SNIPPET-365
Prelims Current Affairs-2019

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Letter From Editor

The first edition of snippet in the year 2018 was very productive about 28 questions were directly from our work. The attempt has been made to increase the coverage and make this years Snippet more comprehensive

Snippet-365 has been prepared keeping in mind Civil Services Prelims Exam, 2019. Several topics have been chosen based on the type of questions asked by UPSC from nonstatic portion of syllabus in last four years.

Here, it needs to be clarified that it is not merely a current affairs notes. It has certain issues covered which were not much in news but can be asked. It not only covers major important happenings in the last year but also includes important happenings beyond last one year. Also emphasis has been made to provide concise material from the static part which were in news.

Efforts have been made to cover all those topics, which have very high probability of being asked. The topics, which have little chances, have been omitted to save the effort of students. We believe there is no point in investing too much of energy in mugging up everything under the sky, because it has dual risk. First, in the process of remembering a lot of things, one may miss on the most important things. Second, it'll eat away vital time that can be given to static portion.

Also this note has only that information, which can be asked in an objective kind of test. So, ‘why’, ‘how’, ‘what next’ kind of things have been avoided. Only objective and factual information has been put. At the same time, the note covers a topic comprehensively in the sense that several relevant aspect related to a topic is also covered. At some places, certain “related topics” from static portion has been mentioned. These topics have a high probability of being asked. So, students must revise them once while studying this note.

We sincerely hope that Snippet-365 helps you clear the Civil Services Prelims – 2019.

All the Best!

Team Dhyeya
SCHEME OF THINGS IN SNIPPET 365

1. **Environment:**
   We have divided this section in 4 broad sub-sections. First, conceptual aspect. Here unconventional topics related to environment have been covered. Second, Global Initiatives. In this section, various international convention and initiatives have been covered. Third, Domestic Initiative. It includes legislations and projects undertaken by government of India related to environment. Fourth, Environment Related Organizations. This sub-section covers both domestic and international organizations.

2. **Economy and Social Development:**
   In this section a holistic coverage of all the basic concepts as well different concepts in news have been covered.

3. **Polity:**
   It has been tried to avoid static part, which is available in standard text book, even if they were in news. Supreme Court judgments are also not asked in PT. So, they have also been avoided to save time of students.

4. **International Relation:**
   This section is prepared with a view to provide holistic perspective of International happenings. It covers major international events along with static part - Organisations, Groupings and Treaties.

   **Organizations** - UPSC frequently asks about organizations. We have extensively covered National and International Organizations including various UN bodies. Some of the national organizations have been included to help in comparative studies.

   **Index, Ranking and Reports:**
   Various rankings which were in news or which are released by renowned Indian and International organizations have been covered. Some less significant one have been omitted as UPSC focuses on familiar ones.

5. **Science and Technology:**
   This section covers certain important technologies, which were in news. Some very technical things have been avoided as UPSC doesn’t ask them. Space mission have been given extensive coverage.

6. **Government Schemes:**
   This section has also been comprehensively covered. After this extensive coverage, it is believed that students won’t need to look after any other source for government schemes.
   
   It has been observed that apart from the schemes, certain important projects are asked by UPSC. We have put them together under one section

7. **Defense Capability of India:**
   This section covers Defense and security related aspects like missile capability, aircraft carriers etc. The coverage is comprehensive.

8. **Miscellaneous Themes of Preliminary Examination:**
   In recent years, UPSC is asking certain unconventional themes like committees, certifications, ratings etc. We have tried to capture certain trends.
**ENVIRONMENT**

**BIOFUEL**

- A biofuel is a fuel that is produced through contemporary biological processes, such as agriculture and anaerobic digestion, rather than a fuel produced by geological processes such as those involved in the formation of fossil fuels like coal and Petroleum.

- **First Generation Biofuel** - They are produced directly from food crops. Crops such as wheat and sugar are the most widely used feedstock. They have caused to food vs fuel debate.

- **Second Generation Biofuel** - They are produced on marginal crop lands unsuitable for food production. They are produced from non-food crops such as wood, organic waste, food crop waste and specific biomass crops. For example-Jatropha. Thus, it overcomes over food vs fuel debate in first generation biofuel. It is also aimed at being cost competitive in relation to existing fossil fuels and increasing Net energy gains.

- **Third Generation Biofuels** - It is based on biomass of specially engineered energy crops such as algae as its energy source. The algae are cultured to act as a low-cost, high-energy and entirely renewable feedstock. Algae will have the potential to produce more energy per acre than conventional crops.

- **Fourth Generation Biofuels** - These are aimed at producing sustainable energy and also capturing and storing carbon dioxide. This process differs from second and third generation production as at all stages of production the carbon dioxide is captured which can be then geo-sequestered. This carbon capture makes fourth generation biofuel production carbon negative rather than simply carbon neutral, as it is ‘locks’ away more carbon than it produces.

**Sources of Ethanol and Bio-diesel are:**

<table>
<thead>
<tr>
<th>Ethanol</th>
<th>Bio-Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar cane, Soy, Sugar Beet, Sweet Sorghum, Corn, Cassava</td>
<td>Jatropha curcas, Castor bean, Rapeseed, Soybean</td>
</tr>
</tbody>
</table>

**National Policy on Biofuels - 2018**

- The Union Cabinet has approved National Policy on Biofuels – 2018.

**Salient Features:**

i. The Policy categorises biofuels as “Basic Biofuels” viz. First Generation (1G) bioethanol & biodiesel and “Advanced Biofuels” - Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.

ii. Farmers are at a risk of not getting appropriate price for their produce during the surplus production phase. Taking this into account, the Policy allows use of surplus food grains for production of ethanol for blending with petrol with the approval of National Biofuel Coordination Committee.

iii. Damaged food grains like wheat, broken rice, Rotten Potatoes, unfit for human consumption may be allowed to be used for ethanol production.

iv. Provisions for viability gap funding for setting up of 2G ethanol Bio refineries

**BIOREMEDICATION**

- Bio remediation is a treatment that uses naturally occurring organisms to break down hazardous substances into less toxic or non-toxic substances. When bioremediation is done using living plants, it is called Phytoremediation.
• **Oil zapper**: it is essentially a cocktail of five different bacterial strains. It feeds on hydrocarbon compounds present in crude oil and converts them into CO2 and water.

• **Pseudomonas putida**: it is the first patented organism in the world. It is a genetically modified organism that has the ability to degrade organic solvents. Thus, it can also be used to clean petro-chemical contamination of water.

**Bioremediation related technologies:**

• **Bio venting**: an in-situ remediation technology. It enhances the activity of indigenous bacteria and simulates the natural in situ biodegradation of hydrocarbons in soil by inducing air or oxygen flow into the unsaturated zone and, if necessary, by adding nutrients.

• **Bio leaching**: extraction of metals from their ores through the use of living organisms instead of using harmful chemical substances such as cyanide etc.,

• **Land farming**: ex-situ bioremediation treatment process that is performed in the upper soil zone or in bio treatment cells. Contaminated soils, sediments, or sludges are transported to the land farming site incorporated into the soil surface and periodically turned over (tilled) to aerate the mixture.

• **Composting**: Aerobic bacteria and fungi decompose the organic matter into compost used as fertilizer. Output includes heat, carbon dioxide, and ammonium mainly. The process is speed up by adding composting worms - this is called vermiculture.

• **Bio-augmentation**: is the practice of adding cultured microorganisms into the subsurface for the purpose of biodegrading specific soil and groundwater contaminants.

• **Bio-stimulation**: modification of the environment to stimulate existing bacteria capable of bioremediation.

**SMOG**

Smog is a kind of air pollution, originally named for mixture of smoke & fog in the air. At least two distinct types of smog are recognized:

1. Sulfurous smog: also called “London smog,” results from a high concentration of sulphur oxides in the air and is caused by the use of sulphur-bearing fossil fuels, particularly coal.

2. Photochemical smog, which is also known as “Los Angeles smog,” has its origin in the nitrogen oxides and hydrocarbon vapours emitted by automobiles etc. The highly toxic gas ozone arises from the reaction of nitrogen oxides with hydrocarbon vapours in the presence of sunlight.

Why in News- Delhi Smog having “severe” levels of pollution on Air Quality Index

**BLACK CARBON**

**Why in news?**

It has been a major contributor to PM2.5 particles and is also an important contributor to global warming.
About Black Carbon

- Black carbon is a potent climate-warming component of particulate matter formed by the incomplete combustion of fossil fuels, wood and other fuels.
- Black carbon is an important contributor to warming because it is very effective at absorbing light and heating its surroundings.
- When deposited on ice and snow, black carbon and co-emitted particles reduce surface albedo (the ability to reflect sunlight) and heat the surface. The Arctic and glaciated regions such as the Himalayas are particularly vulnerable to melting as a result.

FLY ASH

What is Fly Ash

Fly ash is a byproduct from burning pulverized coal in electric power generating plants.

- **Uses**: Embankment, Soil stabilization, flowable fill, Asphalt concrete, Geo polymers, Roller compacted concrete, Bricks, Metal matrix composites, Waste treatment and stabilization, As a catalyst.
- Fly ash contains trace concentrations of heavy metals and other substances include arsenic, beryllium, cadmium, barium, chromium, copper, lead, mercury, molybdenum, nickel, radium, selenium, thorium, uranium, vanadium, and zinc.

BIOINDICATOR

- A bioindicator is a living organism that gives us an idea of the health of an ecosystem.
- These organisms are very sensitive to pollution in their environment.
- So, if pollutants are present, the organism may change its morphology, physiology or behaviour, or it could even die, allowing scientists to calculate atmospheric alterations.
- Examples include Lichens, Algae, microorganisms, frogs, sparrow and butterflies.

<table>
<thead>
<tr>
<th>Lichens:</th>
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<tbody>
<tr>
<td><strong>Lichens</strong> are a symbiosis of at least two quite different organisms. The partnership always involves a fungus, which lives with one or more partners which can do photosynthesis. The photobiont partner may be a <strong>green alga</strong> and/or a <strong>cyanobacterium</strong>.</td>
</tr>
<tr>
<td>The algae or bacteria live inside the fungus, and exchange nutrients with it.</td>
</tr>
<tr>
<td>Lichens are neither plants nor mosses.</td>
</tr>
<tr>
<td>They do not have roots that absorb water and nutrients as plants do.</td>
</tr>
<tr>
<td>They are among the first living things to grow on fresh rock exposed after an event such as landslide. Thus, they are the example of <strong>pioneer species</strong>.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Cyanobacteria:</th>
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<tbody>
<tr>
<td>Cyanobacteria are often called &quot;blue-green algae&quot;. But they are <strong>bacteria not algae</strong>.</td>
</tr>
<tr>
<td>They are quite small and usually <strong>unicellular</strong>, though they often grow in colonies large enough to see.</td>
</tr>
<tr>
<td>They are aquatic and <strong>photosynthetic</strong>.</td>
</tr>
</tbody>
</table>

CARBON CAPTURE AND STORAGE

Carbon Capture and Storage (CCS) consists of three parts;
- Capturing the carbon dioxide from gases produced in electricity generation and industrial processes
- Transporting the carbon dioxide, and
- Securely storing the carbon dioxide emissions, underground in depleted oil and gas fields or deep saline aquifer formations.
Carbon Capture Utilization Storage (CCUS):
• It encompasses methods and technologies to remove CO2 from the atmosphere, followed by recycling the CO2 for utilization and determining safe and permanent storage options. Thus CCUS aims at utilizing CO2 emissions as well.

Commercial application of CO2
• Enhanced oil recovery using CO2 remediation of alkaline industrial wastes production of chemicals, specifically Dimethylcarbonate (DMC) Capturing CO2 by microalgae to produce biodiesel

NEGATIVE CARBON EMISSION TECHNOLOGIES

1. Biochar
• Name given to charcoal that is added to soils.
• The charcoal is produced by burning biomass, such as wood, crop wastes and manure, while cutting off the supply of oxygen (Pyrolysis).
• The carbon in the resulting biochar is very slow to break down.
• Act as a slow-release sponge for water and nutrients - and boost soil fertility and crop yields
• However adding biochar makes soil darker leading to more absorption of solar light.

2. Bioenergy with carbon capture and storage
• Integration of trees and crops, which extract carbon dioxide (CO2) from the atmosphere as they grow, the use of this biomass in processing industries or power plants, and the application of carbon capture and storage via CO2 injection into geological formations

3. Blue carbon' habitat restoration
• Carbon stored in coastal or mar in ecosystems is known as 'blue carbon'. Salt marshes, mangroves, and seagrass beds capture CO2 from the atmosphere in their leaves, stems and in the soil.

4. Cloud or ocean treatment with alkali
• CO2 is not very soluble in water, but the reaction can be enhanced by adding alkali.
• For example adding lime to the sea would increase its capacity to absorb CO2.

5. Enhanced ocean productivity
• Injecting the nutrient iron or fertilising the ocean with nitrogen or pumping nutrient-rich, deep water into the nutrient-depleted surface ocean leading to a “bloom” of microscopic plants called phytoplankton,

6. Enhanced Weathering
• Rain reacts with the rocks and soils it lands on, gradually breaking them down and forming bicarbonate in the process. Eventually, this bicarbonate washes into the oceans, where the carbon is locked up in the sea floor. Enhanced weathering ramps up this process

PERMACULTURE
• Permaculture integrates land, resources, people and the environment through mutually beneficial synergies -
• In Permaculture, energy is captured, used and re-used in order to feed, clothe, transport and educate our society.
• Waste is well used and re-used. Essentially, we search for a way to close the system
ZERO BUDGET NATURAL FARMING

- Zero Budget Natural Farming (ZBNF) is a set of farming methods, and also a grassroots peasant movement (first evolved in Karnataka)
- The word ‘budget’ refers to credit and expenses, thus the phrase ‘Zero Budget’ means without using any credit, and without spending any money on purchased inputs.
- ‘Natural farming’ means farming with Nature and without chemicals

RAT-HOLE MINING

- Recently, the collapse of a coal mine in Meghalaya’s East Jaintia Hills in which 15 workers were trapped, has thrown the spotlight on a procedure known as “rat-hole mining”.
- The National Green Tribunal (NGT) banned it in 2014 on grounds of it being unscientific and unsafe for workers. However, the state government appealed the order in the Supreme Court.
- Even after ban, it remains the prevalent procedure for coal mining in Meghalaya as no other method would be economically viable in Meghalaya, where the coal seam is extremely thin.

INCLUSIVE WEALTH REPORT

Why in News?

- The inclusive wealth of one-third of the countries in the world has declined, but their gross domestic product (GDP) has increased, finds the Inclusive Wealth Report 2018 presented by the UN Environment.

United Nations Environment Programme (UN Environment)

- It is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.
- Its headquarters are in Nairobi, Kenya.

BAN ON PETCOKE

Why in News?

- India recently banned the import of petcoke for use as fuel.

Pet Coke

- It is a carbon-rich solid material (over 90 percent carbon) that is derived from oil refining.
- It is a dirtier alternative to coal and emits 11% more greenhouse gases than coal and nearly 17 times more sulphur than coal. It emits 5 to 10 percent more carbon dioxide (CO2) than coal on a per-unit-of-energy basis because of very high carbon content.
- India is the world’s largest consumer of petcoke.
- India had been becoming a dumping ground of pet-coke from the US, which has banned its internal use because of pollution.

Furnace Oil

- It is a dark viscous residual fuel obtained by blending mainly heavier components from crude distillation unit, short residue and clarified oil from catalytic cracker unit.
- It is used to generate power in industries to run boilers, turbines etc.
PARIVESH

Why in News?

- Recently, government launched an integrated environmental management system named; PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single-window Hub).
- It is a web based, role-based workflow application which has been developed for online submission and monitoring of the proposals submitted by the proponents for seeking Environment, Forest, Wildlife and CRZ Clearances from Central, State and district level authorities.

PESTICIDES BAN

- The Government of India has decided to ban the use of 18 pesticides following the recommendations of the Anupam Verma Committee.
- The pesticides proposed to be banned are harmful not just to humans and animals but also leech into the soil and water bodies and harm the aquatic ecosystem. They also lead to bioaccumulation.

3D-PRINTED ARTIFICIAL REEF

Why in News?

Recently, World’s largest 3D-printed reef installed in Maldives, for coral reefs survive due to threat posed by climate change and warming waters.

What is an Artificial Reef?

- It is a human made structure, similar to natural coral reef, built with the specific aim of promoting the marine life of an area.

NATIONAL CLEAN AIR PROGRAMME (NCAP)

- Government launched National Clean Air Programme (NCAP).
- It is a time bound national level strategy for pan India implementation to tackle the increasing air pollution problem- one of the most alarming challenges of urbanization; across the country in a comprehensive manner.
- Collaborative and participatory approach involving relevant Central Ministries, State Governments, local bodies and other Stakeholders with focus on all sources of pollution forms the crux of the Programme.
- The tentative national level target of 20%–30% reduction of PM2.5 and PM10 concentration by 2024 is proposed under the NCAP taking 2017 as the base year for the comparison of concentration.
- The NCAP will be a mid-term, five-year action plan with 2019 as the first year.
- The NCAP will be institutionalized by respective ministries and will be organized through inter-sectoral groups, which will include different ministries, NITI Ayog and different experts from the industry and civil society.
- NCAP will cover 102 non-attainment cities, which includes the 43 smart cities. With the exception of Delhi, Mumbai, Kolkata and Bengaluru, most of those chosen are tier two cities.

Coral Reef Regions of India

1. Lakshadweep: Known as India’s Coral Islands
2. Andaman and Nicobar Islands
3. Gulf of Mannar
4. Gulf of Kutch
5. Netrani Island in Karnataka
6. Malwan in Maharashtra
Other measures for targeting Air pollution

NATIONAL AIR QUALITY INDEX (AQI)

- It was launched in the year 2014.
- The index is a part of the government’s Swachh Bharat Mission.
- AQI provides ‘One Number- One Colour-One Description’ to judge the Air Quality for Common Man.
- There are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe.
- The AQI considers eight pollutants PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb for which short-term (up to 24-hourly averaging period) National Ambient Air Quality Standards are prescribed.

NATIONAL AMBIENT AIR QUALITY STANDARDS

- They are the standards for ambient air quality set by the Central Pollution Control Board (CPCB) that is applicable nationwide.
- The current National Ambient Air Quality Standards were notified on 18 November 2009 by the Central Pollution Control Board.

NATIONAL AIR QUALITY MONITORING PROGRAMME (NAMP)

- Central Pollution Control Board is executing a nation-wide programme of ambient air quality monitoring known as National Air Quality Monitoring Programme (NAMP).
- Under N.A.M.P., four air pollutants viz., Sulphur Dioxide (SO2), Oxides of Nitrogen as NO2, Respirable Suspended Particulate Matter (RSPM / PM10) and Fine Particulate Matter (PM2.5) have been identified for regular monitoring at all the locations.
- The network consists of 731 operating stations covering 312 cities/towns in 29 states and 6 Union Territories of the country.

SYSTEM OF AIR QUALITY AND WEATHER FORECASTING AND RESEARCH (SAFAR)

- It is a air quality monitoring and weather forecasting initiative developed by Indian Institute of Tropical Meteorology, Pune, and operationalized by India Meteorological Department (IMD).
- It monitors UV-Index, PM1, PM2.5, PM10, Mercury, Black Carbon, Sulfur Dioxide, Ozone, Nitrogen Oxides, Carbon Monoxide, Benzene, Toluene and Xylene.
- It is implemented in four cities of India – Delhi, Pune, Mumbai and Ahmedabad.

CRZ NOTIFICATION 2018

- The Union Cabinet has approved the Coastal Regulation Zone (CRZ) Notification, 2018 which was last reviewed and issued in 2011.
- CRZ notifications are given under the Environmental Protection Act, 1986.
- (CRZ Notification 2018) is based on the recommendations of Shailesh Nayak committee.
- CRZs have been classified into 4 zones for the purpose of regulation:
  - **CRZ-I**: includes ecologically sensitive areas, where no construction is allowed except activities for atomic power plants, defence.
  - **CRZ-II**: includes designated urban areas that are substantially built up. Construction activities are allowed on the landward side only.
  - **CRZ-III**: includes relatively undisturbed areas, mainly rural areas. No new construction of buildings allowed in this zone except repairing of the existing ones. However, constructions of dwelling units in the plot area lying between 200-500m of the high tide line is allowed.
• **CRZ-IV**: Includes the water area covered between Low Tide Line and 12 nautical miles seaward. Except for fishing and related activities, all actions impugning on the sea and tidal water will be regulated in this zone.

• **CRZ Clearances streamlined**: Only such projects/activities, which are located in the CRZ-I (Ecologically Sensitive Areas) and CRZ IV (area covered between Low Tide Line and 12 Nautical Miles seaward) will be required to be cleared by Ministry of Environment, Forest and Climate Change. For, the CRZ-II (urban) or CRZ III (rural) areas, the CRZ clearance will be considered at the state level by the Coastal Zone Management Authority (CZMA).

### SIXTH ANNUAL REPORT TO CBD

#### Why in News?
- Recently, India submitted Sixth National Report (NR6) to the Convention of Biological Diversity (CBD);
- Conference of the Parties (COP 14) to the Convention on Biological Diversity (CBD) was held, adopting Sharm El-Sheikh Declaration.

#### Convention on Biological Diversity (CBD)
- It seeks to address all threats to biodiversity and ecosystem services, including threats from climate change.
- It aims to promote the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources.
- It’s a near universal convention with a participation of 196 member countries.

#### Protocols adopted under the Convention:
- **Cartagena Protocol on Biosafety**: It seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology.
- **Nagoya Protocol on Access and Benefit Sharing**: It aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies.
- It also provides for global and national **Aichi biodiversity targets**.

### EARMARKING ECO-SENSITIVE AREA OF THE WESTERN GHATS

#### Why in news?
- Centre has released a draft notification for earmarking Eco-Sensitive Area (ESA) in Western Ghats.
- Various recommendations have been made by the Madhav Gadgil committee and a High-Level Working Group (HLWG)under former ISRO chairman K Kasturi rangan
- ESZs are ecologically important areas notified under the Environment Protection Act - 1986 to be protected from industrial pollution and unregulated development.
- According to the Environment (Protection) Act, 1986, the government can prohibit industrial operations such as mining, sand quarrying and building thermal power plants in sensitive areas.
- The calls to declare the Western Ghats as ESA got louder recently after the Kerala floods. Many environmental experts including Gadgil had blamed it on the rampant destruction of the Western Ghats and the mindless construction and mining activities in ecological fragile areas in the state.
In 2012 it was listed as a UNESCO World Heritage Site and is one of the eight “hottest hot-spots” of biological diversity in the world.

**CONSERVATION OF MIGRATORY BIRDS AND THEIR HABITATS**

*Why in news?*

- Ministry of Environment, Forest and Climate Change has developed a National Action Plan for Conservation of Migratory Birds and their Habitats along Central Asian Flyway (CAF) for the period 2018-23.
- The NAP has also been drawn to support meeting national commitments related to protection and conservation of migratory birds and their habitats.

**Convention on the Conservation of Migratory Species of Wild Animals (CMS) or Bonn convention**

- It is the only convention under UNEP which provides a global platform for the conservation and sustainable use of migratory animals and their habitats (and their migration routes). India is a member of the convention.
- Migratory species threatened with extinction are listed on Appendix I of the Convention.

**NATIONAL REDD+ STRATEGY**

*Why in news?*

- Union Ministry for Environment, Forest and Climate Change (MoEFCC) released National REDD+ Strategy, which will help to fulfill India’s NDC commitment under Paris Agreement of climate change.

**REDD+**

**REDD+ means “Reducing Emissions from Deforestation and forest Degradation”** It involves conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.

- REDD+ aims to achieve climate change mitigation by incentivizing forest conservation.
- COP 19, 2013 at Warsaw agreed on Warsaw REDD+ framework
- It encourages Parties and the private sector to take actions to reduce the drivers of deforestation and forest degradation.
- Finance: It encourages financing entities, including the Green Climate Fund in a key role, to channel adequate and predictable results-based finance in a fair and balanced manner, and increasing the number of countries that are in a position to obtain and receive payments for results-based actions
- It recognizes the importance of incentivizing non-carbon benefits for the long-term sustainability.

**LAND DEGRADATION NEUTRALITY**

*Why in news?*

- Recently a session was held at United Nations Convention to Combat Desertification (UNCCD) to review the first global assessment of land degradation which seeks to achieve Land Degradation Neutrality (LDN) by 2030.
- The new UNCCD 2018-2030 Strategic Framework is the most comprehensive global commitment to achieve Land Degradation Neutrality (LDN) in order to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations to build
• As per the UNCCD definition, LDN is a state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales.

United Nations Convention to Combat Desertification

• Established in 1994, the United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment and development to sustainable land management. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the dry lands, where some of the most vulnerable ecosystems and peoples can be found.

KATOWICE COP 24

Why in news?

• The 24th Session of the of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 24) was held in Katowice, Poland.

Key outcomes in Katowice

Rulebook Specifics

• Accounting Guidance Rules to guide the countries for their Climate pledges (“nationally determined contributions”, NDCs), to compare pledges and to add them up as a global aggregate.

• Market mechanisms: It provides for the trading of carbon credits i.e. overachievement of NDCs, as well as individual projects generating carbon credits for sale.

Other outcomes:

• Accounting Rules to prevent “double counting” of emissions reductions by the buyer and seller of offsets could not be finalised.

• The schemes and methodologies for the implementation of Sustainable Development Mechanism- SDM would be discussed in COP-25. The SDM is intended to replace the Kyoto Protocol’s “Clean Development Mechanism” (CDM) for carbon offsets.

• Overall Mitigation in Global Emissions (OMGE): It is voluntary and new element under the Paris Agreement, that takes carbon markets beyond the offsetting approaches of the existing markets like the CDM. The primary purpose of OMGE is to deliver on cost-effectively reducing greenhouse gas emissions, rather than creating carbon markets for their own sake.

• Loss and damage: The Warsaw International Mechanism, which has to deal with averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, has no financial resources to support vulnerable countries.

• Talanoa Dialogue: The final text simply “invited” countries to “consider” the outcomes of the Talanoa dialogue in preparing their NDCs and in efforts to enhance pre-2020 ambition.

• Pre-2020: With respect to the “pre-2020” commitments –first agreed by developed countries in 2010 in Cancun – the COP called for developed countries to ratify the Doha Amendment so that it can enter into force. This would extend the Kyoto Protocol on developed country emissions till 2020.

• The Paris Agreement provides for progress assessments (“stocktakes”) every five years .The first full global stocktake will occur in 2023 in order to prepare for a new round of climate commitments, known as Nationally Determined Contributions (NDCs), by 2025 WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world.
TALANOA DIALOGUE SYNTHESIS REPORT AND YEARBOOK OF GLOBAL CLIMATE ACTION 2018


• Emissions Gap Report 2018: This is the 9th edition of the UN Environment Emissions Gap Report.

• It focuses on the “gap” between the emissions reductions necessary to achieve the agreed targets at lowest cost and the likely emission reductions from full implementation of the Nationally Determined Contributions (NDCs), which form the foundation of the Paris Agreement.

• It is prepared by United Nations Environment Programme (UNEP).

NATIONAL ACTION PLAN ON CLIMATE CHANGE (NAPCC)

• It was launched on 30th June 2008. The Prime Minister’s Council on Climate Change is in charge of the overall implementation of the plan. It pledges that India’s per capita greenhouse gas emissions “will at no point exceed that of developed countries.” It constitutes 8 missions

4. National Water Mission: It has set a goal of a 20% improvement in water use efficiency.
5. National Mission for Sustaining the Himalayan Ecosystem
6. National Mission for a “Green India”: Goal is increase forest/tree cover to the extent of 5 million hectares (mha) and improve quality of forest/tree cover on another 5 mha of forest/non-forest lands

MONTREAL PROTOCOL

Why in news:

• The quadrennial (four-yearly) review of the Montreal Protocol reveals a healing ozone layer, global warming reduction potential, and options for more ambitious climate action.

Vienna Convention for the Protection of the Ozone Layer [1985]:

• It acts as a framework for the international efforts to protect the ozone layer.
• It paves the way for a legally binding treaty through protocol called Montreal protocol.

Montreal Protocol [1987]

• It aims at reducing the production and consumption of ozone depleting substances (ODS).
• It has been ratified by 197 parties making it universally ratified protocol in United Nations history.

Kigali agreement to amend the Montreal Protocol [2016]

• Its aim is to phase out Hydrofluorocarbons (HFCs), a family of potent greenhouse gases by the late 2040s.
• It will be binding on countries from 2019.
**INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE REPORT**

**Why in news-**
- The IPCC has released its Special Report titled “Global Warming of 1.5°C”, first in a series of Special Reports to be produced in the IPCC’s Sixth Assessment Cycle.

**What is the IPCC?**
- The Intergovernmental Panel on Climate Change (IPCC) is the UN body with 195 member states for assessing the science related to climate change.
- It was established by the United Nations Environment Programme (UNEP) & the World Meteorological Organization (WMO) in 1988 to provide policymakers with regular scientific assessments concerning climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation strategies.

**CLIMATE FINANCING INITIATIVES**

**Global Environment Facility (GEF)**
- The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle our planet’s most pressing environmental problems. It is a UNIQUE PARTNERSHIP of 18 agencies- including United Nations agencies, multilateral development banks, national entities and international NGOs.
- Since 1994, the World Bank has served as the Trustee of the GEF Trust Fund and provided administrative services.
- It is a public funder of projects to improve the environment. It acts as a financial mechanism for the following conventions:
  1. Convention on Biological Diversity (CBD)
  2. United Nations Framework Convention on Climate Change (UNFCCC)
  3. UN Convention to Combat Desertification (UNCCD)
  4. Stockholm Convention on Persistent Organic Pollutants (POPs)
  5. Minamata Convention on Mercury
  6. The GEF, although not linked formally the Montreal Protocol on Substances that Deplete the Ozone Layer (MP), supports implementation of the Protocol in countries with economies in transition

**Green Climate Fund**
- It is a fund within the framework of the UNFCCC. Founded in 2010 as a mechanism to assist developing countries in adaptation and mitigation practices to counter climate change.
- It is intended to be the centrepiece of efforts to raise Climate Finance of $100 billion a year by 2020. Carbon taxes and cess by the national governments.

**Emission Trading:**
- It allows parties to the Kyoto Protocol to buy ‘Kyoto units’ (emission permits for green house gas) from other countries to help meet their domestic emission reduction targets.

**Clean Development Mechanism**
- It is a flexible mechanism defined in Kyoto Protocol. It involves investment by developed countries in emission reduction projects in developing countries

**Joint Implementation (JI)**
- JI enables developed countries to carry out emission reduction projects in another developed country to meet their emission reduction target under Kyoto protocol.
Perform Achieve Trade (PAT)

- It is an Indian initiative under National Mission on Enhanced Energy Efficiency (NMEEE).
- It involves trading in energy efficiency certificates to offset emissions. Energy intensive industrial units are assigned energy efficiency improvement targets. Any energy efficiency improvements in excess of their target (perform above the achievement) is converted into Energy Savings Certificates (EScerts). The companies which fail to meet their target can buy these EScerts (Trade) to fulfill their commitment.

National Adaptation Fund for Climate Change [NAFCC]

- NAFCC was launched in 2015 to provide 100% central grant to the State Governments for implementing climate change adaptation projects. The objective is to assist states/UTs that are particularly vulnerable to adverse effects of climate change.
- The National Bank for Agriculture and Rural Development (NABARD) is National Implementing Entity (NIE) for NAFCC.

SPECIES IN NEWS

The International Union for Conservation of Nature (IUCN):

The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organisations. IUCN is the global authority on the status of the natural world and the measures needed to safeguard it. It is involved in data gathering and analysis, research, field projects, advocacy, and education. It publishes the Red Data Book under Global Species Programme, working with the Species Survival Commission. Red Data Book assesses the conservation status of species, subspecies, varieties, and even selected sub-populations of both flora and fauna.

The IUCN classification of some species based on its evaluation is:

![IUCN Classification Diagram](image-url)
## Some of the Important species:

<table>
<thead>
<tr>
<th>Species</th>
<th>IUCN Status</th>
<th>Habitat/Other details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nilgiri Tahr</td>
<td>Endangered</td>
<td>• Open montane grassland (Shola Grassland) habitats at elevations from 1200 to 2600 m (generally above 2000 m) of the South Western Ghats. State Animal of Tamil Nadu</td>
</tr>
<tr>
<td>Kashmir Stag (Hangul) -</td>
<td>Critically Endangered</td>
<td>• Habitat: Jammu &amp; Kashmir (Dachigam National Park) <strong>State animal of Jammu &amp; Kashmir</strong></td>
</tr>
</tbody>
</table>
| Sangai (Brow antlered deer ordancing deer- or Eld’sdeer) | Endangered | • Habitat: Floating marshy grasslands, Phumdis, of the Keibul Lamjao National Park, located in the southern parts of the Loktak Lake (largest freshwater lake in eastern India)  
• Endemic species found only in Manipur, India. **State animal of Manipur**  
• **Phumdi** — floating mass of entangled vegetation formed by the accumulation of organic debris and biomass with soil. |
| Amur Falcon                    | Least concern   | • Habitat: Amur falcon species are distributed in India, Africa and Northeast Asia in Grassland, Savanna, Forest, Wetlands (inland).  
• Amur Falcons are the migratory bird that stay every year at **Doyang lake** during their flight from Mongolia to South Africa. |
| Olive Ridley Turtle            | Vulnerable      | • Habitat: It’s found in warm and tropical waters, primarily in the Pacific and Indian Oceans.  
• Gahirmatha located in the Bhitarkanika Wildlife Sanctuary, Odisha houses the world largest mass nesting site of these turtles.  
• Rushikulya rookery coast, and Bahuda Rookery are other major nesting site of olive ridleys on the Odisha coastline.  
• They are known for their **arribadas** (synchronised mass nesting) during which time tens of thousands of female turtles come ashore to nest in the span of a few days. |
<table>
<thead>
<tr>
<th>Animal Type</th>
<th>Endangered Status</th>
<th>Habitat Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gharial ((Gavialis gaptunea))</td>
<td>Critically endangered</td>
<td>Habitat: Endemic to the Indian subcontinent. In India, the major breeding populations are confined to two rivers only, Girwa and the Chambal.</td>
</tr>
<tr>
<td>Ganges shark ((Glyphis gangeticus))</td>
<td>Critically endangered</td>
<td>Habitat: Endemic to India, it inhabits the River Hooghly in West Bengal, as well as the rivers Ganges, Brahmaputra, Mahanadi in the states of Bihar, Assam and Orissa.</td>
</tr>
<tr>
<td>Greater One-horned Rhinos ((Indian Rhino))</td>
<td>Vulnerable</td>
<td>Mainly spread across parts of India and Nepal, with India accounting for over 80% of the population. In India, they are found in parts of Uttar Pradesh, West Bengal and Assam. They are concentrated in Kaziranga National Park, and Pobitara Wildlife Sanctuary in Assam state, which account for 90% of the Indian Rhino.</td>
</tr>
</tbody>
</table>

**GREAT INDIAN BUSTARD**

- Why in News? A recent study suggests that, Great Indian Bustard population has been **falling** continuously, from around 1,260 in 1969 to less than 200 in 2018.
- About Great Indian Bustard \((Ardeotis nigriceps)\)
  - It’s among the heaviest bird with a horizontal body and long bare legs giving it an ostrich-like appearance.
  - Habitat: Arid and semi-arid grasslands, open country with thorn scrub, tall grass interspersed with cultivation. It avoids irrigated areas.
  - It is endemic to Indian Sub-continent, found in central India, western India and eastern Pakistan.
- Currently, it is found in only six states in the country — Madhya Pradesh, Gujarat, Maharashtra, Andhra Pradesh, Rajasthan and Karnataka.
- Great Indian Bustard, popularly known as ‘Godawan’, is Rajasthan’s state bird. The state government has started “Project Godawan” for its conservation at Desert National Park (DNP) in Jaisalmer. It’s one of the Species for The Recovery Programme under the Integrated Development of Wildlife Habitats of the Ministry of Environment and Forests.

**It is also listed in Appendix I of CITES and covered under CMS or Bonn Convention.**
GANGETIC DOLPHIN

- Why in news? Recently, study showed that rising salinity in Sunderbans region of India is causing a decrease in population of the Ganges River Dolphins.
- The population of the Gangetic river dolphin at the Vikramshila Gangetic Dolphin Sanctuary has declined to 154 from 207 in 2015

About Gangetic dolphins

- It inhabits the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.
- It is among the four freshwater dolphins found in the world – the other three are found in the Yangtze River (China), the ‘bhulan’ of the Indus (Pakistan) and the ‘boto’ of the Amazon River (Latin America).
- It is a mammal and cannot breathe in the water and must surface every 30-120 seconds.
- Because of the sound it produces when breathing, the animal is popularly referred to as the ‘Susu’.
- It is the national aquatic animal and had been granted non-human personhood status by government in 2017.
- It is also protected under the Schedule I of the Wildlife Protection Act (1972).
- Vikramshila Gangetic Dolphin Sanctuary (VGDS) in Bihar is India’s only sanctuary for the Gangetic dolphin.
- It has been categorised as endangered on the Red List of Threatened Species by the IUCN.
- It is listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

GREATER FLAMINGOES

Why in news?

- Greater Flamingoes have been spotted on the Coast of Hope Island, a part of the Coringa Wildlife Sanctuary, after a gap of 25 years.
- Coringa Wildlife Sanctuary (CWLS) is situated in Andhra Pradesh near confluence of Godavari and Bay of Bengal and houses the second largest mangroves forest in India.

About Greater Flamingoes

- These come under ‘Least Concern’ category of IUCN Red List.
- They prefer shallow brackish lakes & use mudflats & saltpans for nesting.
- They are filter feeders (take prey and water together and then filter out water) and get their characteristic pink colour from their diet of brine shrimps and algae available in the coastal wetlands.
EURASIAN OTTER

Why in news?

• Recently scientist confirmed the presence of Eurasian otter in Western Ghats.
• Though the Eurasian otter has been recorded historically from the Western Ghats (Coorg in Karnataka and Tamil Nadu’s Nilgiri and Palani hill ranges), this is the first photographic and genetic confirmation of its presence here.
• India is home to 3 of the 13 species of otters found worldwide.

These are

• Eurasian Otter (Lutra lutra): IUCN: Near Threatened; CITES Appendix I; Wildlife (Protection) Act Schedule II.
• Smooth-coated Otter (Lutra perspicillata): IUCN: Vulnerable; CITES Appendix II; Wildlife (Protection) Act Schedule II.
• Small-clawed otter (Aonyx cinereus): IUCN: Vulnerable; CITES Appendix II; Wildlife (Protection) Act Schedule II.

RECOVERY PROGRAMME FOR WILDLIFE SPECIES

Why in news?

• The National Board for Wildlife (NBWL) recently added four species—the Northern River Terrapin, Clouded Leopard, Arabian Sea Humpback Whale, Red Panda—to a Recovery Programme for Critically Endangered Species.

About the Species

• Northern River Terrapin, which is a species of riverine turtle found in the rivers that flow in Eastern India, is hunted for its meat and carapace. It is a native of Bangladesh, Cambodia, India, Indonesia and Malaysia. (IUCN-Critically Endangered)
• Clouded Leopard, found in the Himalayan foothills, is threatened due to habitat loss, poaching for its skin and is also as a live pet trade. (IUCN-Vulnerable)
• Arabian Sea Humpback Whale is a species found in all of major oceans but ship strikes, unforgiving fishing gear and seismic explorations pose grave threat to it. (IUCN-Endangered)
• Red Panda which is closely associated with montane forests with dense bamboo-thicket, is found in Sikkim, West Bengal and Arunachal Pradesh. It is poached for its meat, and for use in medicines, and as a pet. (IUCN-Endangered)

About National Board for Wildlife (NBWL)

• It is a statutory Board constituted under the Wild Life (Protection) Act, 1972.
• It is chaired by the Prime Minister. Its vice chairman is Minister of Environment.
• It is involved in framing policies and promoting wildlife conservation and controlling poaching and illegal trade of wildlife.
• It makes recommendations on the setting up of and management of national parks, sanctuaries and other protected areas and restriction of activities in those areas.
• Its concurrence is needed for creation of tourist lodges, alteration of the boundaries of Protected Areas, de-notification of Tiger Reserves, etc.
• It may appoint a standing committee which provides clearances to projects that pass through or are located near protected areas.
RED SANDERS NOT ENDANGERED ANYMORE

Why in news?

- The International Union for Conservation of Nature (IUCN), now reclassified red sanders (Pterocarpus santalinus) as ‘near threatened’ from the earlier ‘endangered’.

Red Sanders

- It is an endemic tree of South India.
- They are found in Tropical Dry Deciduous forest of the Palakonda and Seshachalam hill ranges of Andhra Pradesh and also found in Tamil Nadu and Karnataka.
- It occurs in hot, dry climate with a rainfall of 88-105 cm.
- It prefers lateritic and gravelly soil and cannot tolerate water logging.

ASIATIC LION CONSERVATION PROJECT

- The Ministry of Environment, Forest and Climate Change, Government of India has launched the “ Asiatic Lion Conservation Project” with an aim to protect and conserve the world’s last ranging free population of Asiatic Lion and its associated ecosystem.
- The Project is for 3 years and will be funded from the Centrally Sponsored Scheme- Development of Wildlife Habitat (CSS-DWH) with the contributing ratio being 60:40 of Central and State share.
- The last census in the year 2015 showed the population of 523 Asiatic Lions in Gir Protected Area Network of 1648.79 sq. km. that includes- Gir National Park, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary adjoining reserved forests, Protected Forests, and Unclassed Forests.
- Asiatic Lion- Panthera Leo Persica is listed in Schedule 1 of Wildlife Protect Act, 1972 and in Appendix-1 of CITES, while IUCN lists it in endangered category.
- Their population is limited to only five protected areas in Gujarat – Gir National Park, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary and Girnar Sanctuary.

TIGER CONSERVATION

- Indian Tiger or Royal Bengal Tiger (Panthera tigris) is the sub species found in India.

Conservation status of Tiger

- IUCN Red List: Endangered
- Wild life protection Act : Schedule 1
- CITES: Appendix 1
- India is home to 70 per cent of global tiger population.
- States having Highest number of tigers are- Karnataka > Uttarakhand > Madhya Pradesh

Conservation Efforts in India

- Project Tiger:
- The Government of India launched the centrally Sponsored Scheme the ‘Project Tiger’ in 1973 for for in-situ conservation of wild tigers in designated tiger reserves. The Project Tiger coverage has increased to 50 tiger reserves at present.
The National Tiger Conservation Authority (NTCA):

- It is a statutory body established in 2006 under MoEFCC performing functions as provided in the Wildlife (Protection) Act, 1972. Presently It implements major tiger conservation initiatives like project tiger, Tiger conservation plan etc.

Monitoring System for Tigers –

- Intensive Protection and Ecological Status (M-STrIPES): It is a software-based monitoring system launched across Indian tiger reserves by the NTCA.
- Global Conservation Efforts

The Global Tiger Initiative (GTI), 2008:

- A global alliance of governments, international organizations, civil society, the conservation and scientific communities and the private sector and includes organization like the World Bank, the Global Environment Facility (GEF), etc.

Aim:

- To work together to save wild tigers from extinction. In 2013, the scope was broadened to include Snow Leopards.
- The initiative is led by the 13 tiger range countries (Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand, and Vietnam).

TX2:

- In 2010, the St. Petersburg Declaration on Tiger Conservation was adopted under the GTI and TX2 was endorsed. Its goal was to double the number of wild tigers across their geographical areas. The WWF is implementing the programme in 13 tiger range countries.
- The Global Tiger Forum (GTF) is the only intergovernmental international body established with members from willing countries to embark on a global campaign to protect the Tiger.
- Conservation Assured Tiger Standards CA|TS: It is a new tool for tiger conservation management. It is a set of criteria which allows tiger sites to check if their management will lead to successful tiger conservation. It is an important part of Tx2 programme.

CHEETAH REINTRODUCTION PROJECT

Why in news?

- Madhya Pradesh forest department seeks to revive the plan to reintroduce Cheetahs in Nauradehi sanctuary.

About the Plan

- National Tiger Conservation Authority (NTCA), is nodal agency for the Cheetahs reintroduction plan.
- In 2009 Project Cheetah was launched and Kuno Wildlife Sanctuary (MP) and Shahgarh area in Rajasthan were also identified as other two sites for cheetah reintroduction plan.
- Nauradehi was found to be the most suitable area for the cheetahs as its forests are not very dense to restrict the fast movement of Cheetahs.
Related Information About Cheetahs

- It was declared extinct in India in 1952 and last spotted in Chhattisgarh in 1947.
- The only mammal to become extinct in India in last 1,000 years.
- IUCN status: Vulnerable

National Tiger Conservation Authority

- It is a statutory body and has overarching supervisory/coordination role as provided in the Wildlife (Protection) Act, 1972. It approves the Tiger Conservation Plan prepared by the State Governments.

BANNI GRASSLAND

Why in news?
- Nomadic tribes (Maldhari) are leaving their villages in Banni region due to water scarcity.
- The Banni grassland of Gujarat (near Rann of Kutch) is the largest natural grassland in the Indian subcontinent known for its scarce rainfall and semi-drought conditions.

Chhari Dhand
- ‘Chhari’ means salt affected and ‘dhand’ means shallow wetland. Chhari-Dhand is a legally protected wetland conservation reserve.
- The Banni Grasslands and Chhari-Dhand form one of the most important bird areas in the desert ecosystems of India.

KAZIRANGA NATIONAL PARK

Why in news?
- The Kaziranga National Park (KNP) had been split into two divisions—the existing Eastern Assam Wildlife and the new Biswanath Wildlife park with Brahmaputra flowing in between.

About the Kaziranga National Park
- Kaziranga protected area was established in 1904 and is located on the edge of the Eastern Himalayan biodiversity hotspot.
- It is a UNESCO world heritage site.
- The park is home to large breeding populations of elephants, wild water buffalo, and swamp deer other than the one-horned rhino.

KHANGCHENDZONGA BIOSPHERE RESERVE

Why in news?
- Recently, Khangchendzonga Biosphere Reserve was included in the UNESCO’s World Network of Biosphere Reserve (WNBR) under the Man and Biosphere Programme (MAB).

UNESCO: MAB PROGRAMME

- Launched in 1971, it is an Intergovernmental Scientific Programme that aims to establish a scientific basis for the improvement of relationships between people and their environments.
- It covers internationally designated protected areas, each known as biosphere reserves, that are meant to demonstrate a balanced relationship between people and nature.
- Now the total number of Biosphere reserves under MAB programme has reached to 686. India has 18 biospheres reserves, of which 11 have been included in the WNBR.
• It combines the natural and social sciences, economics and education to improve human livelihoods and the equitable sharing of benefits, and to safeguard natural and managed ecosystems.

• The Nilgiri Biosphere Reserve was the first reserve from the country to be included in the WNBR.

Others MAB -WNVR site in India

- Gulf of Mannar-Tamil Nadu
- Sundarban-West Bengal
- Nanda Devi-Uttarakhand
- Nokrek - Meghalaya
- Pachmarchi - Madhya Pradesh
- Simlipal - Orissa
- Achanakmar - Amarkantak - Madhya Pradesh
- Great Nicobar-Andaman and Nicobar Island
- Agasthyamala - (Western Ghat) Kerala & Tamilnadu

Khangchendzonga Biosphere Reserve

- It is one of the highest ecosystems in the world and located at tri junction of India (Sikkim), bordering Nepal to the west and Tibet (China) to the north-west.

- The Khangchendzonga National Park (KNP), which comprises the core area of the KBR, was inscribed as India's first ‘Mixed World Heritage Site’ in 2016.

LEGISLATIONS FOR ENVIRONMENT IN INDIA

ENVIRONMENT PROTECTION ACT, 1986

- In the wake of the Bhopal tragedy, the government of India enacted the Environment (Protection) Act of 1986. In this Act, main emphasis is given to “Environment”, defined to include water, air and land and the inter-relationships which exist among water, air and land and human beings and other living creatures, plants, micro-organisms and property. It contains the provision of “Citizens” Suit under which any person, in addition to authorized government officials, may file a complaint with a court alleging an offence under the Act.

Environmental initiatives under the act

1. Central Ground Water Authority (CGWA), Ministry of water resource, river development and Ganga rejuvenation
2. Genetic Engineering Approval Committee (GEAC).
   a. It functions under the Ministry of Environment and Forests.
   b. It is the apex body to accord environmental approval of activities involving large scale use of micro-organisms and recombinants in research and industrial production.
   c. It is also mandated with approving there is ease of genetically engineered organisms and products into the environment, including experimental field trials.
3. National Ganga River Basin Authority (NGRBA)
4. Declaration of Ganges as the 'National River' of India.
5. National Coastal Zone Management Authority (NCZMA) and State Coastal Zone Management Authority (SCZMA) for enforcement and monitoring of the CRZ Notification.
6. In exercise of the powers under this act, the Central government has constituted Environment Pollution (Prevention and Control) Authority for the National Capital Region.
7. Eco Sensitive Zone is notified under Environment (Protection) Act, 1986 by the Union Ministry of Environment and Forest.
8. Environmental Impact Assessment (EIA) has now been made mandatory under the Environmental (Protection Act, 1986 for 29 categories of developmental activities involving investments of Rs. 50 crores and above.)
9. Rules framed under the act include
   a. Ozone Depleting Substances (Regulation and Control) Rules
   b. Plastic Waste (Management & Handling) Rules
   c. E-waste Management and Handling Rules
   d. The Hazardous Wastes (Management, Handling and Trans boundary Movement) Rules
   e. Bio-Medical Waste (Management and Handling) (Amendment) Rules
   f. The Municipal Solid Wastes (Management and Handling) Rules
   g. The Rules for the Manufacture, Use, Import, Export and Storage of Hazardous micro-organisms Genetically engineered organisms or cells
   h. Noise Pollution (Regulation and Control) Rules

**ECO-SENSITIVE ZONE (ESZ)**

- ESZ is created to act as a buffer for further protection around Protected Areas (PAs) such as National Parks and Wildlife sanctuaries.
- ESZ is notified under Environment (Protection) Act, 1986 by the Union Ministry of Environment and Forest.

**WILDLIFE PROTECTION ACT, 1972**

- It provides protection to plant, animal as well as bird species.
- It extends to whole of India except Jammu and Kashmir. It deals with Trade or Commerce in Wild Animals, Animal Articles and Trophies

**There are 4 Types of protected areas in Wildlife Protection Act**

1. National Park
2. Sanctuary
3. Conservation reserve
4. Community reserve
Six Schedules of Wildlife Protection Act

- **Schedule-I & Part-II of Schedule-II** - Absolute Protection; can’t be declared as vermin; highest penalties
- **Schedule III & IV** - Protection but penalties are lower; can be declared as vermin.
- **Schedule-V** - Animals which may be hunted
- **Schedule VI** - Endemic Plants. These are prohibited from cultivation and planting.

Authorities Established under Wildlife Protection Act

1. **Indian/National Board for Wildlife (IBWL/NBWL)**
   - It is chaired by the prime minister of India.
   - Primary function of the Board is to promote the conservation and development of wildlife and forests.
   - It has power to review all wildlife-related matters and approve projects in and around national parks and sanctuaries. No alteration of boundaries in national parks and wildlife sanctuaries can be done without the approval of the NBWL.

2. **National Tiger Conservation Authority (NTCA)**
   - Constituted under the Ministry of Environment, Forests and Climate Change. It conducts tiger census in India.

3. **Wildlife Crime Control Bureau**
   - It complements the efforts of the state governments, primary enforcers of the Wildlife (Protection) Act and other enforcement agencies of the country.

4. **Wildlife Advisory Board**
   - Constituted by the state government. It advises state govt in the selection of areas to be declared as Sanctuaries, National Parks, and Closed Areas.

5. **Central Zoo Authority**
   - It is responsible for oversight of zoos. Every zoo in the country is required to obtain recognition from the Authority. It identifies endangered species for captive breeding in a zoo. It is an affiliate member of the World Association of Zoos and Aquariums.

6. **Wildlife Institute of India**
   - WII is an autonomous institution under the Ministry of Environment Forest and Climate change (MoEFCC). WII carries out wildlife research in areas of study like Biodiversity, Endangered Species, Wildlife Policy, Wildlife Management, Wildlife Forensics, Spatial Modeling, Eco-development, Habitat Ecology and Climate Change.

**NATIONAL GREEN TRIBUNAL**

- It has been established in 2010 under the National Green Tribunal Act 2010. It has been established for expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- It can award relief and compensation for damages to persons and property.
- The Tribunal is not bound by the Code of Civil Procedure, 1908. But it is guided by principles of natural justice. The Tribunal is mandated to dispose applications or appeals within 6 months. New Delhi is the Principal Place of Sitting of the Tribunal.
- Bhopal, Pune, Kolkata and Chennai shall be the other four place of sitting.
It adjudicates matters relating to following Acts only -

1. Water (Prevention and Control of Pollution) Act, 1974
2. Air (Prevention and Control of Pollution) Act, 1974
3. Environment (Protection) Act, 1986
5. Forest (Conservation) Act, 1980
6. Biological Diversity Act, 2002

**Note:** It doesn’t have jurisdiction over Wildlife Protection Act, 1972 and other acts enacted by the state governments.

### INTERNATIONAL CONVENTIONS

#### CITES

**What is CITES?**

- It is an International agreement between governments, drafted as a result of a resolution adopted in 1963 at a meeting of members of International Union for Conservation of Nature (IUCN).
- It ensures that international trade in the specimens of wild animals and plants does not threaten their survival.
- CITES regulates international trade in species by including species on one of the three Appendices.
- **Appendix I** - includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances e.g. Tiger, Himalayan brown bear, elephant, and Tibetan antelope.
- **Appendix II** - includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival e.g. Hippopotamus, big leaf mahogany, and the gray wolf.
- **Appendix III** - a species included at the request of a country which the n needs the cooperation of other countries to help prevent illegal exploitation, e.g. walrus, Hoffmann’s two-toed sloth, and the red-breasted toucan.

**Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal:**

It aims at preventing and minimizing the generation of wastes including those ending up in the ocean. Much of the marine litter and micro plastics found in the sea may be determined as ‘waste’ as defined under the Convention.

Stockholm Convention for persistent organic pollutants

- **RAMSAR CONVENTION** The Convention on Wetlands, called the Ramsar Convention, is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources.
- The Convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. Since then, almost 90% of UN member states, from all the world’s geographic regions, have acceded to become “Contracting Parties”
UNITED NATION CONVENTION TO COMBAT DESERTIFICATION

- It is the only internationally legally binding framework regarding desertification. The Convention addresses the arid, semi-arid and dry sub-humid areas, known as the dry lands.

THE CENTRAL POLLUTION CONTROL BOARD (CPCB)

- It is statutory organisation, was constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- Principal Functions of the CPCB, as spelt out in the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981.
  (i) to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution, and
  (ii) to improve the quality of air and to prevent, control or abate air pollution in the country.

WORLD WIDE FUND FOR NATURE (WWF)

- It is an international non-governmental organization. The world’s largest conservation organization. It is working in the field of the wildlife preservation, and the reduction of humanity’s footprint on the environment. It is also concerned with endangered species, sustainable production of commodities and climate change.
- It publishes (Living Planet Report).
- The report measures the abundance of biodiversity based on data from the Zoological Society of London (ZSL).

WWF organizes a symbolic event – Earth Hour.

- Under Earth Hour, across the globe, various organisations, households and individuals switch off their lights for one hour on a specific day towards the end of March.

BIRDLIFE INTERNATIONAL

- It is an environmental conservation Non-Profit Organisation. It recognizes Key Biodiversity area and Important Bird and Biodiversity area. Key Biodiversity Areas (KBA) are sites that contribute to the global persistence of biodiversity for threatened plant and animal species in terrestrial, fresh water and marine ecosystems.
- Important Bird and Biodiversity Areas (IBAs) are KBAs identified for birds using internationally agreed criteria. BirdLife’s Forests of Hope Programme aims to prevent deforestation, protect trees and to restore natural forests in the tropics.
- Bird Life International publishes a quarterly magazine, BirdLife - The Magazine.
- It is the official Red List authority for birds, for the International Union for Conservation of Nature.

BOMBAY NATURAL HISTORY SOCIETY (BNHS)

- Non-governmental organization in India engaged in conservation research in India Collaborated with technology company Accenture to create Internet of Birds.
- Internet of Birds is an online tool for bird watchers that identifies birds based on their photos.
ZOOGICAL SURVEY OF INDIA (ZSI)

• ZSI is a premier Indian organisation in zoological research and studies. It was established on 1 July 1916 to promote the survey, exploration and research of the fauna. It has been established under the Ministry of Environment, Forest and Climate Change.
• Following are its objectives: Status survey of Threatened and Endemic species.

BOTANICAL SURVEY OF INDIA

• Was established in 1890 with the objectives of exploring the plant resources of the country and identifying plant species with economic virtue. Like ZSI, it also works under MoEF & CC. It publishes Red Data Book, inventory of endangered plants. Its Head Quarter is in Kolkata.

INDICES IN NEWS

Global Risks Report 2019

• The Global Risks Report is released by the World Economic Forum (WEF).

Climate Change Performance Index (CCPI)

• The Climate Change Performance Index (CCPI) is an annual publication by Germanwatch, NewClimate Institute and Climate Action Network Europe. It evaluates the climate protection performance of 60 countries, responsible for over 90% of global energy-related CO2 emissions.

Living Planet Report 2018

• The bi-annual Living Planet Report is released by the World Wide Fund for Nature. The Report tracks more than 4,000 species of mammals, birds, fish, reptiles and amphibians.
(I) TERMS AND CONCEPT IN NEWS

**Countervailing Duty (CVD)**
- Additional import duty that is imposed to neutralize the negative effects of subsidies.
- Safeguard duty: Tariff imposed to restrict imports of a product temporarily (take “safeguard” actions) if its domestic industry is injured or threatened with injury caused by a surge in imports.

**Anti-dumping Duty (ADD)**
- Protectionist tariff that a domestic government imposes on foreign imports that are priced lower than their value in their home market.

**Inverted Duty Structure**
- It implies a situation where import duty on finished goods is low compared to the import duty on raw materials that are used in the production of such finished goods.
- This makes domestically produced goods more expensive than their imports from other countries.

**Limited Liability Partnerships**
- It is an alternative corporate business vehicle that provides the benefits of limited liability of a company, but allows its members the flexibility of organizing their internal management on the basis of a mutually arrived agreement, as is the case in a partnership firm.
- The LLP as a separate legal entity, is fully liable of its assets but liability of the partners is limited to their agreed contribution in the LLP.

**Universal basic Income (UBI)**
- It is an unconditional cash transfer to every citizen of the country periodically.

**Minimum Basic Income**
- Income Support to the citizens from the state.

**National Examples**
- Madhya Pradesh Unconditional Cash Transfers Project, more than 6000 beneficiaries were given income support besides existing subsidies.

**International Examples**
- Under Finland’s “Perustulokokeilu” (Basic Income Experiment), unconditional income support was provided to the selected pool of unemployed people between 25 & 58.
- Brazil has an ‘anti-poverty’ programme called ‘BolsaFamilia’, involving a cash grant to families below a certain income level, provided they meet conditions such as overseeing their children’s school attendance.

**Infrastructure Investment Trusts (InvITs)**
- These are mutual fund like institutions that enable investments into the infrastructure sector by pooling small sums of money from multitude of individual investors for directly investing in infrastructure so as to return a portion of the income to unit holders of InvITs, who pooled in the money.
- InvITs are regulated by Securities and Exchange Board of India.
**Masala Bonds:**
- Masala bonds are rupee-denominated debt securities issued outside India by Indian companies.
- The bonds are directly pegged to the Indian currency. So, investors directly take the currency risk or exchange rate risks.

**External Commercial Borrowings**
- It is the financial instrument used to borrow money from the foreign sources of financing to invest in the commercial activities of the domestic country. Simply, borrowing money from the non-resident lenders and investing it in the commercial activities of India is called as external commercial borrowings.

**Withholding Tax**
- It is an amount that an employer withholds from employees’ wages and pays directly to the government. The amount withheld is a credit against the income taxes the employee must pay during the year. It also is a tax levied on income (interest and dividends) from securities owned by a non-resident as well as other income paid to nonresidents of a country.

**Roll-over Risk**
- It is a risk associated with the refinancing of debt. Roll over risk is commonly faced by countries and companies when a loan or other debt obligation (like a bond) is about to mature and needs to be converted, or rolled over, into new debt. If interest rates have risen in the meantime, they would have to refinance their debt at a higher rate and incur more interest charges in the future—or, in case of a bond issue, pay out more in interest.

**Operational and Financial creditors**
- Financial creditors are those whose relationship with the entity is a pure financial contract, such as a loan or debt security.
- Operational creditor (unsecured creditor) refers to anyone who has provided goods or services and the payment for same is due from the corporate debtor.
- The IBC creates the distinction between a financial and operational creditor based on the nature of the transaction (i.e., purely financial transactions or transactions related to day to day operations).

**National Minimum Wage**

**Minimum Wage**
- It is one, which is paid by an employer/industry to its workers irrespective of its ability to pay.
- It must provide not only for the bare sustenance of life, but for the preservation of the efficiency of the workers.
- The Expert Committee under the Chairmanship of Dr. Anoop Satpathy has brought out a timely technical Report on “Determining the Methodology for the Fixation of the National Minimum Wage (NMW)”.
- A uniform national minimum wage of Rs 9,750 per month or region-wise minimum wages ranging from Rs 8,892-Rs 11,622 per month for five regions (as of July 2018) has been recommended.

**International Conventions on Minimum Wages**
- The ILO Minimum Wage Fixing Machinery Convention, 1928
- Minimum Wage Fixing Machinery (Agriculture) Convention, 1951
- Minimum Wage Fixing Convention, 1970
CAPITAL GAINS TAX

- It is a tax levied on capital gains, profits an investor realizes when he sells a capital asset for a price that is higher than the purchase price.
- Tax is levied when an asset is realized, not while it is held by an investor.
- **Budget 2018** imposed long term capital gains (LTCG) tax @ 10%.
- No indexation benefit (allowance for inflation) would be allowed.

BASE EROSION AND PROFIT SHIFTING (BEPS):

- Tax planning strategies that exploit the gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations e.g. Panama, Cayman Island.
- Usually, there is little or no economic activity at those locations.
- It is aimed at paying little or no overall corporate tax.
- BEPS is of major significance for developing countries due to their heavy reliance on corporate income tax, particularly from multinational enterprises (MNEs)

FLOOR SPACE INDEX

- It is the total floor area built per square metre of land.
- For example, if a plot size is 3,000 sq.ft. and the FSI is 1, it implies that a maximum of 3,000 sq.ft. of built-up area on the plot is permitted. In other words, this will allow you to build, for instance, a two storeyed home with 1,500 sq.ft. area on each floor.
- It is fixed by urban local bodies/ developmental authorities.

TRANSFER PRICING

- Transfer pricing is the setting of the price for goods and services sold between controlled (or related) legal entities within an enterprise. For example, if a subsidiary company sells goods to a parent company, the cost of those goods paid by the parent to the subsidiary is the transfer price.
- When transfer pricing occurs, companies can book profits of goods and services in a different country that may have a lower tax rate.
- Thus they can be used to avoid the tax liability.

ARMS LENGTH PRINCIPLE

- The international tax laws are regulated by the Organization for Economic Cooperation and Development (OECD).
- It says that the transfer prices set between the corporate entities should be in such a way as if they were two independent entities.

ADVANCE PRICING AGREEMENT (APA)

- Under this the two competent authorities (usually a taxpayer and at least one taxation authority) will negotiate in advance to determine the Arms Length Price of the future international transaction. Thus, APAs bring tax certainty, reduce litigation expenses and avoid risk of double taxation.

DOMESTIC SYSTEMICALLY IMPORTANT BANKS (D-SIB)

- D-SIB means that the bank is too big to fail.
- According to the RBI, some banks become systemically important due to their size, crossjurisdictional activities, complexity and lack of substitute and interconnection.
- Banks with assets exceeding 2% of GDP are considered part of this group.
• ICICI Bank, HDFC Bank and SBI are D-SIBs.

• All the banks under D-SIB are required to maintain higher share of risk-weighted assets as tier-I equity.

STRATEGIC OIL RESERVES

• Recently Government invited Saudi Arabia and Oman to participate in the Indian Strategic Petroleum Reserve Programme.

• The government has already built three such reserves
  a. Visakhapatnam, A.P.
  b. Mangalore, Karnataka
  c. Padur, Kerala

• Detailed Project Reports have been prepared for establishing additional crude oil reserves at Chandikhol (Odisha), Rajkot (Gujrat) and Bikaner (Rajasthan).

(II) BANKING

OVERALL ISSUES IN BANKING AND VARIOUS GOVERNMENT INITIATIVES:

NON-PERFORMING ASSET (NPA)

• It is a loan or advance for which the principal or interest payment remained overdue for a period of 90 days or more. In case of Agriculture/Farm Loans, the NPA varies for short duration crop (interest not paid for 2 crop seasons) and long duration crops (interest not paid for 1 Crop season). Banks are required to classify NPAs further into Substandard, Doubtful & Loss assets.

• Substandard assets: Assets which have remained NPA for a period less than or equal to 12 months.

• Doubtful assets: Assets which have remained in the substandard category for a period of 12 months

• Loss assets: Loss asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted, although there may be some salvage or recovery value.

GOVERNMENT INITIATIVES:

PROJECT SASHAKT

• Recently the government announced a comprehensive plan Project Sashakt for the resolution of stressed assets in banking sector

About Project Sashakt

• It aims to strengthen the credit capacity, credit culture and credit portfolio of public sector banks

• It is a five-pronged strategy towards resolution of stressed assets, as recommended by Sunil Mehta Committee.

• Small and Medium Enterprise (SME) resolution approach

• Bank-led resolution approach

• AMC/AIF led resolution approach

• NCLT/IBC approach:

• Asset-trading platform to be created for trading of both performing and NPAs
PROMPT CORRECTIVE ACTION (PCA) BY RBI

- Invoked if NPAs rise above 10% (Asset Quality Review), Capital Adequacy Ratio (CAR) falls below 9%, Return on Assets (RoA) falls below 0.25% (i.e. low profitability) etc.
- RBI imposes several restrictions on the bank such as reducing capital expenditure other than technological upgradation, making dividend payments, borrowing from other banks
- Banks Board Bureau (BBB): Set up in 2016 to recommend for selection of heads of PSBs & Financial Institutions and help banks in developing strategies and capital raising plans.
- Insolvency and Bankruptcy Code (IBC) has helped banks to recover through liquidation of assets.
- 2.11 lakh crores infused into PSBs as are capitalization effort.

THE CAPITAL ADEQUACY RATIO (CAR)

- It is a measure of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures. It is used to protect depositors and promote the stability and efficiency of financial systems around the world. It is also known as capital-to-risk weighted assets ratio.
- Two types of capital are measured
  - Tier one capital It absorbs losses without a bank being required to cease trading
  - Tier two capital it absorbs losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

CAPITAL CONSERVATION BUFFER

What is Capital Conservation Buffer (CCB)?

- It is the mandatory capital that financial institutions are required to hold above minimum regulatory requirement
- According to CCB norms, banks will be required to hold a buffer of 2.5% Risk Weighted Assets (RWAs) in the form of Common Equity, over and above Capital Adequacy Ratio of 9%.
- CCB currently stands at 1.875% and remaining 0.625% was to be met by March 2019.

Significance of CCB

- It is designed to ensure that banks build up capital buffers outside periods of stress which can be drawn down, as losses are incurred.
- The capital buffers increase the resilience of banks to losses, reduce excessive or underestimated exposure sand restrict the distribution of capital

Why in news?

- Reserve Bank of India (RBI) decided to extend the deadline for implementing last tranche of an additional 0.625% to be set aside as capital conservation buffer required under the Basel III norms, by a year (upto March 31, 2020)

Basel Norms:

- Basel III (or the Third Basel Accord or Basel Standards) is a global, voluntary regulatory framework on bank capital adequacy, stress testing, and market liquidity risk. This third installment of the Basel Accords was developed in response to the deficiencies in financial regulation revealed by the financial crisis of 2007-08. It is intended to strengthen bank capital requirements by increasing bank liquidity and decreasing bank leverage.
- Basel is a city in Switzerland, It is head quarter of Bank for International Settlement, which is considered as central bank of all central Banks.
INSOLVENCY AND BANKRUPTCY CODE

Supreme Court’s judgement on IBC

- The Supreme Court upheld the constitutionality of the Insolvency and Bankruptcy Code (IBC) in its "entirety".
- Many of changes were made on the basis of the recommendations of the IBC review committee headed by Corporate Affairs Secretary Injeti Srinivas. It lead to Insolvency and Bankruptcy Code (Second Amendment) Act 2018.

REGIONAL RURAL BANKS

- Regional Rural Banks (RRBs) are financial institutions which ensure adequate credit for agriculture and other rural sectors.
- It was set up on the basis of the recommendations of the Narasimham Working Group (1975), and after the legislations of the Regional Rural Banks Act, 1976.
- The equity of a regional rural bank is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35.
- The RRB’s have also been brought under the ambit of priority sector lending on par with the commercial bank.
- It plays an important role in the Rural Development by helping in easy facilitation of credit to marginal sections of rural areas; also it provides finance to co-operative societies, Primary Credit societies, Agricultural marketing societies.
- In news due to- Amalgamation of Regional Rural Banks

- Union government, in consultation with the NABARD, had decided to go ahead with phase III of the amalgamation of regional rural banks (RRBs), bringing down the number of such entities to 38 from 56 now.

NON-BANKING FINANCIAL COMPANY (NBFC)

- It is a company engaged in the business of loans and advances, acquisition of shares/stocks/bonds/debentures/securities issued by Government or local authority.
- Foreign Investment is allowed up to 100%.
- Recently an infrastructure financing company, Infrastructure Leasing & Financial Services (IL&FS), an NBFC, defaulted on their loan repayment.

Difference between NBFCs & Banks:

- Provides Banking services to People without holding a Bank license,
- An NBFC cannot accept Demand Deposits,
- An NBFC is not a part of the payment and settlement system and as such,
- An NBFC cannot issue Cheques drawn on itself, and
- Deposit insurance facility of the Deposit Insurance and Credit Guarantee Corporation is not available for NBFC depositors, unlike banks
- An NBFC is not required to maintain Reserve Ratios (CRR, SLR etc.)
- An NBFC cannot indulge Primarily in Agricultural, Industrial Activity, Sale-Purchase, Construction of Immovable Property.
**BANK CONSOLIDATION**

- The government has decided that Bank of Baroda, Vijaya Bank and Dena Bank shall be "amalgated" making the new entity India’s third Largest Bank.
- Background Narasimham committee of 1991 had recommended a restructuring of Indian banks with 3-4 large banks that could be positioned as global banks and 8-10 smaller ones with a national footprint.
- The P.J. Nayak committee in 2014 suggested that government should privatise or merge some PSBs.
- In 2017, the government had approved the "merger" of SBI’s five associate banks and later of the Bharatiya Mahila Bank (BMB) with SBI.

**SMALL FINANCE BANKS**

- They provide basic banking services like accepting deposits and lending to the unbanked sections such as small farmers, micro business enterprises, micro and small industries and unorganised sector entities.
- They were created with an aim to encourage financial inclusion by provision of savings vehicles and supply of credit to small business units.
- The minimum paid-up equity capital for small finance banks shall be Rs. 100 crore.
- The promoter’s minimum initial contribution to the paid-up equity capital of such small finance bank shall at least be 40 per cent (can be brought down to 26 per cent within 12 years from the date of commencement of business of the bank.
- They are required to maintain Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).
- They are required to extend 75 per cent of its Adjusted Net Bank Credit (ANBC) to the sectors eligible for classification as priority sector lending (PSL) by the Reserve Bank.

**URBAN COOPERATIVE BANKS (UCBS)**

- It refers to primary cooperative banks located in urban and semi-urban areas.
- The Urban Cooperative Banks (UCBs) are registered as cooperative societies under the provisions of, either the State Cooperative Societies Act of the concerned State or the Multi State Cooperative Societies Act, 2002.
- The Reserve Bank regulates and supervises the banking functions of UCBs under the provisions of Banking regulation Act, 1949 (AACS).

IN NEWS as The Reserve Bank of India (RBI) allowed voluntary transition of the Urban Co-Operative Banks (UCB) into Small Finance Banks (SFB). The move is an outcome of the recommendations made by the High Powered Committee on Urban Cooperative Banks under R Gandhi in 2015.

**PAYMENT BANK**

- A payments bank is a differentiated bank, offering a limited range of products.
- It cannot lend to customers.
- It can accept demand deposits, issue ATM/debit cards but not credit cards.
- It can accept deposits up to Rs. 1 Lakh per account from individuals and small businesses.
- Apart from maintaining Cash Reserve Ratio with the RBI, it will be required to invest minimum 75% of its “demand deposit balances” in Statutory Liquidity Ratio (SLR) eligible Government securities/treasury bills with maturity up to one year.
- It hold maximum 25% in current and time/fixed deposits with other scheduled commercial banks for operational purposes and liquidity management.
- 25% of its branches must be in the unbanked rural area.
- The promoter’s minimum initial contribution to equity capital will have to be at least 40% for the first five years.
INDIA POST PAYMENT BANK

- Prime Minister on 1st September launched the India Post Payments Bank (IPPB) that offers doorstep banking to customers
- It has been incorporated under the Companies Act, 2013 as a public limited company with 100% Government of India equity under Department of Posts (DoP) and is governed by the Reserve Bank of India.
- It aims to provide banking and financial services to people in rural areas, by linking all 1.55 lakh post office branches with IPPB. This will create the country’s largest banking network with a direct rural presence.

About IPPB

- India Post Payments Bank has been incorporated as a public sector company under the department of posts, with 100% government equity and is governed by the Reserve Bank of India.
- It will focus on providing banking and financial services to people in rural areas, by linking all the 1.55 lakh post office branches with India Post Payments Bank services. This will create the country’s largest banking network with a direct presence at the village level.
- It will not offer any ATM debit card. Instead, it will provide its customers a QR Code-based biometric card. The card will have the customer’s account number embedded and the customer does not have to remember his/her account number to access the account.

UPI 2.0 LAUNCHED

- Recently, National Payment Corporation of India (NPCI) has upgraded the Unified Payment Interface (UPI) with enhanced features.
- New features in UPI 2.0

UPI 2.0 in New features

- Linking of overdraft account - Apart from the savings and current accounts, the UPI users can now link their overdraft account to it and all the facilities and benefits of overdraft account would be made available to the users.
NPCI
- It is an initiative of Reserve Bank of India (RBI) and Indian Banks’Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007
- It is the umbrella organization for all retail payments and settlement systems in the country.
- It also manages the UPI platform
- It links all the ATMs in India.

WORLD’S FIRST BLOCKCHAIN BOND
- The World Bank has launched the world’s first public bond created and managed using only block chain in order to test how the technology might improve current bond sales practices.

More About News
- The project is called 'BONDI'(Block chain Operated New Debt Instrument), which is also reference to the Bondi Beach in Sydney.
- Commonwealth Bank of Australia (CBA) has been mandated by the World Bank to be the sole arranger of the bond.
- It is a Kangaroo bond (foreign bonds issued in Australia in local currency).

Benefits of Block chain Bonds
- The launch of the blockchain bond is an initial step in moving bond sales away from manual processes towards automation.
- Block chain technology could help in cutting down bond settlement time “from T+2 days currently to T+2 minutes”.
- The technology has potential to deliver substantial cost savings as intermediary activities can be eventually reduced or removed.
- It also improves the reputation of crypto-technologies which are currently viewed suspiciously.

LEGAL ENTITY INDENTIFIER
- Reserve Bank of India has made Legal Entity Identifier (LEI) code mandatory for all market participants, other than individuals.

What is LEI?
- It is a 20 character global reference number conceived by G20 that uniquely identifies every legal entity or structure that is party to a financial transaction, in any jurisdiction.
- Internationally LEI is implemented and maintained by Global Legal Entity Identifier Foundation through Local Operation Units (LOU) established by each country independently and voluntarily.
- LEI information is publicly available free of charge and It is reviewed, updated and validated annually by LOUs.
- In India entities can obtain LEI from Legal Entity Identifier India Ltd (LEIL) (only LOU of India), subsidiary of The Clearing Corporation of India Ltd, recognized by RBI under Payment and Settlement Systems Act, 2007

Global Legal Entity Identifier Foundation:
- It is a not-for-profit organization established by the Financial Stability Board in June 2014.
- It is overseen by the LEI Regulatory Oversight Committee, representing public authorities from around the globe.
- It publishes Global LEI Index.
OMBUDSMAN SCHEME FOR DIGITAL TRANSACTIONS (OSDT)

Why in News?
- Recently Reserve Bank of India (RBI) launched Ombudsman Scheme for Digital Transactions (OSDT)

About Banking Ombudsman Scheme 2006
- The Banking Ombudsman is a quasi-judicial authority appointed by the RBI
- It aims to provide a cost-effective grievance redressal mechanism to customers.
- All Scheduled Commercial Banks, Regional Rural Banks & Scheduled Primary Co-operative Banks are covered under the Scheme.
- The complaint has to be first filed in the respective banks before approaching Ombudsman. The power of Appellate Authority, which is vested with a Deputy Governor of the RBI. RBI has extended the scheme to deposit taking Non-Banking Finance Companies (NBFC).

DIGIDHAN MISSION
- The government has extended the Digidhan Mission till 2019-20 with the primary objective of promoting digital payments as well as to increase the acceptance of digital payment infrastructure.
- Under the Mission, new policy measures and interventions will be proposed to design tax incentives to promote digital payments.
- Mechanisms will be devised to monitor the regional penetration of digital payments by geo-tagging the digital payment transactions.
- The Mission is implemented by Ministry of Electronics and Information Technology.

(III) Taxation

ANGEL TAX

Why in news?
- The Government has widened the definition of startups to partly address angel tax woes of the startups. Earlier, several startups were served notices under Section 56 (2) of the Income Tax Act, which provides for taxation of funds received by an entity.

What is Angel Tax?
- It is a levy of 30% on the unlisted companies that have raised capital through sale of shares at a value above their fair market price. This excess capital is treated as income from other sources and is taxed.
- Fair value is a rational and unbiased estimate of the potential market price of a good, service, or asset. It is determined by the tax authorities.
- It was introduced in 2012 to prevent laundering of illegal wealth, by investing in shares of unlisted start-ups at extraordinary valuations.

Angel Investor and venture Capital:
- An angel investor (also known as a business angel, informal investor, angel funder, private investor, or seed investor) is an affluent individual who provides capital for a business start-up, usually in exchange for convertible debt or ownership equity.
- Venture capital is financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential. Venture capital generally comes from well-off investors, investment banks and any other financial institutions.
GST REGIME

- In recent months, major decisions have been taken for changes in GST regime by GST Council.

Recent Changes in GST Regime

- Setting up of Goods and Services Tax Appellate Tribunal: It is a quasi-judicial body that will mediate in indirect tax disputes between states and centre.

- Goods and Services Tax Appellate Tribunal is the forum of second appeal in GST laws against the orders in first appeals issued by the Appellate Authorities under the Central and State GST Acts.

- It is the first common forum of dispute resolution between Centre and States.

OTHER ASPECTS RELATED TO GST

E-Way Bill

- e-way bill is a document required to be carried by a person in charge of the conveyance carrying any consignment of goods of value exceeding Rs 50,000, for sales beyond 10 km in the new Goods and Services Tax (GST) regime.

- It offers the technological framework to track intra-state as well as inter-state movements of goods.

National Anti-profiteering Authority (NAA)

- The National Anti-profiteering Authority (NAA) was established under section 171 of the Central Goods and Services Tax Act, 2017. The NAA was set up to monitor and to oversee whether the reduction or benefit of input tax credit is reaching the recipient by way of appropriate reduction in prices.

GST council

- It is a constitutional body under article 279(A) for making recommendations to the Union and State Government on issues related to GST.

- It is chaired by the Union Finance Minister and other members are the Union State Minister of Finance and Ministers in-charge of Finance of all the States.

Goods and Services Tax Network (GSTN)

- It is a not for profit company governed under section 8 of the companies Act.

Why in News?

- The Union Cabinet has approved increasing of Government ownership in Goods and Services Tax Network (GSTN).

- It has decided that the entire 51% equity held by the Non-Government Institutions in GSTN will be acquired equally by the Centre and the State Governments.

- Hence the restructure GSTN will have 100% government ownership equally distributed between the Centre (50%) and the States (50%).

Reverse Charge Mechanism

- Reverse Charge means the liability to pay tax is on the recipient of supply of goods or services instead of the supplier of such goods or services in respect of notified categories of supply.
Operational Clean Money

- Income Tax Department (ITD) has initiated Operation Clean Money

About:
- Operation Clean Money Mission aims to create a tax compliant society through a fair, transparent and non-intrusive tax administration where every Indian takes pride in paying taxes

DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE (DPIIT)

- The Department of Industrial Policy and Promotion (DIPP) has been renamed as the Department for Promotion of Industry and Internal Trade (DPIIT) with a mandate to deal with matters related to start-ups, facilitating ease of doing business among others.

Details
- DIPP (under the Ministry of Commerce and Industry) was established in 1995 and reconstituted in the year 2000 with the merger of the Department of Industrial Development.
- It looked after external trade earlier and the matters related to internal trade (including retail trade, welfare of traders & their employees etc.) were under the domain of the Ministry of Consumer Affairs.
- With this, both internal and external trade has come under the same ministry i.e. Ministry of Commerce and Industry, through this department.

Other functions of this body include:
- Formulation of industrial policy and strategies
- Monitoring of industrial growth
- Formulation of FDI policy and its regulation
- Formulation of policies relating to various IPRs
- Coordinates with UN Industrial Development Organization

STRATEGIC OIL RESERVES

- Recently, India received a consignment of 2 million barrels of crude oil from United Arab Emirates (UAE) for India’s strategic petroleum reserve at Mangalore.

About Strategic Oil Reserves
- It is storage of crude oil which would act as a cushion during any external supply disruptions or supply-demand mismatch shock.
- The crude oil storages are constructed in underground rock caverns and are located on the East and West coast of India. They are considered to be more environment friendly and incur less evaporation loss than ground level storage.
- Construction of storage facilities are maintained by Indian Strategic Petroleum Reserves Limited (a SPV of Oil Industry Development Board under Ministry of Petroleum and Natural Gas).
- Presently, strategic reserves are situated at Visakhapatnam (Andhra Pradesh), Mangalore (Karnataka), and Padur (Karnataka). Moreover, project of three additional reserves is in pipeline -at Chandikhol (Odisha), Bikaner (Rajasthan) and Rajkot (Gujarat).
- Recently, the Visakhapatnam Strategic Petroleum Reserve (SPR) facility was operationalized.
Oil & Gas Scenario in India

- 3rd largest oil consuming nation globally.
- 4th largest Liquefied Natural Gas (LNG) importer after Japan, South Korea & China
- By 2020, India will be the largest oil importer in the world (International Energy Agency)

RIVER INFORMATION SYSTEM

Why in news?

- The Union Minister of Shipping recently inaugurated the Phase 2 of the River Information System on National Waterway-1 (River Ganga) between Farakka and Patna (410 km).

About River Information System

- It is a form of vessel traffic management system using a combination of tracking and meteorological equipment with specialized software designed to optimize traffic and exchange information real-time between vessels.
- The Inland Waterways Authority of India (IWAI) launched a new portal LADIS - Least Available Depth Information System to provide real-time data on least available depths for ship/barge.

INTERNATIONAL FINANCE SERVICES CENTER AUTHORITY BILL

Why in News?

- The Union Cabinet has approved the International Financial Services Centres (IFSC) Authority Bill, 2019.

What is an IFSC?

- SEZ act provides for the establishment of an IFSC in India within an SEZ in India and enables the Central Government to regulate IFSC activities.
- Gujarat International Finance Tech-City Co. Ltd (GIFT) is being developed as the country’s first IFSC.
- IFSC has been designated for all practical purposes as a 'deemed foreign territory' which would have the same ecosystem as other offshore locations, but which is physically on Indian soil.

IV) SCHEMES

POWER ASSET REVIVAL THROUGH WAREHOUSING AND REHABILITATION (PARIWARTAN)

- The Rural Electrification Corporation (REC) has finalised a plan called Pariwartan to revitalize stressed power sector assets.
- Under the scheme government has planned to warehouse stressed power projects totaling 25,000 megawatts (MW) under an asset management and rehabilitation company (AMRC) jointly owned by the financial institutions (Power finance corporation and lending banks) to protect the value of the assets and prevent their distress sale under the insolvency and bankruptcy code till demand for power picks up.
- The scheme is similar to SAMADHAN (Scheme of Asset Management and Debt Change Structure) under which the SBI led bankers’ consortium took over unsustainable debt of stressed power plants to avoid their liquidation.
Rural Electrification Corporation

- It is a Navratna company under the administrative control of the Ministry of Power,
- It is the nodal agency by the Government of India for implementation of Saubhagya (Pradhan mantri Sahaj Bijli Har Ghar Yojana) and DDUGJY (Deendayal Upadhyaya Gram Jyoti Yojana).
- It is the coordinating agency for rolling out UDAY (Ujwal Discom Assurance Yojana)

15TH FINANCE COMMISSION - TERMS OF REFERENCE

15th Finance Commission came under allegations that the terms of reference under which it operates may end up favouring northern States more than southern ones

About:
- The Fifteenth Finance Commission was constituted in November 2017 under Article 280 of the Indian Constitution.
- The Commission shall make its report available by 30th October, 2019, covering a period of five years commencing 1st April, 2020.

CLEAN ENERGY MINISTERIAL (CEM)

- It is a high-level global forum to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy. 21st Century Power Partnership (21CPP)
- It is a multilateral effort of the Clean Energy Ministerial and serves as a platform for public-private collaboration to advance integrated policy, regulatory, financial, and technical solutions for the large-scale deployment of renewable energy in combination with deep energy efficiency and smart grid solutions.

FIRST FREIGHT VILLAGE

- India’s first freight village is being developed in Varanasi.
- The objective of the project is to support economic development in the hinterland of the multimodal terminal at Varanasi and reduce logistics cost in the Eastern Transport Corridor and its influence zone.
- The village is being funded by the World Bank and it is being implemented by the inland waterways authority of India.
- The village will also have the Varanasi waterways terminal which is being developed under the Jal Marg Vikas project.

What is Freight Village?

- A freight village is a defined area within which all activities relating to transport, logistics and the distribution of goods, both for national and international transit, are carried out by various operators

JAL MARG VIKAS PROJECT

- The project envisages the development of waterway (for commercial navigation) between Allahabad and Haldia on Ganga River that will cover a distance of 1620 km.
- The project covers Uttar Pradesh, Bihar, Jharkhand and West Bengal.

SWIFT - SINGLE WINDOW INTERFACE FOR FACILITATING TRADE

- Single Window provides a single platform for relevant agencies like Wildlife, Drug Control, Animal Quarantine, Plant Quarantine, FSSAI and Textile Committee for necessary clearance or certification before the goods are released inland from the ports
Optimal use of SWIFT can ensure effective quality control of all the imports of products under QCO/technical regulations. Market Economy Status of the WTO

MES is accorded by the WTO to the countries where economic decisions and the pricing of goods and services are guided solely by open competition, with little or no government intervention or central planning.

China’s bid for this status is opposed by the US, the EU, India and other parties.

If granted this status, imposition of anti-dumping duties and other trade defences gets difficult to impose against such a nation.

COALMINE SURVEILLANCE & MANAGEMENT SYSTEM (CMSMS) AND ‘KHAN PRAHARI’ APP

Coal Mine Surveillance & Management System (CMSMS)

- The basic objective of CMSMS is reporting, monitoring and taking suitable action on unauthorized coal mining activities.
- It is a web based GIS application through which location of sites for unauthorized mining can be detected.
- The basic platform used in the system is of Ministry of Electronics & Information Technology’s (MeITy) map which provides village level information.

Khan Prahahri

- It is a tool for reporting any activity taking place related to illegal coal mining like rat hole mining, pilferage etc.
- One can upload geo-tagged photographs of the incident along with textual information directly to the system.
- The identity of the complainant shall not be revealed.

CONCESSION FINANCING SCHEME

About Concession Financing Scheme

- The scheme is aim to support Indian entities bidding for strategically important infrastructure projects abroad.
- Under the scheme government provide counter guarantee and interest equalization of 2% to EXIM Bank to offer concessional finance to any foreign Govt. or controlled entity, if any Indian entity, succeeds in getting contract for the execution of a project.
- It will now cover all Indian entities, compared to the earlier stipulation of minimum 75 per cent Indian shareholding.
- EXIM Bank extends credit at a rate not exceeding LIBOR(avg. of six months) + 100 bps. The repayment of the loan is guaranteed by the foreign govt.
- Under the scheme Ministry of External Affairs selects the project, keeping in view strategic interest of India and sends the same to the Department of Economic affairs.
- Recently, government extended the Concessional Financing Scheme (CFS) for five years till 2023

UNEMPLOYMENT ALLOWANCE

The Andhra Pradesh government has announced MukhyaMantriYuvaNestam scheme to provide unemployment allowance of Rs 1000 per month to the unemployed youth (between 22-35 years of age) through DBT using Aadhar.
HYDROCARBONS VISION - 2025

- The Hydrocarbons Vision-2025, presented in the year 2000, laid down the framework which would guide the policies relating to the hydrocarbons sector for the next 25 years.
- It includes:
  - To assure energy security by achieving self-reliance through increased indigenous production and investment in equity oil abroad.
  - To enhance quality of life by progressively improving product standards to ensure a cleaner and greener India.
  - To develop hydrocarbon sector as a globally competitive industry which could be benchmarked against the best in the world through technology upgradation and capacity building in all facets of the industry.

OISD (OIL INDUSTRY SAFETY DIRECTORATE):

- It's a technical directorate under the Ministry of Petroleum and Natural Gas that formulates and coordinates the implementation of a series of self-regulatory measures aimed at enhancing the safety in the oil & gas industry in India. Petroleum and Explosives Safety Organisation (PESO)
- It is the apex department to control and administer manufacture, storage, transport and handling of explosives, petroleum, compressed gases and other hazardous substances in India
- It functions under the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry. HQ at Nagpur

BIDDER INFORMATION MANAGEMENT SYSTEM (BIMS) AND BHOOMI RASHI

Why in news?

- The Ministry for Road Transport & Highways, Ministry for Shipping and Ministry for Water Resources, River Development and Ganga Rejuvenation had launched two IT initiatives - BIMS & Bhoomi Rashi with aim to expedite pre-construction processes relating to bidding and land acquisition respectively.

Bidder Information Management System (BIMS)

- The portal will work as a data base of information about bidders, covering basic details, civil works experience, cash accruals and network, annual turnover etc.
- BIMS will be used by all the project implementation agencies of the Ministry Bhoomi Rashi
- It is a portal that has been developed in collaboration with National Informatics Centre (NIC), comprising the entire revenue data of the country. The entire process flow, from submission of draft notification by the State Government to its approval by the Ministry is online.
- The portal had been created for expediting the process of publication of notifications.
- It has been integrated with Public Financial Management System (PFMS). With this payment of Compensation by the Ministry to the beneficiaries will be just-in-time, and without any parking of funds.
- It will act as one of the key functionalities to facilitate payment related to compensation for land acquisition to all the beneficiaries directly through the Bhoomi Rashi system.

WATER AERODROME

- The Ministry of Civil Aviation has approved a proposal to set up water aerodromes in the country
Details

- Water aerodrome is a defined area on water, including any buildings, installations and equipment, intended to be used either wholly or in part for the arrival, departure and movement of aircraft.
- The Airports Authority of India has identified 5 states i.e. Odisha, Gujarat, Assam, Maharashtra and Andhra Pradesh where water aerodromes would be developed.
- They are proposed to be developed near locations of tourist and religious importance.
- In its first phase, water aerodrome will be established at Chilika Lake in Odisha, Sardar Sarovar Dam and Sabarmati River Front in Gujarat.

NATIONAL COUNCIL FOR VOCATIONAL EDUCATION & TRAINING

- The Cabinet approved the merger of National Council of Vocational Training (NCVT) and National Skill Development Agency (NSDA) into National Council for Vocational Education and Training (NCVET) for improving the outcome of the Skill India mission.

About NCVET

- It will regulate functions of entities engaged in vocational education and training and establish minimum standards for functions of such entities.
- The various functions of NCVET include:
  - Recognition and regulation of awarding bodies, assessment bodies and skill related information providers.
  - Approval of qualifications developed by awarding bodies and Sector Skill Councils (SSCs).
  - Indirect regulation of vocational training institutions through awarding bodies and assessment agencies.
  - Other recent government initiatives for Skill development.
  - Indian Institute of Skills: The Union Cabinet has approved the setting up of Indian Institute of Skills (IISs) at different locations across the country in Public Private Partnership (PPP) mode.
  - Global Skills Park: It is an international skilling institute to provide students with international training methods in world class machinery, tools & equipment. The Asian Development Bank (ADB) has approved a $150 million loan to establish the first Global Skills Park in Madhya Pradesh.

NATIONAL LEVEL ENTREPRENEURSHIP AWARENESS CAMPAIGN: ‘Udyam Abhilasha’

- The Small Industries Development Bank of India (SIDBI) has launched a national level entrepreneurship awareness campaign ‘Udyam Abhilasha’.

About Udyam Abhilasha

- The campaign is to promote entrepreneurship in the 115 aspirational districts identified by NITI Aayog. It would create and strengthen cadre of more than 800 trainers to provide entrepreneurship training to the aspiring youths across these districts thus encouraging them to enter the admired segment of entrepreneurs.
- SIDBI has partnered with Common service centres, e-Governance Services India Limited, a Special Purpose Vehicle, set up by the Ministry of Electronics and IT for implementing the campaign.

About SIDBI

- SIDBI set up on 2nd April 1990 under an Act of Indian Parliament, acts as the Principal Financial Institution for Promotion, Financing and Development of the Micro, Small and Medium Enterprise (MSME) sector as well as for co-ordination of functions of institutions engaged in similar activities.
FOURTH INDUSTRIAL REVOLUTION

- It fuses physical, digital and biological spheres, and is transforming global production systems. Advanced technologies, such as the internet of things, artificial intelligence, blockchain, robotics and additive manufacturing, are changing the future of manufacturing.
- World Economic Forum launches Centre for Fourth Industrial Revolution in India.
- The centre would be based in Mumbai, Maharashtra and it has selected drones, artificial intelligence and blockchain as the first three projects.
- NITI Aayog will coordinate the partnership on behalf of the government and the work of the centre among multiple ministries.

FIRST MULTI-MODAL TERMINAL ON INLAND WATERWAYS

- India’s first multi-modal terminal on inland waterways was inaugurated on by Prime Minister in Varanasi.
- PepsiCo India became the first company to use the country’s inland waterways for container movement by transporting products from its plant in Kolkatato Varanasi in the IWAI vessel, MV RABINDRANATH TAGORE.
- This is the first of the multi-modal terminals being constructed on the National Waterway-1 as part of the World Bank-aided Jal Marg Vikas project of the Inland Waterways Authority of India.

ADVANCED MOTOR FUELS TECHNOLOGY COLLABORATION PROGRAMME (AMF-TCP)

Recently, Cabinet was apprised that India is joining Advanced Motor Fuels Technology Collaboration Programme as a member.

About AMF TCP

- It is one of the International Energy Agency’s (IEA) transportation related Technology Collaboration Programme.
- Its vision is to establish a sustainable transportation system that uses advanced, alternative, and renewable fuels.

About IEA

- It is an autonomous body within the Organization for Economic Co-operation and Development (OECD) framework established in the wake of 1973 oil crisis.
- It works to ensure reliable, affordable & clean energy for its member countries and beyond.
- Its four main areas of focus are energy security, economic development, environmental awareness, and engagement worldwide.
- An IEA Member country must be a member country of the OECD, but not all OECD members are members of the IEA.
- Apart from 30 members, it has 8 association members including India.

COAL SWAPPING SCHEME EXTENDED

Government has decided to extend the Coal Swapping Scheme to private power producers and non-regulated cement and steel sectors.

What is Coal Swapping Scheme?

- It’s a coal supply rationalization scheme to private power producers and non-regulated cement and steel sectors that are importing coal or have domestic supply linkages.
Now bilateral arrangements can be signed between two consumers for swapping full or part of their entitled quantity of coal allocation for at least six months. This will be facilitated via an electronic platform where participants can register, and on a pre-decided time applicants can swap coal supplies with the registered participants. Coal India would be the nodal agency for the swapping arrangement.

**TECHNICAL TEXTILES**

National Conclave on Technical Textiles was held recently in Mumbai.

**What are technical textiles?**

- These are textile material and products manufactured primarily for technical performance and functional properties rather than aesthetic and decorative characteristics.
- They can be woven or non-woven and combinations of both. They can be made up as a single or multiple-layer and can be produced as a composite or a coated material.
- They can be made from any fiber yarn or filament of purely natural or synthetic origin or combination of the two types. They find application not only in clothing but also in areas like agriculture, medical, infrastructure, automotive, aerospace, sports, defence and packaging.

**WTO DISPUTE SETTLEMENT BODY**

The WTO’s Dispute Settlement Body (DSB) agreed to establish panels to review US President Donald Trump’s decision to hit a long line of countries with tariffs of 25 per cent on steel and 10 per cent on aluminium.

**WTO’s Dispute Settlement Body:**

- The General Council convenes as the Dispute Settlement Body (DSB) to deal with disputes between WTO members.
- WTO dispute settlement system is one of the most important innovations of the Uruguay Round of 1986.
- There was a dispute settlement system under GATT 1947.
- The current WTO system builds on, and adheres to, the principles for the management of disputes applied under GATT 1947.
- The Uruguay Round brought important modifications and elaborations to the previous system.

**EXTERNAL COMMERCIAL BORROWINGS**

The Reserve Bank of India has decided to liberalise external commercial borrowing (ECB) norms

External Commercial Borrowings (ECB) refer to commercial loans in the form of bank loans, buyers’ credit, suppliers’ credit, securitized instruments (e.g. floating rate notes and fixed rate bonds, non-convertible, optionally convertible or partially convertible preference shares) availed of from non-resident lenders with a minimum average maturity of 3 years.

**MULTI-COMMODITY EXCHANGE OF INDIA**

The Multi Commodity Exchange has introduced gold option contracts for the first time in India.

- The Multi Commodity Exchange of India Limited (MCX), India’s first listed exchange, is a state-of-the-art, commodity derivatives exchange that facilitates online trading of commodity derivatives transactions, thereby providing a platform for price discovery and risk management.
- The Exchange, which started operations in November 2003, operates under the regulatory framework of Securities and Exchange Board of India (SEBI).
BSE TO LAUNCH COMMODITY DERIVATIVE CONTRACTS

Recently, SEBI has given permission to Bombay Stock Exchange (BSE) to launch commodity derivative contracts in gold and silver.

'Derivative':

- It is a financial security with a value that is reliant upon, or derived from, an underlying asset or group of assets such as stocks, bonds, commodities, currencies etc.
- The derivative itself is a contract between two or more parties, and its price is determined by fluctuations in the underlying asset.
- Objectives of derivatives: Hedging of Risk and Making speculative gain.
- Commodity market is a market that trades in primary economic sector rather than manufactured products. Commodity market includes physical trading in derivatives using spot prices, forwards, futures and options on futures.

(V) AGRICULTURE

THREE YEAR ACTION PLAN: AGRICULTURAL EDUCATION

Recently, the cabinet has approved the continuation of the Three-Year Action Plan (2017-2020) of the scheme for Agricultural Education Division and ICAR Institutes.

- The scheme aims to reduce academic inbreeding and addressing faculty shortage, promotes green initiatives, international ranking, alumni involvement, promoting innovations, technology enabled learning, post-doctoral fellowships, agriculture education portal, and scientific social responsibility.

Indian Council of Agricultural Research (ICAR)

- It is the apex body for co-ordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country.
- Formerly known as Imperial Council of Agricultural Research established on 16 July 1929.
- Presently, it is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare.

KRISHI KALYAN ABHIYAN

Recently launched by Ministry of Agriculture and Farmer Welfare

More about the Abhiyan

- It was launched with an aim to aid, assist and advice farmers to improve their farming techniques and raise their income.
- It has been launched from 1st June 2018 till 31st July 2018 during which various activities to promote best practices and enhance agriculture income will be undertaken in accordance with an action plan formulated by including various departments of the Ministry such as Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW), Animal Husbandry Dairying & Fisheries (DAHD&F) etc.

Various activities under the program are -

- Distribution of soil health cards to all farmers
- 100% coverage of bovine vaccination for Foot and Mouth Disease (FMD) in each village
- 100% coverage of Sheep and Goat for eradication of Peste des Petits ruminants (PPR )
- Artificial insemination saturation
- Demonstration programmes on Micro-irrigation and integrated cropping practice etc.
• It will be undertaken in 25 villages with more than 1000 population each in Aspirational District as identified in consultation with the Ministry of Rural Development in accordance with the guidelines of NITI Aayog.
• The overall coordination and implementation will be done by KrishiVigyan Kendra.

RYTHU BANDHU SCHEME
Recently Telangana government launched a scheme named RythuBandhu (Friend of farmers) scheme to support farmers.
• It is first of a kind investment support scheme for farmers which involves cheque payments to farmers based on their landholdings. The government gives every beneficiary farmer Rs. 4,000 per acres “investment support” before every crop season.
• The objective is to help the farmer meet a major part of his expenses on seed, fertilizer, pesticide, and field preparation.
• The scheme covers 1.42 crore acres in the 31 districts of the state, and every farmer owning landis eligible. Benefits are as follows
• The scheme will avert the need for going to moneylenders for money before every crop season and help rid of debts over the 4-5 years.
• The government will issue cheques rather than make Direct Benefit Transfer (DBT) which eliminates the possibility of banks adjusting DBT money against farmers’ previous dues.
• It can be the template for social and agricultural policy. It is seen as a trial for universal basic income in the country.

KALIA SCHEME
• Krushak Assistance for Livelihood and Income Augmentation, KALIA was launched last month and completed its first phase of registration Tuesday. Under the scheme, Rs 10,180 crore will be spent over three years until 2020-21 in providing financial assistance to cultivators and landless agricultural labourers.
• All farmers will be provided Rs 10,000 per family as assistance for cultivation. Each family will get Rs 5,000 separately in the kharif and rabi seasons, for five cropping seasons between 2018-19 and 2021-22.
• The scheme is not linked to the amount of land owned, it also has provisions for sharecroppers and cultivators, most of whom own little or no land.

PRADHAN MANTRI ANNADATA AAY SANRAKSHAN ABHIYAN (PM-AASHA)
About the scheme
• It has three components complementing the existing schemes of the Department of Food and Public Distribution for procurement of paddy, wheat and other cereals and coarse grains where procurement takes place at MSP:
  • **Price Support Scheme (PSS):** Under this, physical procurement of pulses, oilseeds and copra will be done by Central Nodal Agencies. Besides National Agricultural Cooperative Marketing Federation of India Ltd (NAFED), FCI will also take up procurement of crops under PSS. The expenditure and losses due to procurement would be borne by the Centre.
  • **Price Deficiency Payment Scheme (PDPS):** This will cover all oilseeds for which MSP is notified and Centre will pay the difference between the MSP and actual selling/model price to the farmer directly into his bank account. Farmers who sell their crops in recognized mandis within the notified period can benefit from it.
  • **Pilot of Private Procurement and Stockiest Scheme (PPSS):** In the case of oilseeds, the States will have the option to roll out PPSS in select districts where a private player can procure crops at MSP when market prices drop below MSP. The private player will then be compensated through a service charge up to a maximum of 15% of the MSP of the crop
AGRICULTURE CENSUS

The 10th Agriculture Census 2015-16 was released by the Agriculture Ministry.

What is Agriculture Census?

- Agriculture Census in India is conducted at five-year intervals to collect data on structural aspects of farm holdings. The basic statistical unit for data collection is ‘Operational Holding’
- The first census was conducted with reference year 1970-71. So far, nine censuses have been done and this is the 10th in series.

AGRICULTURE EXPORT POLICY, 2018

Objectives of the Agriculture Export Policy

- To double agricultural exports from present $ 30+ Billion to $ 60+ Billion by 2022 and reach $ 100 Billion in the next few years thereafter, with a stable trade policy regime.
- To diversify our export basket, destinations and boost high value and value added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agriculture products exports.
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- To strive to double India’s share in world agriculture exports by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.

NATIONAL AGRICULTURAL HIGHER EDUCATION PROJECT (NAHEP)

ICAR has recently launched Rs 1100 crore ambitious NAHEP to attract talent and strengthen higher agricultural education in the country.

About NAHEP

- **Funding:** It will be funded by the World Bank and the Indian Government on a 50:50 basis.
- **Objective:** To support Participating Agricultural Universities (AUs) and ICAR in providing more relevant and higher quality education to Agricultural University.
- **Centre of Advanced Agricultural science & Technology (CAAST):**
  - CAAST Grants will be provided to selected participating AUs to establish multidisciplinary centers for teaching, research and extension on critical and emerging agricultural topics.
  - Innovation Grants to selected participating AUs to make AUs reform ready (i.e., attain accreditation); and promote mentoring of non-accredited AUs by existing reform-ready AUs and other interstate and international academic partnerships.

Results Monitoring and Evaluation:

- The Education Division/ICAR would establish a Monitoring and Evaluation (M&E) Cell to oversee the progress of activities across all NAHEP components.

GrAMs (GRAMEEN AGRICULTURAL MARKETS)

- Aim is to develop and upgrade existing 22,000 rural haats into Gramin Agricultural Markets (GrAMs) by strengthening their physical infrastructure (e.g. road linkages, storage capacity etc) using MGNREGS & other Government Schemes.
- GrAMs would be outside the APMC Act regulation & will be linked to e-NAMs.
- The move is based on the recommendations of Ashok Dalwai Committee on doubling farmers’ income, which had advised to build on the available infrastructure of rural haats to establish primary rural agricultural markets where small and medium farmers can secure competitive prices.
Why in news?
• The Centre has identified 1,878 rural haats for modernization & development of infrastructure under Gramin Agriculture Markets (GrAM) programme in the first phase.

"OPERATION GREENS"
• It is a Central Sector Scheme (CSS) and was announced in Budget 2018-19 with an outlay of 500 crores to stabilize the supply of Tomato, Onion and Potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility.

Objectives:
• Enhancing value realization of TOP farmers by strengthening TOP production clusters and their Farmer Producers Organizations (FPOs) ? Price stabilization for producers and consumers ? Reduction in post-harvest losses

RAINFED AGRICULTURE

Why in news?
• Recently a Rainfed Agriculture Atlas was released, which has pointed out that there are biases against rainfed agriculture in the policies of the government.
• It was formed in 2010 is It is published by Revitalizing Rainfed Agriculture Network ,a pan India network of more than 600 members..

About Rainfed Agriculture
• A region is classified as rainfed, if it has less than 40% net irrigated area.
• In India they cover around 180 districts and exist in all agro-climatic regions but are mostly concentrated in the arid and semi-arid area.
• About 61% of India’s farmers rely on rain-fed agriculture and 55% of gross cropped area is under rain-fed farming.
• Rain-fed areas contributed significantly to the country’s food production. They account for 88% of pulses, 40% rice production & support 64% of cattle population in the country.

CORPUS FOR MICRO IRRIGATION FUND

Why in News?
• A dedicated Micro Irrigation Fund (MIF) with National Bank for Agriculture and Rural Development (NABARD) under Pradhan Mantri Krishi Sinchai Yojana (PMKSY) has been set up to provide states financial assistance on concessional rate of interest.

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):
• Launched on 1st July, 2015 with the motto of "Har Khet Ko Paani", the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is being implemented to expand cultivated area with assured irrigation, reduce wastage of water and improve water use efficiency. PMKSY not only focuses on creating sources for assured irrigation, but also creating protective irrigation by harnessing rain water at micro level through "Jal Sanchay" and "Jal Sinchan". Micro irrigation is also incentivized through subsidy to ensure "Per drop-More crop".
NABARD

- Established under NABARD Act of 1981 with an objective of providing & regulating credit to farmers, small-scale industries, cottage & village industries, handicrafts etc in rural areas.
- Refinances the financial institutions like state cooperative agriculture and rural development banks (SCARDBs), state co-operative banks (SCBs), regional rural banks (RRBs), commercial banks (CBs) which finances the rural sector.
- Promotes SHG-Bank linkage programme for encouraging banks to lend to SHGs.
- Long Term Irrigation Fund (LTIF) has been established in NABARD during Budget 2016-17, as a part of PMKSY with an initial corpus of ₹ 20,000 cr and it has been doubled to ₹ 40,000 cr in Budget 2017-18.

INTERNATIONAL YEAR OF MILLETS

- Food and Agriculture Organisation (FAO) has agreed to celebrate ‘International Year of Millets’ in 2023. 2018 is being celebrated as ‘National Year of Millets’ in India which will help raise awareness.

POKKALI PADDY

- Pokkali Paddy is a saltwater-tolerant paddy in the coastal fields of Alappuzha, Ernakulam and Thrissur districts of Kerala. It is an indigenous method of rice-fish rotational cultivation practiced in the coastal belts.
- This GI-Tagged paddy is a single-season (only one yield in a year) paddy raised in saltwater fields between June and November followed by a season of fish-farming. After the harvest, the paddy stubble in the fields acts as food and shelter for shrimp and small fish.

MINIMUM SUPPORT PRICE (MSP)

Why in news?

Debate over different prices of CACP

- Commission for Agricultural Costs and Prices gives three definitions of production costs
- There are several cost concepts that the Commission for Agricultural Costs and Prices (CACP) considers while recommending MSPs of 24 crops.
- Cost A2 - These are the costs the farmer actually pays out of his/her pocket for buying various inputs ranging from seeds to fertilisers to pesticides to hired labour to hired machinery or even leased-in land.
- Cost A2 +FL - In agriculture, farmers also use a lot of family labour and if their cost is imputed and added to cost A2, that concept is called cost A2+FL.
- Cost C2 - the Comprehensive cost (cost C2), it includes imputed costs of family labour, imputed rent of owned land and imputed interest on owned capital.

- National commission on farmers head by M.S Swaminathan recommended a 50 per cent margin over C2, which is also being the demand of the farmers.

About MSP

- The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).
• It protects the farmers against excessive fall in price during bumper production years. The minimum support prices are a guarantee price for their produce from the Government.

• Minimum support prices are **currently announced for 24 commodities** including
  - Seven cereals (paddy, wheat, barley, jowar, bajra, maize and ragi);
  - Five pulses (gram, arhar/tur, moong, urad and lentil);
  - eight oilseeds (groundnut, rapeseed/ mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and nigerseed);
  - copra, raw cotton, raw jute and virginia flu cured (VFC) tobacco.

(VI) Annual Budget

• According to Article 112 of the Indian Constitution, the Union Budget of a year, also referred to as the annual financial statement (AFS), is a statement of the estimated receipts and expenditure of the government for that particular year.

• The Union Budget keeps the account of the government’s finances for the financial year that runs from April 1 to March 31. The Union Budget is classified into Revenue Budget and Capital Budget.

• In the Budget, the receipts and disbursements are shown in three parts in which Government Accounts comprise (i) the Consolidated Fund, (ii) the Contingency Fund and (iii) the Public Account.

• The Annual Financial Statement distinguishes the expenditure on revenue account from the expenditure on other accounts, as mandated by the Constitution of India.

• Finance Ministry – There are five departments in finance Ministry
  1. Department of Economic Affairs
  2. Department of Expenditure
  3. Department of Revenue
  4. Department of Financial Services
  5. Department of Investment and Public Asset Management

**Budgetary Deficits**

• There can be different types of deficit in a budget depending upon the types of receipts and expenditure we take into consideration.
  (i) Revenue deficit
  (ii) Fiscal deficit and
  (iii) Primary deficit

  1. Revenue deficit = Total revenue expenditure – Total revenue receipts.
  2. Fiscal deficit = Total expenditure – Total receipts excluding borrowings.
  3. Primary deficit = Fiscal deficit-Interest payments.

<table>
<thead>
<tr>
<th>Primary Deficit</th>
<th>Basis</th>
<th>Fiscal Deficit</th>
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<tbody>
<tr>
<td>It is the difference between fiscal deficit and interest payment.</td>
<td><strong>Meaning</strong></td>
<td>It is the excess of total expenditure over total receipts (excluding borrowings).</td>
</tr>
<tr>
<td>It is the total borrowing requirements of the government (including interest)</td>
<td><strong>Meaning</strong></td>
<td>It indicates the total borrowing requirements of the government (excluding interest)</td>
</tr>
<tr>
<td>Primary deficit = Fiscal deficit – Interest payment</td>
<td><strong>Meaning</strong></td>
<td>Fiscal Deficit = Total Expenditure–Total Receipts (excluding borrowing)</td>
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</table>
Important Announcement in this years Budget

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

- This fund is intended to provide direct income support at the rate of 6,000 per year.
- This income support will be transferred directly into the bank accounts of beneficiary farmers, in three equal instalments of 2,000 each.
- This will cover all farmers having land less than 2 acre. Around 12 crore small and marginal farmer families are expected to benefit from this.
- PM-KISAN will also provide assured supplemental income to the most vulnerable farmer families, and will meet their emergent needs especially before the harvest season.

‘Marginal Farmer’ means a farmer cultivating (as owner or tenant or share cropper) agricultural land up to 1 hectare (2.5 acres). ‘Small Farmer’ means a farmer cultivating (as owner or tenant or share cropper) agricultural land of more than 1 hectare and up to 2 hectares (5 acres).

Schemes like this are also given by various state governments:

They are-Telangana (RythuBandhu) and Odisha (KALIA).

Comparing Telangana’s RBS with Odisha’s KALIA

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Telangana’s RBS</th>
<th>Odisha’s KALIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>All landowners</td>
<td>Small and marginal landowners; Landless agri HHs; Vulnerable agri HHs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount transferred</th>
<th>6,000 per acre twice a year</th>
<th>£5,000/farmer twice a year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£12,500/landless agriHH/year</td>
<td>£10,000/vulnerable agriHH/year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit</th>
<th>Per acre</th>
<th>Per farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal costs</td>
<td>£12,000 cr/year</td>
<td>£10,138 cr for 3 years i.e. about £3,460 cr/year</td>
</tr>
</tbody>
</table>

| Total beneficiaries | 5.2 million (landowners)   | Cap of 4.5 million (3.02 million farmers, 1 million landless labourers and 5 lakh vulnerable HHs) |

<table>
<thead>
<tr>
<th>Identification of beneficiaries</th>
<th>Updated &amp; purified land records under LRP</th>
<th>Databases on farmers, not necessarily land records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficiaries excluded</td>
<td>Share croppers, landless labourers</td>
<td>Large farmers, and within small and marginal farmers those who pay taxes, or have a family member with a government job</td>
</tr>
<tr>
<td>Mode of payment</td>
<td>Printed cheques/bank orders</td>
<td>Direct bank transfer</td>
</tr>
<tr>
<td>Payment related to actual production</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Pradhan Mantri Shram-Yogi Maandhan’

- This will cover unorganised sector workers. This scheme will cover all unorganized sector workers with income less than 15,000. This pension yojana shall provide them an assured monthly pension of Rs. 3,000 from the age of 60 years on a monthly contribution of a small affordable amount during their working age. It is expected that at least 10 crore labourers and workers in the unorganised sector under this scheme.

Dairy Sector

- Allocation of Rashtriya Gokul Mission has been increased by 750 crore. A new Commission called Rashtriya Kamdhenu Aayog will be set up

Banking Sector

- Recapitalization of banks with 2.6 lakh crore has improved the Financial health of banks.
REPORTS AND INDICES RELATED TO ECONOMY IN NEWS

LOGISTIC SECTOR

Logistic Performance Index 2018

- Recently, World Development Bank released the Logistic Performance Index 2018.
- Highlight of the LPI 2018
  - LPI ranking of India has decreased from 35th in 2016 to 44th in 2018.
  - The score of India has reduced significantly for all the LPI six parameters.
  - Germany has been ranked first and Sweden stood at second rank under LPI 2018

Logistic Performance Index (LPI) 2018

- It is released by Word bank bi-annually, by comparing across 160 countries on logistic sector performance
- The index ranges from 1 to 5, with a higher score representing better performance.

CRISIL DRIPINDEX

- Recently, CRISIL release its rainfall parameter index also known as DRIP (Deficient Rainfall Impact Parameter) Index.

About the Crisil Drip Index

- DRIP Index move away from simply measuring the rainfall volumetric data and captures the interaction between the most critical aspect of vulnerability (irrigation) and weather shocks.
- The higher the CRISIL DRIP score, the more adverse the impact of deficient rains.

Highlight of the Index

- The index showed that four states - Bihar, Karnataka, Maharashtra and Uttar Pradesh - and five crops - jowar, soyabean, tur, maize and cotton - are most hurt by deficient rains.

EASE OF DOING BUSINESS RANKINGS FOR STATES

- Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry has released the final rankings of States in Ease of Doing Business.
More on News

• In 3rd edition of the annual ranking of all states and UTs under the Business Reform Action Plan (BRAP) conducted by DIPP and the World Bank, Andhra Pradesh stood to be the best in India to do business.

• Telangana and Haryana in second and third spots, while Meghalaya stood last at 36th position. Jharkhand and Gujarat stood fourth and fifth respectively.

• The ranking was introduced with the aim of triggering competition among states to attract investments and improve business climate.

MULTIDIMENSIONAL POVERTY INDEX-2018

• The 2018 global Multidimensional Poverty Index was released by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI)

Key findings of MPI 2018

• The global Multidimensional Poverty Index (MPI)-2018 covers 105 countries in total, which are home to 75 per cent of the world’s population, or 5.7 billion people.

• In India, 271 million people moved out of poverty between 2005-06 and 2015-16, but the country still has the largest number of people living in multidimensional poverty in the world (364 million people). Even so, India has cut its poverty rate from 55% to 28% in ten years.

• After India, the countries with the largest number of people living in multidimensional poverty are Nigeria (97 million), Ethiopia (86 million), Pakistan (85 million), and Bangladesh (67 million).

What is the global MPI?

• The global Multidimensional Poverty Index (MPI) is an international measure of acute poverty covering over 100 developing countries. It complements traditional income-based poverty measures by capturing the severe deprivations that each person faces at the same time with respect to; education, health and living standards.

• The MPI measures multiple deprivations in the same households in education, health and living standards and 10 indicators, namely nutrition, child mortality, years of

• The Oxford Poverty and Human Development Initiative (OPHI) is an economic research centre within the Oxford Department of International Development at the University of Oxford.

• OPHI aims to build and advance a more systematic methodological and economic framework for reducing multidimensional poverty, grounded in people’s experiences and values.

HUMAN DEVELOPMENT INDEX

• India’s ranking in UN’s Human Development Index (HDI) went up by one from last year, to 130th among 189 countries, released by the United Nations Development Programme (UNDP)

EASE OF LIVING INDEX

Why in News?

• Pune is the best city to live in India, while Delhi is among the worst cities in terms of economic prospects, according to the Ease of Living Index rankings published by the Union Ministry of Housing and Urban affairs
2018 Ease of Living Index Results

- Top 10 Livable Cities in India according to report are Pune, Navi Mumbai, Greater Mumbai, Tirupati, Chandigarh, Thane, Raipur, Indore, Vijaywada and Bhopal.

- Andhra Pradesh has topped the chart in the ‘Ease of Living Index’ rankings among the states under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), followed by Odisha and Madhya Pradesh.

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT) focuses on providing basic civic amenities like water supply, sewerage, urban transport, parks. The emphasis of the mission is on infrastructure creation that has a direct link to quality of urban life.

POVERTY AND SHARED PROSPERITY 2018

- World Bank has released its report on global poverty ‘Poverty and Shared Prosperity 2018: Piecing Together the Poverty Puzzle’.

Notable Observations

- The percentage of people living in extreme poverty (less than $1.90 a day) globally fell to a new low.

- In the 25 years from 1990 to 2015, the extreme poverty rate dropped an average of a percentage point per year—from nearly 36% to 10%. But the rate dropped only one percentage point in the two years from 11% in 2013 to 10% in 2015.

- Extreme poverty is becoming more concentrated in Sub-Saharan Africa because of the region’s slower rates of growth, problems caused by conflict and weak institutions, and a lack of success in channeling growth into poverty reduction.

Poverty Index

- It recognizes that access to education, health, electricity, water, sanitation, and physical and environmental security are critical for well-being.

- It provides a global picture using comparable data across 119 countries for 2013 (representing 45 percent of the world’s population) combining consumption or income with measures of education and access to basic infrastructure services.

- China and India are not a part of this exercise because of data availability.

THE SOCIETAL POVERTY LINE (SPL)

- Reflecting how monetary definitions of poverty at the national level vary with the overall income in a society.

What is Societal Poverty Line?

- The SPL is a combination of the absolute IPL and a poverty line that is relative to the median income level of each country. Specifically, it is equal in value to either the IPL or US$1.00 plus half of daily median consumption in the country, whichever is greater.

BALI FINTECH AGENDA

- The International Monetary Fund (IMF) and the World Bank launched the Bali Fintech Agenda.

- The Bali Fintech Agenda is a set of 12 policy elements established to help member countries harness the benefits and opportunities of rapid advances in financial technology (fintech), while at the same time also managing the risks that arise.

- The Agenda proposes a framework of high-level issues that countries should consider in their own domestic policy discussions and aims to guide staff from the two institutions in their own work and dialogue with national authorities.
What is Fintech?

• Fintech (financial technology) is used to describe new tech that seeks to improve and automate the delivery and use of financial services.

• At its core, fintech is utilized to help companies, business owners, and consumers better manage their financial operations, processes, and lives by utilizing specialized software and algorithms that are used on computers and, increasingly, smartphones.

GLOBAL COMPETITIVE INDEX

• Recently, the World Economic Forum released Global Competitive Index 4.0, under Global Competitive Report 2018.

About Global Competitive Index (GCI) 4.0

• It is a composite indicator that assesses a set of factors that determine an economy’s level of productivity widely considered as the most important determinant of long-term growth.

Key Findings

• In the index, U.S. topped the position, followed by Singapore and Germany at the second and third positions respectively.

• Among the BRICS economies, China topped the list at 28th place with a score of 72.6, ahead of India (score of 62.0, ranked 58th), the Russian Federation (65.6, 43rd), South Africa (60.8, 67th), and Brazil (72nd).

EASE OF DOING BUSINESS

• India jumped 23 ranks in the World Bank’s Ease of Doing Business (EoDB) Index 2018 to 77 from 100 in 2017 among 190 nations.

More about the report

• The Doing Business report ranks countries on the basis of distance to frontier (DTF), a score that shows the gap of an economy to the global best practice.

• The World Bank has recognized India as one of the top improvers for the year. This year, India features among the report’s list of top 10 improvers for the second year in a row and only one in BRICS to feature in this list.

• India is seeking to reach the 30th position by 2020, according to an output-outcome framework document prepared by the government.

• It will help India maintain its goal of strong and sustained economic growth, attract more FDI, achieve sound living standards and moderate inflation.

• The Doing Business 2019 report bases the rankings on field surveys and interviews with corporate lawyers and company executives in Delhi and Mumbai.

HUMAN CAPITAL INDEX

• Recently, the first Human Capital Index (HCI) was released by the World Bank.

About HCI

• The HCI measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of complete education and full health. oHCI is part of the World Development Report (WDR).

• As part of this report, the World Bank has launched a Human Capital Project (HCP).

• Human Capital Project (HCP): A program of advocacy, measurement, and analytical work to raise awareness and increase demand for interventions to build human capital.
STATES START-UP RANKING 2018

- The Department of Industrial Policy and Promotion (DIPP) announced results of the first ever States' Start-up Ranking 2018.
- Gujarat ranked the best performer and Karnataka, Kerala, Odisha, and Rajasthan are the top performers.

Start-up definition by government:

- Start-up means an entity, incorporated or registered in India not prior to seven years, with annual turnover not exceeding INR 25 crores in any preceding financial year, working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property.

GLOBAL IP INDEX

Why in news?

- US Chamber of Commerce recently released its Global Intellectual Property Index.

Global IP Index 2019

- This is the seventh edition of the annual International IP Index which analyses the IP climate in 50 world economies, based on 45 indicators critical to an innovation-led economy.
- India climbed up 8 places to reach 36 as opposed to 44 in the 2018 edition.
- Despite the improvement, certain barriers continue to exist such as barriers to licensing and technology transfer, strict registration requirements, limited framework for the protection of biopharmaceutical IP rights, patentability requirements outside international standards, etc.

PORTS IN INDIA

1. **Kolkata Port**: Only riverine major port in India
2. Paradip Port (Odisha)
3. Vishakhapatnam Port (Andhra Pradesh)
4. Ennore Port renamed as Kamarajar Port Limited (TN): It is first corporate port of India and is registered as a public company with 68% stake held by government.
5. Chennai Port: is the largest port in the Bay of Bengal and second largest port of India after JNPT. It is an artificial & all-weather port.
6. Tuticorin Port renamed as V.O.Chidambaranar Port (TamilNadu)
7. Cochin Port (Kerala)
8. New Mangalore Port (Karnataka)
9. Mormugao Port (Goa)
10. **Jawaharlal Nehru Port**: also known as Nhava Sheva and is the largest container port in India
11. Mumbai Port
12. **Kandla Port**: was built after partition as the Karachi port on western coast had gone to Pakistan.
## Static Indices Related to Indian Economy

### INDEX OF INDUSTRIAL PRODUCTION

The Index of Eight Core Industries is released by the Office of the Economic Adviser, DIPP, Ministry of Commerce and Industry.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Type of Goods</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic goods</td>
<td>Any bulk raw material/ product used in manufacture. High Speed Diesel, Aviation Fuel, Kerosene, Urea, Cement all kinds, Granites, iron, copper and Electricity.</td>
</tr>
<tr>
<td>2</td>
<td>Consumer non-durable</td>
<td>Can’t be used for long periods. Fruit Pulp, edible oil, milk powder, tea, Cigarettes, Apparels, Newspapers, Antibiotics etc.</td>
</tr>
<tr>
<td>3</td>
<td>Intermediate</td>
<td>Used for manufacturing of another product. Cotton yarn, Plywood, Adhesives, Aluminum and steel pipes etc.</td>
</tr>
<tr>
<td>4</td>
<td>Capital</td>
<td>Plants, machinery and goods used for further investments. Boilers, compressors, engines, Transformers, Commercial Vehicles and all machineries like Textile Machinery, Printing Machinery etc.</td>
</tr>
<tr>
<td>5</td>
<td>Consumer durable</td>
<td>Can be used for more than 3 years. Pressure Cooker, AC, TV, mobile, automobile, Gems and Jewelry etc.</td>
</tr>
</tbody>
</table>

### Ranking of 8 core industries in IIP (Base Year: 2011-12):

<table>
<thead>
<tr>
<th>New Series (base 2011-12)</th>
<th>Item groups</th>
<th>Weights (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary goods</td>
<td>15</td>
<td>34.05</td>
</tr>
<tr>
<td>Intermediate goods</td>
<td>110</td>
<td>17.22</td>
</tr>
<tr>
<td>Capital goods</td>
<td>67</td>
<td>8.22</td>
</tr>
<tr>
<td>Infrastructure/ construction goods</td>
<td>29</td>
<td>12.34</td>
</tr>
<tr>
<td>Consumer durables</td>
<td>86</td>
<td>12.84</td>
</tr>
<tr>
<td>Consumer nondurables</td>
<td>100</td>
<td>15.33</td>
</tr>
<tr>
<td>TOTAL</td>
<td>407</td>
<td>100</td>
</tr>
</tbody>
</table>

### Sector-wise Weights and Item Groups

<table>
<thead>
<tr>
<th>Sector</th>
<th>Base year 2011-12</th>
<th></th>
<th>Base year 2004-05</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weights (%)</td>
<td>Item groups</td>
<td>Weights (%)</td>
<td>Item groups</td>
</tr>
<tr>
<td>Mining</td>
<td>14.373</td>
<td>1</td>
<td>14.157</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>77.633</td>
<td>405</td>
<td>75.527</td>
<td>397</td>
</tr>
<tr>
<td>Electricity</td>
<td>7.994</td>
<td>1</td>
<td>10.316</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>407</td>
<td>100</td>
<td>399</td>
</tr>
</tbody>
</table>

These 8 core industries comprise nearly 40.27% of the weight of items included in IIP.
### INFLATION RELATED INDICES

<table>
<thead>
<tr>
<th>Indices</th>
<th>Base Year</th>
<th>Calculating Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI (AL)</td>
<td>1986-87</td>
<td>Labour Bureau under Ministry of Labour</td>
</tr>
<tr>
<td>CPI (RL)</td>
<td>1986-87</td>
<td>Labour Bureau under Ministry of Labour</td>
</tr>
<tr>
<td>CPI (IW)</td>
<td>2001</td>
<td>Labour Bureau under Ministry of Labour</td>
</tr>
<tr>
<td>WPI</td>
<td>2011-12</td>
<td>Office of Economic Adviser, Department of Industrial Policy and Promotion (DIPP), Ministry of commerce and industry</td>
</tr>
<tr>
<td>WPI Food Index</td>
<td>2011-12</td>
<td>Office of Economic Adviser, Department of Industrial Policy and Promotion (DIPP), Ministry of commerce and industry</td>
</tr>
<tr>
<td>IIP</td>
<td>2011-12</td>
<td>Central Statistics Office (CSO)</td>
</tr>
<tr>
<td>CPI (combined)</td>
<td>2012</td>
<td>Central Statistics Office (CSO)</td>
</tr>
<tr>
<td>Consumer Food Price Index (CFPI)</td>
<td>2012</td>
<td>Central Statistics Office (CSO)</td>
</tr>
<tr>
<td>GDP</td>
<td>2011-12</td>
<td>Central Statistics Office (CSO)</td>
</tr>
<tr>
<td>Employment Data</td>
<td></td>
<td>National Sample Survey Organisation</td>
</tr>
</tbody>
</table>
CONSTITUTIONALLY VALIDITY OF AADHAAR

• A Constitution Bench of the Supreme Court, led by Chief Justice of India by a 4:1 majority upheld the validity of Aadhaar but with certain caveats.

Highlights of the Verdict

• Constitutionality of Aadhaar: Aadhaar scheme passed the triple test laid down in the Puttaswamy (Privacy) judgment to determine the reasonableness of the invasion of privacy (under Art 21) i.e. Existence of a law, A legitimate state interest and Test of proportionality

• Court has upheld the validity of the Aadhaar Act being passed as a Money Bill.

What is Aadhaar?

• 12 digit biometric-based individual identification number managed by Unique Identification Authority of India (UIDAI) under Ministry of Communications/IT. Any Resident can get Aadhaar. However, it is not a proof of citizenship.

Money Bill

• Money bill is defined under the Article 110 of the constitution.
• It can be introduced only in the Lok Sabha (lower chamber of the Parliament)
• When the bill is placed in Rajya Sabha (Upper chamber of the Parliament) thereafter and Rajya Sabha can return the Bill with or without its recommendations.
• In any case, the Bill has to be returned within a period of 14 days from the date of its receipt by Rajya Sabha. Otherwise it is deemed to have been passed by both Houses at the expiration of the said period in the form in which it was passed by Lok Sabha.
• A defeat of Money bill in Lok Sabha is deemed political/parliamentary defeat of the government of the day.
• Speaker has unquestionable powers to decide if a Bill is a Money Bill or not. It cannot be questioned in any court.

DEFINING MINORITIES IN INDIA

• The Supreme Court recently asked the National Commission for Minorities to take a decision on a plea seeking guidelines for defining the term ‘minority’ and for their identification State-wise.
• The PIL sought minority status for Hindus in Lakshadweep, Mizoram, Nagaland, Meghalaya, J&K, Arunachal Pradesh, Manipur and Punjab.
About NCM
- It was set up under the National Commission for Minorities Act, 1992.
- It is a quasi-judicial body with powers of a civil court.
- It consists of a Chairperson, a Vice Chairperson and five Members to be nominated by the Central Government.
- The Constitution of India uses the word ‘minority’ in various articles viz. Article 29, 30, 350 A and 350 B.
- It recognizes minorities based on religion and language.
- But it neither defines the term ‘minority’ nor delineates the criteria for determining a minority.

Minority Communities in India: Six religious communities, viz: Muslims, Christians, Sikhs, Buddhists, Zoroastrians (Parsis) and Jains have been notified as minority communities by the Union Government.

National Security Act
- Recently, the Madhya Pradesh Government invoked the National Security Act (NSA) against three men accused of killing a cow.
- The National Security Act was promulgated on September 23, 1980, “to provide for preventive detention in certain cases and for matters connected therewith”.
- A three person Advisory Board made up of high court judges or persons qualified to be high court judges determines the legitimacy of any order made for longer than three months. If approved, a person may be held extra-judicially for up to 12 months. The term can be extended if the government finds fresh evidence.
- It extends to the whole of India except the State of Jammu and Kashmir.

Article 22 of Constitution grants protection to persons who are arrested or detained under a preventive detention law.
- Detention of a person cannot exceed three months unless an advisory board reports sufficient cause for extended detention.
- This protection is available to both citizens as well as aliens.

Concurrent List
- The CM of Telangana has pitched for more autonomy to the states, suggesting that the concurrent list be done away with.
- The provision of concurrent list is a feature borrowed from the Australian constitution.
- The 42nd Amendment Act implemented in 1976, restructured the Seventh Schedule ensuring that State List subjects like education, forest, protection of wild animals and birds, administration of justice, and weights and measurements were transferred to the Concurrent List.

Seventh Schedule (Article 246)
- The Constitution provides a scheme for demarcation of powers through three 'lists' in the seventh schedule
  1. Union List: subjects on which Parliament may make laws
  2. State List: those under the purview of state legislatures
  3. Concurrent List: subjects in which both Parliament and state legislatures have jurisdiction.
- In case of a conflict; a central law will override a state law.
- Provision of concurrent list is a feature borrowed from the Australian Constitution.
OFFICE OF PROFIT

- President dismissed a petition to disqualify 27 Aam Aadmi Party (AAP) members of the Delhi legislative assembly for allegedly holding offices of profit.

What is Office of Profit?

- Articles 102(1) and 191 (1) mention disqualifications on the basis of Office of Profit in the Parliament and state legislature respectively.
- But it is neither defined in the constitution nor under Representation of People's Act.
- Supreme Court in Pradyut Bordoloi vs Swapan Roy (2001), the Supreme Court outlined the broad framework to determine office of profit.

BREACH OF PRIVILEGE

- Claiming they had misled Parliament on the Rafale fighter jet deal issue, a breach of privilege motion was moved against Prime Minister and Defence Minister.
- The concept of privileges emerged from the British House of Commons when a nascent British Parliament started to protect its sovereignty from excesses of the monarch.
- The Constitution (under Art. 105 for Parliament, its members & committees /Art. 194 for State Legislature, its members & committees) confers certain privileges on legislative institutions and their members.
- Currently, there is no law that codifies all the privileges of the legislators in India.
- There are two types of privileges: 1. Individual privilege 2. Collective privilege

NATIONAL REGISTER OF CITIZENS (NRC)

Assam is in process to update its National Register of Citizens (NRC).

What is NRC?

- It is a list of all bona fide Indian citizens of Assam, the only state with such a document. Other states such as Tripura are also demanding for NRC.
- It will include persons whose names appear in any of the electoral rolls up to the midnight of 24th March, 1971 or National Register of Citizens, 1951 and their descendants.

Assam Accord 1985

- It is a Memorandum of Settlement (MoS) signed between representatives of the Government of India and the leaders of the Assam Movement.
- All those foreigners who had entered Assam between 1951 and 1961 were to be given full citizenship, including the right to vote;
- Those who had done so after 1971 were to be deported.

SPORTS BETTING IN INDIA

- The Law Commission of India submitted a report to the government stating that the only viable option left is to "regulate" gambling in sports.
- According to Entry 40 of union list of the Seventh Schedule of the Constitution, the Parliament has the power to legislate on 'Lotteries organized by the Government of India as well as the Government of any State'.
- The power of the State governments to make laws on gambling can be traced to Entry 34 of the state list. Thus, the States have exclusive power to make laws on this subject.
- The Lodha committee recommended the legalization of betting, except for those covered by the BCCI and IPL regulations.
DEPARTMENT OF OFFICIAL LANGUAGE

- The first review meeting of the Department of Official Language (an independent Department of the Ministry of Home Affairs) took place to discuss the issues related to implementation of Hindi language in official work.
- Part XVII of the Constitution deals with the official language in Articles 343 to 351.
- The Official Language Act (1963) provided for the setting up of a Committee of Parliament on Official Language to review the progress made in the use of Hindi for the official purpose of the Union.
- UAE and Fiji have included Hindi as official language.

Eighth Schedule

- As per Articles 344(1) and 351 of the Indian Constitution, the eighth schedule includes the recognition of the following 22 languages.
- Bodo, Dogri, Maithili and Santali were added in 2003 by 92nd Constitutional Amendment Act.

Classical Languages:

- Government of India has awarded the distinction of classical language to Kannada, Malayalam, Odia, Sanskrit, Tamil and Telugu.
- Classical language status is given to languages which have a rich heritage and independent nature.
- Ministry of Culture laid down clear criteria for Eligibility for this status.

NO CONFIDENCE MOTION IN LOKSABHA

- Lok Sabha Speaker recently accepted the no-confidence motion moved by the Opposition parties against the government.
- Article 75 of the Constitution says that the council of ministers shall be collectively responsible to the Lok Sabha. It means that the Lok Sabha can remove the ministry from office by passing a no-confidence motion.
- Rule 198 of the Rules of Procedure and conduct of Lok Sabha specifies the procedure for moving a no-confidence motion.
- It can be moved only in the Lok Sabha and not Rajya Sabha.

FORMATION OF LEGISLATIVE COUNCIL

- The Odisha Assembly passed a resolution for establishing Legislative Council, or Vidhan Parishad.
- Procedure for Creation/Abolition of LC
- The Constitution provides for the abolition or creation of legislative councils in states under Article 169. Accordingly, the Parliament can abolish a legislative council (where it already exists) or create it (where it does not exist), if the legislative assembly of the concerned state passes a resolution to that effect.
- Such a specific resolution must be passed by the state assembly (LA) by a special majority.
- This Act of Parliament is not to be deemed as an amendment of the Constitution for the purposes of Article 368 and is passed like an ordinary piece of legislation (i.e. by simple majority).

States with Legislative Council: Currently, seven states have Legislative Councils. These are Andhra Pradesh, Telangana, Uttar Pradesh, Bihar, Maharashtra, Karnataka and Jammu and Kashmir
SABKI YOJANA, SABKA VIKAS

- Recently, the central government launched a campaign, Sabki Yojana, Sabka Vikas on October 2, 2018.
- The campaign will involve people at the grassroots while preparing structured gram panchayat development plans.
- It will also involve thorough audit of the works done in the last few years.
- Under the campaign, which will conclude in December’18, gram panchayats will have to publicly display all sources of funds collected and their annual spending, along with future development initiatives.
- This would help in making the exercise of formulating Gram panchayat development plans more structured which has been largely unorganized till now.

**Gram Panchayat Development Plan (GPDP):**

- It is an annual plan of each panchayat where the villagers would decide where the money should be spent.
- The Gram Panchayat Development Plan aims to strengthen the role of 31 lakh elected Panchayat leaders and 2.5 crore SHG Women under DAY-NRLM in effective gram sabha

THE 15TH FINANCE COMMISSION

- The Southern states are protesting against the Term of Reference of the 15th Finance Commission (FC-15).
- The Commission may consider proposing measurable performance-based incentives for States in different areas.
- Incentivizing states for “efforts and progress made in moving towards replacement rate of population growth”, thus, rendering most states ineligible for incentives.
- The FC-15 was constituted on November 27, 2017 and is headed by former Revenue Secretary and former Rajya Sabha MP N.K. Singh.

**About Finance Commission**

- Article 280 of the Constitution of India provides for a Finance Commission as a quasi-judicial body. It is constituted by the president of India every fifth year or at such earlier time as he considers necessary.
- The Finance Commission consists of a chairman and four other members to be appointed by the president.
- The recommendations made by the FC are only of advisory nature and hence, not binding on the government.

ZONAL COUNCILS

- West Bengal hosted the 23rd meeting of the Eastern Zonal Council presided over by Union Home Minister.
- The Zonal Councils are statutory bodies established under States Reorganization Act, 1956.
- The act divided the country into five zones (Northern, Central, Eastern, Western and Southern) and provided a zonal council for each zone.
- The main objectives of setting up of Zonal Councils is to bring out national integration and enabling the Centre and the States to co-operate and exchange ideas and experiences;
- Each zonal council is an advisory body.
**North Eastern Council**

- It is a statutory advisory body established under the North Eastern Council Act, 1971, as amended in 2002.
- It is the apex level nodal agency for the economic and social development of the North Eastern Region.
- It is mandated to function as a Regional Planning Body for the North Eastern Region.
- In case of Sikkim, the Council shall formulate specific projects and schemes for that State.

**STATEHOOD FOR DELHI**

- The Delhi government has decided to give another push to its demand for full statehood to Delhi with a public campaign.
- The 69th Constitutional Amendment Act of 1991 provided a special status to the Union Territory of Delhi.
- The strength of the assembly is fixed at 70 members, directly elected by the people.
- The chief minister is appointed by the President (not by the LG). The ministers hold office during the pleasure of the president.
- The Assembly can make laws on all the matters of the state list and concurrent list except three matters of the state list - public order, police and land.
- In case of difference of opinion between the LG and the ministers, LG needs to refer the matter to the President for decision and act accordingly.

**CAUVERY WATER MANAGEMENT SCHEME, 2018**

- Recently, the Union Water Resources ministry notified the constitution of the Cauvery Water Management Authority (CWMA) and the Cauvery Water Regulation Committee (CWRC) under Cauvery Water Management Scheme, 2018.
- Cauvery Water Management Authority (CWMA) is a permanent body under the Union Ministry of Water Resources and its decisions are final and binding on all the party States.

**Cauvery Water Regulation Committee (CWRC)** is technical arm that deals with collecting data and preparing reports.

- Constitutional and legislative provisions for inter-state water disputes
- Article 262(2) empowers Parliament to provide by law that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint.
- Cauvery Judgment was admitted by Supreme Court as Special Leave Petition (SLP).
- The Interstate River Water Disputes Act, 1956 (IRWD Act) enacted under Article 262 of Constitution. Under this article the Parliament also enacted the River Boards Act (1956).

**Existing Water Disputes:**

<table>
<thead>
<tr>
<th>Dispute-Tribunals</th>
<th>States involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ravi and Beas Water Tribunal</td>
<td>Punjab, Haryana and Rajasthan</td>
</tr>
<tr>
<td>Vansadhara Water Disputes Tribunal</td>
<td>Andhra Pradesh &amp; Odisha</td>
</tr>
<tr>
<td>Mahadayi Water Disputes Tribunal</td>
<td>Goa, Karnataka and Maharashtra</td>
</tr>
<tr>
<td>Krishna Water Disputes Tribunal</td>
<td>Karnataka, Telangana, Andhra Pradesh and Maharashtra</td>
</tr>
<tr>
<td>Mahanadi Water Disputes Tribunal</td>
<td>Odisha and Chhattisgarh</td>
</tr>
</tbody>
</table>
ARTICLE 35A

Why in news?

• The constitutionality of article 35A is being challenged in the Supreme Court.

What is Article 35A?

• It was incorporated into the Constitution in 1954 by a Presidential order issued under Article 370 (1) (d) of the Constitution.
• It empowers J&K legislature to define state’s “permanent residents” and their special rights and privileges.
• It protects certain provisions of the J&K Constitution which denies property rights to native women who marry a person from outside the State. The denial of these rights extends to her children also.
• The Article bars non-J&K state subjects to settle and buy property in J&K

SEPARATE HIGH COURTS FOR ANDHRA PRADESH & TELANGANA

Recently the separate High Courts for Telangana and Andhra Pradesh came into being.
• Articles 214 to 231 in Part VI of the Constitution deal with the organisation, independence, jurisdiction, powers, procedures and so on of the high courts.
• the Seventh Amendment Act of 1956 authorised the Parliament to establish a common high court for two or more states or for two or more states and a union territory.
• The territorial jurisdiction of a high court is co-terminus with the territory of a state.
• At present, there are 25 high courts in the country (including the Andhra Pradesh HC). Out of them, three are common for 2 or more states.

ADR MECHANISMS

• The New Delhi International Arbitration Centre Ordinance, 2019 was promulgated.
• It was set up by the Department of Legal Affairs as an autonomous body registered under the Societies Registration Act, 1860.

Other Mechanisms:

• National Legal Service authority (NALSA) - It has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes.
• Gram Nyayalaya: mobile village courts in India established under Gram Nyayalayas Act, 2008 for speedy and easy access to justice system in the rural areas of India. the State Governments to establish Gram Nyayalayas in consultation with the respective High Courts.

ELECTRONIC VOTING MACHINE (EVM)

Recently, there have been controversies surrounding EVMs regarding their safety feature.
• An EVM consists of a "control unit" and a "balloting unit". The control unit is with the Election Commission-appointed polling officer; the balloting unit is in the voting compartment into where voter casts her vote in secret.
• It runs on a single alkaline battery fitted in the control unit, and can even be used in areas that have no electricity.
• They are manufactured by Electronics Corporation of India Limited (ECIL) and Bharat Electronics Limited (BEL).
• EVMs were 1st used in 1982 Kerala Assembly elections (by-election).
Voter Verifiable Paper Audit Trail (VVPAT):
- VVPAT is a paper slip is generated bearing serial number, name and symbol of the candidate along with recording of vote in CU. The printed slip is visible (for 7 seconds) in a viewing window attached to BU in voting compartment.
- In Subramaniam Swamy vs ECI (2013), SC said VVPAT is necessary for transparency in voting and must be implemented by ECI.

DELIMITATION COMMISSION
- It is a commission established by the Government of India under the provisions of the Delimitation Commission Act. It's a statutory body, not a constitutional body.

Delimitation Exercise
- The representation from each State has been fixed till 2026 on the basis of 1971 census.
- However, the number of SC and ST seats in a state are changed in accordance with the census.
- The present delimitation of constituencies has been done on the basis of 2001 census under the provisions of Delimitation Act, 2002.
- Delimitation in the J&K is done under the state constitution and not by Delimitation Commission.
- The main task of the commission is redrawing the boundaries of the various assembly and Lok Sabha constituencies based on a recent census.
- The Orders of the commission cannot be challenged in a court of law.
- The orders are laid before the Lok Sabha and the respective State Legislative Assemblies. However, modifications are not permitted.
- Chief Election Commissioner of India and State Election Election Commissioners of respective states are its ex-officio members.

Important Amendments w.r.t. Delimitation Exercise:
1. The Constitution (84th Amendment) Act, 2001
2. Extended ban on readjustment of seats in the Lok Sabha and the state legislature assemblies for another 25 years (i.e., up to 2026) with same objective of encouraging population limiting measures.
4. Provided for readjustment and rationalization of territorial constituencies in the states on the basis of the population figures of 2001 census and not 1991 census.

ELECTRONICALLY TRANSMITTED POSTAL BALLOT SYSTEM (ETPBS)
- The ETPBS was recently used in Chengannur (Kerala) Assembly bypoll for service voters
- It provides an alternative method of quick dispatch of Postal Ballot paper electronically (earlier delivered by post) to the entitled Service Voters.
- It was developed by the Election Commission with the help of Centre for Development of Advanced Computing (C-DAC).
- It uses QR codes for uniqueness of the Service Voters and the secrecy in transmission is ensured by the use of OTP and PIN.
**123RD CONSTITUTIONAL AMENDMENT BILL**

- The Parliament has recently passed the Constitution (123rd Amendment) Bill. Added a new article 338B which provides for NCBC, its composition, mandate, functions and various officers.
- Added a new article 342-A which empowers the president to notify the list of socially and educationally backward classes of that state/union territory.
- It would also amend article 366 to add a clause 26C providing definition of socially and educationally backward classes.
- This would bring it at par with the National Commission for Scheduled Castes (NCSC) and the National Commission for Scheduled Tribes (NCST).
- The NCBC would get constitutional status after half of the states approve it with a simple majority and President gives his nod to the legislation.

**RESERVATION FOR ECONOMICALLY WEAKER SECTIONS**

- President gave assent to The Constitution (103rd Amendment) Act, to provide 10% reservation in government jobs and educational institutions to the economically weaker sections.

**NORTH-EAST AUTONOMOUS COUNCILS**

- Recently, Constitution (125th Amendment) Bill, 2019 was introduced in Rajya Sabha. The Bill amends provisions related to the Finance Commission and the Sixth Schedule of the Constitution to increase the financial and executive powers of the 10 Autonomous Councils in the Sixth Schedule areas.
- 6th schedule deals with the administration of the tribal areas in four north-eastern states of Assam, Meghalaya, Tripura and Mizoram.
- The tribal areas in these states have been constituted as autonomous districts, each of which has an autonomous district council consisting of 30 members. Currently, there are 10 such councils.
- These autonomous districts are directly administered by the Governor. Article 244A provides for an autonomous state for certain tribal areas in Assam with its own legislature and council of ministers.
## Difference between 5th and 6th Schedule Areas:

<table>
<thead>
<tr>
<th>Fifth scheduled Areas</th>
<th>Sixth scheduled Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ARTICLE 244(1))</td>
<td>(ARTICLE 244(2) AND 275(1))</td>
</tr>
<tr>
<td>The Fifth Schedule being a very important provision of the constitution deals with the control and administration of the Schedule Area.</td>
<td>The Constitution of India makes special provisions for the administration of the tribal dominated areas in four states viz. Assam, Meghalaya, Tripura and Mizoram.</td>
</tr>
<tr>
<td>At present there are 10 such states: Andhra, Telengana, Maharashtra, Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Orissa and Himachal Pradesh.</td>
<td>It provides <strong>Autonomous District Councils</strong> with certain legislative and judicial powers.</td>
</tr>
</tbody>
</table>

### CITIZENSHIP AMENDMENT BILL
- The Citizenship (Amendment) Bill 2016 which recently lapsed saw opposition from various quarters of the country.
- The Bill amends the Citizenship Act, 1955 to provide that ‘persecuted’ non-Muslim minorities (Hindu, Sikh, Buddhist, Jain, Parsi & Christian communities) from Pakistan, Afghanistan and Bangladesh, who have arrived in India on or before December 31, 2014 & living in India without valid travel documents to obtain Indian citizenship, will not be treated as illegal migrants.

### Issue of Call for full citizenship to OCI card holders and merger of Person of India Origin (PIO) and OCI cards

#### What benefits OCI are entitled to?
- She can inherit ancestral property.
- OCI facilitates lifelong visa-free travel, rights of residency and hassle free participation in business and educational activities.
- They are entitled to general ‘parity with Non-Resident Indians in respect of all facilities available to them in economic, financial and educational fields

#### What things OCI are not entitled to do?
- OCI card is not a citizenship card and does not offer dual citizenship/nationality.
- An OCI card holder does not have voting rights in India, nor can contest any elections or hold any constitutional office.
- S/he shall not be entitled to the rights conferred on a citizen of India under article 16 of the Constitution with regard to equality of opportunity in matters of public employment.
- He cannot buy agricultural land.

### ENEMY PROPERTY ACT
- The Union Cabinet has approved the mechanism and procedure for sale of the enemy shares.
- To administer the enemy property seized during the wars, the government enacted the Enemy Property Act in 1968.
The act defines "Enemy property" refers to any property belonging to, held or managed on behalf of an enemy, an enemy subject or an enemy firm.

The Defence of India Acts defined an 'enemy' as a country that committed an act of aggression against India.

The Enemy Property Act laid down the powers of the Custodian of Enemy Property of India (CEPI) for management and preservation of the enemy properties.

CEPI has been established under the Ministry of Home Affairs and is empowered to appropriate property in India owned by Pakistani nationals under Defence of India Act.

A recent amendment to the Enemy Property (Amendment and Validation) Act, 2017, ensures the heirs of those who migrated to Pakistan and China during Partition and afterwards will have no claim over the properties left behind in India.

**FUGITIVE ECONOMIC OFFENDERS BILL (FEOB), 2018**

President recently gave his assent to the Fugitive Economic Offenders Bill (FEOB), 2018.

The Act allows for a person to be declared as a fugitive economic offender (FEO) if:

- an arrest warrant has been issued against him for any specified offences where the value involved is over Rs 100 crore, and he has left the country and refuses to return to face prosecution.

- It extends not only to loan defaulters and fraudsters, but also to individuals who violate laws governing taxes, black money, benami properties and financial corruption.

- The Enforcement Directorate (ED) will be the apex agency to implement the law.

- The Act allows authorities to provisionally attach properties of an accused, while the application is pending before the Special Court.

**PREVENTION OF CORRUPTION (AMENDMENT) ACT, 2018**


**New Changes**

- Bribery
- Pre-investigation approval
- Sanction for prosecution
- Criminal misconduct
- Forfeiture of property

**WITNESS PROTECTION SCHEME**

Supreme Court under Article 141/142 of the Constitution of India has provided legal sanctity to the scheme until Parliament/state legislature enacts a law on the matter.
• Art. 141 - law declared by the Supreme Court shall be binding on all courts within the territory of India.
• Art. 142- Under this, SC can grant appropriate relief for doing complete justice

• Although National Investigation Agency (NIA) act provides for witness protection, the scheme has extended it to the witnesses in all other cases as per the threat perception. A Witness Protection Bill is still pending.
• In Zahira sheikh vs. State of Gujarat, SC observed that witness protection is necessary for free and fair trial. About the Witness Protection Scheme
• The scheme aimed to enable a witness to depose fearlessly and truthfully.

**YUVA SAHAKAR -COOPERATIVE ENTERPRISE SUPPORT AND INNOVATION SCHEME**

• Union Agriculture Minister launched National Cooperative Development Corporation (NCDC)'s new scheme 'Yuva Sahakar-Cooperative Enterprise Support and Innovation Scheme'.
• **Purpose:** To cater to the needs and aspirations of the youth, attracting them to cooperative business ventures. It would encourage cooperatives to venture into new and innovative areas.
• **CSIF fund:** The scheme will be linked to a 'Cooperative Start-up and Innovation Fund (CSIF)' created by the NCDC with an annual outlay of Rs 100 crore and it has special incentive for cooperatives of North Eastern region, Aspirational Districts and cooperatives with women/SC/ST/PwD members. About NCDC

**NCDC**

• It is the sole statutory organisation (under Ministry of Agriculture & Farmers Welfare) functioning as an apex financial and developmental institution exclusively devoted to cooperative sector.

**MISSION SATYANISHTHA**

• Mission Satyanishtha was launched recently by Ministry of Railways.
• The mission aims at sensitizing all railway employees about the need to adhere to good ethics and to maintain high standards of integrity at work.

**DRAFT CAPE TOWN CONVENTION BILL, 2018**

• Recently the Ministry of Civil Aviation released the draft Bill that seeks to implement the Cape Town Convention (Convention on International Interests in Mobile Equipment), and Protocol (Protocol to the Convention on Matters Specific to Aircraft Equipment) in India.
• The Cape Town Convention was adopted in 2001 under the joint auspices of International Civil Aviation Organisation (ICAO) and International Institute for the Unification of Private Law (UNIDROIT).
• The Convention is general in nature and is meant to be applied to three sectors, viz. Aviation, Railways and Space Equipment.

**PATHALGADI MOVEMENT**

• In recent times, many Adivasi villages in Jharkhand have put up giant plaques (Pathalgadi) declaring their gram sabha as the only sovereign authority and banning 'outsiders' from their area.
• Pathalgadis proclaim allegiance to the Constitution but reject any authority except their gram sabhas (village assemblies).
• Pathalgadis have their presence in Jharkhand, Chhattisgarh, Odisha and parts of West Bengal and Madhya Pradesh.
UN GLOBAL MEDIA COMPACT

- Recently more than 30 organizations from across the world including India’s Ministry of Information and Broadcasting have come together to form a global media compact.
- It is an initiative of the United Nations, in collaboration with the UN Foundation.
- It is aimed at advancing awareness regarding Sustainable Development Goals (SDGs) to be achieved by 2030.

SOME IMPORTANT INSTITUTIONS IN NEWS

NITI Ayog

- It is a Government of India initiative to replace Planning Commission.
- NITI Ayog involves inputs from both the central and state governments in policy-making processes.
- The Prime Minister is the Ex-officio chairman of NITI Ayog.
- NITI Ayog also consists a governing council. Chief Ministers of all the states, chief ministers of Delhi and Puducherry, Lieutenant Governor of all the union territories are members of this council.
- Apart from the governing council, NITI Ayog also consists of two part-time members and four ex-officio members.

CBI

- The CBI is not a statutory body. It derives its powers from the Delhi Special Police Establishment Act, 1946. The CBI is the main investigating agency of the Central Government.
- CBI comes under the jurisdiction of the Ministry of Personnel, Public Grievances and Pensions.
- In 2014, the Lokpal Act provided a committee for appointment of CBI Director was formed.
- It consists of Prime Minister, Leader of Opposition / Leader of the single largest opposition party, Chief Justice of India / a Supreme Court Judge.

LOKPAL

- It is statutory body formed under Lokpal and Lokayuktas Act, 2013 to fight corruption in public offices.
- The Lokpal should consist of a chairperson and such number of members, not exceeding eight, of whom 50% should be judicial members.
- A search committee will prepare a panel of candidates, a selection committee will recommend names from among this panel, and the President will appoint these as members.
- A selection committee consists of PM, Speaker of Lok Sabha, leader of opposition in Lok Sabha, Chief Justice of India or a sitting Supreme Court judge nominated by CJI. Eminent jurist is to be nominated by President of India on basis of recommendations of the first four members of the selection committee “through consensus”.

CIC

- The Central Information commission was established in 2005 by the Government of India under the provisions of the Right to Information Act (2005).
- The Central Information Commission consists of the Central Information Commissioner and more than ten Information commissioners.
- President appoints CIC on the recommendation by committee consisting of the Prime Minister as chairperson, the leader of the opposition in the Lok Sabha and union cabinet ministers nominated by the Prime Minister.
I. INTERNATIONAL RELATIONS

I. INDIA AND ITS NEIGHBOURS

INDIA - PAKISTAN:

Kulbhushan Jadhav Case

- India is presenting its case at the International Court of Justice, seeking cancellation of the death sentence of Kulbhushan Jadhav - an Indian national, accused of spying by Pakistan.

Vienna Convention on Diplomatic Relations, 1961

- It is an international treaty of 1961 which gives a framework for diplomatic relations between independent countries.
- It specifies the privileges of a diplomatic mission that enable diplomats to perform their functions without fear of coercion or harassment by the host country. It forms the legal basis for diplomatic immunity.

Vienna Convention on Consular Relations, 1963

- It defines the guidelines for consular relations between the independent countries.
- A consul normally operates out of an embassy in a different country and performs two functions:
  1. protecting the interests of the country and the countrymen of the consul, and
  2. furthering the commercial and economic relations between the two countries.
- They are afforded most of the same privileges, including a variation of diplomatic immunity called consular immunity, but these protections are not as extensive.

India is a party to both the above conventions.

FATF Action Plan for Pakistan

Why in news:

Pakistan has been formally put on the grey list by the Financial Action Task Force (FATF).

- **Financial Action Task Force** was set up in 1989 by the G7 countries with headquarters in Paris.
- It has 37 members, which include all 5 permanent members of the Security Council and other countries with economic influence.
- Two regional organisations, the Gulf Cooperation Council (GCC) and the European Commission (EC) are also members.
- Saudi Arabia and Israel are “observer countries” (partial membership).
- India became a full member in 2010.
- FATF acts as an “international watchdog” on issues of money-laundering and financing of terrorism.

After 2012-15, this is the second time Pakistan has been grey-listed and is facing sanctions.
## INTERNATIONAL COURTS AND TRIBUNALS

<table>
<thead>
<tr>
<th>Permanent Court of Arbitration</th>
<th>International Court of Justice (ICJ/World Court)</th>
<th>International Criminal Court (ICC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established</td>
<td>Established by</td>
<td>Located at</td>
</tr>
<tr>
<td>1899</td>
<td>Hague Peace Conference Hague convention of 1899 and 1907</td>
<td>The Hague, Netherlands</td>
</tr>
<tr>
<td>1945</td>
<td>UN Charter</td>
<td>The Hague, Netherlands</td>
</tr>
<tr>
<td>2002</td>
<td>Rome Statute</td>
<td>The Hague, Netherlands</td>
</tr>
<tr>
<td>Membership</td>
<td>Membership</td>
<td>Membership</td>
</tr>
<tr>
<td>121 states</td>
<td>193 states. All UN members are automatically parties to it. Non-UN members may also become parties to the Court</td>
<td>124 states</td>
</tr>
<tr>
<td>India's Position</td>
<td>India is a party</td>
<td>India is a party</td>
</tr>
<tr>
<td>Non-signatory</td>
<td>Non-signatory</td>
<td>Non-signatory</td>
</tr>
<tr>
<td>Resolve disputes between (has jurisdiction over)</td>
<td>Member states international organizations, or private parties</td>
<td>Member states only (e.g. India and Pakistan)</td>
</tr>
<tr>
<td></td>
<td>It has the jurisdiction to prosecute individuals of member countries.</td>
<td></td>
</tr>
<tr>
<td>Kind of Disputes</td>
<td>Arising out of international agreements e.g. South China Sea dispute, international investment etc.</td>
<td>International Law e.g. Vienna Convention</td>
</tr>
<tr>
<td></td>
<td>International crimes of genocide, crimes against humanity and war crimes</td>
<td></td>
</tr>
<tr>
<td>Is it an UN Agency</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>Legally Independent of UN but Security Council has power to refer a situation to ICC.</td>
<td></td>
</tr>
<tr>
<td>Why is news?</td>
<td>• Antix and Devas Award</td>
<td>• Recently, Justice Dalveer Bhandari was re-elected as the judge of International Court of Justice (ICJ).</td>
</tr>
<tr>
<td></td>
<td>• South China sea dispute arbitration</td>
<td>• Kulbhushan Jadhav case is underway in it.</td>
</tr>
<tr>
<td></td>
<td>• Chagos Archipelago judgement</td>
<td>• Russia, Burundi, South Africa and Gambia have quit in 2016.</td>
</tr>
<tr>
<td></td>
<td>• Facing accusations of bias towards African Nations.</td>
<td></td>
</tr>
</tbody>
</table>
GILGIT-BALTISTAN ISSUE

Why in News?

• India summoned a Pakistani diplomat and protested against a recent order of the Supreme Court of Pakistan.

What is this order?

• The order of the Pakistan Supreme Court was that its jurisdiction and power extend to Gilgit-Baltistan.
• The Court has also asked the federal government in Pakistan to promulgate a new law within a fortnight to grant more rights, including fundamental human rights, to the people of Gilgit-Baltistan in Pakistan-occupied Kashmir.
• India’s stand: The region was, and would remain, an integral part of India. Such order by Supreme Court of Pakistan on Gilgit-Baltistan is an interference in India’s internal affairs.

About Gilgit Baltistan (GB) Region

• The region was a part of the erstwhile princely state of Jammu and Kashmir, but has been under Pakistan’s control since November 4, 1947, following the invasion of Kashmir by tribal militias and the Pakistan army.
• The region was renamed The Northern Areas of Pakistan and put under the direct control of Islamabad. The Northern Areas were distinct from Pakistan-occupied Kashmir (PoK), the part of J&K that Pakistan calls “Azad Kashmir”. The Northern Areas are, however, more than six times the size of PoK.
• After the Pakistani government enacted the Gilgit-Baltistan Empowerment and Self-Governance Order in August 2009, the ‘Northern Areas’ came to be known as Gilgit-Baltistan.
• Pakistan Government in 2018 had also passed orders towards incorporating the disputed region as its fifth province. Balochistan, Khyber-Pakhtunkhwa, Punjab and Sindh being the other four.

INDIA-PAK GURDWARA CORRIDOR

India Pakistan plans to open a corridor to Gurdwara Darbar Sahib at Kartarpur in Pakistan.

• Kartarpur, a place in Pakistan on the banks of Ravi River, is the final resting place of Guru Nanak, the founder of Sikh faith.
• It is where the guru lived the last 18 years of his life and holds a special place for the community.
• The original shrine was built in 1539 after the demise of Sikh guru.
• It is the place where Guru Nanak first started the tradition of Guru da langar (free community kitchen) and congregational worship.
• Since partition in 1947, access to shrines in Nankana Sahib, Kartarpur and Panja Sahib was restricted for Indian pilgrims.
• Kartarpur sahib was finally reopened to Sikh pilgrims from India as an outcome of former prime minister Atal Bihari Vajpayee’s visit to Pakistan in 1999.
• Sikh jathas from India travel to Pakistan on four occasions every year for Baisakhi, the martyrdom day of Guru Arjan Dev, the death anniversary of Maharaja Ranjit Singh, and the birthday of Guru Nanak Dev.
Pilgrimages between India and Pakistan are governed by the 1974 Protocol on Visits to Religious Shrines.

- It includes a list of shrines in Pakistan and India open for visitors from the other country, and for which visas are required.
- The Kartarpur Corridor, which will provide visa-free access from India to the shrine inside Pakistan, may need a separate treaty.

**Sikh Gurus**

- **Guru Nanak** (1469-1539) - Guru Nanak Dev, first of the 10 gurus, founded the Sikh faith, introducing the concept of one God.
- **Guru Angad** (1538-1552) compiled the writings of Nanak Dev, and introduced the Gurmukhi script.
- **Guru Amar Das** (1552-1574)
- **Guru Ram Das** (1574-1581)
- **Guru Arjun Dev** (1581-1606) - Guru Arjun (Arjan) Dev, fifth of the 10 gurus, erected the Golden Temple (Harmandir Sahib) in Amritsar, compiled and contributed to Adi Granth, 1604.
- **Guru Har Gobind** (1606-1645)
- **Guru Har Rai** (1645-1661)
- **Guru Har Kishan** (1661-1664)
- **Guru Teg Bahadur** (1664-1675) - He was executed at Delhi by Aurangzeb for not embracing islam.
- **Guru Govind Singh** (1675 – 1708) - Guru Gobind Singh, tenth of the 10 gurus, created the order of Khalsa. Completed the Granth bestowing upon it title of everlasting Guru.

**Panj Takht (The Five Sikh Takhts):**
- Takht ‘Akal Takht’ near Sri Harmandar Sahib (Golden Temple) at Amritsar.
- Takht Sri Kesgarh Sahib, Anandpur Sahib
- Takht Sri Damdama Sahib, Talwandi Sabo
- Takht Sri Patna Sahib, Patna Bihar
- Takht Sri Hazur Sahib, Nanded, Maharashtra

**UN MILITARY OBSERVER GROUP IN INDIA AND PAKISTAN (UNMOGIP)**

**Why in news?**

UN Secretary-General Antonio Guterres has appointed a veteran Uruguay Army general, Major General Jose Eladio Alcain, as the chief military observer of the UNMOGIP.

**Details**

- The UNMOGIP was established in January 1949 with first team of unarmed military observers arriving in Jammu and Kashmir to supervise the ceasefire between India and Pakistan, and to assist the Military Adviser to the UN Commission for India and Pakistan (UNCIP), established in 1948 by the UN Security Council.
- Following the India-Pakistan war in 1971 and a subsequent ceasefire agreement, the tasks of UNMOGIP have been to observe, to the extent possible, developments pertaining to the strict observance of the ceasefire of December 17, 1971 and to report to the Secretary-General.
- Further, it clarified that mission does not have a mandate beyond the LoC and does not cover whole of Kashmir.
- On the other hand, India has maintained that UNMOGIP has outlived its utility and is irrelevant after the Shimla Agreement and the consequent establishment of the Line of Control.
INDIA-AFGHANISTAN

AFGHAN PEACE CONFERENCE

Why in News?

• India is participating in a Russia-sponsored peace conference with Taliban.

• Currently, the talks known as the “Moscow format/Moscow Talks” include a “high-level” delegation from the Taliban as well as a delegation of Afghanistan’s “High Peace Council (HPC)”, along with representatives of 12 countries. First time an Indian delegation, in unofficial capacity, also has represented India.

AMERICAN Forces withdrawal FROM AFGHANISTAN

Why in News?

• US President Donald Trump has argued for gradual withdrawal of American forces.

This may have negative impact on India:

• A destabilized and Talibanized Afghanistan might lead to upsurge of violence in Jammu and Kashmir

• There is also an imminent security threat to India’s investments & developed infrastructure in Afghanistan.

It may also have a major impact on India’s energy security and regional ties in the Middle East.

HEART OF ASIA (HOA) CONFERENCE

The Heart of Asia-Istanbul Process was launched in 2011.
The platform was floated to encourage security, political and economic cooperation between Afghanistan and its neighbours.

India hosted the 6th Ministerial Conference of Heart of Asia (HoA) in Amritsar in the year 2016

Participating Countries of HOA:


INDIA-BANGLADESH

• India is working on many Development efforts in Bangladesh.

India’s Development efforts in Bangladesh

• **Rooppur project** is the first initiative under Indo-Russian deal to undertake atomic energy projects in Bangladesh. India will provide personnel training, consultation support and participate in the construction and erection activity and non-critical materials supply to the site in Bangladesh.

• India and Bangladesh opened their first border haat at Kalaichar on the India-Bangladesh border in Meghalaya’s West Garo Hills district on July 23, 2011 reviving the traditional border trade after nearly 40 years.

• **Border with Bangladesh** - 2,217 km falls in West Bengal, 262 km in Assam, 443 km in Meghalaya, 856 km in Tripura and 180 km in Mizoram.
INDIA - MYANMAR

Why in news?
• Recently India and Myanmar opened two land border crossings through a Land Border Crossing Agreement
• The two crossing points are at Moreh in Manipur, opposite Tamu in Myanmar’s Sagaing division, and Zokhawthar in Mizoram, opposite Rikhawdawr in Myanmar’s Chin state.
• It marked the abolishing of special land entry permission which was previously required for visitors entering the country via land routes.

Free Movement Regime
• The tribal communities, particularly Nagas, Singhpos, Kukis, Mizos etc. claim that the boundary between India and Myanmar is inconsistent with the traditional limits of the region they inhabited and they still continue to have trans-border linkages with their kiths and kins.
• It is thus an arrangement to alleviate insecurity of tribals living along India and Myanmar border.
• It permits tribes residing along the border to travel 16 km across the boundary without visa restrictions.

Other connectivity projects with Myanmar
• IMT Trilateral Highway: a regional highway being constructed under India’s Act East policy. It will connect Moreh in India with Mae Sot, Thailand via Myanmar. The highway is expected to boost trade and commerce in ASEAN–India Free Trade Area, as well as with rest of Southeast Asia.
• The second land border crossing at Zokhawthar-Rikhawdawr will be connected to the Trilateral Highway at Kalemyo, near Kalewa in Myanmar.
• Motor Vehicle Agreement: India, Myanmar and Thailand has been negotiating for finalising and implementing a Motor Vehicle Agreement. This agreement is necessary to utilise physical road infrastructure on IMT Trilateral Highway and other infrastructural linkages.

Kaladan Multi-Modal Transit Transport Project is a project that will connect the eastern Indian seaport of Kolkata with Sittwe seaport in Rakhine State, Myanmar by sea. In Myanmar, it will then link Sittwe seaport to Paletwa, Chin State via the Kaladan river boat route, and then from Paletwa by road to Mizoram state in Northeast India.
INDIAN OCEAN

CHAGOS ARCHIPELAGO AND MAURITIUS

Why in News?

- ‘International Court of Justice’ in an advisory opinion has said that Britain has to handover Chagos Archipelago to complete the process of decolonization of Mauritius.
- British government has rejected the opinion as it said that ICJ has no jurisdiction to deliberate on this matter. Mauritius has maintained that Britain’s “unilateral” decision to ban the right of return of Chagossians (African Tribe) and to renew the lease for the US base on Diego Garcia, one of the Chagos Islands, breached international law.

BIMSTEC SUMMIT

Why in News?

- Recently, the 4th summit of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) was held in Nepal.
- The meeting is taking place after a gap of four years, the 3rd BIMSTEC Summit took place in Nay Pyi Taw in 2014.

BIMSTEC (THE BAY OF BENGAL INITIATIVE FOR MULTI-SECTORAL TECHNICAL AND ECONOMIC COOPERATION)

- It is a regional organization of countries lying in the littoral and adjacent areas of the Bay of Bengal.
- The permanent secretariat of BIMSTEC was established in Dhaka.
- It came into being on 6 June 1997 through the Bangkok Declaration.

7 Members of BIMSTEC:
   Nepal and Bhutan do not share a boundary with Bay of Bengal although members.

INDIAN OCEAN CONFERENCE

Why in News?

- The third edition of Indian Ocean Conference took place in Hanoi, the capital of Vietnam

More on the news

- The theme of the two- day conference will focus on ‘Building Regional Architectures’, particularly with regards to trade and commerce, security and governance.
- This year, the Indian Ocean Conference will emphasise on better cooperation, strategic collaboration and governance architectures.

Indian Ocean Conference

- The Indian Ocean Conference is initiated by India Foundation along with its partners from Singapore, Sri Lanka and Bangladesh
- It is an annual effort to bring together Heads of States/Governments, Ministers, thought Leaders, scholars, diplomats, bureaucrats and practitioners from across the region.
- Two successful editions of the Conference have been hosted so far in 2016 and 2017.
SAARC DEVELOPMENT FUND (SDF)

Why in news?
SDF’s Partnership Conclave 2018 was held in New Delhi.

More about the news
• The event aims towards Strategic growth in the South Asian region through project collaboration and Regional integration and proposes to:
  • Solicit Cross-Border project Co-Financing under social, economic and infrastructure windows for SDF in SAARC member States.
  • Build partnership with various organisations like the World Bank, Asian Development Bank (ADB) and the Asian Infrastructure Investment Bank (AIIB) for fund mobilisation and investment in SAARC member states.
  • The larger aim is to convert the SDF into a regional bank by strengthening its credit portfolio so that it could get lender’s status. It will help raise funds from the capital market through various instruments like bonds etc.

About SDF
• It was established by heads of all eight SAARC member states during 16th SAARC summit at Thimphu, Bhutan in April 2010.
• Its Secretariat is located at Thimphu, capital of Bhutan. Its Governing Council comprises finance ministers of these eight countries.
• It was created as umbrella financial mechanism for all SAARC developmental projects and programmes.

South Asian Association of Regional Cooperation
• It is the regional intergovernmental organization and geopolitical union of nations in South Asia.
• Afghanistan, Bangladesh, Bhutan, India, Nepal, the Maldives, Pakistan and Sri Lanka are its members.
• Its secretariat is based in Kathmandu, Nepal.
• It launched the South Asian Free Trade Area (SAFTA) in 2006.
• States with observer status include Australia, China, European Union, Iran, Japan, Mauritius, Myanmar, South Korea and United States.
• Pakistan was to host the Summit in 2016, but India had pulled out accusing Pakistan of supporting anti-India terrorist groups.
• SAARC foreign ministers meet was recently held at the sidelines of UNGA meet.

SWAP Arrangement for SAARC Member:
• Cabinet approved the Framework on Currency Swap Arrangement for SAARC Member Countries in 2012.
• The intention is to provide a line of funding for short term foreign exchange requirements or to meet balance of payments crises.
• Under the agreement, RBI offers swaps of varying sizes in USD, Euro or INR to each SAARC member country depending on their 2 months import requirement.
• This will not exceed US$ 2 billion in total.
South Asia Subregional Economic Cooperation (SASEC)

The SASEC program is a project-based partnership to promote regional prosperity.

- Project based partnership means several projects are undertaken by it to improve crossborder connectivity, boost trade among member countries and strengthen regional economic cooperation.
- The Asian Development Bank (ADB) is the secretariat and lead financier of the program.
- Myanmar has formally become a full member (SASEC).

Members of SASEC

Indian Ocean Rim Association (IORA)

- Maldives has now become the latest member of Indian Ocean Rim Association (IORA)
- IORA, formerly known as the Indian Ocean Rim Initiative and Indian Ocean Rim Association for Regional Cooperation (IOR-ARC), is an international organisation consisting of coastal states bordering the Indian Ocean.
- The Association comprises 21 member states, including India, SL and BanglaDesh.
- Indonesia is the chair of IORA in the period 2016-2018.
- The objective of IORA is to promote sustainable growth and balanced development of the region and member states.

II. South-East Asia

India-Japan Relations

The 13th Indo-Japan annual bilateral summit was held and a joint vision statement was issued.

India and Japan share similar interest in Indo pacific hence called for a free, open, transparent, rule based and (inclusive) Indo pacific region.

Initiatives

- A landmark civil-nuclear deal was signed last year.
- Connectivity through Huge Infrastructure projects like the Delhi-Mumbai Freight Corridor, Delhi-Mumbai Industrial Corridor, Chennai-Bangalore Industrial Corridor and the Ahmedabad-Mumbai High Speed Rail system.
- Maglev trains use magnetic levitation over guideways and move without making any contact with the ground. This allows for very high speed travel by reducing friction and creating both lift and propulsion

Outside India-Asia-Africa Growth Corridor (AAGR) announced in 2017 and joint projects in some third countries like Bangladesh, Myanmar, and Sri Lanka and in Africa as well will be taken jointly.

Asia -Africa Growth Corridor:

- The Asia-Africa Growth Corridor or AAGC is an economic cooperation agreement between the governments of India, Japan and multiple African countries.
- It aims for Indo-Japanese collaboration to develop quality infrastructure in Africa, complemented by digital connectivity, which would undertake the realization of the idea of creating free and open Indo-Pacific Region. The AAGC will give priority to development projects in health and pharmaceuticals, agriculture and agro-processing, disaster management and skill enhancement. The connectivity aspects of the AAGC will be supplemented with quality infrastructure.
• Defence ties - **Quadrilateral Security Dialogue** is a strategic dialogue between India, United States, Japan and Australia will be carried out.

• **Triilateral naval exercise called Exercise Malabar** involving the United States, Japan and India will be carried on continuous basis.

• Till now India and Japan had a 2+2 dialogue at the secretary-level now they decided to have a 2+2 dialogue mechanism between Defence and Foreign ministers. This is aimed at giving political muscle to the existing diplomatic, security and defence cooperation.

### ASIA PACIFIC ECONOMIC COOPERATION

**Why in News?**

• Asia Pacific Economic Cooperation (APEC) at its Summit in Papua New Guinea failed to develop consensus on a communique. This was first such instance in the history of APEC when a consensus could not be achieved on final declaration.

**Asia-Pacific Economic Cooperation (APEC):**

• Asia-Pacific Economic Cooperation (APEC) is an inter-governmental forum for 21 Pacific Rim member economies that promotes free trade throughout the Asia-Pacific region.

• These 21 member countries collectively account for nearly 50% of the world’s trade and about 57% of GDP. It was established in 1989.

• 21 Members Economies: Australia, Brunei, Canada, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States, Taiwan, Hong Kong, China, Mexico, Papua New Guinea, Chile, Peru, Russian and Vietnam. India is observer of APEC since 2011 and has applied for members...

**Current relation between India and APEC**

• India was allowed in APEC summit in **2011 as an observer state**.

• Although India has been attempting to join APEC since 1993, but still has not got the membership as:

  • India’s geographical location isn’t conducive for India’s membership in APEC as India does not border the Pacific Ocean.

  • Some APEC members have expressed concerns that India’s inclusion could shift the focus of the grouping away from its Pacific Rim.

### INDIA BECOMES PRESIDENT OF AIBD

**Why in News?**

• Recently, India has been elected as the President of the Asia-Pacific Institute for Broadcasting Development (AIBD) for a period of two years.

• Asia-Pacific Institute for Broadcasting Development (AIBD)

• It is a regional inter-governmental organisation servicing countries of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP) in the field of electronic media development.

• It was established in 1977 under the auspices of UNESCO and the **Asia-Pacific Broadcasting Union (ABU)** is a founding organisation of the Institute and is a non-voting member of the General Conference.

• It is hosted by Malaysia and its secretariat is located in Kuala Lumpur.

• The International Telecommunication Union (ITU) and United Nations Development Programme (UNDP) are also founding organisations of the Institute.

• Its function is to achieve a vibrant and cohesive electronic media environment in the Asia-Pacific region through policy and mobilising the intellectual and technological resources available within the national broadcasting organizations.
EARLY-HARVEST PACKAGE FOR RCEP

Why in News?
• Members of the Regional Comprehensive Economic Partnership (RCEP), have finalized an early-harvest “package” with the aim of concluding trade negotiations by the year-end.

Background
• The RCEP, forged during the 2012 ASEAN summit in Cambodia, was built upon the premise of broadening and deepening engagement among parties and facilitating participation to promote economic development in the region.
• But the negotiations which had begun in 2012 resulted in a stalemate due to various differences among members.

About RCEP
• The RCEP is a FTA between the 10-member ASEAN bloc and its six FTA partners—India, China, Japan, South Korea, Australia and New Zealand.
• Once concluded, RCEP will create the largest regional trading bloc, making up 25% of GDP, 30% of global trade, and 26% of foreign direct investment (FDI) flows.
• The RCEP ‘guiding principles and objectives state that the “negotiations on trade in goods, trade in services, investment and other areas will be conducted in parallel to ensure a comprehensive and balanced outcome.”

EAST ASIA SUMMIT

Why in news?
• Recently, India participated in the 13th East Asia Summit, held in Singapore.

About East Asia Summit (EAS)
• It is an annual meeting of regional countries which was started in 2005. It is an ASEAN-centred forum which can only be chaired by an ASEAN member.
• The members include 10 Association of South East Asian Nations (ASEAN) nations plus 8 other nations Australia, China, India, Japan, New Zealand, South Korea, Russia and the US.
• The EAS membership represents around 54% of the world’s population and accounts for 58% of global GDP.

Quadrilateral Security Dialogue (QUAD) Summit:
• It was held in Singapore on the sidelines of 13th EAS in Singapore.
• About QUAD: It is an informal mechanism between India, the US, Australia and Japan, and interpreted as a joint effort to counter China’s influence in the Indo-Pacific region.
• Key Takeaway: It covered a range of security and economic issues under the rubric of supporting a free, open and inclusive rules-based order
• Reaffirms India’s diplomatic engagement: East Asia Summit has provided a relatively bigger platform (due to participation of 18 countries) to India for better endorsement of Act East Policy, and historical, cultural and economic linkages with East Asian Communities.

ASSOCIATION OF SOUTH EAST ASIAN NATIONS (ASEAN)
• It is a regional organisation comprising 10 Southeast Asian states which promotes intergovernmental cooperation and facilitates economic integration amongst its members.
• Its principal aim is to accelerate economic growth, social progress, and socio cultural evolution, promote Southeast Asian studies, alongside the protection of regional stability.
• Member nations are Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Cambodia, Laos, Myanmar, and Vietnam.
**ASEAN Plus**

- Three was created to improve existing ties with the People’s Republic of China, Japan, and South Korea.
- ASEAN became **ASEAN Plus Six** with additional three countries: Australia, New Zealand and India.
- In 2006, ASEAN was given observer status at the United Nations General Assembly.
- In response, the organisation awarded the status of “dialogue partner” to the UN.

**Delhi Dialogue**

- India hosted the 10th edition of the Delhi Dialogue (DD X) under the theme “Strengthening India-ASEAN Maritime Cooperation” in New Delhi.
- It is a premier annual event to discuss politico-security, the economic and socio-cultural engagement between **India and ASEAN**.
- India-ASEAN Commemorative Summit was held in 2018, marking 25 years of India-ASEAN ties.
- The Delhi Declaration was released after the summit.
- The declaration urges countries to strengthen cooperation and collaboration in combating transnational crimes, including people smuggling, trafficking in persons, illicit drug trafficking, cybercrime.

**ASEAN-INDIA Connectivity Summit -**

- It is being organized by the Ministry of External Affairs in partnership with Confederation of Indian Industry (CII).
- The summit was with the theme “Powering Digital and Physical Linkages for Asia in the 21st Century”.
- Vietnam and Cambodia has participated from the ASEAN side

** AsiAN DEVELOPMENT BANK STRATEGY 2030**

**Why in News?**

- Recently, Asian Development Bank (ADB) released its long-term corporate strategy i.e. Strategy 2030.

**ADB- Strategy 2030**

- It is policy framework for ADB that sets out the its broad vision and strategic response to the **evolving needs of Asia and the Pacific**

**Related Information**

About Asian Development Bank (ADB)
- ADB was founded in 1966 and India is a founding member to it.
- The ADB has 67-member countries, including — 48 from the Asian region.
- ADB has been led conventionally by a Japanese governor.
- Top 5 shareholders in ADB are: Japan (15.6%), United States (15.6%), People’s Republic of China (6.4%), India (6.3%) and Australia (5.8%)
- **It provides direct assistance to private enterprises of developing member countries** through equity investments and loans.
Asian Infrastructure Investment Bank (AIIB) ANNUAL MEETING AT MUMBAI

Why in news?
Recently, third annual meeting of AIIB was held in Mumbai.

Highlights of the meeting
• The meeting was joint held by The Department of Economic Affairs and the Asian Infrastructure Investment Bank (AIIB).

Asian Infrastructure Investment Bank
• It is a multilateral development bank with a mission to improve social and economic outcomes in Asia and beyond.
• It was established in December 215 but commenced operation in January 2016 and is headquartered in Beijing. Currently it has 86 members with India as a founding member.
• India holding about 8.99% stake and 7.5% vote is the second largest shareholder in AIIB with China holding 32% being the largest.
• So far AIIB has approved 23 projects with a total funding of USD4.22 billion. Recently it also proposed to invest USD200 million in the National Infrastructure Investment Fund (NIIF).

Difference between AIIB, NDB and ADB

<table>
<thead>
<tr>
<th></th>
<th>AIIB</th>
<th>NDB</th>
<th>ADB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership:</td>
<td>57 countries,</td>
<td>Brazil, Russia, China,</td>
<td>31 members at its</td>
</tr>
<tr>
<td>Founding</td>
<td>including China</td>
<td>India, south Africa</td>
<td>establishment, ADB</td>
</tr>
<tr>
<td>members</td>
<td></td>
<td></td>
<td>currently has 67 members,</td>
</tr>
<tr>
<td>Regional</td>
<td>33 members (76.9% of</td>
<td>NA</td>
<td>of which 48 are from within</td>
</tr>
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<td></td>
<td>voting powers)</td>
<td></td>
<td>Asia and the Pacific</td>
</tr>
<tr>
<td>Non-Regional</td>
<td>16 members</td>
<td>NA</td>
<td>and 19 from outside Japan</td>
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<tr>
<td>Shareholders</td>
<td>China (29.780)</td>
<td>Brazil (10000)</td>
<td>and United States hold</td>
</tr>
<tr>
<td></td>
<td>India (8.367)</td>
<td>Russia (10000)</td>
<td>the largest proportion</td>
</tr>
<tr>
<td></td>
<td>Russia (6.536)</td>
<td>China (10000)</td>
<td>of shares (15.607%)</td>
</tr>
<tr>
<td></td>
<td>Germany (4.484)</td>
<td>India (10000)</td>
<td>China (6.444%)</td>
</tr>
<tr>
<td></td>
<td>South Korea (3.739)</td>
<td>South Africa (10000)</td>
<td>India (6.331%)</td>
</tr>
<tr>
<td>Voting Rights</td>
<td>China(28.7%)</td>
<td>Brazil (20%)</td>
<td>Australia (5.786%)</td>
</tr>
<tr>
<td></td>
<td>India(8.3%)</td>
<td>Russia (20%)</td>
<td></td>
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<tr>
<td></td>
<td>Russia(6.536%)</td>
<td>China (20%)</td>
<td></td>
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<tr>
<td></td>
<td>Germany(4.6%)</td>
<td>India (20%)</td>
<td></td>
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<tr>
<td></td>
<td>South Korea(3.9%)</td>
<td>South Africa (20%)</td>
<td></td>
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<tr>
<td>Majority</td>
<td>Two thirds of</td>
<td>Four founding members</td>
<td></td>
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<tr>
<td>threshold for</td>
<td>Membership with</td>
<td>and two third</td>
<td></td>
</tr>
<tr>
<td>major decisions</td>
<td>75% of voting power</td>
<td>voting power</td>
<td></td>
</tr>
<tr>
<td>HQ</td>
<td>Beijing, China</td>
<td>Shanghai, China</td>
<td>Manila, Philippines</td>
</tr>
</tbody>
</table>
Small Pacific Islands

Forum for India-Pacific Islands cooperation (FIPIC) is a multinational grouping developed in 2014 for cooperation between India and 14 Pacific Islands nations which include Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Samoa, Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu and Vanuatu.

- All Head of state/head of government of the above countries met in Suva, Fiji in November 2014 for the first time where the annual summit was conceptualized.

III. CENTRAL ASIA

1st INDIA-CENTRAL ASIA DIALOGUE

Why in news?
- 1st India-Central Asia Dialogue was held in Samarkand, Uzbekistan and was co-chaired by the Minister of External Affairs of India.
- The ministerial level summit saw the participation of External Affairs Ministers of Afghanistan, Kyrgyz Republic, Tajikistan, Turkmenistan and Kazakhstan.
- India & Central Asia
- India now considers the Central Asian countries as part of its 'extended and strategic neighbourhood'.
- India’s only foreign military airbase is in Farkhor (Tajikistan), which is operated by IAF and Tajik Air Force. Tajikistan is located in proximity to the Pakistan-occupied Kashmir (PoK).

Energy
India and Uzbekistan has signed a deal for long-term supply of uranium.

After Kazakhstan, Uzbekistan will become the second Central Asian country to supply uranium to India.

Uranium production across world

<table>
<thead>
<tr>
<th>Rankings</th>
<th>Top Uranium reserves</th>
<th>Top UraniumProducer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Australia</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td>2.</td>
<td>Canada</td>
<td>Canada</td>
</tr>
<tr>
<td>3.</td>
<td>Kazakhstan</td>
<td>Australia</td>
</tr>
</tbody>
</table>

INDIA’S EFFORTS TO CONNECT WITH THE REGION

Connect Central Asia Policy:
- Launched in 2012, with objective of increased exchanges and high level political visits.

Membership of Shanghai Cooperation Organization:

Why in news?
Shanghai Cooperation Organization (SCO) summit was held in Qingdao, China.

- This year meet is India’s first participation in the summit as a full-time member.
- India, along with Pakistan, became full-time members during the Astana summit in Kazakhstan in June 2017.
### Shanghai Cooperation Organization

- It owes its origin to its predecessor **Shanghai Five**.
- It was a multilateral forum founded by 5 countries **China, Russia, Kazakhstan, Kirghizia, and Tajikistan in Shanghai in 1996**.
- It emerged from a **series of border demarcation and demilitarization talks** between the four former Soviet republics and China.

- Current member states (8) - China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan.
- **Observer States (4)** - Afghanistan, Belarus, Iran and Mongolia.
- The official working languages of the Shanghai Cooperation Organisation are Chinese and Russian.
- The SCO Secretariat, based in Beijing, is the main permanent executive body of the SCO.
- The Council of Heads of State is the top decision making body in the SCO.
- The **Regional Anti-Terrorist Structure (RATS)**, headquartered in Tashkent, Uzbekistan, is a permanent organ of the SCO which serves to promote cooperation of member states against terrorism, separatism and extremism.
- All SCO members, except for China, India & Pakistan, are also members of the Eurasian Economic Community.
- The original purpose of the SCO was to serve as a counterbalance to NATO and in particular to avoid conflicts that would allow the United States to intervene in areas bordering both Russia and China.

### International North South Transport Corridor (INSTC)

- India is a founding member of the International North-South Transport Corridor (INSTC), a project to link India and Iran via the sea route and then through Iran to the Caspian Sea onwards to Central Asia.
- It is a multi-mode network of ship, rail, and road route for moving freight between India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe.
- Multi modal transport corridor signed in 2000 in St. Petersburg with **Iran, Russia and India as founding members**.
- It was expanded to include 11 new members: Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Ukraine, Belarus, Oman, Bulgaria.
- It aims to **link India and Iran via the sea route and then through Iran to the Caspian sea onwards to Central Asia**.

#### Development of Chabahar port in Iran:

- It will allow access to landlocked Afghanistan and energy-rich Central Asia through the Jawaharlal Nehru and Kandla ports on India’s west coast.

#### Why in news?

- Afghanistan began exports to India through Chabahar port.
- Chabahar port can help the two countries overcome limitation of overland trade.
• Goods brought at the port can be easily transported to the Afghan border & distributed to different parts of Afghanistan via Zaranj-Delaram highway.

**Ashgabat Agreement:**

India has acceded to the Ashgabat Agreement, an international transport and transit corridor facilitating transportation of goods between **Central Asia and the Persian Gulf.**

**Ashgabat Agreement**

- It aims to create multi-modal international transport and transit corridor.
- It has Oman, Iran, Turkmenistan and Uzbekistan as founding members. Kazakhstan has also joined this arrangement subsequently.
- Pakistan joined Ashgabat agreement in 2016.
- India has also become a member of the agreement, which would enable India to utilize this existing transport and transit corridor to facilitate trade and commercial interaction with the Eurasian region.
- Further, this would synchronize with our efforts to implement the International North-South Transport Corridor for enhanced connectivity.
- **The Lapis Lazuli Corridor** is an agreement between Afghanistan, Turkmenistan, Azerbaijan, Georgia and Turkey seeking to foster transit and trade cooperation by reducing barriers facing transit trade.

**Turkmenistan-Afghanistan-Pakistan-India (TAPI) Gas Pipeline:**

- It is the proposed natural gas pipeline that runs from Galkynysh field (Turkmenistan) – Herat – Kandahar – Multan – Fazilika (Pak – India Border).

**Eurasian Economic Union (EEU):**

- India is negotiating a comprehensive economic partnership agreement with the Eurasian Economic Union, which includes Belarus, Kazakhstan, Russia, Armenia and Kyrgyzstan.

**About Eurasian Economic Union**

- It is a political and economic union of 5 states located in central and northern Eurasia i.e. Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Russia.
- It facilitates the free movement of goods, capital, services, and people among its member countries.
- India is holding negotiations to finalize free trade agreement with EEU

**Indian Technical and Economic Cooperation (ITEC) Programme** is also an effective instrument under which young professionals of these countries undergo training and human capacity development.

**CASPION SEA BREAKTHROUGH TREATY**

**Why in News?**

- Five Caspian Sea states – Azerbaijan, Iran, Kazakhstan, Russia and Turkmenistan reached a breakthrough agreement on sovereign rights to the sea, paving the way for new oil and gas extraction — and pipelines — after more than two decades of disputes.
- The treaty ends a spat over whether the Caspian is a sea or a lake, granting it special legal status and clarifying the maritime boundaries of each surrounding country. It also allows each to lay pipelines offshore with consent only from the neighbouring states affected, rather than from all Caspian Sea nations.
IV. AFRICA

AFRICAN CONTINENTAL FREE TRADE AREA

Why in news?

- African countries are set to launch the African Continental Free Trade Area or AfCFTA, the biggest free trade agreement in the world since the World Trade Organization.
- The African Continental Free Trade Area (AfCFTA) is the result of the African Continental Free Trade Agreement among all 55 members of the African Union. African heads of state gathered in Kigali, Rwanda in March 2018 to sign the proposed agreement.
- The Continental Free Trade Area (CFTA) is a continent-wide free-trade agreement brokered by the African Union (AU) and initially signed on by 44 of its 55 member states in Kigali, Rwanda on March 2018.
- The United Nations Economic Commission for Africa estimates that the agreement will boost intra-African trade by 52 percent by 2022.
- The proposal will come into force after ratification by 22 of the signatory states. One Stop Trade Bloc-AfCFTA will provide a number of opportunities for the Indian firms and investors to tap into a larger, unified, simplified and more robust African market.

**The African Union (AU)**

- The African Union (AU) is a continental union consisting of 55 member states located on the continent of Africa, with exception of various territories of European possessions located in Africa.
- The AU’s secretariat, the African Union Commission, is based in Addis Ababa, Ethiopia.

- India’s interactions with African nations is taking place through forums such as:
  - India-Africa Strategic Dialogue, India Africa Forum Summit.

**India Africa Forum Summit:**

- The 3rd India-Africa Forum Summit took place in New Delhi in 2015.
- The two previous India-Africa summits were held in 2008 and 2011, in New Delhi and Addis Ababa respectively.

INDIA & SOUTH AFRICA

Why in news?

- India and South Africa recently sealed a three-year strategic programme (2019-21).

More on news

- The deal was finalized after talks between Prime Minister and **South African President Cyril Ramaphosa, who was the Chief Guest for the Republic day function**.
- The strategic programme will cover cooperation in a range of areas including defence and security, trade and investment, the blue economy, tourism, IT and agriculture.
- Both the countries are members of groupings such as BRICS, IBSA, IORA, G-20, etc. Both nations are committed to securing representation in an expanded UN Security Council to achieve a more representative UN Security Council Membership. Both are former British colonies and full member states of the Commonwealth of Nations as Commonwealth republics.
Girinka Programme

Why in news-

- India gifted 200 locally bought cows to villagers from Rweru village for Girinka during PMs visit to African Nations.
- It is the Rwanda’s one of a kind Social Protection scheme under which the poorest residing in the region get cows from the government and gift the first female calf to a neighbour to promote brotherhood.
- It aims to transform livelihoods, reconcile communities, and improve agricultural productivity through the use of manure as fertilizers.
- It has led to an increase in agricultural production in Rwanda - especially milk production and products, reduced malnutrition and increased incomes.

V. EUROPE

12TH ASIA-EUROPE MEETING

Why in News?

- The 12th Asia-Europe Meeting(ASEM12) was held in October 2018 in Brussels, Belgium. Discussions focused on the theme “Europe and Asia: Global Partners for Global Challenges”.

About ASEM

- It is an intergovernmental process established in 1996 to foster dialogue and cooperation between 51 Asian and European countries plus two institutional partners (the EU and the Association of South East Asian Nations -ASEAN). India joined the forum in 2008.
- The first summit was held in Bangkok, Thailand. It also seeks to strengthen the relationship between regions and spread peace, respect and equality.

INDIA AND EUROPEAN UNION

Why in News?

- The European Union has unveiled a ‘strategy paper’ outlining the broad roadmap for accelerating cooperation with India in a range of key sectors.

Broad-based Trade and Investment Agreement (BTIA)

- India and EU since 2007 are unable to strike a free trade agreement called Bilateral Trade and Investment Agreement (BTIA) due to incoherent interests of both.
- For India, EU is one of the largest trading partner (13.5% of India’s overall trade with the world in 2015-16), well ahead of China (10.8%), USA (9.3%), UAE (7.7%) and Saudi Arabia (4.3%).

EU (European Union)

- The European Union -often known as the EU -is an economic and political partnership involving 28 European countries.
- It began after World War Two to foster economic co-operation, with the idea that countries which trade together were more likely to avoid going to war with each other.
- It has since grown to become a “single market” allowing goods and people to move around, basically as if the member states were one country.
- It has its own currency, the euro, which is used by 19 of the member countries, its own parliament and it now sets rules in a wide range of areas -including on the environment, transport, consumer rights and even things such as mobile phone charges.
For the time being, the United Kingdom remains a full member of the EU and rights and obligations continue to fully apply in and to the UK.

The Maastricht Treaty established the European Union in 1993 and introduced European citizenship.

The latest major amendment to the constitutional basis of the EU, the Treaty of Lisbon, came into force in 2009.

The EU has developed an internal single market through a standardised system of laws that apply in all member states.

The Union reached its current size of 28 member countries with the accession of Croatia on 1 July 2013.

EU policies aim to ensure the free movement of people, goods, services, and capital within the internal market, enact legislation in justice and home affairs, and maintain common policies on trade, agriculture, fisheries, and regional development.

Within the Schengen Area, passport controls have been abolished.

A monetary union has been established within union but lacks common Fiscal union.

Of 28 member states, only 19 EU member states use the euro currency.

The Lisbon Treaty now contains a clause under Article 50, providing for a member to leave the EU.

United Kingdom enacted the result of a membership referendum in June 2016 and is currently negotiating its withdrawal.

The EU as a whole is the largest economy in the world.

Brexit

Why in news?

Failure of Parliamentry approval to Prime Ministers proposal regarding withdrawal from EU.

Brexit:

It is a word that is used as a shorthand way of saying the UK leaving the EU - merging the words Britain and exit to get Brexit.

After the referendum, Prime Minister of UK gave notice to the EU (invoking a EU provision covering withdrawal — Article 50 of the Lisbon Treaty) on the UK’s decision on.

Under Article 50, the two sides have two years to agree on the terms of the split. The UK is scheduled to leave at 11 pm UK time on March 29, 2019, which can be extended if all 28 EU member countries agree.

Conflicting issue

Citizens’ rights after Brexit, Trade over Irish Border, payments that the UK makes to the EU budget and other are some of the conflicting issues.
VI. North America

INDIA-USA:

INDIA-US TRADE RELATIONS

Why in news?
• Recently U.S. has withdrawn Generalized System of Preferences (GSP) benefits on 94 products for all countries.

What is Generalized System of Preferences?
• It is a non-reciprocal preferential tariff system which provides for exemption from the Most Favored Nation principle of World Trade Organization.
• It involves reduced MFN tariffs or duty free entry of eligible products exported by beneficiary countries (developed countries) to markets of donor countries (developing countries).
• The objective of GSP was to give development support to poor countries by promoting capacity development and trade.
• U.S. has a particularly strong GSP regime, under Trade Act, 1974. India has been the largest beneficiary of the GSP. In 2017, India’s duty-free export to the US under the GSP was more than $5.6 billion.

Most Favored Nation
• MFN clause under WTO requires a country to provide any concessions, or granted in a trade agreement to one nation to all other World Trade Organization member countries.
• It ensures non-discriminatory trade policy because it ensures equal trading among all WTO members.
• However, in the case benefits are provided under free-trade agreements, like those laid out in the North American Free Trade Agreement, those are not subject to the MFN clause as long as the goods are traded between the participating countries only.

Intellectual Property Rights Issue:
• India has been placed in Priority Watch List of the USTR’s Special 301.

SPECIAL 301 REPORT
• It is prepared annually by the Office of the United States Trade Representative (USTR).
• The reports identify trade barriers to U.S. companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.
• It must identify a list of “Priority Foreign Countries”, those countries judged to have inadequate intellectual property laws; these countries may be subject to sanctions.
• In addition, the report contains a “Priority Watch List” and a “Watch List”, containing countries whose intellectual property regimes are deemed of concern.

Visa related tensions:
• India is the largest beneficiary of H1-B visa scheme of US. But US in recent times has increased visa fees for H1-B applicants and cut their quotas. This has been detrimental for the interest of Indian IT companies. India has raised concerns on this issue.
India – US have been also engaged WTO in dispute resolution:

- India dragged the US to the WTO dispute settlement mechanism over the imposition of import duties on steel and aluminium. Also, India and US are at loggerheads on subsidies and Domestic Content Requirement (DCR) provisions to renewable energy sector in their respective countries.

JCPOA (JOINT COMPREHENSIVE PLAN OF ACTION)

- Earlier USA has withdrawn from JCPOA (Joint Comprehensive Plan of Action) as the deal did not target Iran's ballistic missile programme, its nuclear activities beyond 2025 and its role in conflicts in Yemen and Syria.
- US has agreed to let eight countries including Japan, India and South Korea, keep buying Iranian oil after it re-imposes sanctions on Iran, in recognition of their significant efforts to reduce imports from Iran.

Why U.S. is imposing sanctions on Iran?

- The sanctions that are being imposed are the most damaging to the Iranian economy - targeting its oil sales, its wider energy industry, shipping, banking, insurance and so on.

New Arrangement with Iran of India:

- Oil payments are being made in rupees only as against earlier arrangements where there was a ratio of 45 percent rupees and 55 percent Euros.
- Under the US sanctions, India is allowed to export farm commodities, food, medicines, and medical devices to Iran. Iran could use the rupee to pay for imports from India.
- The agreement of buying oil in rupees will help strengthen the rupee as India will not need US dollars to import the oil.

INDIA – USA DEFENCE FACTS

- It was officially announced that the Logistics Exchange Memorandum of Agreement (LEMOA) has been fully operationalised.
- There are four foundational agreements that help the U.S. to intensify its defence cooperation with a partner nation such as India.
- India had signed only three of these four agreements -
  2. Logistics Exchange Memorandum of Agreement (LEMOA) in 2016
  3. Communications Compatibility and Security Agreement (COMCASA) in 2018
- The last one remaining is the Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA)
- GSOMIA paved the way for greater technology cooperation in the military sector.
- LEMOA gives both nations access to each other's military facilities. But it does not make it automatic or obligatory.
- COMCASA will facilitate transfer of encrypted communications systems.
- It helps in sharing high-tech military hardware, especially armed drones which the U.S. is willing to supply to India.
- BECA facilitates exchange of geospatial information.

India-U.S. 2 + 2 Dialogue

- 2+2 dialogue (Two plus Two discussion) is a diplomatic arrangement between India and the U.S.
• It is held between Indian External Affairs and Defence Ministers, and their US counterparts.
• It aimed at promoting synergy in diplomatic and security efforts and provide a forward looking vision for the India-U.S. strategic partnership.

**India’s Exemption from CAATSA**
• U.S is set to exempt an India, Indonesia and Vietnam defence acquisition from Russia from CAATSA law.
• The Countering America’s Adversaries through Sanctions Act (CAATSA), aims at taking punitive measures against Russia, Iran, and North Korea.

**India’s S-400 deal with Russia**
• The Russian-built S-400 Triumf, is the most dangerous operationally deployed modern long-range surface-to-air missile (MLR SAM) system in the world.
• It is considered to be much ahead of the Terminal High Altitude Area Defence system (THAAD) developed by the United States.
• The mobile S-400 system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAVs), and ballistic and cruise missiles within a range of 400 km, at an altitude up to 30 km.
• It can track 100 airborne targets, including super fighters such as the American built F-35, and engagesix of them simultaneously.
• The bulk of India’s military equipment is of Soviet/Russian origin including the nuclear submarine INS Chakra, the Kilo-class conventional submarine, the supersonic Brahmos cruise missile, the MiG and Sukhoi fighters, Mi helicopters, and the Vikramaditya aircraft carrier.

**United States - Mexico - Canada Agreement**
• The U.S., Canada and Mexico arrived at a revised trade agreement, replacing the North American Free Trade Agreement (NAFTA).
• The new deal will be known as the United States Mexico-Canada Agreement, or USMCA.
• The USMCA makes changes to the earlier NAFTA that had some concerns.
• It will thus replace the quarter-century-old North American Free Trade Agreement (NAFTA).
• USMCA does not do anything new to promote the cause of free trade among the North American nations.
• But it achieves the objective of avoiding any significant damage to the international trade system.

**NAFTA**
• NAFTA came into effect in 1994.
• It is a successor to the Canada-United States Free Trade Agreement.
• NAFTA is a trilateral arrangement that includes Mexico.
• It led to lower tariffs on most goods and services traded among the countries.
• It encouraged big business to reorganise supply chains around the North American continent.
• Overall, regional trade has expanded more than three times since NAFTA came into effect.
• The agreement has also led to a range of rules on food safety, intellectual property rights and the settlement of disputes.
• It has generally deepened the political relationship among the three signatories South America

**VENEZUELA CRISIS**

**Why in news?**
• Venezuela is reeling under political turmoil fuelled by an economic crisis due to falling oil prices, and President Nicolas Maduro’s attempts to restrain the Opposition.
• Hyperinflation (extremely fast or out of control inflation), food shortage, Mass Migration, rising crime rate in Venezuela are some of the manifestation of this crisis.
• Venezuela being home to the world’s largest oil reserves the crisis is expected to complicate the global oil supply mix and perhaps seven push up oil prices.

**Organization of the Petroleum Exporting Countries**
• It is an intergovernmental organization of 14 nations to coordinate and unify their petroleum policies and ensure the stabilization of oil markets, in order to have regular supply of petroleum to consumers, a steady income to producers, and a fair return on capital for those investing in the petroleum industry.
• HQ of OPEC is at Vienna, Austria.

**Members** -
• Iran, Iraq, Kuwait, Saudi Arabia, Venezuela Libya, UAE, Algeria, Nigeria, Gabon, Angola, Equatorial Guinea and Congo.
• Qatar announced its termination of its membership from January 2019.
• Russia is not a member of OPEC.
• The countries accounted for an estimated 42% of global oil production and 73% of the world’s “proven” oil reserves.
• Since 2007, OPEC has published the “World Oil Outlook” annually, in which it presents a comprehensive analysis of the global oil industry including medium- and long-term projections for supply and demand.

**MERCOSUR**
• It is a full customs union and a trading bloc with members Argentina, Brazil, Paraguay, Uruguay.
• Bolivia is in the process of being incorporated as a member.
• Venezuela was suspended from membership in 2016.
• Chile, Peru, Colombia, Ecuador and Suriname are its associate members.
• Observer countries are New Zealand and Mexico.
• Its purpose is to promote free trade and the fluid movement of goods, people, and currency.
• India and the Mercosur bloc have stepped up efforts to expand their preferential trade agreement to make greater inroads into the other’s market.
VII. Other International Organisations in News

INTERNATIONAL SOLAR ALLIANCE (ISA)

- It was launched at Paris Climate Change Conference in 2015 by the President of France and the Prime Minister of India.
- It is a multi-country partnership organization with membership from solar resource rich countries between the two tropics, where the global community can make a positive contribution towards increasing the use of solar energy.
- It has now been decided to extend the membership of the alliance to all the UN member states.
- Each Member shares and updates, for those solar applications for which it seeks the benefits of collective action under the ISA.
- The Delhi Declaration on Renewable Energy in the Indian Ocean Region calls for collaboration among IORA member states in meeting the growing demand for renewable energy in the Indian Ocean littorals, development of a common renewable energy agenda for the Indian Ocean region and promote regional capacity building.

G-20 SUMMIT

Why in news?

- Recently the 13th G-20 Summit took place in Argentina. 2018 G20 summit was held under the theme “Building consensus for fair and sustainable development”.
- In the summit, India presented a nine-point agenda to G20 member nations calling for strong and active cooperation among them to comprehensively deal with fugitive economic offenders.

Background of Group of Twenty (G 20)

- It is an international forum for the governments and central bank governors from 19 countries and the European Union.
- The first G20 Summit was held in Berlin in December 1999
- It was formed in 1999 to discuss policies relating to financial stability.
- It is an international forum that brings together the world’s leading industrialised and emerging economies.
- Members are Canada, France, Germany, Italy, Japan, UK, US, Russia, Australia, Canada, Saudi Arabia, India, South Africa, Turkey, Argentina, Brazil, Mexico, China and Indonesia and EU.
- It acts as a forum for the governments and central bank governors from 20 major economies.
- It was founded with the aim of studying, reviewing, and promoting high level discussion of policy issues pertaining to the promotion of international financial stability.
- Its agenda was expanded since 2008 including heads of governments/heads of states as well as finance ministers and foreign ministers.

Recent developments

- The Digital Economy Task Force (DETF) was established to provide recommendations for inclusive development in the era of digital transformation.
- For the first time, India will host the annual G20 summit in 2022
- The FATF is an inter-governmental body an initiative of G-7 to combat money laundering, terrorist financing and other related threats to the integrity of the international financial system.
WORLD TRADE ORGANISATION

Why in news?

• Presently, IMF, World Bank and WTO has called for reform in multilateral trading System in order to tackle ongoing trade war between China and US, stalemate at 11th Ministerial Conference of WTO, USA’s consideration of withdrawal from WTO.

Organizational Structure of WTO

• Ministerial Conference - It Includes all members, meets once in 2 year and the 11th Ministerial Conference was held in Argentina.


WTO and its evolution

World Trade Organization

• It operates a global system of trade rules, acts as a forum for negotiating trade agreements, it settles trade disputes between its member countries and it supports the needs of developing countries.

• WTO officially commenced under the Marrakesh Agreement, replacing the General Agreement on Tariffs and Trade (GATT).

• It is created by Uruguay round of negotiations and established in 1995. HQ - Geneva.

• The trade agreements are signed by representatives of member governments and ratified by their parliaments.

• WTO has 164 members and 22 observer governments, with Afghanistan and Liberia being the latest to join.

Basic principles of trade liberalizations that were to be followed were:

• **Non-discrimination** – Countries will not discriminate one from another. It had been achieved through

• **Most Favored Nation status** i.e. neutral trading relations and National treatment to non-domestic producers.

• **Reciprocity** – The concessions conferred by countries had to be mutual.

GLOBAL COMPACT FOR MIGRATION

• It is the first intergovernmental negotiated agreement, prepared under the auspices of UN to cover all dimensions of migration.

• The agreement was signed in the UNGA by adopting a political declaration “New York Declaration on Refugees and Migrants” in 2016.

• It is framed consistent with one of the targets of the 2030 Agenda for Sustainable Development in which member States have committed to cooperate internationally to facilitate safe, orderly and regular migration.

• The pact is not binding on member countries.

• All the 193 member countries of UNGA became part of the global pact for migration.

• However, few countries have refused to sign or withdrawn from the agreement – USA, Australia, Hungary, Australia, Israel, Poland, Slovakia, the Czech Republic, Austria, Switzerland, Bulgaria, Latvia, Italy, Switzerland and Chile.
10th BRICS SUMMIT

Why in News?

- Recently, the 10th BRICS Summit took place from 25th to 27th July, at Johannesburg in South Africa. The Theme of the summit was ‘BRICS in Africa: Collaboration for Inclusive Growth and Shared Prosperity in the 4th Industrial Revolution.’

About BRICS

- The acronym “BRICS” was initially formulated in 2001 by economist Jim O’Neill, of Goldman Sachs, in a report on growth prospects for the economies of Brazil, Russia, India and China.
- BRICS brings together five major emerging economies, comprising 43% of the world population, having 37% of the world GDP and 17% share in the world trade.

About NDB

- NDB is an initiative of BRICS countries signed into Agreement during the sixth BRICS summit in Fortaleza in 2014 and it came into existence as a legal entity in Ufa Summit in 2015.
- The 5 member states have an equal share.
- The core purpose of the NDB is to mobilize resources for infrastructure and sustainable development in BRICS countries.

The Contingent Reserve Arrangement (CRA) of BRICS

- CRA was established in 2015 during 7th BRICS summit in July 2015. The Treaty for the establishment of BRICS CRA was signed at Fortaleza, Brazil in July 2014.
- It is a framework that aims at providing support through additional liquidity and other means to BRICS countries at a time of economic crisis.
- It will be providing support to BRICS countries through liquidity and precautionary instruments in response to actual or potential short-term balance of payments pressures.
- The initial total committed resources of the CRA will be 100 billion dollars with individual commitments as follows: China ($41 billion), India ($18 billion), Brazil ($18 billion), Russia ($18 billion) and South Africa ($5 billion).
- The CRA is generally seen as a competitor to the International Monetary Fund (IMF) and along with BRICS New Development Bank (NDB) is viewed as an example of increasing South-South cooperation.
- Both CRA and NDB were announced as part of BRICS Fortaleza Declaration announced during 6th BRICS summit held in Fortaleza, Brazil in July 2014

IBSA DECLARATION FOR SOUTH-SOUTH CO-OP

Why in news?

- Recently, at a Ministerial meeting of IBSA in Pretoria, South Africa, Foreign Ministers of India, Brazil and South Africa (IBSA) adopted a declaration to contribute to greater understanding of development and South-South Cooperation (SSC).
- Background About South-South Cooperation (SSC)
- South South Cooperation (SSC) is defined as the exchange and sharing of developmental solutions among countries in the global south.
- The formation of SSC can be traced to the Asian–African Conference that took place in Bandung, Indonesia, in 1955 which is also known as the Bandung Conference.
**IBSA**

- The **IBSA Dialogue Forum** (India, Brazil, and South Africa) is an international tripartite grouping for promoting international cooperation among these countries. It represents three important poles for galvanizing South-South cooperation and greater understanding between three important continents of the developing world namely, Africa, Asia and South America.
- IBSA was formally established by the **Brasilia Declaration of 6 June 2003** by external affairs ministers of India, Brazil and South Africa.

**ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS (OPCW)**

**Why in news?**

- OPCW has been granted new powers to assign blame for attacks using banned toxic materials.

**OPCW**

- It was established in the year 1997 with headquarter at The Hague, Netherlands.
- It is the implementing body for the **Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons**.
- The OPCW Member States share the collective goal of preventing chemistry from ever again being used for warfare, thereby strengthening international security.
- To this end, the Convention contains four key provisions:
  -destroying all existing chemical weapons under international verification by the OPCW;
  -monitoring chemical industry to prevent new weapons from re-emerging;
  -providing assistance and protection to States Parties against chemical threats; and
  -fostering international cooperation to strengthen implementation of the Convention and promote the peaceful use of chemistry.
- It has membership of 193 countries.
  - India is a member.
  - Israel has signed but not ratified the Convention. Egypt, North Korea, Palestine and South Sudan have neither signed nor acceded.
- The Conference of the States Parties is the plenary organ consisting of all members of the OPCW having equal voting rights. It has the general power to oversee implementation of the Convention
- OPCW has reached a major milestone of destroying over 90% of the stockpile of the chemical weapons and was awarded **2013 Nobel Peace Prize** for its extensive efforts to eliminate chemical weapons.
- **The OPCW- The Hague Award**- It was established to honor select individuals and institutions by highlighting their exceptional contributions towards the goal of a world permanently free of chemical weapons.

**VIII. Treaties and conventions in news**

**COMPREHENSIVE NUCLEAR TEST BAN TREATY**

**Why in news?**

- UN chief Antonio Guterres appealed to eight nations, including India and the US, to ratify the Comprehensive Nuclear-Test-Ban Treaty (CTBT).
What is CTBT?

• It is a multilateral treaty banning all nuclear explosions for both military and civilian purposes.

• It was negotiated at the Conference on Disarmament in Geneva and adopted by the United Nations General Assembly. It was opened for signature on 24 September 1996.

• The CTBT with its 183 signatories and 163 ratifications is one of the most widely supported arms-control treaties.

• It can only enter into force after it is ratified by eight countries with nuclear technology capacity, namely China, Egypt, India, Iran, Israel, North Korea, Pakistan and the United States.

• China, Egypt, Iran, Israel and the United States have signed but not ratified the Treaty.

• India, North Korea & Pakistan have not signed it. They have neither signed the Non-Proliferation Treaty 1968.

• According to CTBT each State Party undertakes not to carry out any nuclear weapon test explosion or any other nuclear explosion, and to prohibit and prevent any such nuclear explosion at any place under its jurisdiction or control.

• Only North Korea, has broken the norms, which had led to condemnation from the Security Council and repeated imposition of sanctions.

• The Treaty establishes a CTBT Organization (CTBTO), located in Vienna, to ensure the implementation of its provisions, including provisions for international verification measures.

TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS (NPT) 1968:

• Its objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament.

• Opened for signature in 1968, the Treaty entered into force in 1970. On 11 May 1995, the Treaty was extended indefinitely.

• Four UN member states have never joined the NPT: India, Israel, Pakistan and South Sudan.

• The treaty recognizes five states as nuclear-weapon states: the United States, Russia, the United Kingdom, France, and China (also the five permanent members of the United Nations Security Council).

• India is a non-signatory to this treaty. India had ruled out the possibility of joining the Non-Proliferation Treaty (NPT) as a non-nuclear weapon state but it remains “committed” to a unilateral voluntary moratorium on nuclear explosive testing.

TREATY ON THE PROHIBITION OF NUCLEAR WEAPONS 2017:

• It is the first legally binding international agreement that prohibits States Parties from developing, testing, producing, manufacturing, acquiring, possessing, or stockpiling nuclear weapons or other nuclear explosive devices.

• It is the first multilateral legally-binding instrument for complete nuclear disarmament. Even the Non-Proliferation Treaty (NPT) of 1968 and nuclear-weapon-free zone contains only partial prohibitions.

• This treaty prohibits a full range of nuclear-weapon related activities, such as undertaking to develop, test, produce, manufacture, acquire, possess or stockpile nuclear weapons or other nuclear explosive devices.

• It also prohibits the use or threat of use of these weapons as well.

• 122 of the 124 nations that participated in the negotiations had voted in favour of the treaty.
The treaty will enter into force 90 days after it has been ratified by at least 50 countries.

The eight nuclear weapon states i.e. US, Russia, Britain, China, France, India, Pakistan and North Korea along with Israel had not participated in the negotiations.

India did not participate in the negotiations on a Treaty on the Prohibition of Nuclear Weapons which was concluded in New York on 7 July 2017 quoting that India maintains the Geneva-based Conference on Disarmament (CD) as a single multilateral disarmament negotiation forum.

**NUCLEAR-WEAPON-FREE ZONES (NWFZ):**

- It is a regional approach to strengthen global nuclear non-proliferation and disarmament norms and consolidate international efforts towards peace and security.

**Pelindaba Treaty**

- The African Nuclear Weapon Free Zone Treaty / Pelindaba treaty prohibits the research, development, manufacture, stockpiling, acquisition, testing, possession, control or stationing of nuclear explosive devices in the territory of parties to the Treaty and the dumping of radioactive wastes in the African zone by Treaty parties.

**GENEVA CONVENTION 1949**

**Why in News?**

- Recently, Pakistan government was accused of violating Geneva Convention in treatment of Indian Air force Pilot who crashed in the Pakistan Occupied Kashmir region.

**What is Geneva Convention?**

- The Geneva Conventions and their Additional Protocols form the basis of modern international humanitarian law, setting out how soldiers and civilians should be treated during the war.
- Although they were adopted in 1949, to take account of the experiences of the Second World War, the four Geneva Conventions continue to apply to armed conflicts today.
- Three additional protocols were also adopted later on which expanded the rules.
- The Conventions have been ratified by all States and are universally applicable.

**International Red Cross and Red Cross Movement**

- It is a humanitarian movement with approximately 17 million volunteers worldwide.
- It consists of various International and National organizations with common objective but legally independent of each other.

**INTERMEDIATE RANGE NUCLEAR FORCES TREATY**

**Why in News?**

- Recently, U.S.A (and then Russia) suspended its obligations under the Intermediate-Range Nuclear Forces (INF) Treaty.
- The treaty was signed in the year 1987 between United States and the then Soviet Union.
- The treaty prohibited land-based cruise or ballistic missiles with ranges between 500 and 5,500 km. It did not cover air- or sea-launched weapons,
- The treaty marked the first time the superpowers had agreed to reduce their nuclear arsenal & eliminate entire category of nuclear weapons.
- In 2014, US has alleged that Russia violated the treaty and it has deployed the non-compliant missile.
- Recently, US announced its withdrawal from the treaty. USA Congress approval for the same is yet to be taken.
IX. SPACE DIPLOMACY

• As part of its space diplomacy, India will set up five ground stations and more than 500 terminals in five neighboring countries—Bhutan, Nepal, Maldives, Bangladesh and Sri Lanka.

**Indian initiatives in Space Diplomacy**

• India has also allowed SAARC countries to use its regional positioning system NAVIC.

• India collaborated with NASA during its Chandrayan Mission which found water on the moon.

• Data from Indian satellites is frequently shared with friendly countries for astronomical research which furthers goodwill and enhances relations.

• The ISRO Telemetry, Tracking and Command Network (ISTRAC) operates three international stations in Brunei, Indonesia and Mauritius.

• The ISRO also established the India-Myanmar Friendship Centre for Remote Sensing in 2001.

• South Asia Satellite or GSAT-9 is a Geostationary Communication satellite launched by ISRO to provide various communication applications over South Asian countries. Some other applications include: Tele-medicine, Disaster Management, Banking, e-governance etc.

**Related Bodies**

• The United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) is the forum for the development of international space law.

• The Committee has concluded five international treaties:

**OUTER SPACE TREATY**

• The “Outer Space Treaty” which regulates activities of States in the Exploration and Use of Outer Space. It is an international treaty binding the parties to use outer space only for peaceful purposes.

• The treaty came into force in 1967, after being ratified by the United States, the Soviet Union, the United Kingdom, and several other countries.

• It represents the basic legal framework of international space law.

• 108 countries are parties to this treaty, including India.

• It was formulated to bar its signatory countries from placing weapons of mass destruction in orbit of the Earth, on the Moon or any other celestial body or the outer space.

• However, the Treaty does not prohibit the placement of conventional weapons in orbit and thus some highly destructive attack strategies such as kinetic bombardment are still potentially allowable.

• The treaty explicitly forbids any government from claiming a celestial resource such as the Moon or a planet.

**EXPORT CONTROL REGIMES:**

A Multilateral Export Control Regime is an international body that states use to organize their national export control systems.

**There are currently four such regimes:**

• The Wassenaar Arrangement (WA) on Export Controls for Conventional Arms and Dual-Use Goods and Technologies

• The Nuclear Suppliers Group (NSG), for the control of nuclear related technology
- The Australia Group (AG) for control of chemical and biological technology that could be weaponized
- The Missile Technology Control Regime (MTCR) for the control of rockets and other aerial vehicles capable of delivering weapons of mass destruction

**A brief comparison of the four export control regimes is:**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Wasseanar Agreement</th>
<th>Australia groupings</th>
<th>MTCR</th>
<th>NSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment</td>
<td>Estd. in 1996</td>
<td>Estd. in 1985</td>
<td>Initiative of G7; Estd. in 1987</td>
<td>It was founded in response to the Indian nuclear test in 1974</td>
</tr>
<tr>
<td>Objective</td>
<td>Deals with conventional arms and dual use technologies seeks to ensure that exports do not contribute to the development of chemical or biological weapons.</td>
<td></td>
<td>Proliferation of Missile and unmanned aerial vehicle technology of carrying above 500kg payload for more than 300 km.</td>
<td></td>
</tr>
<tr>
<td>Nature</td>
<td>Informal</td>
<td>Informal</td>
<td>Informal and voluntary partnership</td>
<td>It is a voluntary, non-legally binding export control regime.</td>
</tr>
<tr>
<td>India’s Membership</td>
<td>Yes (Dec 2017)</td>
<td>Yes (Feb 2018)</td>
<td>Yes(May,2016)</td>
<td>India has been trying to become a member. But its membership has been blocked by China</td>
</tr>
<tr>
<td>China’s membership</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Major non-members</td>
<td></td>
<td></td>
<td>China, Pakistan and Israel. (Israel is unilateral member)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>India joined <strong>Hague code of conduct</strong>-dealing with ballistic missile non-proliferation arrangement before becoming member of MTCR. China, Pakistan, Israel are not its member.</td>
<td>Works by consensus only and not by majority.</td>
</tr>
</tbody>
</table>
UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

- It is also called the Law of the Sea Convention or the Law of the Sea treaty.
  It defines the **rights and responsibilities of nations** with respect to
- Their use of the world’s oceans, establishing guidelines for businesses, the environment, and the management of **marine natural resources**.

**NOTE:** Although UN provides support for the meeting of the state party, the **UN has no direct operational role in the implementation** of the Convention.

The convention set the limit of **various areas**, measured from a carefully defined baseline.

1. **Internal waters:** Covers all water and waterways on the landward side of the baseline. The coastal state is free to set laws, and use any resource.
2. **Territorial Waters:** Out to 12 nautical miles from the baseline. The coastal state is free to set laws, and use any resource. Vessels were given the right of innocent passage through any territorial waters.
3. **Contiguous zone:** Beyond the 12-nauticalmile limit, there is a further 12 nautical miles from the territorial sea baseline limit. In this, a state can continue to enforce laws in four specific areas: customs, taxation, immigration and pollution.
4. **Exclusive economic zones (EEZs):** These extend from the edge of the territorial sea out to **200 nautical miles** from the baseline. It includes contiguous zone.
   a. The coastal nation has sole exploitation rights over all natural resources.
   b. Foreign nations have the freedom of navigation and over flight, subject to the regulation of the coastal states.
5. **Continental shelf:** the natural prolongation of the land territory to the continental margin’s outer edge, or 200 nautical miles from the coastal state’s baseline, whichever is greater. So, A state’s continental shelf may exceed EEZ (200 nautical miles). Coastal states have the exclusive right to harvest minerals and nonliving materials in the subsoil of its continental shelf.

INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA (ITLOS)

- Established by UNCLOS.
- Seated at Hamburg (Germany).
- States and international organisations can be its members
- Non-state parties can also file an appeal with it.

INTERNATIONAL SEABED AUTHORITY

- It is an United Nation organization established by UNCLOS.
- Its aim is to organize, regulate and control all mineral-related activities (non-living resources) in the international seabed area beyond the limits of national jurisdiction.
- Government of India signed a 15-year contract with the International Seabed Authority (ISA) for exploration of polymetallic sulphides (PMS) in Indian Ocean.
## United Nation Agencies

<table>
<thead>
<tr>
<th>United Nation Development Group Agencies</th>
<th>Head Quarter</th>
<th>Mandate/Salient Features</th>
</tr>
</thead>
</table>
| United Nations Development Programme (UNDP) | New York City | • Publishes **Human Development Report** annually. It is developed by economist **Mahbub Ul Haq** of Pakistan and based on the work of **Amartya Sen**.  
• Help countries achieve MDGs and SDGs |
| United Nations Environment Programme (UN Environment) | Nairobi, Kenya | • Coordinates environmental activities of UN.  
• Assists developing countries in implementing environmentally sound policies and practices.  
• It is one of several Implementing Agencies for the Global Environment Facility (GEF) |
• Take contributions from government as well as private donors.  
• Got Nobel Peace Prize in 1965. |
| World Health Organization (WHO) | Geneva, Switzerland | • Publishes **World Health Report**,  
• Conducts World Health Survey  
• Started World Health Day (7 April of every year) |
| International Labour Organization (ILO) | Geneva, Switzerland | • A nation can be a member of ILO w/o being a member of UN.  
• It registers complaints against entities that are violating international rules  
• It does not impose sanctions on governments.  
• Got Nobel Peace Prize in 1969 |
| International Telecommunication Union (ITU) | Geneva, Switzerland | • It is an intergovernmental **public-private partnership organization**.  
• Its membership includes 193 **Member States** and around 700 public and private sector **companies**.  
• Coordinates the shared global use of the **radio spectrum, assigning satellite orbits**.  
• Works to improve telecommunication infrastructure in the developing world.  
• Develops international standards. |
| UNHCR (The UN Refugee Agency) | Geneva, Switzerland | • Mandated to protect and support refugees at the request of a government or the UN itself  
• It assists refugees in their voluntary repatriation, local integration or resettlement to a third country.  
• Initially it was established to help people displaced by World War II. |
<table>
<thead>
<tr>
<th>Organization</th>
<th>HQ</th>
<th>Function and Objective</th>
</tr>
</thead>
</table>
| World Meteorological Organization (WMO) | Geneva, Switzerland | • Specialised agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences.  
• It maintains the database of cyclone/hurricane/typhoon names.  
• **Greenhouse Gas Bulletin** is its annual report.  
• It runs **Global Atmosphere watch Programme** to provide scientific data and information on the chemical composition of the atmosphere. |
| International Fund for Agricultural Development (IFAD) | Rome, Italy | • Specialized agency dedicated to eradicating **rural poverty in developing countries**.  
• India is a founding member. |
| Food and Agriculture Organisation (FAO) | Rome, Italy | • It leads international efforts to **defeat hunger**.  
• Serves both developed and developing countries.  
• FAO acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy.  
• Also a source of knowledge and information regarding agriculture, forestry and fisheries practices |
| The World Food Programme (WFP) | Rome, Italy | • The world’s largest humanitarian organization addressing hunger and promoting food security. |
| United Nations Industrial Development Organization (UNIDO) | Vienna, Austria | • Mandate is promotion and acceleration of industrial development in developing countries  
• It also promotes international industrial cooperation. |
| United Nations Conference on Trade and Development (UNCTAD) | Geneva | • A permanent intergovernmental body.  
• Its goal is to maximize the trade, investment and development opportunities of **developing countries** |
| Other UN Agencies | HQ | Function and Objective |
| International Maritime Organisation (IMO) | London, UK | • It has responsibility for the **safety and security of shipping**  
• It works for the prevention of marine pollution by ships. |
| The World Intellectual Property Organisation (WIPO) | Geneva, Switzerland | • To encourage creative activity  
• To promote the protection of **intellectual property** throughout the world. |
| UNESCO | Paris | • building of peace,  
• eradication of poverty,  
• sustainable development  
• intercultural dialogue through education, sciences, culture, communication and information |

**Why in news?**
USA has decided to withdraw from UNESCO, accusing the body of anti-Israel bias.
| **UN Office for Disaster Risk Reduction (UNISDR)** | Geneva, Switzerland | • NISDR was established in 1999 as a dedicated secretariat to facilitate the implementation of the International Strategy for Disaster Reduction (ISDR)
• It serve as the focal point in the United Nations system for the coordination of disaster reduction |
| **UN Human Rights Council (UNHRC)** | Geneva | • The council is 47-member body. So, not all UN members are automatically member of UN HR Council.
• It makes decisions ranging from exposing violations to **recommending that the Security Council make a referral to the International Criminal Court.**
The council doesn’t have the authority to take action but can set up special rapporteurs with the mandate to investigate and report human-rights abuses. |
## INDICES and INDIA’S PERFORMANCE

<table>
<thead>
<tr>
<th>Name of the Index and Report</th>
<th>Released by</th>
<th>India’s position</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logistics Performance Index</strong> in the report ‘Connecting to Compete 2016: Trade Logistics in the Global Economy’</td>
<td>World Bank</td>
<td>From 35 in 2016 to 45 in 2018; Only China is ahead of us in BRICS.</td>
<td>• Captures the relative ease and efficiency with which products can be moved into and within a country. • LPI captures the extent of costs and inefficiency in moving goods across states but not to hinterland.</td>
</tr>
<tr>
<td><strong>Ease of Doing Business Ranking</strong></td>
<td>World Bank</td>
<td>77/190 (2019) &amp; 100th (2018)</td>
<td><strong>Components of ranking:</strong>  • Starting abusiness  • Registering property  • Getting electricity connection  • Getting construction Permit  • Getting credit  • Paying taxes  • Enforcing contracts. Trading across borders  • Resolving Insolvency  • Protecting Minority Investors</td>
</tr>
<tr>
<td><strong>Ease of Living Index</strong></td>
<td>World Bank</td>
<td></td>
<td>The index could include categories on social inclusion, cost of living, public transport, housing, education, health, Environment-friendliness, corruption, crime/safety, governance.</td>
</tr>
<tr>
<td><strong>Sustainable Development Goal Index</strong></td>
<td>SDSN and the Bertelsmann Stiftung</td>
<td>116/157; Sweden - 1st Rank</td>
<td>• It assesses countries where they stand with regard to achieving 17 SDGs by 2030. • The index helps countries to identify priorities for early action.</td>
</tr>
</tbody>
</table>
| Global Hunger Index | Concern Worldwide (Ireland) and Welthungerhilfe (Germany). | 103/119 | **Lower value of index is better:**
- 4 equally weighted indicators
  a. Proportion of under nourished population
  b. The proportion of children under the age of 5 suffering from wasting
  c. The proportion of children under the age of 5 suffering from stunting
  d. Infant Mortality Rate |
|---------------------|-------------------------------------------------------------|--------|----------------|
| Global Innovation Index (GII) | World-Intellectual Property Organization (WIPO), Cornell University and INSEAD | 57th (2018) 60th (2017) | **It ranks world economies according to their innovation capabilities and outcomes.**
- Using 82 indicators.
- Switzerland tops the list. |
| India Innovation Index | NITI Aayog, DIPP and CIIn consultation with WEF, WIPO, Cornell university, OECD, ILO, UNESCO and others | Ranks the innovation performance of all Indian states | **It will be structured on GII by adding India-centric parameters those truly reflect the Indian innovation ecosystem.**
- It will track each indicator at the National level and the State level on real-time basis.
- It will be the point of reference for all international agencies to collect India’s up to date data points for global indices and analytic. |
| Human Development Index (HDI) (In Human Development Report) | United Nation Development Program (UNDP) | 130th (2018) | **It is based on capability approach of Amartya Sen.**
- Considers 3 criteria
  1. Life Expectancy at birth
  2. Education
     a. Average Years of Schooling
     b. Expected Years of Schooling
  3. Gross National Income Per capita |
<table>
<thead>
<tr>
<th>Multi dimensional Poverty Index (In Human Development Report)</th>
<th>United Nation Development Program (UNDP)</th>
<th>26th among 102 developing countries</th>
<th>It measures deprivations across the three dimensions (and 10 indicators) as used for HDI namely health,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Inequality Index in Human Development Report</td>
<td>United Nation Development Program (UNDP)</td>
<td>125/159, Only Afghanistan performs worse than India in South Asia.</td>
<td>Measurement of gender disparity using three dimensions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Reproductive health for women:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. maternal mortality rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. adolescent fertility rate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Empowerment:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. proportion of parliamentary seats occupied by females</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. Proportion of adult females and males aged 25 years and older with at least secondary education.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Economic status: It is measured by labour force participation rate of female and male populations aged 15 years and older.</td>
</tr>
<tr>
<td>Global Manufacturing Index</td>
<td>World Economic Forum</td>
<td>30th</td>
<td>It has categorized 100 countries into four groups-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. Leading (strong current base, high level of readiness for future);</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. High Potential (limited current base, high potential for future);</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>c. Legacy (strong current base, at risk for future);</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>d. Nascent (limited current base, low level of readiness for future).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>India has been placed in the ‘Legacy’ group along with Hungary, Mexico, Philippines, Russia, Thailand and Turkey, among others.</td>
</tr>
</tbody>
</table>
| **Global Gender Gap Index** in Global Gender Gap Report | Designed to measure gender equality | World Economic Forum (Leading four continue to be Scandinavian; Iceland ranks 1st) | 108th in 2018 | Takes four factors into account:
1. **Economic participation and opportunity** – outcomes on salaries, participation levels and access to skills
2. **Educational attainment** – outcomes on access to basic and higher level education
3. **Political empowerment** – outcomes on representation in decision-making structures
4. **Health and survival** – outcomes on life expectancy and sex ratio. Here parity is not assumed. |
| --- | --- | --- | --- | --- |
| **Human Capital Index** | World Economic Forum | 158/195 (2018) | • It measures countries’ ability to nurture, develop and deploy talent for economic growth.
• It is based on **46 indicators** about how well countries are developing and deploying their human capital, focusing on **education, skills and Employment**. |
| **Network Readiness Index** | World Economic Forum | 91st | • It measures countries’ success in creating the necessary conditions for a transition to a digitized economy and society. |
| **Global Competitiveness Index** | World Economic Forum | 58/140 (2018) | • India is also the second most Competitive country among BRICS nations (China on 28th). |
| **Global Energy Architecture Performance Index** | World Economic Forum | 87/127; Improved from 90th position | • Based on 18 indicators defined across the three sides of the energy triangle:
1. Economic growth and development,
2. Environment sustainability,
3. Energy security and access. |
| --- | --- | --- | --- |
| **Travel and Tourism Competitiveness Index** | World Economic Forum | 40/136; Improved 12 places | • It ranks countries across 14 dimensions.  
• It measures set of factors and policies that enable sustainable development of travel and tourism sector. |
| **Global talent competitiveindex** | Developed by INSEAD, the Adecco Group and TATA Communications | 80th | • It is an annual study ranking countries and major cities on their ability to, attract, develop and retain talent.  
• GTCI addresses the theme of Diversity for Competitiveness |
| **Creativity Productivity Index** | Asian Development Bank |  |  |
| **Corruption Perception Index** | Transparency International | 78/180 (2018) | • It ranks countries and territories by their perceived levels of public sector corruption. |
| **CLIMATE CHANGE PERFORMANCE INDEX (CCPI)** | German watch | Improved to 11th from 14th last year | • The index evaluates the climate protection performance of 56 countries and the EU that are, together, responsible for nearly 90 percent of global greenhouse gas emissions.  
• The evaluation is done in three major categories: “GHG Emissions”, “Renewable Energy” and “Energy Use”. |
| **ENVIRONMENTAL PERFORMANCE INDEX** | Jointly by Yale University and Columbia | Ranked 177 out of 180 |  |
| **School Education Quality Index (SEQI)** | Niti Aayog | For states and UTs | • Will report annual improvements of States on keydomains of education quality  
• Vision of the index is to shift the focus of States from inputs toward outcomes  
• **SEQI is divided into two categories:**  
  1. Outcomes and  
  2. Governance Management.  
• Three domains of Outcomes (Learning, Access and Equity) and two domains of Governance & Management (Governance Processes and Structural Reforms). |
| **National Index for Performance of Health Outcomes** | Niti Aayog | For States and UTs | • Index is developed with technical assistance from World Bank  
• Life Expectancy at age 1 year (LE1),  
• IMR and MMR as indicators  
• Measurable health indicators like infant mortality rate, sex ratio at birth and functional 24x7 public health centres have been used |
| **Comprehensive Environmental Pollution Index (CEPI)** | Central Pollution Control Board (CPCB) | Industrial Clusters are rated not states | • Based on three factors namely pollutant, pathway (pollutant concentration in ecology), and receptor (affected population) |
| **City Liveability Index** | Ministry of Urban Development | | • 79 Indicators of assessment based on four broad pillars:  
  1. Physical Infrastructure,  
  2. Institutional,  
  3. Social  
  4. Economic |
## OTHER IMPORTANT ORGANIZATIONS

### NATIONAL

1. **TELECOM REGULATORY AUTHORITY OF INDIA (TRAI)**
   - It is a statutory body under TRAI Act 1997.
   - It is an independent regulator.
   - It regulates telecom services, **including fixation of tariffs for telecom services**.
   - It provides a fair and transparent policy that facilitates fair competition.
   - TRAI Act establishes a **Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT)** as sole dispute resolution body in the communication sector.
   - TDSAT can adjudicate upon dispute between central government and service provider, between service providers or between service providers and a group of consumers.

2. **NATIONAL COMMISSION FOR PROTECTION OF CHILD RIGHTS (NCPCR)**
   - It is a statutory body under the Commissions for Protection of Child Rights (CPCR) Act, 2005.
   - NCPCR is under administrative control of the Ministry of Women & Child Development.
   - Its mandate is to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective in the Constitution of India and also the UN Convention on the Rights of the Child.
   - Under CPCR Act, Child is defined as a person in 0-18 years age group.

3. **CENTRAL ADOPTION RESOURCES AUTHORITY (CARA)**
   - CARA is an autonomous body of Ministry of Women & Child Development.
   - It has been instituted under **Juvenile Justice (Care and Protection of Children) Act, 2015**.
   - It functions as the nodal body for adoption of Indian children.
   - It is mandated to monitor and regulate both **in-country and inter-country adoptions**.

4. **THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)**
   - It is an autonomous body funded by University Grants Commission in 1994.
   - It is headquartered in Bangalore.
   - It undertakes periodic assessment and accreditation of institutions of higher education and its units across the country.
   - It grades institutes on an eight-grade ladder.

5. **NATIONAL INSTITUTIONAL RANKING FRAMEWORK (NIRF)**
   - The National Institutional Ranking Framework (NIRF) was launched by the MHRD in 2015.
   - This framework outlines a **methodology to rank institutions** across the country.
   - There are separate rankings for different types of institutions depending on their areas of operation like universities and colleges, engineering institutions, management institutions, pharmacy institutions and architecture institutions.
Five Parameters are used in NIRF:

1. Teaching, Learning and Resources,
2. Research and Professional Practices
3. Graduation Outcomes
4. Outreach and Inclusivity and
5. Perception

Note: There is different weightage of these parameters and the weights are different for different type of institutions.

6. AGRICULTURAL AND PROCESSED FOOD PRODUCTS EXPORT DEVELOPMENT AUTHORITY (APEDA)

- It is a statutory body under the Agricultural and Processed Food Products Export Development Authority Act.
- APEDA is mandated with the responsibility of export promotion and development of products like Fruits, Vegetables and their Products, Meat and Meat Products, Poultry and Poultry Products, Dairy Products etc.
- It works under Ministry of Commerce & Industries.

7. NATIONAL PHARMACEUTICAL PRICING AUTHORITY (NPPA)

- NPPA is a government regulatory agency under the Ministry of Chemicals and Fertilizers,
- It controls the prices of pharmaceutical drugs in India.
- Its mandate is to implement and enforce the provisions of the Drugs Prices Control Order (DPCO).
- It has power to recover amounts overcharged by manufacturers for the controlled drugs from the consumers.

**Bulk drug or Active pharmaceutical ingredients (API)**

API are the active raw materials used in a drug that gives it the therapeutic effect.

India currently meets about 80% of its demand of bulk drugs from Chinese imports.

**Formulation** means a medicine processed out of or containing one or more drugs with or without use of any pharmaceutical aids.

Note - It shall not include any AYUSH medicine.

**Generic version of a medicine** means a formulation sold in pharmacopeial name or the name of the active pharmaceutical ingredient contained in the formulation, without any brand name.

8. FINANCIAL STABILITY AND DEVELOPMENT COUNCIL (FSDC)

- It was setup in 2010 to maintain financial stability and enhancing inter-regulatory coordination.
- The Chairman of the FSDC is the Finance Minister of India and its members include:
  1. The heads of the financial sector regulatory authorities (i.e, SEBI, IRDA, RBI, PFRDA).
  2. Finance Secretary and/or Secretary, Department of Economic Affairs.
  3. Secretary, Department of Financial Services
  4. Chief Economic Adviser
9. **GEOPHYSICAL SURVEY OF INDIA**

- GSI, headquartered at Kolkata, is a government organization attached to the Ministry of Mines for conducting geological surveys and studies in India.

- It is the second oldest survey in India after Survey of India (founded in 1767), for conducting geological surveys and studies of India, and also as the prime provider of basic earth science information to government, industry and general public.

10. **COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH**

- The Council of Scientific and Industrial Research (CSIR was established by the Government of India in 1942 is an autonomous body that has emerged as the largest research and development organisation in India.

- Although it is mainly funded by the Ministry of Science and Technology, it operates as an autonomous body through the Societies Registration Act, 1860.

- The research and development activities of CSIR include aerospace engineering, structural engineering, ocean sciences, life sciences, metallurgy, chemicals, mining, food, petroleum, leather, and environmental science.

- Prime Minister of India and Minister for Science and Technology are the President and Vice-President of CSIR respectively.

11. **THE INDIA METEOROLOGICAL DEPARTMENT (IMD)**

- It is the principal agency of Government of India, responsible for meteorological observations, weather forecasting and seismology.

- IMD is also one of the six Regional Specialised Meteorological Centres of the World Meteorological Organization.

- It has the responsibility for forecasting, naming and distribution of warnings for tropical cyclones in the Northern Indian Ocean region, including the Malacca Straits, the Bay of Bengal, the Arabian Sea and the Persian Gulf.

- It is headquartered in New Delhi.

- It is under the Ministry of Earth Sciences.

- Eight countries in the Northern Indian Ocean region - Bangladesh, India, Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand - have contributed a set of names which are assigned sequentially whenever a cyclonic storm develops.

- Names of some storms that cause widespread damage and deaths are usually retired and are not brought back or reused later, at least for 10 years.

12. **MEDICAL COUNCIL OF INDIA**

- The Medical Council of India is a regulatory body under Ministry of Health and Family welfare (not MHRD)

- It is formed under Medical Council of India Act, 1956. (Statutory body)

- Its main function includes.

- Recommendation for recognition/de-recognition of medical qualifications of medical institutions of India or foreign countries.

- Maintenance of uniform standards of medical education, both undergraduate and postgraduate.

- Permanent registration/provisional registration of doctors with recognized medical qualifications.

**Note:** It doesn’t conduct AIPMT/NEET. CBSE conducts it.
Dental education and profession is regulated by Dental Council of India, established under the Dentist Act, 1948.

13. **RAIL DEVELOPMENT AUTHORITY**

- It would be an independent Rail Regulator.
- Set up through an executive order. So, it’s non-statutory, non-constitutional body.
- It will only make recommendations to the Rail Ministry, which will take final decision.
- **Bibek Debroy committee** had recommended for it.
- The Authority will have a **Chairman and three members** with a **fixed term of five years**.
- The Chairman and members of the Authority will be appointed by a Search and Selection Committee headed by the Cabinet Secretary

**Responsibilities:**
- Recommending passenger fares,
- Setting performance standards for rail operations.
- Creating level playing policy for private sector participation.
- Frame principles for social service obligation.
- Resolve disputed related to future concession agreements.
- Collect, analyse and disseminate information and statistics concerning the rail sector.

**INTERNATIONAL**

1. **World Trade Organisation (WTO) Boxes**

- Subsidies in general are identified by "boxes" which are given the colours of traffic lights: green (permitted), amber (slow down - i.e. need to be reduced), red (forbidden).
- The Agriculture Agreement has no red box.

**Amber box**

- Nearly all domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box.
- Include measures to support prices, or subsidies directly related to production quantities.
- are subject to limits:generally 5% of agricultural production for developed countries, 10% for developing countries

**Blue Box**

- Any support that would normally be in the amber box, is placed in the blue box if the support also requires farmers to limit production
- At present there are no limits on spending on blue box subsidies.

**Green box**

- To qualify, green box subsidies must not distort trade.
- They have to be government-funded (not by charging consumers higher prices) and must not involve price support.
- They are not targeted at particular products, and include direct income supports for farmers that are not related to current production levels or prices.
- Also include environmental protection and regional development programmes.
- "Green box" subsidies are therefore allowed without limits
Development Box

- Agriculture Agreement allows developing countries additional flexibilities in providing domestic support.
- Include investment subsidies like agricultural input subsidies, domestic support to producers to encourage diversification from growing illicit narcotic crops etc.

2. SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK (SDSN).
- The UN Sustainable Development Solutions Network (SDSN) has been operating since 2012 under the auspices of the UN Secretary-General.
- SDSN mobilizes global scientific and technological expertise to promote practical solutions for sustainable development, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.
- It works closely with United Nations agencies, multilateral financing institutions, the private sector, and civil society.

3. EUROPEAN ORGANISATION FOR NUCLEAR RESEARCH (CERN)
- CERN is a European research organization that operates the largest particle physics laboratory in the world.
- It is based in Geneva on the French-Swiss border.
- It was founded in 1954.
- It has 22 member states and four associate member states.
- It is best known as operator of the Large Hadron Collider, which found the elusive Higgs boson in 2012.
- India was inducted as an ‘Observer’ at CERN in 2004. India recently became an associate member of the (CERN)

4. WORLD ECONOMIC FORUM (WEF)
- It is a not-for-profit foundation
- It is headquartered in Geneva, Switzerland.
- It is independent, impartial and not tied to any special interests.
- The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

Note: It publishes various reports and indices that have been covered in Index and Reports Section.
## SCIENCE AND TECHNOLOGY

### DIFFERENT KINDS OF SATELLITES

<table>
<thead>
<tr>
<th>Features</th>
<th>Low Earth Orbits</th>
<th>Sun-Synchronous/ helio synchronous</th>
<th>Geosynchronous</th>
<th>Geostationary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height above the Earth Surface</td>
<td>160 km</td>
<td>600-800 km</td>
<td>36,000 km</td>
<td>36,000 km</td>
</tr>
<tr>
<td>Period of rotation</td>
<td>90 minutes</td>
<td>Orbit Earth 15 to 16 times per day</td>
<td>24 hours</td>
<td>24 hours</td>
</tr>
<tr>
<td>Launch Vehicle used</td>
<td>Simple rockets</td>
<td>PSLV</td>
<td>GSLV (small size satellites can be launched using PSLV also)</td>
<td>GSLV (small size satellites can be launched using PSLV also)</td>
</tr>
<tr>
<td>Purpose Served</td>
<td>military</td>
<td>Meteorological</td>
<td>Communication</td>
<td>Communication</td>
</tr>
<tr>
<td>Special Feature</td>
<td>reconnaissance</td>
<td>satellites, Remote Sensing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Features</td>
<td>very short lifetimes in the order of weeks</td>
<td>In polar orbits. Satellite’s orientation is fixed relative to the Sun throughout the year, allowing very accurate weather predictions to be made.</td>
<td>Their period of rotation exactly matches the Earth’s rotation. They are not in equatorial plane.</td>
<td>They are permanently fixed above one point on the equator of the Earth.</td>
</tr>
</tbody>
</table>

### SPACECRAFTS

<table>
<thead>
<tr>
<th>Spacecraft and its manufacturing Agency</th>
<th>Destination</th>
<th>Objectives/Other Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Exoplanet Survey Satellite (TESS) by NASA</td>
<td>Earth’s Orbit</td>
<td>Discovery of exoplanets in orbit around the brightest stars in the sky.</td>
</tr>
<tr>
<td>New Horizon by NASA</td>
<td>Pluto and Kuiper Belt</td>
<td>• To cast light on how solar system was born.</td>
</tr>
<tr>
<td>JUNO by NASA</td>
<td>Jupiter</td>
<td>• To understand the origin and evolution of Jupiter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To investigate the existence of a solid planetary core.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To map Jupiter’s intense magnetic field,</td>
</tr>
<tr>
<td>Europa Clipper Mission by NASA</td>
<td>Jupiter’s icy moon Europa</td>
<td>• Europa holds a salty liquid water ocean beneath its icy crust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• So, the mission would explore its habitability.</td>
</tr>
<tr>
<td>Mission</td>
<td>Body</td>
<td>Note</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>------</td>
</tr>
</tbody>
</table>
| Dawn by NASA | Vesta and Ceres, proto-planets in the asteroid belt | • Asteroids belt is located between the orbits of planets Mars and Jupiter.  
• Dawn is the first spacecraft to orbit two extraterrestrial bodies. |
| Cassini by NASA, European Space Agency and Italian space agency | Saturn and its moon Titan | • It has discovered steep sided canyons flooded with hydrocarbons on Saturn’s Moon Titan.  
• It became the first satellite to orbit the Saturn. |
| OSIRIS-Rex (Origins, Spectral Interpretation, Resource Identification-Regolith Explorer) by NASA | Near earth asteroid Bennu | • NASA’s first asteroid sampling mission.  
• It’ll collect dust from asteroid without landing on it and then return to the Earth.  
• To unravel how life began on Earth, how the solar system was formed, and how to protect our planet from stray asteroids like Bennu. |
| SOFIA (Stratospheric Observatory for Infrared Astronomy) Mission by NASA and the German Aerospace Centre, DLR | Stratosphere | It is an aircraft modified to carry a 100-inch diameter telescope.  
To study observations of celestial magnetic fields, star forming regions, comets and Saturn’s giant moon Titan. |
| LISA Pathfinder by European Space Agency | Space | • To demonstrate the technology needed to build a space-based gravitational wave observatory.  
• LISA pathfinder was launched as a prelude to the LISA mission. |
| Rosetta by European Space Agency | Comet 67P | • It had an orbiter and a lander configuration. |
| Solar Parker Probe by NASA | Sun atmosphere | • NASA plans to send its first robotic spacecraft to the Sun  
• The spacecraft will travel directly into the sun’s atmosphere about 4 million miles from the star’s surface.  
• It will Trace the flow of energy that heats and accelerates the solar corona and solar wind.  
• It will study why the surface of the Sun, called the photosphere, is not as hot as its atmosphere, called the corona. |
| Cartosat by ISRO | sun-synchronous orbit | • Part of the Indian Remote Sensing Programme.  
• For Earth’s resource management and monitoring. |
1. **Polarimetry Doppler Weather Radar**
   - The Indian Space Research Organization (ISRO) recently launched the Polarimetry Doppler Weather Radar at Satish Dhawan Space Centre, Sriharikota.
   - The Polarimetry Doppler Weather Radar provides advanced information, enhances the lead-time essential for saving lives and property in the event of a natural disaster associated with severe weather.
   - The polarimetric capability of the radar will significantly improve the accuracy of rainfall estimation leading to accurate and timely flash flood warnings, according to ISRO’s earlier release.
   - The radar has been indigenously developed by Bharat Electronics Ltd (BEL), Bengaluru. It is the seventh radar of such type manufactured in the country under “Make in India”.

2. **Gaganyaan Mission**
   Recently the Prime Minister in his Independence Day speech announced that ISRO will be sending its first human spaceflight mission into the space by 2022
   - GSLV Mk-III launch vehicle will be used to launch Gaganyaan. Two unmanned Gaganyaan missions will be undertaken prior to sending humans, with first unmanned flight within 30 months.
   - The total programme is expected to be completed before 2022 and cost is expected to be less than Rs. 10,000 Crores.
   - The mission will aim to send a three-member crew to space for a period of five to seven days. The spacecraft will be placed in a low earth orbit of 300-400km.
   - It will comprise of a crew module and service module that constitute an orbital module. The crew will do microgravity experiment during the mission.

3. **Hyper Spectral Imaging Satellite (HYSIS)**
   - ISRO’s PSLV C43 launched India’s first Hyperspectral Imaging Satellite (HysIS) along with 30 foreign satellites from Satish Dhawan Space Centre, Sriharikota.
   - HysIS is an earth observation satellite built around ISRO’s Mini Satellite-2 (IMS-2) bus.

   **About the Hyperspectral Imaging Technology**
   - It combines the power of digital imaging and spectroscopy to attain both spatial and spectral information from an object.
   - This result can be then used to identify, measure and locate different materials and their chemical and physical properties. Every pixel in the image contains a continuous spectrum (in radiance or reflectance) and can be used to characterize the objects in the scene with great precision and detail.
   - Hyperspectral images provide much more detailed information about the scene by dividing the spectrum into many more bands than a normal color camera, which only acquires three different spectral channels corresponding to the visual primary colors red, green and blue.
• Application
• Hyperspectral remote sensing is used for a range of applications like agriculture, forestry, soil survey, geology, coastal zones, inland water studies, environmental studies, detection of pollution from industries and the military for surveillance or anti-terror operations.
• Other utilities include online industrial monitoring/sorting/classification to laboratory measurements, clinical instruments for medical diagnostic and airborne and satellite based remote sensing tools.

**Spectral Imaging**

It is imaging that uses multiple bands across the **electromagnetic spectrum** like using infrared, the visible spectrum, the ultraviolet, x-rays, or some combination of the above.

- The main difference between multispectral and hyperspectral is the number of bands and how narrow the bands are.
- Hyperspectral imaging (HSI) uses continuous and contiguous ranges of wavelengths (e.g. 400 - 1100 nm in steps of 0.1 nm) whilst multispectral imaging (MSI) uses a subset of targeted wavelengths at chosen locations (e.g. 400 - 1100 nm in steps of 20 nm).
- Hyperspectral imagery consists of much narrower bands (10-20 nm). A hyperspectral image could have hundreds or thousands of bands. In general, it comes from an imaging spectrometer.

4. **ADITYA-L1 MISSION AND LAGRANGE POINTS**

- It is the **first Indian mission to study the Sun**.
- It is expected to be launched in 2019 by the launch vehicle PSLVXL with six payloads from Sriharikota.
- The main aim of the solar mission is to do coronal and near UV studies.
- It will be **launched into the halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth system**.
- This orbit has the advantage of allowing continuous monitoring of the sun.

5. **GSLV-MK III D2**

Recently, ISRO launched satellite-GSAT-29 through the launcher GSLV-Mk III D2.

- It is the fifth generation, India’s heaviest launch vehicle designed to place satellites of up-to 4,000 kg into Geosynchronous Transfer Orbit (GTO) or satellites weighing about 10,000 kg to a Low Earth Orbit (LEO).
- It is the second launch of GSLV-Mk III, which earlier in 2017 carried GSAT-19 satellite as the first development flight.
- It is a three-stage heavy-lift rocket with two solid fuel strap-on engines in the first stage, a liquid propellant core as second stage and a cryogenic engine for the third stage.
- The cryogenic propellant system in upper stage called the C25 engine, is an advanced version of cryogenic technology.
- The indigenous cryogenic C25 engine provides an unprecedented thrust power to GSLV rockets which keeps fuel loads on the rocket relatively low.

A cryogenic rocket engine is a rocket engine that uses a cryogenic fuel or oxidizer, that is, its fuel or oxidizer (or both) is gases liquefied and stored at very low temperatures.
Significance of GSLV-Mk III

- Its successful launch will provide a thrust to future space missions such as Chandrayaan 2, ISRO’s moon and man missions etc.
- India is among six nations - apart from the US, Russia, France, Japan and China - to possess cryogenic engine technology. This launch will further expand ISRO’s space programmes on several fronts such as commercial international space market.

LAUNCH VEHICLES OF ISRO

<table>
<thead>
<tr>
<th></th>
<th>PSLV</th>
<th>GSLV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generation</strong></td>
<td>Third generation launch vehicle</td>
<td>Fourth generation launch vehicle</td>
</tr>
<tr>
<td><strong>Type of satellites</strong></td>
<td>Deliver the “Remote-sensing”</td>
<td>Deliver the “Communication-</td>
</tr>
<tr>
<td></td>
<td>satellites to Sun-Synchronous</td>
<td>satellites” to Geo-synchronous</td>
</tr>
<tr>
<td></td>
<td>orbits.</td>
<td>orbits.</td>
</tr>
<tr>
<td><strong>No. of stages</strong></td>
<td>Four-staged vehicle with 2 solid</td>
<td>Three-staged vehicle with a solid,</td>
</tr>
<tr>
<td></td>
<td>and 2 liquid stages</td>
<td>liquid and cryogenic stage</td>
</tr>
<tr>
<td><strong>Variants</strong></td>
<td>• PSLV-G</td>
<td>• GSLV Mk-I</td>
</tr>
<tr>
<td></td>
<td>• PSLV-CA</td>
<td>• GSLV Mk-II</td>
</tr>
<tr>
<td></td>
<td>• PSLV-XL</td>
<td>• GSLV Mk-III</td>
</tr>
<tr>
<td><strong>Lift-off mass</strong></td>
<td>230-320 tonnes</td>
<td>400-600 tonnes</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>44 m</td>
<td>49.13 m</td>
</tr>
<tr>
<td><strong>Diameter</strong></td>
<td>2.8 m</td>
<td>4 m</td>
</tr>
</tbody>
</table>

6. **GSAT -11**

GSAT-11, the heaviest satellite built by ISRO was launched from French Guiana by Areane 5 Rocket of European Space Agency.

- It weighs around 5855 Kg, double the size of biggest satellite built by ISRO till now. ISRO’s most powerful launcher GSLV-Mk III can launch satellite weighing up to 4000 kg only.
- It is part of ISRO’s new family of high-throughout communication satellite (HTS) fleet that will drive the country’s Internet Broadband from space to untouched areas. It is built to provide throughput data rate of 16 gbps.
- It carries 40 transponders in Ku (32)/ Ka (8) Band. For the First time use of Ka-Band is introduced in India through GSAT-11.
- It will be placed in a circular geo-stationary orbit almost 36,000 Km. away and settle at 74° E in India.
7. UNISPACE NANO SATELLITE ASSEMBLY & TRAINING PROGRAMME (UNNATI)

Recently ISRO launched a capacity building programme on Nano satellite development named UNNATI.

- It is an initiative to commemorate the 50th anniversary of the first United Nations conference on the exploration and peaceful uses of outer space (UNISPACE+50).
- It would provide opportunities to the participating developing Countries to strengthen in assembling, integrating and testing of Nanosatellite.

**About Nanosatellite**

- In mass classification a Nanosatellite is any satellite with mass from 1kg to 10kg.
- These satellites can reduce the cost of launching.
- Many Nanosatellites are deployed together in network of satellites (satellite constellation) that operates as a single entity which can capture minute details.
- This system can provide people in poor, rural or low population density areas around the world with affordable, high-speed internet access.

8. YOUNG SCIENTIST PROGRAMME

Indian Space Research Organization (ISRO) has recently launched Young Scientist Programme for school students.

- It aims to inculcate and nurture space research fervor in young minds.
- Under this 1-month program, 3 students from each of the 29 States and 7 UTs will be selected.
- Students mostly from class VIII will be given lectures and access to R&D labs and practical experience of building a small satellite.
- It is conceptualized after the similar Programme run by the American Space Agency NASA.
- All the expenses of travelling and boarding will be funded entirely by ISRO.
- Under this, six incubation centres will be established in various parts of the country and the first such centre has been established in Agartala in Tripura.

**Samvad with Students**

- ISRO recently launched a student outreach programme called Samvad with Students where ISRO chairman meets the students during his outstation visits and address their queries and quench the scientific thirst.

9. MISSION SHAKTI

India successfully completed 'Mission Shakti' operation where it destroyed a live satellite on a low earth orbit (LEO) using an Anti-Satellite (ASAT) missile in three minutes.

- India has become the 4th country after the US, Russia and China in the world to achieve this historic feat.
- Anti Satellite weapons also called the ASAT are developed to destroy satellites.
- Mission Shakti is a joint programme of DRDO and the Indian Space Research Organisation (ISRO).
10. **SUNSPOT CYCLE**

**Why in news?**

Recently, scientists from Indian Institute of Science Education and Research have developed a way of predicting the intensity of activity in the next solar cycle (approximately from 2020 to 2031).

**What is Sun-spot Cycle?**

- The amount of magnetic flux that rises up to the Sun’s surface varies with time in a cycle called the solar cycle. This cycle lasts 11 years on average.
- They are darker, magnetically strong, cooler areas on the surface of the sun in a region called the photosphere.

**Why this is important?**

- It will help in understanding of the long-term variations of the Sun and its impact on earth climate which is one of the objectives of India’s first solar probe - ‘Aditya L-1 Mission’.

**How does Sunspot Cycle affect the Earth?**

- During extreme events, space weather can affect electronics-driven satellite controls, communications systems, air traffic over polar routes and even power grids.
- Some believe that they are correlated with climate on earth.

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11. **EXOPLANETS DISCOVERED BY INDIA**

Recently Indian scientists discovered a sub-Saturn or super-Neptune sized exoplanet.

- The discovery was made by measuring the mass of the planet using the indigenously designed PARAS (PRL Advance Radial-velocity Abu-Sky Search) spectrograph integrated with a 1.2m telescope at Gurushikar Observatory in Mount Abu.
- The name of the host star is EPIC 211945201 or K2-236 and the planet will be known as EPIC 211945201b or K2-236b.

**About Exoplanet**

- An exoplanet or extrasolar planet is a planet outside our solar system around a different host star than sun.
- Kepler 90 is the first star system to have as many planets as our solar system.

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12. **INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM (IRNSS)**

- Its operational name is NAVIC which stands for NAVigation with Indian Constellation.
- It is a kind of GPS service developed by ISRO.
- It is an autonomous regional satellite navigation system, that provides real-time positioning and timing services.
- It covers India and a region extending 1,500 km around it.
- The system at-present consist of a constellation of 7 satellites (3 in Geostationary orbit and 4 in Geosynchronous Orbit).
- NAVIC will provide two levels of service, the ‘standard positioning service’ will be open for civilian use, and a restricted service (an encrypted one) for authorized users (including military).
- There are plans to expand NavIC system by increasing constellation size from 7 to 11.

**Why in news?**

ISRO has launched a backup satellite to replace IRNSS-1A whose all the three rubidium atomic clocks on board had stopped functioning.
Different navigation Systems across the world

<table>
<thead>
<tr>
<th>Name of the System</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS</td>
<td>USA</td>
</tr>
<tr>
<td>The Quazi-Zenith Satellite System (QZSS)</td>
<td>Japan</td>
</tr>
<tr>
<td>GLONASS</td>
<td>Russia</td>
</tr>
<tr>
<td>BeiDou Navigation Satellite System</td>
<td>China</td>
</tr>
<tr>
<td>Galileo</td>
<td>European Union</td>
</tr>
</tbody>
</table>

13. PRATYUSH and MIHIR

- Pratyush and Mihir are the Two High Performance Computing (HPC) Systems installed at IITM, Pune and NCMRWF, Noida respectively.
- They have a total computing capacity of 6.8 petaflops
- Pratyush is the first Petaflop Supercomputer developed by India.
- Pratyush is an array of computers that can deliver a peak power of 4 petaflops.
- As of January 2018, Pratyush is the fastest supercomputer in India.
- The facility will improve India's capacity in weather forecasting and help it to come out with weather forecast down to the block level (for about 6500 blocks) across the country later this year. At present, such facility is available at district level.
- The new system will be India's largest HPC facility in terms of peak capacity and performance and will propel India’s ranking from the 368th position to the 30th in the list of top 500 HPC facilities in the world.
- The country will now also be ranked 4th - after Japan, UK and USA - for dedicated HPC resources for weather/climate community

<table>
<thead>
<tr>
<th>The top 5 fastest supercomputer of the world:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sunway TaihùLight - China</td>
</tr>
<tr>
<td>2. Tianhe-2 (MilkyWay-2) - China</td>
</tr>
<tr>
<td>3. Piz Daint - Switzerland</td>
</tr>
<tr>
<td>4. Gyoukou (Japan)</td>
</tr>
<tr>
<td>5. Titan - United States</td>
</tr>
</tbody>
</table>

NASA

1. ICESAT-2

Recently NASA satellite named 'Ice, Cloud and Land Elevation Satellite-2 (ICESat-2)', was launched.
- ICESat (Ice, Cloud, and Land Elevation Satellite) is the benchmark Earth Observing System mission for measuring ice sheet mass balance, cloud and aerosol heights, as well as land topography and vegetation characteristics.
- The ICESat, was launched in 2003 and ended in 2009. From it, scientists learned that sea ice was thinning, and ice cover was disappearing from coastal areas in Greenland and Antarctica.
- ICESat-2 continues key elevation observations of the and Operation IceBridge airborne efforts (2009 through present), to provide a continuous long-term record of change in the beginning of the 21st century.
2. **Parker Solar Probe**
   The Parker Solar Probe has completed a flyby of Venus, done to slowdown the spacecraft enough to avoid gravitational pull of the Sun, during its first gravity assist from the planet.

<table>
<thead>
<tr>
<th><strong>Lagrange Points</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A Lagrange point is a location in space where the combined gravitational forces of two large bodies, such as Earth and the sun or Earth and the moon, equal the centrifugal force felt by a much smaller third body.</td>
</tr>
<tr>
<td>The interaction of the forces creates a point of equilibrium where a space craft may be &quot;parked&quot; to make observations.</td>
</tr>
<tr>
<td>The first point, L1, lies between Earth and the sun and gets an uninterrupted view of the sun and free from the occurrence of eclipses.</td>
</tr>
</tbody>
</table>

3. **New Horizons probe**
   - It will flyby the Kuiper Belt object nicknamed Ultima Thule on 1st January, 2019 and will set the record for the most distant object ever visited by a spacecraft.
   - It is the first mission to the Pluto System and the Kuiper belt.
     - The farthest ever trajectory correction maneuvers (TCM) or course correction has been performed on this spacecraft.

<table>
<thead>
<tr>
<th><strong>Kuiper Belt</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>It is a circumstellar disc in the outer Solar System, extending from the orbit of Neptune (at 30 AU) to approximately 50 AU from the Sun. It is similar to the asteroid belt, but is far larger.</td>
</tr>
</tbody>
</table>

**Other Missions in news**

- **Hubble Telescope** - Recently, it put itself into "safe mode" after one of its gyroscopes, which keeps it aimed at objects of scientific interest, died. It is the first major optical telescope to be placed in space. Hubble has an unobstructed view of the universe and scientists have used it to observe the most distant stars and galaxies as well as the planets in our solar system.
- **NASA's Chandra X-ray Observatory** also entered protective "safe mode" in October due to a malfunction of some sort. It is one of NASA's original "Great Observatories" projects along with Hubble, the Compton Gamma-Ray Observatory and the Spitzer Space Telescope.
  - The planet- hunting **Kepler space telescope**, which has found about 70 percent of all known alien worlds to date, is almost out of fuel.
- **NASA's Dawn spacecraft**, which has been orbiting the dwarf planet Ceres (largest object in asteroid belt) since March 2015, is also nearly out of fuel.

**MOONMOON**

- They are potential moons of the moon i.e. a moon that orbits around another moon.
- Duncan Forgan has given the concept and the name for such celestial bodies.
- There haven’t been any examples of moonmoons found in the solar system by now.

4. **VISIONS -2 MISSION**
   NASA has launched Visualizing Ion Outflow via Neutral Atom Sensing-2 (VISIONS-2).
   - It is a sounding rocket mission to get a closer look at how the Earth’s atmosphere is slowly leaking into space.
• The Earth is losing weight as observations show that several hundred tons of atmosphere is getting "leaked" into space every day.
• The aurora borealis is of keen interest to the VISIONS-2 team as they are fundamental drivers in the process of atmospheric escape.
• Scientists had long thought that oxygen was too heavy to escape Earth’s gravity. But near-Earth space has much more Earth-borne oxygen than anyone had expected. This is as a result of processes that energize the oxygen enough to escape. The aurora is one such process.
• It is the first of nine sounding rockets launching over the next 14 months as part of the Grand Challenge Initiative - cusp, an international collaboration to explore the unusual portal between Earth and space.

### EUROPEAN MISSIONS

1. **BepiColombo Mission**
   - It is Europe’s first mission to Mercury which will set off in 2018 and reach there in 2025.
   - It is a joint mission between ESA and the Japan Aerospace Exploration Agency (JAXA), executed under ESA leadership.
   - The mission comprises two spacecrafts: the Mercury Planetary Orbiter (MPO) and the Mercury Magnetospheric Orbiter (MMO).
   - The mission will help in finding out the possibility of water in Mercury. The surface temperature of Mercury varies from 450 degree Celsius to -180 degree Celsius (areas permanently in shade).
   - Mercury is the smallest and least explored terrestrial planet in our Solar System. Till now only NASA’s Mariner 10 and US Space Agency’s Messenger has flown past the planet.

2. **Hyperion**
   - It is the largest ever galaxy proto-super cluster (A million Billion times that of Sun) sighted till date, with the help of Very Large Telescope of European Southern Observatory.
   - This is the first time that such a large structure has been identified at such a high redshift, just over two billion years after the Big Bang i.e. when universe was relatively young.
   - In general, such superclusters are observed at lower redshifts i.e when universe has had much more time to evolve.

3. **SOYUZ**
   - Recently, a Soyuz Rocket carrying astronauts from Russia, USA and Canada was successfully launched into orbit since a failed launch in October.
   - The Soyuz is a Russian spacecraft which carries people and supplies to and from the space station.
   - It has room for three people to ride in it. The spacecraft also brings food and water to the space station.
   - It is like a lifeboat. At least one Soyuz is always attached to the space station. If there were an emergency on the space station, the crew could use the Soyuz to leave the space station and return to Earth.
   - Currently only this Russian spacecraft carry people to ISS after USA retired its space shuttle in 2011.
4. **International Space Station (ISS)**
   - ISS is a space station, or a habitable artificial satellite, in low Earth orbit.
   - Its first component was launched into orbit in 1998, with the first long-term residents arriving in November 2000. The Station is expected to operate till 2030.
   - It is the largest human-made body in low Earth orbit and can often be seen with the naked eye from Earth.
   - It serves as a microgravity and space environment research laboratory.
   - It is a joint project among five participating space agencies: NASA (USA), Roscosmos (Russia), JAXA (Japan), ESA (Europe), and CSA (Canada).
   - China launched its first experimental space station, Tiangong 1, in September 2011.

5. **Avangard Hypersonic System**
   - Recently, Russia successfully test fired Avangard Missile.
   - It’s liquid-fueled intercontinental-range ballistic missile (ICBM), with the ability to fly as fast as Mach 20 (more than 15,000 miles per hour), and can carry nuclear and conventional warheads.
   - Avangard deployment by 2019 will make it the first operational hypersonic glide vehicle system deployed anywhere in world.

**EMERGING TECHNOLOGY**

1. **5G**
   - **Why in news?**
     The Steering Committee constituted for identifying the 5G deployment roadmap for India recently submitted report titled ‘Making India 5G Ready’.
   - **About Different Mobile Technologies**
     - **First Generation (1G)** mobile wireless communication network was analog and was used for voice calls only. Its basic features were - speed of 2.4kbps, voice calls in one country only, use analog signal, poor voice quality etc.
     - **Second Generation (2G)** is a digital technology and supports text messaging. Next to 2G, 2.5G system uses packet switched and circuit switched domain and provide data rate upto 144kbps e.g. GPRS, CDMA etc.
     - **Third Generation (3G)** mobile technology provided high data transmission rate, increased capacity and provided multimedia support. The aim of this technology was to provide high speed data and offers data services, access to television/videos, new services like Global Roaming etc. It used Wide Band Wireless Network with which clarity is increased.
     - **Fourth Generation (4G)** integrates 3G with fixed internet to support wireless mobile internet which is an evolution to mobile technology and it overcomes the limitations of 3G. Long Term Evolution (LTE) is considered 4G technology.
   - **What is 5G?**
     - 5G is a wireless communication technology using radio waves or radio frequency (RF) energy to transmit and receive data.
     - The final standard for 5G will be set up by the International Telecommunications Union (ITU).
     - it provides high data rates (1 Gbps for hotspots, 100 Mbps download and 50 Mbps upload for wide-area coverage) and massive connectivity (1 million connections per square kilometer)
2. **SCIENCE AND TECHNOLOGY IN SPORTS**

- **Hawk-Eye Technology**: It helps to take an error-free decision in cricket, lawn tennis, rugby league, football, and baseball. This technology has reduced the criticism of the players and spectators about the decision of the match referee.

- **HANS (Head and Neck Support) device**: used in motorsports saving the lives of driver in the event of a tragic crash.

- Whole body polyurethane swim suits which contains polyurethane membrane which decreases the drag by 24% compared to other suits

- **Ingestible Thermometer Pills**: which supervise visceral organs, temperature and heart rate of an athlete and transmits vital information to medical personnel. It will help to minimize death from heat exhaustion which is the second most common reason for athlete fatalities

3. **BISPHENOL A (BPA)**

**Why in News?**

Recently, Rice University researchers enhanced micron-sized titanium dioxide particles to trap and destroy Bisphenol A (BPA).

- Scientists have created tiny spheres of Titanium dioxide that can catch and destroy BPA.
- BPA being hydrophobic is attracted to the cavity where it is degraded into harmless chemicals.
- Bisphenol A (BPA) is a chemical produced in large quantities for use primarily in the production of polycarbonate plastics and epoxy resins.
- Bisphenol A can leach into food from the protective internal epoxy resin coatings of canned foods and from consumer.
- BPA is an endocrine system disruptor and it can interfere with the production, and function of natural Hormones. It also contributes to high blood pressure.
- BPA can also be found in breast milk. Its Prolonged exposure is suspected of affecting the health of children.

4. **INDIA-BASED NEUTRINO OBSERVATORY**

**Why in News?**

The National Green Tribunal (NGT) upheld the environmental clearance granted to the India-based Neutrino Observatory (INO), a major research facility proposed in Theni district of Tamil Nadu.

**What is INO?**

- MoEFCC categorized it as a Category B project for which Environmental Impact Assessment (EIA) is not necessary. However, Madhikettan Shola National Park in Idukki district of Kerala was just about 4.9 km from the proposed project site and the Tamil Nadu-Kerala border was just a km away, making it a Category "A" project.
- Being located within 5 km of a wildlife sanctuary, requires specific approval by the National Board for Wild Life.
What are Neutrinos?

• The elusive neutrinos are second most abound particles in the universe
• They interact very little with anything and pass through everything that’s why it’s hard to detect them.
• They carry no electrical charge and nearly massless.
• It occurs in 3 different types/flavors, separated based on mass (electron-neutrino, muon-neutrino, tau-neutrino).
• It is produced in the core of the sun & millions of them roam around in the solar system

5. EARTH BIOGENOME PROJECT

Why in News?

International biologists have launched an ambitious Earth BioGenome Project at an estimated cost of $4.7bn.

• It aims to sequence, catalog and characterize the genomes of all of Earth’s eukaryotic biodiversity over a period of ten years.
• It involves projects by various countries including USA, China, UK, Global NT Genome Alliance, etc.
• Physical samples would be stored frozen in liquid nitrogen repositories of digitized information would be created which is to be shared online for free. The project has the backing of the World Economic Forum
• The potential benefits of EGP are compared to those from Human Genome Project, which has transformed research into human health and disease.
• Other benefits include: Saving Biodiversity, discovery of unknown species and new resources

6. HUMAN MICROBIOME

Why in news?

Indian Human Microbiome Initiative, led by The National Centre for Microbial Resource (NCMR) - National Centre for Cell Science (NCCS) has been put up for approval.

What is Microbiome?

• The collective genome of all micro-organisms contained within the human body, residing inside tissues & bio-fluids is called Human Microbiome. It includes bacteria, archaea, fungi, protists and viruses.
• Most of them have either commensal (co-exist without harming humans) or mutualistic (each benefit from the other).
• The composition of microbiome is shaped by factors such as genetics, dietary habits, age, geographic location and ethnicity. Human microbiome makes up around 2% of the body mass of the adult.
About Human Microbiome Project (HMP)

- Human Microbiome Project is a research initiative of US's National Institute of Health
- Launched in 2007, it is focused on identifying and characterizing human microbial fauna and elucidating their roles in health and diseases.

7. SOLID FUEL DUCTED RAMJET (SFDR)

Why in news?
Recently, DRDO successfully flight tested the second indigenously developed ‘Solid Fuel Ducted Ramjet (SFDR)’ propulsion-based missile system, the first test of which was carried out in May 2018.

About SFDR

- SFDR is an Indo-Russian R&D project which has been established to develop a long-range air-to-air missile and a surface-to-air missile system in near future. It was started in 2013 to develop the technology and demonstrate it in 5 years.
- The Defence Research Development Laboratory (DRDL), Hyderabad is the lead agency for the collaborative mission project.
- SFDR technology, based on the ramjet propulsion system depends only on its forward motion at supersonic speed to compress intake air and the engine flow-path components have no moving parts.
- The solid ramjet fuel is 100% fuel and obtains oxidizer from air, with the result being approximately four times the specific impulse (the product of thrust and time divided by propellant weight) as compared to solid rocket propellant.
- Hence, this air breathing ramjet propulsion technology helps propel the missile at high supersonic speeds (above Mach 2) for engaging targets at long ranges.
- Consequently, it has inherent simplicity, reliability, lightweight, and high-speed flight capability not possible with other air-breathing engines.

### Ramjet vs Scramjet

<table>
<thead>
<tr>
<th>Ramjet</th>
<th>Scramjet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ramjet: A ramjet engine does not have any turbines unlike the turbojet engines. <strong>hypersonic speeds</strong> and allows</td>
<td>1. It is an improvement over the ramjet engine as it efficiently operates at supersonic combustion.</td>
</tr>
<tr>
<td>2. It achieves compression of intake air just by the forward speed of the air vehicle.</td>
<td>2. Thus it is known as Supersonic Combustion Ramjet, or Scramjet.</td>
</tr>
</tbody>
</table>

8. CRYPTO CURRENCY

- A crypto currency is a digital currency designed to work as a medium of exchange that uses cryptography to secure its transactions, to control the creation of additional units, and to verify the transfer of assets.
- Crypto currencies use decentralized control as opposed to centralized electronic money and central banking systems.
• It is not regulated by the central bank of any country.
• The decentralized control of each cryptocurrency works through a blockchain, which is a public transaction database, functioning as a distributed ledger.
• It is easier to transfer funds across the globe with minimal processing fees.
• Bitcoin, created in 2009, was the first decentralized cryptocurrency by an individual or group known under the pseudonym Satoshi Nakamoto.
• Since then, numerous other cryptocurrencies have been created.

9. **FAST NEUTRON REACTOR**

• A fast neutron reactor/fast reactor is a type of reactor in which nuclear fission chain reaction is sustained by fast neutrons.
• Such a reactor does not need any neutron moderator such as water which serves such a Purpose in thermal reactors.
• Fast reactors are beneficial in the sense that it can help in the reprocessing and deactivation of radioactive waste material and produce energy as well.
• It also addresses the concern regarding non-proliferation of fission materials and weapon technologies.

10. **HYPERLOOP**

• Hyperloop is a proposed mode of passenger and freight transportation that would propel a pod-like vehicle through a reduced-pressure tube.
• It would exceed airliner speed.
• The pods would accelerate using a linear electric motor.
• It would glide above their track using passive magnetic levitation or air bearings.
• The tubes could also go above ground on columns or underground.
• It is hoped that the system will be highly energy-efficient, quiet and autonomous.
• The concept was created by entrepreneur Elon Musk and his company Space X in 2012.

11. **INDIA’S FIRST ROBOTIC TELESCOPE**

• Recently, India’s first robotic telescope – Global Relay of Observatories Watching Transients Happen (GROWTH)-India, began its operation at the Indian Astronomical Observatory (IAO) in **Hanle in Ladakh**.
• It is a joint project of Indian Institute of Astrophysics, Bangalore and the Indian Institute of Technology Bombay (IITB).
• It is fully funded by the Science and Engineering Board (SERB) of the Department of Science and Technology, under the PIRE project, administered by the Indo-US Science and Technology Forum.
• It is a 70 cm telescope and the primary objective of the project is the time domain astronomy.
• It is mainly an imaging telescope.
12. **FALCON HEAVY**

- Falcon Heavy is a **partially reusable super heavy-lift launch vehicle** designed and manufactured by SpaceX.
- It is **derived from the Falcon 9 vehicle** and consists of a strengthened Falcon 9
- Falcon Heavy **has the highest payload capacity** of any currently operational launch vehicle
- With the ability to lift into orbit nearly 64 metric tons, Falcon Heavy **can lift more than twice** the payload of the next closest **operational vehicle**, the Delta IV Heavy, at one-third the cost.

**SpaceX:**
- SPACEX designs, manufactures and launches advanced rockets and spacecrafts.
- The Private Sector Company was founded in 2002 to revolutionize space technology, with the ultimate goal of enabling people to live on other planets.
- It has developed the technology to recycle and reuse a launched rocket.
- Rocket reusability is for the purpose of cost cutting, speed up flights, technology advancement and less space garbage dumping.

13. **QR CODE (Quick Response code)**

- It is a two-dimensional (matrix) machine-readable bar code.
- It is made up of black and white square and can be read by the camera of a smartphone.
- It is capable of 360 degrees (vertical as well as horizontal), reading. Traditional bar code can be read horizontally only.
- QR Code can store up to **7089 digits** as compared to conventional bar codes which can store max 20 digits
- 'It has error correction capability and data stored in it can be restored even if it is partially damaged or dirty.

**Why in news?**
- **Bharat QR code** has been developed jointly by National Payments Corporation of India (NPCI), Visa, MasterCard and American Express to move towards less-cash economy

14. **LITHIUM-ION BATTERIES**

Lithium ion batteries are being widely used nowadays. There are many advantages to use a lithium cell of battery.

**Advantages**

- **High energy density**: This means having high power capacity **without being too bulky**. This is suitable for use in power-hungry devices such as laptops and smartphones
- **Low rate of Self-discharge**: One issue with batteries and cells is that they lose their charge over time. This self-discharge can be a major issue. One advantage of lithium ion cells is that their rate of self-discharge is much lower than that of other rechargeable cells such as Nickel-Cad and NiMH forms.
- **No requirement for priming**: Some rechargeable cells need to be primed when they receive their first charge. There is no requirement for this with lithium ion cells and batteries. You can **use them out of the box**.

### Nuclear Fission
- It is a nuclear process when an atom (e.g. Uranium) splits apart into smaller atoms.
- The process gives off a lot of energy.

### Nuclear Fusion
- Nuclear fusion is a nuclear reaction in which two or more lighter atomic nuclei (e.g. Hydrogen) come close enough to form heavier atomic nuclei (e.g. Helium) and subatomic particles.
- The processes release a large amount of energy.

Fusion is the process that powers stars including the Sun.

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### 15. GRAVITATIONAL WAVES
- Gravitational Waves are ripples in in the fabric of space-time.
- Ripples mean distortion curvature of spacetime continuum.
- Laser Interferometer Gravitational-Wave Observatory (LIGO):
  - Based in Washington and Louisiana in the U.S. found evidence of gravitational waves coming from two black holes colliding and fusing together 1.3 billion light years away.
  - So, this was a signal of a black hole merger 1.3 billion years ago.
  - Thus, LIGO offers a way of looking back in time and unravel the mysteries of origin of universe.
- It can map black holes, neutron stars and other such objects.
- Though Indian scientists were part of the LIGO project, their involvement was limited to theoretical aspects and data analysis.
- The Rs.1,200-crore LIGO-India project is scheduled to become operational in about eight years.
- It could be set up in Udaipur or Marathwada.

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### BLACK HOLE
- A black hole is a place in space where gravity pulls so much that even light can't get out.
- The gravity is so strong because matter has been squeezed into a tiny space.
- This can happen when a star is dying. Because no light can get out, people can't see black holes. They are invisible.

### ANTIMATTER:
- Antimatter is a material composed of antiparticles.
- A particle and its antiparticle have the same mass as one another, but opposite electric charge and other quantum numbers.
- For example, a proton has positive charge while an antiproton has negative charge.

### DARK ENERGY
- It is a hypothetical form of energy that permeates all of space.
- It tends to accelerate the expansion of the universe.
- Thus, it's a source of anti-gravity (object/place free from gravity) and the vacuum of energy in space.
- Like Dark matter, it is also transparent to electromagnetic waves.
DARK MATTER

- It is a kind of matter that **does not emit** or **interact** with electromagnetic radiation, such as light, and is thus **invisible** to the entire electromagnetic spectrum.
- Although dark matter has not been directly observed, its existence and properties are inferred from its gravitational effects such as the motions of visible matter.
- It constitutes 27% and Dark Energy constitutes 68% of total mass-energy content of universe.
- So, visible matter is only about 5%.
- Black hole is not dark matter.

16. NANOMATERIALS

- A material having particles or constituents of **nanoscale dimensions**, or one that is produced by nanotechnology.
- Nanoscale is usually cited as 1-100 nanometers.

**Application of Nano Technology**

<table>
<thead>
<tr>
<th>IT and Electronics</th>
<th>Nano-circuits using tiny transistors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data Storage device</td>
</tr>
<tr>
<td></td>
<td>Display Screen</td>
</tr>
<tr>
<td>Automobile</td>
<td>Anti-scratch and rust proof component</td>
</tr>
<tr>
<td>Textile</td>
<td>Water and stain repellent, wrinkle free fibres</td>
</tr>
<tr>
<td>Medicine</td>
<td>Disease Diagnosis</td>
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<tr>
<td></td>
<td>Targeted Drug delivery</td>
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<td></td>
<td>Medical Nanorobots</td>
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<tr>
<td>Energy and Environment</td>
<td>For making solar cells</td>
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<tr>
<td></td>
<td>Smart windows- heat reflecting quality</td>
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<tr>
<td></td>
<td>Waste water treatment using Nanofiltration</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>Food packaging and Food safety</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Cosmetics</td>
</tr>
<tr>
<td></td>
<td>Precision farming using nanosensors</td>
</tr>
</tbody>
</table>

**Note:** The list is only illustrous and not exhaustive. Nanomaterials are currently being used in various other fields also.

GRAPHENE

- Graphene is an allotrope of carbon in the form of a **two-dimensional (2-D)**, atomic-scale, **hexagonal lattices** (also known as **honeycomb-shaped lattice**) in which one atom form each vertex.
- It is **one-atom thick**.
- It is the basic structural element of other allotropes, including graphite, charcoal, **carbon** nanotubes.

**Properties of Graphene:**

- 100 times stronger than the steel.
- Good conductor of heat and electricity. Better conductor compared to Copper.
- Nearly transparent.
Carbon Nanotube:
- CNTs are allotropes of carbon with a cylindrical nanostructure.
- Length-to-diameter ratio of up to 132,000,000:1
- Exceptional strength and stiffness like Graphene
- Extraordinary thermal conductivity, mechanical, and electrical properties like Graphene.

Applications of Graphene and Carbon Nanotube:
- Paints and coatings, lubricants, oils and functional fluids, capacitors and batteries, thermal management applications, display materials (in smartphones and laptops) and packaging, solar cells, inks and 3D-printers’ materials and films.

What are allotropes?
Allotropes are different forms of an element in the same physical state. E.g. Diamond, graphite, graphene, CNTs are allotropes of Carbon.

<table>
<thead>
<tr>
<th>Name</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missile Prahaar</td>
<td>- Surface-to-Surface short-range tactical ballistic missile developed by DRDO with a strike range is 150 km</td>
</tr>
<tr>
<td>Milan-2t Anti-Tank Missiles</td>
<td>- A French 2nd-generation man-portable ATGM which is produced in India by Bharat Dynamics Limited in partnership with a French firm.</td>
</tr>
</tbody>
</table>
| National Advance Surface to Air Missile System-II (NASAMS) | - Quickly detects, tracks & shoots down multiple airborne threats such as cruise missiles, aircraft and drones  
  - NASAMS was developed by Raytheon in partnership with KONGSBERG Defence and Aerospace of Norway.  
  - Capability to take down an incoming Missile as close as 500 meters away.  
  - Jointly developed by India and Israel, is a long-range surface-to-air missile (LRSAM). |
| Artillery Gun ‘Dhanush’ | - first long-range artillery gun to be Produced in India.  
  - It is an upgraded version, based on the original design of the Swedish 155-mm Bofors howitzers, which India procured in the mid-1980s. |
| Pinaka Rocket | A multi-barrel rocket launcher which can fire a salvo of 12 rockets in 44 seconds |
HEALTH

1. FOOD FORTIFICATION

**Why in news?**

- The Food Safety and Standards Authority of India (FSSAI) has recently released a report on food fortification.
- Fortification is being promoted through both open market and government schemes like ICDS, MDMS, PDS, etc.
- In National Nutrition Strategy (Kuposhan Mukt Bharat), food fortification has been given a major thrust.
- It has also introduced the +F logo to identify fortified foods.
- It has also launched the Food Fortification Resource Centre (FFRC) to promote large-scale fortification of food across India.
- Food fortification is the deliberate addition of one or more micronutrients to food so as to correct or prevent a deficiency and provide a health benefit.
- The concentration of just one micronutrient might be increased (e.g. the iodization of salt) or there might be a whole range of food-micronutrient combinations.
- Food fortification is a "complementary strategy" and not a replacement of a balanced & diversified diet to address malnutrition.

Food Safety and Standards Authority of India (FSSAI) is an autonomous body (statutory) established under the Ministry of Health & Family Welfare, Government of India. The FSSAI has been established in 2011 under the Food Safety and Standards Act, 2006.

2. FIXED DOSE COMBINATIONS (FDCS)

**Why in news?**

Recently, the Ministry of Health and Family Welfare in exercise of powers conferred by the Drugs and Cosmetics Act, 1940, has prohibited the manufacture for sale, sale or distribution for human use of 328 Fixed Dose Combinations (FDCs) and restricted the manufacture, sale or distribution of six FDCs subject to certain conditions.

- In 2016, the health ministry had banned 349 FDCs, claiming they were "unsafe" and "irrational" for consumption on the recommendation of Chandrakant Kokate committee (2015). However, the matter was contested by the affected manufacturers in various High Courts and the Supreme Court of India.
- The Drugs Technical Advisory Board on a direction from Supreme Court, formed Nilima Shirsagar committee to review the safety, efficacy and therapeutic justification of 344 fixed dose combination (FDC) drugs. The committee also recommended the continuation of the ban.
- An FDC is a cocktail of two or more therapeutic drugs packed in a single dose. Several cough syrups, painkillers and dermatological drugs in India are FDCs.

**Drug regime in India**

- Drugs are regulated by the Drugs and Cosmetics Act, 1940 and Drugs and Cosmetic Rules, 1945.
- Central Drugs Standard Control Organization (CDSCO), under the Ministry of Health and Family Welfare, is the authority that approves new drugs for manufacture and import.
• State Drug Authorities are the licensing authorities for marketing drugs.
• Drugs Technical Advisory Board (DTAB): It is the highest statutory decision-making body under the Union Health ministry on technical matters. It is constituted as per the Drugs and Cosmetics Act, 1940.

3. **BACTERIA WOLBACHIA**

- Recently successful experiments were conducted in Australia, which demonstrated the positive correlation between presence of Wolbachia bacteria in mosquitoes and reduced spread of diseases such as Malaria and Dengue.
- Wolbachia is a tiny bacterium that is present in up to 60% of all species of insects, including several mosquito species. It is usually not present in the Aedes aegypti mosquito, the primary species responsible for transmitting dengue, chikungunya and Zika.
- Wolbachia is one of the world’s most common parasitic microbes and possibly the most common reproductive parasite in the biosphere.
- When present in the mosquito, the viruses cannot replicate and hence small numbers of wolbachia-carrying mosquitoes are released in target areas.
- The World Mosquito Program introduces Wolbachia into Aedes aegypti mosquitoes. Once Wolbachia carrying mosquitoes are released, they breed with wild mosquitoes and over time, the majority of mosquitoes carry Wolbachia.
- This new method provide bio-control approach to handle these diseases.

4. **NEW INFLUENZA RESEARCH PROGRAMME**

Recently, Indian and European Union (EU) collaborated for new influenza research programme to develop Next Generation Influenza Vaccine.

- The programme will get fund of EUR 15 million under EU funding programme for research and innovation called ‘Horizon 2020’.
- It aims at further advancing the next generation influenza vaccine with improved efficacy and safety, duration of immunity, and reactivity against an increased breadth of influenza strains.

**Horizon 2020**

- It is the biggest EU Research and Innovation programme with nearly €80 billion of funding available over 7 years (2014 to 2020).
- It is helping to achieve research and innovation on excellent science, industrial leadership and tackling societal challenges.

5. **ZIKA VIRUS**

Few cases of Zika virus disease have been reported in Bihar.

**About Zika**

- First identified in Uganda in 1947 in monkeys, Zika was detected in humans five years later. Sporadic cases have been reported throughout the world since the 1960s, but the first outbreak happened only in 2007 in the Island of Yap in the Pacific.
- In 2015, a major outbreak in Brazil led to the revelation that Zika can be associated with microcephaly, a condition in which babies are born with small and underdeveloped brains. Generally, the virus is not considered dangerous to anyone other than pregnant women.
- Some countries that have had a Zika outbreak, including Brazil, reported a steep increase in Guillain-Barré syndrome - a neurological disorder that could lead to paralysis and death, according to WHO.
• In India, the first outbreak was reported in Ahmedabad in January 2017 and second outbreak in July, 2017 from Krishnagiri District in Tamilnadu.

6. **WHO TB REPORT**

**Why in news?**

- Recently, World Health Organisation (WHO) released World TB Report 2018, with collaboration of UN’s first high-level meeting (HLM) on TB.
- TB is the 10th leading cause of death worldwide, and since 2011. It has been the leading cause of death from a single infectious agent, ranking above HIV/AIDS.
- Overall, TB deaths have decreased over the past year. However, underreporting and under-diagnosis of TB cases remains a major challenge.

**Facts about TB**

- TB is communicable infectious disease caused by the bacillus Mycobacterium Tuberculosis.
- It typically affects the lungs (pulmonary TB) but can also affect other organs (extrapulmonary TB).
- Drug Resistant TB:
  1. Multidrug Resistance TB (MDR): It is TB that does not respond to at least isoniazid and rifampicin.
  2. Extensively drug-resistant tuberculosis (XDR-TB): It is resistant to at least four of the core anti-TB drugs. It involves multidrug-resistance (MDR-TB), in addition to resistance to any of the fluoroquinolones and to at least one of the three injectable second-line drugs.
  3. Totally drug-resistant tuberculosis (TDR-TB): TB which is resistant to all the first- and second-line TB drug

7. **TELEROBOTIC SURGERY**

- India became the world’s first to successfully perform a telerobotic coronary intervention.

**What is telerobotic coronary intervention?**

- It is a robotic method of performing heart surgery. With the help of the internet and a robotic tower, a surgeon is able to treat patients from a distance.
- This technology is especially important for high emergency situations of heart attacks and stroke, where ideal treatment must be received within 90 minutes or 24 hours.

8. **NATIONAL MEDICAL DEVICES PROMOTION COUNCIL**

**Why in News?**

To give a fillip to the medical device sector, a National Medical Devices Promotion Council will be set up under the Department of Industrial Policy and Promotion (DIPP).

- The Council will be headed by Secretary, DIPP. It will also have representatives from health care industry and quality control institutions.
- It will act as a facilitating and promotion & developmental body for the Indian Medical Devices Industry (MDI).
- It will identify redundant processes and render technical assistance to the agencies and departments concerned to simplify the approval processes involved in medical device industry.
9. **LEPROSY IN INDIA**

Initial reports of Leprosy Case Detection Campaign of the National Leprosy Eradication Programme (NLEP) indicated an all-time high of nearly 50,000 new leprosy cases in Bihar.

- India was officially declared to have eliminated leprosy in 2005 when new cases fell to less than 1 per 10,000, yet India still accounts for the largest number of leprosy affected people in the world (58 per cent).
- Indian research contributed to the development of Multi-Drug Therapy or MDT, now recommended by WHO, which led to the shortening of treatment and higher cure rates.

**More about Leprosy**

- Leprosy is a chronic infectious disease caused by Mycobacterium leprae and is highly contagious.
- The bacteria has a long incubation period. Once a person is infected, it can take 6-10 years or even 20 years for the first symptoms to surface.
- The disease mainly affects the skin, the peripheral nerves, the mucosa of the upper respiratory tract and the eyes. It is curable and treatment provided in the early stages averts disability.
- Mycobacterium Indicus Pranii (MIP) is an indigenous vaccine for leprosy developed by National Institute of Immunology. It is now being introduced into the National Leprosy Elimination Programme (NLEP). It will boost the immune system against the bacterial disease.

10. **NATIONAL ACTION PLAN FOR VIRAL HEPATITIS CONTROL**

- The Plan provides a strategic framework, based on which National Viral Hepatitis Control Program was launched in 2018 under National Health Mission.

**About Hepatitis**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MORTALITY</th>
<th>INFECTION</th>
<th>VACCINES</th>
<th>CHALLENGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, C,</td>
<td>Viral hepatitis types B and C can cause chronic hepatitis and are</td>
<td>1. Hepatitis B, C and D usually occur as a result of contact with</td>
<td>There as vaccines to prevent hepatitis A, B and E. However, there is no</td>
<td>The infected person being unaware of their chronic carrier status and</td>
</tr>
<tr>
<td>D and E</td>
<td>responsible for 96% of overall hepatitis</td>
<td>infected body fluids</td>
<td>vaccine for hepatitis C.</td>
<td>continue to infect others.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Hepatitis A and E are caused by ingestion of contaminated food or water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. SWINE FLU

- Swine influenza is an infection caused by any one of several types of swine influenza viruses.
- Swine influenza virus (SIV) or swine-origin influenza virus (S-OIV) is any strain of the influenza family of viruses that is endemic in pigs e.g. H1N1, H1N2, H2N1, H3N1, H3N2, and H2N3.
- The H1N1 variant of the flu virus is commonly known as "swine flu virus" because it was known in the past to occur in people who had been in the vicinity of pigs. That is no longer true.
- The virus in its current form affects and spreads to people who have got nothing to do with the animal. It is essentially an infection of the respiratory tract characterized by the usual symptoms of flu - cough, nasal secretions, fever, loss of appetite, fatigue and headache.
- Mode of Spread: When people who have it cough or sneeze, they spray tiny drops of the virus into the air. If you come in contact with these drops, touch a surface (like a doorknob or sink) where the drops landed, or touch something an infected person has recently touched, you can catch H1N1 swine flu.
- Despite the name, one can't catch swine flu from eating bacon, ham, or any other pork product.

12. STEM CELLS

- These are undifferentiated biological cells that can differentiate into specialized cells.
- Embryonic cell is example of stem cells whereas, RBC or nerve cell is example of specialized cell.
- Specialized Body cells are also known as somatic cells. Induced pluripotent stem cells (iPSCs)
- iPSCs are body (somatic) cells which have been reprogrammed to function like embryonic stem cells.
- This is done by introducing four regulatory factors (pieces of DNA) or Yamanaka genes into the cells.
- It avoids the controversial use of killing the embryos while harvesting the stem cells.

13. NIPAH VIRUS

Recently, there were several cases of deaths due to ‘Nipah’ (NiV) virus in Kerala.
- Nipah virus was first identified in Kampung Sungai Nipah, Malaysia in 1998.
- The first outbreak in India was reported from Siliguri, West Bengal in 2001.
- The natural host of the virus is the fruit bat but it can also infect pigs or any domesticated animals.
- The virus is present in bat urine, faeces, saliva, and birthing fluids which then transmits it to Humans climbing trees or drinking raw palm sap covered in it.
- Transmission of Nipah virus also takes place through direct contact with other NiV-infected people.

What are Zoonotic diseases?
- A zoonotic disease is a disease that spreads between animals and people.
- They can be caused by viruses, bacteria, parasites, and fungi.
- Important Zoonotic diseases in India are: Nipah virus, avian influenza, rabies, etc.
### MAJOR DISEASES

#### Diseases and nutritional deficiency

<table>
<thead>
<tr>
<th>Vitamin</th>
<th>Deficiency Symptoms/ Disease</th>
</tr>
</thead>
</table>
| **A**   | • Xerophthalmia - Dryness of eyeball  
          | • Night blindness             |
| **D**   | • Rickets in Children       
          | • Osteomalacia in adults     
          | • Both of them leads to weak bones. |
| **E**   | • Destruction of RBCs       
          | • Sterility                  |
| **K**   | • Faulty blood clotting    
          | • Haemorrhage                |

#### Viral Diseases of Humans

<table>
<thead>
<tr>
<th>Disease</th>
<th>Caused by</th>
<th>Method of Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>German measles (Rubella)</td>
<td>German measles (Rubella)</td>
<td>Droplet infection</td>
</tr>
<tr>
<td>Poliomyelitis (polio)</td>
<td>Poliovirus (RNA Virus)</td>
<td>Droplet infection or via human faeces</td>
</tr>
<tr>
<td>AIDS</td>
<td>Retro virus</td>
<td>Sexual intercourse, homo- and hetrosexuals</td>
</tr>
<tr>
<td>Yellow fever</td>
<td>Lining of blood vessels and liver.</td>
<td>vector- arthropods e.g. ticks, mosquitoes</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>Varicella- zoster</td>
<td>Air-borne droplets</td>
</tr>
</tbody>
</table>

#### Bacterial Diseases of Humans

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>CAUSED BY</th>
<th>Method of Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>Corynebacterium diphtheria</td>
<td>Droplet infection</td>
</tr>
<tr>
<td>TB</td>
<td>Mycobacterium tuberculosis</td>
<td>Droplet infection</td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>Bordetella pertussis</td>
<td>Droplet infection</td>
</tr>
<tr>
<td>Tetanus</td>
<td>Clostridium tetani</td>
<td>Wound infection</td>
</tr>
<tr>
<td>Cholera</td>
<td>Vibrio cholera</td>
<td>Faecal contamination, vectors like flies, contaminated water, food</td>
</tr>
<tr>
<td>Typhoid</td>
<td>Salmonella typhi</td>
<td>Same as Cholera</td>
</tr>
</tbody>
</table>

#### Diseases caused by worms

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>CAUSED BY</th>
<th>Method of Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ringworm (tinea)</td>
<td>Microsporum, Trichophyton</td>
<td>Direct contact from infected cats and dogs.</td>
</tr>
<tr>
<td>Athletes foot</td>
<td>Trichophyton</td>
<td>Bad foot hygiene where skin remains warm and moist</td>
</tr>
</tbody>
</table>

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**NOTES**

25B, 2nd Floor, Pusa Road, Old Rajendra Nagar,  
Metro Pillar Number 117 • Tel. : 011-49274400, 9205274743
GOVERNMENT SCHEMES AND INITIATIVES

1. **DIGITAL NORTH-EAST VISION 2022**

   Recently government released 'Digital North East: Vision 2022', that aims to leverage digital technologies to transform lives of people of the northeastern states and enhance the ease of living.

   • Under the Digital India programme government had earlier taken various digital initiative in Northeast such as: State Wide Area Network, Common services Centre, National Knowledge Network, SMS based agricultural extension services etc.

   • It will be coordinated by the Ministry of Electronics and Information Technology and will be implemented by various central government ministries and governments of north eastern states

2. **INNOVATION CELL**

   **Why in news?**

   MHRD recently launched the Innovation Cell at All India Council of Technical Education (AICTE) premises with a purpose to systematically foster the culture of Innovation in all Higher Education Institutions (HEIs) across the country.

   The primary mandate of Innovation Cell is to encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities in their formative years fostered through Network of Innovation clubs in Higher Educational Institutions.

   **Other Major Programs**

   • Network of Innovation Clubs (NIC)-details will released soon by the ministry.

   • Atal Ranking of Institutions on Innovation Achievements (ARIIA)- to systematically rank education institutions and universities primarily on innovation related indicators.

   • Smart India Hackathon (SIH) 2019-to provide students a platform to solve some of pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem solving.

   • National Student Startup Policy (NSSP)-launched in 2016 to guide AICTE approved institutions to promote student driven innovations and start-ups. The policy aims at identifying the innovative and entrepreneurial potential of students and transforming them into start-up entrepreneurs.

3. **IMPRINT -II**

   **Why in news?**

   • Recently, it was reported that 122 new research project were selected under IMPRINT-II.

   • Impacting Research, Innovation and Technology or IMPRINT is a national initiative of Ministry of Human Resource Development (MHRD) which aims to address engineering challenges in 10 technology domains relevant to India through an inclusive and sustainable mode.

   • IMPRINT was launched in 2015 as a joint initiative of IIT and IISc under which 142 project are being implemented presently.

   • The round two of IMPRINT -IMPRINT II, will be jointly funded and steered by MHRD and Department of Science and Technology.
4. **START UP INDIA'S ACADEMIA ALLIANCE PROGRAM**

Recently, Startup India launched Startup Academia Alliance Program.

- It is a unique mentorship opportunity between academic scholars and start-ups to promote the spirit of entrepreneurship in the country.
- It aims to reduce the gap between scientific research and its industrial application in order to increase the efficacy of technology and widen its impact.
- It strives to implement the third pillar on which the Startup India Action Plan is based - Industry Academia Partnerships and Incubation. The other two being Simplification and Handholding & Funding Support and Incentives.
- It has been partnered by Regional Centre for Biotechnology, The Energy and Resources Institute (TERI), Council on Energy, Environment and Water, and TERI School of Advanced Studies to provide mentorship and guidance to relevant start-ups in the field of renewable energy, biotechnology, healthcare etc.

5. **REPURPOSE USED COOKING OIL (RUCO)**

Recently, FSSAI launched Repurpose Used cooking Oil (RUCO) initiative.

- Aim: To enable collection and conversion of used cooking oil to bio-diesel.
- Under this around 64 companies at 101 locations have been identified to enable collection of used cooking oil.
- According to FSSAI regulations, the maximum permissible limits for Total Polar Compounds (TPC) in cooking oil have been set at 25 per cent.
- TPC is formed due to repeated frying and usage of edible oil which changes its physiochemical and nutrition properties making it unfit for human consumption.

6. **SCHEMES RELATED TO RESEARCH**

Recently, Government launched two schemes to promote higher education research in India.

**IMPRESS - Impactful Policy Research in Social Sciences**

- Aim: To identify and fund research proposals in social sciences with maximum impact on the governance and society.
- Eligibility: To provide opportunity for social science researchers in any institution in the country, including all Universities (Central and State), private institutions and ICSSR funded/recognized research institutes.
- Implementing Agency: Indian Council of Social Science Research (ICSSR).

**SPARC - Scheme for Promotion of Academic and Research Collaboration**

- Aim: To boost joint research with global universities from 28 countries and get international expertise to solve major national problems, train Indian students in the best laboratories, deepen academic engagement and improve the international ranking of Indian Institutes.

- All Indian institutions ranked in top 100 of National Institutional Ranking Framework will be eligible for this scheme.

- Foreign institutions in top 100 to top 200 of global academic rankings from the 28 target countries will be eligible.

- Implementing Agency: IIT Kharagpur will be the National Coordinating (NC) Institution.
Stars Scheme

- Recently, Ministry of Human Resource Development launched STARS Scheme (Scheme for Translational and Advanced Research in Science) on National Science Day.
- Under this, 500 science projects would be funded.
- The project will be coordinated by the Indian Institute of Science (IISc), Bangalore.

National Science Day

- It is celebrated every year on February 28 to mark the discovery of Raman Effect by physicist Chandrasekhar Venkata Raman.
- Theme: This year theme was ‘Science for the People and the People for Science’.

MISCELLANEOUS

1. NOBEL PRIZE IN PHYSICS

- Nobel Prize in Physics 2018 was awarded for groundbreaking inventions in the field of laser physics with one half to Arthur Ashkin for the optical tweezers and their application to biological systems, the other half jointly to Gérard Mourou and Donna Strickland for their method of generating high-intensity, ultra-short optical pulses. Donna Strickland is third women to win Physics Noble.
  - Application:
  - Optical Tweezers are widely used to investigate the machinery of life.
  - Chirped Pulse Amplification (CPA) for subsequent high-intensity lasers. Its uses include the millions of corrective eye surgeries that are conducted every year using the sharpest of laser beams.

2. NOBEL PRIZE IN CHEMISTRY

- The Nobel Prize in Chemistry 2018 was divided, one half awarded to Frances H. Arnold for the directed evolution of enzymes, the other half jointly to George P. Smith and Sir Gregory P. Winter for the Phage Display of peptides and antibodies. Ms. Arnold, only the fifth woman to win a chemistry Nobel.
  - Application:
  - First directed evolution of enzymes, which are proteins that catalyse chemical reactions, has been used in manufacturing of chemical substances, such as pharmaceuticals, and the production of renewable fuels for a greener transport sector.
  - Phage Display, where a bacteriophage - a virus that infects bacteria - can be used to evolve new proteins. It has produced anti-bodies that can neutralize toxins, counteract autoimmune diseases and cure metastatic cancer. Adalimumab, a first protein evolved through phage display, is used for rheumatoid arthritis, psoriasis and inflammatory bowel diseases.

3. NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

- It has been jointly awarded to James P. Allison and Tasuku Honjo for their discovery of 'immune checkpoint therapy,' a cancer treatment.
  - Working: By stimulating the inherent ability of our immune system to attack tumor cells by releasing the brakes on immune cells.
  - James P. Allison studied a known protein that functions as a brake on the immune system. He realized the potential of releasing the brake and thereby unleashing our immune cells to attack tumors.
• Tasuku Honjo discovered a protein on immune cells and, after careful exploration of its function, eventually revealed that it also operates as a brake, but with a different mechanism of action. Therapies based on his discovery proved to be strikingly effective in the fight against cancer.

4. OVERHAUL OF SI UNITS

The 26th General Conference on Weights & Measures (CGPM) in a historic decision unanimously redefined World’s standard definition of kilogram, Ampere, Kelvin, and Mole.

- It will result in uniform and worldwide accessible SI system for high-technology manufacturing, basic science, etc.
- The units shall be stable in the long term, internally self-consistent and practically realizable being based on the present theoretical description of nature at the highest level.
- It will not be bound by the limitations of objects in our measurement of the world, but have universality accessible units that can pave the way to even greater accuracy and accelerate scientific advancement.
- It will not change measurements in our day to day life like in kitchen, trade & transport etc. Thus for most people, everyday life will carry on as normal despite the redefinitions.

<table>
<thead>
<tr>
<th>International System of Units (SI Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The SI system was adopted in 1960.</td>
</tr>
<tr>
<td>• There are seven fundamental units.</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

5. CALL FOR TWO TIME ZONES IN INDIA

Council of Scientific & Industrial Research’s National Physical Laboratory (CSIR-NPL), which maintains Indian Standard Time (IST), has published a research article describing the necessity of two time zones.

Need for two time zones

- At present, the country observes a single time zone based on the longitude passing through 82°30’E.
- India extends from 68°7’E to 97°25’E, with the spread of 29° representing almost two hours from the geographic perspective.
- In the Northeast - causes the loss of many daylight hours by the time offices or educational institutions open, and that early sunset (4PM in winters), for its part, leads to higher consumption of electricity.

<table>
<thead>
<tr>
<th>Some facts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Countries with most number of time zones:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• France (12), United States of America (11), Russia (11)</td>
</tr>
</tbody>
</table>

6. INTERNATIONAL YEAR OF THE PERIODIC TABLE OF CHEMICAL ELEMENTS

The United Nations General Assembly has proclaimed 2019 as the International Year of the Periodic Table of Chemical Elements to celebrate its 150 years.

About the Periodic Table of Chemical Elements

- Russian scientist Dmitry Mendeleev published the first periodic table in 1869. He organized all chemical elements by the atomic mass (number of protons & neutrons) and other chemical properties.
• However, the shortcomings of Mendeleev's Periodic Table were uncertain position of Hydrogen and no place for isotopes (similar chemical properties but different atomic masses) which were discovered later.

• Thus, Modern periodic table, managed by the International Union for Pure and Applied Chemistry (IUPAC) is arranged on the basis of atomic number rather than atomic mass.

• UNESCO and the 1001 Inventions organization will launch a new educational initiative celebrating 2019 International Year of the Periodic Table of Chemical Elements (IYPT2019) - a year long initiative to raise awareness of chemistry and its applications for sustainable development.

7. GAS HYDRATES

Researchers at Indian Institute of Technology (IIT) Madras have experimentally shown that methane and carbon dioxide (CO2) can exist as gas hydrates.

• Gas hydrates are formed when a gas such as methane gets trapped in well-defined cages of water molecules forming crystalline solids. It is a solid ice-like form of water that contains gas molecules in its molecular cavities.

• Natural gas hydrates occur on continental margins and shelves worldwide from Polar Regions to the tropics.

• Gas hydrate reservoirs are generally associated with biologically rich cold seep ecosystems at the seafloor. Cold seeps are locations where hydrocarbon-rich fluid seeps up from below the sea floor, often as methane or hydrogen sulfide.

Indian Initiative

• The National Gas Hydrate Programme (NGHP) is of national importance considering India's phenomenal growing energy demand. The programme was initiated in 1997. It first conducted studies in 2006.

• India has entered into an agreement with Canada to develop technology in this regard.

• IIT Madras, in collaboration with GAIL, is working to recover methane from methane hydrate from the Krishna-Godavari Basin and sequester CO2 simultaneously.

8. SEED VAULT OF INDIA

• India’s vault lies in Chang La (a high-altitude mountain pass in Ladakh)

• Built jointly by the Defence Institute of High Altitude Research (DIHAR) and the National Bureau of Plant Genetic Resources (NBPGR) in 2010 under the aegis of Defence Research and Development Organization (DRDO), this permafrost seed bank is the second largest in the world.

9. THREE STAGE NUCLEAR PROGRAMME

• India’s three-stage nuclear power programme was formulated by Homi Bhabha in the 1950s for achieve energy security, through the use of uranium and thorium reserves found in the monazite sands of coastal regions of South India.
### GOVERNMENT SCHEMES AND INITIATIVES

**Ministry of Agriculture and Farmers Welfare**

<table>
<thead>
<tr>
<th>Name of Scheme and Purpose National</th>
<th>Benefits and Beneficiaries</th>
<th>Key Features</th>
</tr>
</thead>
</table>
| **Agricultural Higher Education Project (NAHEP)**<br>To attract talent and strengthen higher agricultural education in the country.<br>(A project by ICAR ) | Agricultural University students. | • Funded by the World Bank and the Indian Government  
• The objective of the NAHEP for India is to support participating agricultural universities and ICAR in providing more relevant and higher quality education to Agricultural University students.  
• In addition, a four-year degree in Agriculture, Horticulture, Fisheries and Forestry has been declared a professional degree. |
| **Online Portal “ENSURE”**<br>(ENSURE – National Livestock Mission-EDEG developed by NABARD) | Farmers | Entrepreneurship Development and Employment Generation (EDEG):  
• Under the component EDEG, subsidy payment for activities related to poultry, small ruminants, pigs etc., through Direct Benefit Transfer (DBT) goes directly to the beneficiary’s account.  
• To make it better, simpler and transparent, the NABARD has developed an online portal “ENSURE”, which can be accessed on real time basis. |
| **Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)** | Farmers | • Aimed at ensuring remunerative prices to the farmers for their produce. The umbrella scheme ‘PM-AASHA’ comprises three sub-schemes:  
• **Price Support Scheme (PSS):** The physical procurement of Pulses, Oilseeds and Copra will be done by Central Nodal Agencies (NAFED and FCI) with the proactive role of the state governments.  
• **Price Deficiency Payment Scheme (PDPS):** it is proposed to cover all oilseeds for which Minimum support price (MSP) is notified.  
• **Pilot of Private Procurement & Stockist Scheme (PPPS):** For oilseeds, the states will have the option to roll Procurement Stockist Scheme (PPSS) on pilot basis and |
Agricultural Produce Market Committee’s (APMC) Involving the participation of **private** stockiest. Selected private agency shall procure the commodity at MSP in the notified markets from the registered farmers, whenever the prices in the market fall below the notified MSP and whenever authorised by the state or UT government to enter the market. The maximum service charges up to 15% of the notified MSP will be payable.

<table>
<thead>
<tr>
<th><strong>Rashtriya Krishi Vikas Yojana (RKVY)</strong> as Rashtriya Krishi Vikas Yojana Remunerative Approaches for Agriculture and Alliedsector Rejuvenation (RKVY-RAFTAAR)</th>
<th>Farmers</th>
<th>Rashtriya Krishi Vikas Yojana (RKVY) is a continuing scheme under implementation From XIth Five Year Plan. It provides considerable flexibility and autonomy to states in planning and executing programmes District Agriculture Plans (DAPs) and State Agriculture Plan (SAP) are prepared based on agro-climatic conditions etc.</th>
</tr>
</thead>
</table>
| **Pradhan Mantri Fasal Beema Yojana:** (To increase of insured farmers from the present 20% to 50% in the next next two to three years time) | Farmers | • The farmer share of premium- One Season One Rate  
• Rabi: 1.5%  
• Kharif: 2%  
• Commercial Crop: 5%; Rest premium is divided equally between centre and state. Localised calamities - inundation has been added. For the first time, risk of post-harvest losses up to 14 days occurring due to cyclone, non-seasonal rain and local calamities have been included.  
• No Capping of the Premium: The provision of capping the premium rate has been removed and farmers will get claim against full sum insured without any reduction. Smartphones will be used to capture and upload data of crop cutting to reduce delays in claim payment to farmer and to check misuse of the scheme. Panchayat would be unit of assessment. (Earlier it was a district). The scheme is mandatory for farmers who have taken institutional loans from banks. It is optional for farmers who have not taken institutional credit. |
<table>
<thead>
<tr>
<th><strong>National Agriculture</strong></th>
<th><strong>Market portal (eNAM)</strong></th>
<th>Farmers—will get better farm prices. Consumers—will get Produce at low cost. Traders—Less registration Fee</th>
<th>• Farmers can showcase their produce online from their nearest market and traders can quote price from anywhere. It will result in increased numbers of traders and greater competition. It will also ensure open price discovery and better returns to farmers. Single registration for traders. Thus, less expenditure. To integrate a wholesale mandis across the country with the online platform, the state governments have to amend their Agriculture Produce Market Committee (APMC) Act. It will be implemented through Agri- Tech Infrastructure Fund (ATIF).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Intervention</strong></td>
<td><strong>Scheme (MIS)</strong></td>
<td>Consumers (Related Topic: Minimum Support Price)</td>
<td>• If at least 10% increase in production or 10% fall in prices. Like MSP but only a temporary measure. States are given funding on 50:50 basis on receipt of a specific proposal.</td>
</tr>
<tr>
<td><strong>Rashtriya Gokul Mission</strong></td>
<td><strong>Dairy Sector</strong></td>
<td>Dairy Sector</td>
<td>• Objectives of this mission includes improvement of genetic makeup of indigenous breed, enhancing the milk productivity and distribution of disease free high genetic merit. bulls for natural service.</td>
</tr>
<tr>
<td><strong>Paramparagat Krishi Vikas Yojana</strong></td>
<td>Farmers</td>
<td>Farmers</td>
<td>• It is to promote organic farming and the products will be linked with the market. It will be implemented in a cluster based approach and farmers will be funded to meet the expenditure from farm to market. There is no liability for farmers for expenditure on certification.</td>
</tr>
<tr>
<td><strong>Pradhan Mantri Krishi Sinchayee Yojana</strong></td>
<td>Farmers</td>
<td>Farmers</td>
<td>Main objectives are - 1. Extending the coverage of irrigation 2. Improving water use efficiency End to end solution on source creation, distribution, management, field application and extension activities. It is formulated by amalgamating ongoing schemes</td>
</tr>
</tbody>
</table>
• Accelerated Irrigation Benefit Programme (AIBP) - Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR).
• Integrated Watershed Management Programme (IWMP) - Department of Land Resources (DoLR), Ministry of Rural Development.
• On Farm Water Management (OFWM) - Department of Agriculture and Cooperation (DAC).
• Micro Irrigation Fund - The fund was set up with an initial corpus of Rs.5,000 crore under the scheme with NABARD.
• NABARD will extend the loan to State Governments to mobilise resources to achieve the annual target of about 2 million ha/year during the remaining period of 14th Finance commission.

**e-RaKAM e-Rashtriya Kisan Agri Mandi (E-RaKAM)**

<table>
<thead>
<tr>
<th>Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is a digital platform portal enables farmers to sell their agricultural products through auction across the country.</td>
</tr>
<tr>
<td>The farmers would get the payment for their products directly into their bank accounts without any intermediaries.</td>
</tr>
<tr>
<td>CWRC, a subsidiary of the Central Warehousing Corporation Ltd, will provide logistics support for sellers and buyers in case they need it.</td>
</tr>
</tbody>
</table>

**Ministry of Food Processing Industries**

<table>
<thead>
<tr>
<th>Name of Scheme and Purpose</th>
<th>Intended Beneficiary</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pradhan Mantri Kisan SAMPADA Yojana</strong> (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters)</td>
<td>Food processing Sector Better Return to Farmers</td>
<td>It is a Central Sector Scheme that aims to supplement agriculture, modernize processing and decrease Agriculture waste.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It will include implementation of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Mega Food Parks.</strong> Integrated Cold Chain and Value Addition Processing and Infrastructure. Creation/Expansion of Food Processing &amp; Preservation Capacities.</td>
</tr>
</tbody>
</table>
| Infrastructure for Agro-processing Clusters | • Creation of Backward and Forward Linkages  
• Food Safety and Quality Assurance Infrastructure  
• Human Resources and Institutions |

| **Operation Greens:** to reduce price volatility in Tomatoes, Onions and Potatoes (TOP) commodities | Farmers and Consumers | • The Strategy will comprise of a series of measures as decided by the Ministry which includes:  
1. Short term Price Stabilisation Measures:  
2. Long Term Integrated value chain development projects:  
   • It is essentially a price fixation scheme that aims to ensure farmers are given the right price for their produce. The main objective of the project is to reduce price volatility in agriculture commodities such as vegetables. Initially, Government has decided to start focusing on three basic vegetables namely tomatoes, onions and potatoes.  
   • NAFED will be the Nodal Agency to implement price stabilisation measures. |

| **Mega Food Park** | Farmers, processors retailers and consumers | • Aimed at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastages, increasing farmers’ income and creating employment opportunities particularly in rural sector. It includes creation of infrastructure for primary processing and storage near the farm in the form of Primary Processing Centres (PPCs) and Collection Centres (CCs) and common facilities and enabling infrastructure at Central Processing Centre (CPC). |
## Ministry of Ayush

(Ayurveda, Yoga and Naturopathy, Unani, Siddha, Homeopathy)

### National Ayush Mission

- It is a centrally sponsored scheme with implementation period till 2020.
- Objectives –
  1. To provide cost effective and equitable AYUSH health care.
  2. To revitalize and strengthen the AYUSH systems
  3. To improve educational institutions capable of imparting quality AYUSH education
  4. To promote the adoption of Quality standards of AYUSH drugs and making available the sustained supply of AYUSH raw-materials.
- Beneficiaries - Patients due to low cost medicine and increased access.

### Pathya-Apathya

- The aahar-vihar which is beneficial and nutritional to the body and also gives the happiness to the mind is known as Pathya and opposite to that is known as Apathya.
- It is a curative factor in Ayurveda.

## Ministry of Culture

### Project Mausam:

To establish cross cultural linkages and to revive historic maritime cultural and economic ties with the 39 Indian ocean countries

The people of 39 Indian Ocean Countries with enhanced Friendship leading to commercial and religious interactions

- It is to be implemented by the Archaeological Survey of India (ASI) as the nodal agency
- ASI will get research support of the Indira Gandhi National Centre for the Arts (IGNCA) and National Museum as associate bodies.
- At the macro level to re-connect with the countries of the IOR with the aim of enhancing the understanding of cultural values and concerns
- At a more localised level, to enable an understanding of national cultures in a regional maritime milieu.

### Seva Bhoj Yojna

Charitable Religious Institutions

- It is a Central Sector Scheme under which the CGST and Central Government’s share of IGST paid by Charitable Religious Institutions on purchase of specific raw food items shall be reimbursed to them. The charitable religious institutions include Temples, Gurudwara, Dharmik Ashram, Mosques, Dargah, Church, Matth, Monastries etc.
### Ministry of Chemicals and Fertilizers

**Jan Aushadhi**
- To provide quality as well as poor medicines at affordable prices to the masses
- To reduce out of pocket expenditure in healthcare

Under Department of Pharmaceuticals
In association with Central Pharma PSUs but stores will have medicines of pvt companies also.
- Jan Aushadhi stores shall sell Generic medicines, surgical items and other allied medical products like Horlicks etc.

### Ministry of Commerce and Industry

**Womaniya on Government e-Market place**

Women entrepreneurs and self-help groups

- Initiative launched by the Government eMarketplace (GeM) to enable women entrepreneurs and self-help groups to sell different products at the platform and to achieve gender-inclusive economic growth.

- This would enable women entrepreneurs and women self-help groups to sell handicrafts and handloom, jute and coir products, home decor and office furnishings, directly to various government ministries, departments and institutions.

- GeM is an online marketplace, a 100% government owned company, to facilitate procurement of goods and services by various Ministries and agencies of the Government.

### National Mission on Government e-Market (GeM) Portal

MSMEs, Start-ups, domestic manufacturers, Women entrepreneurs, and Self-Help

**Aims:**

1. For increasing awareness and accelerating the use of (GeM)
2. To cover all central government departments, states and public sector undertakings in a mission mode.
3. To give a boost to cashless, contactless, paperless transactions in line with Digital India objectives.
| Government e-marketplace | Government e-Marketplace (GeM) is a one stop portal to facilitate online procurement of common use Goods & Services required by various Government Departments / Organizations / PSUs.  
| | • All Central government and State Government Ministries/Departments including its attached/subordinate offices, Central and State autonomous bodies, Central and State Public Sector Units and local bodies etc. are authorized to make procurement through GeM portal.  
| | • GeM aims to enhance transparency, efficiency and speed in public procurement. It provides the tools of e-bidding, reverse e-auction and demand aggregation to facilitate the government users achieve the best value for their money. |

| Merchandise | Exporters of Goods | Exporters of Goods has merged 5 different export promotion schemes into one.  
| Exports from India |  | • Incentives under MEIS are available to units located in SEZs also.  
| Scheme (MEIS) |  | • It covers the export to the market of Europe, The United States of America and Africa  
| • To promote export of notified goods produced in India |  |

| Start Up India Scheme | Start Up | Start-up profits to be tax-free for 3 years.  
|  |  | • Compliance regime based on self-certification for labour and environmental laws.  
|  |  | • Easy exit within 90 days. Liberalised fast-track mechanism for start-up patent applications with 80% cost rebate.  
|  |  | • Sector specific incubators, 500 tinkering labs. |

| Scheme for IPR Awareness - Creative India; Innovative India |  | Launched by Cell for IPR Promotion and Management (CIPAM) under the aegis of the Department of Industrial Policy and Promotion.  
|  |  | The Scheme aims at raising IPR awareness amongst students, youth, authors, artists, budding inventors and professionals to inspire them to create, innovate and protect their creations and inventions across India including Tier 1, Tier 2, Tier 3 cities as well as rural areas in the next 3 years. |

| Ministry of Coal | Power Producers, consumers. Will ensure adequate supply of fuel to power plants, which are awaiting fuel supply. | To address the problem of lack of coal linkage.  
| Scheme for Harnessing and Allocating Koyala (Coal) Transpareently in India’ (SHAKTI) |  | • Coal linkages would be granted on notified price on auction basis for Independent Power Producers (IPPs) having already concluded domestic coal based Power Purchase Agreement (PPAs). |
**Ministry of Communication**

| **Sampoorna Bima Gram Yojana Yojana (SBG)**. | All villages under the Saansad Adarsh Gram Yojana | • To identify at least one village (having a minimum of 100 households) in each of the revenue districts of the country and cover all households with a minimum of one RPLI (Rural Postal Life Insurance) policy in that village. |
| **Deen Dayal SPARSH Yojana** |  | • Scholarship for Promotion of Aptitude & Research in Stamps as a Hobby (SPARSH) is a pan India Scholarship programme to children of Standard VI to IX having good academic record and also pursuing Philately as a hobby. The selection would be based on the evaluation of Project work on Philately & performance in Philately Quiz conducted by the Circles. |
|  |  | • Digital Advancement of Rural Post Office for A New India (DARPAN) is aimed at realizing financial inclusion of un-banked rural population. |
|  |  | • The Project shall increase the rural reach of the Department of Posts and enable Branch Post Offices to increase traffic of all financial remittances, savings accounts, Rural Postal Life Insurance, and Cash Certificates etc. |
|  |  | • It intends to provide a low power technology solution to each branch postmaster to improve service delivery. The application will also be used for the reimbursement of social security benefits such as MNREGS, old age pension and DBT. |

**Ministry of External Affairs**

<p>| <strong>SAMEEP Students and MEA Engagement Programme (SAMEEP)</strong> |  | • It is an outreach mission to take Indian foreign policy and its global engagements to students across the country. |
|  |  | • It aims to familiarise students in India about the functioning of the MEA. |
|  |  | • All the ministry officers are asked to engage students in the schools and colleges in the jobs that the ministry is engaged in. |</p>
<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know India Programme</td>
<td>- The programme is voluntary and gives officials the option of going back to their alma mater or to any school or college in their hometown.</td>
</tr>
<tr>
<td>Indian Diaspora Youth</td>
<td>- To help familiarize Indian Diaspora youth, in the age group of 18-26 years, with developments and achievements made by the country and bringing them closer to the land of their ancestors.</td>
</tr>
<tr>
<td></td>
<td>- KIP provides a unique forum for students and young professionals of Indian origin to visit India, share their views, expectations and experiences and to bond closely with contemporary India.</td>
</tr>
</tbody>
</table>

### MINISTRY OF FINANCE

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Pradhan Mantri MUDRA Yojana</td>
<td>• To provide cheap credit to MSME</td>
</tr>
<tr>
<td>Micro Small and Medium Enterprises</td>
<td>• Mudra bank has been established that provide refinancing facility to banks and NBFC. Refinancing is done for loan given to MSMEs.</td>
</tr>
<tr>
<td>Atal Pension Yojana (APY)</td>
<td>• To provide pension to every Indian.</td>
</tr>
<tr>
<td>Unorganized sector employee in the age group of 18 years to 40 years.</td>
<td>• It is open to all bank account holders who are not members of any statutory social security scheme.</td>
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<tr>
<td></td>
<td>• Fixed pension ranging from Rs. 1000 to Rs. 5000 per month, at the age of 60 years, depending on their contributions.</td>
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<tr>
<td></td>
<td>• The Central Government would also co-contribute 50% of the subscriber’s contribution or Rs. 1000 per annum, whichever is lower for a period of 5 years upto 2020.</td>
</tr>
<tr>
<td>Pradhan Mantri Suraksha Bima Yojana (PMSBY)</td>
<td>To provide accidental insurance</td>
</tr>
<tr>
<td>People in the age group of 18 to 70 years</td>
<td>• Premium is Rs. 12 per year. Person must have a bank account.</td>
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<tr>
<td></td>
<td>• Risk coverage is Rs. 2 lakh for accidental death and permanent total disability and Rs. 1 lakh for permanent partial disability.</td>
</tr>
<tr>
<td>Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)</td>
<td>To provide life insurance</td>
</tr>
<tr>
<td>people in the age group of 18 to 50 years</td>
<td>• Premium is Rs.330/- per annum. A life cover of Rs. 2 lakhs is provided.</td>
</tr>
<tr>
<td></td>
<td>• A person can join PMJJBY with one insurance company with an bank account only.</td>
</tr>
<tr>
<td><strong>Stand Up India Scheme</strong></td>
<td>Scheduled caste, Scheduled Tribe and Women</td>
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</tr>
<tr>
<td><strong>Pradhan Mantri Vaya Vandana Yojana</strong></td>
<td>Elderly Person aged 60 and above</td>
</tr>
<tr>
<td><strong>National Pension Scheme</strong></td>
<td>Citizen of India (both resident and Non-resident) in the age group of 18-65 years. PIOs and OCIs are not applicable, NRI are eligible, subject to regulatory requirements as prescribed by RBI and FEMA from time to time.</td>
</tr>
<tr>
<td><strong>Project Shaksham</strong></td>
<td></td>
</tr>
<tr>
<td>Labour Room Quality Improvement Initiative (LaQshya)</td>
<td>Pregnant Mother and New born baby</td>
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<tr>
<td><strong>NOTES</strong></td>
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<tr>
<td>To improve the quality of care that is being provided to the pregnant mother in the Labour Room and Maternity Operation. Theatres.</td>
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<tr>
<td>Quality certification of labour rooms would be conducted.</td>
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<tr>
<th>Mission SAMPARK</th>
<th>AIDS patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTES</strong></td>
<td></td>
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<tr>
<td>To trace those who are Left to Follow Up and are to be brought under Antiretroviral therapy (ART) services.</td>
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<thead>
<tr>
<th>Mission Parivar Vikas</th>
<th>Improved Access to family planning Services.</th>
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<tbody>
<tr>
<td><strong>NOTES</strong></td>
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<tr>
<td>The mission will focus on 145 high focus family planning districts having the highest total fertility Services rates in the country.</td>
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<tr>
<td>These 145 districts are in the seven high focus, high TFR states of Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand and Assam that constitute 44% of the country’s population.</td>
<td></td>
</tr>
<tr>
<td>The key strategic focus will be on improving access to contraceptives through delivering assured services, dovetailing with new promotional schemes, and building capacity (service providers) etc</td>
<td></td>
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<thead>
<tr>
<th>Janani Suraksha Yojana</th>
<th>Poor pregnant women, providing conditional cash assistance of Rs.1400 in low performing states and Rs. 700 High performing States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTES</strong></td>
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<tr>
<td>To provide completely free institutional delivery to a pregnant women including normal deliveries and caesarean operations.</td>
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<tr>
<td>Free care to sick new born (up to 30 days after birth).</td>
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<thead>
<tr>
<th>Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)</th>
<th>Free Antenatal Check up to Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTES</strong></td>
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</tr>
<tr>
<td>Comprehensive health service is provided to pregnant women at government health centres and hospitals on 9th of every month.</td>
<td></td>
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<tr>
<td>Many private sector doctors have also pledged to provide voluntary service under PMSMA.</td>
<td></td>
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</tbody>
</table>
### Rashtriya Kishor Swasthya Karyakram
(National Adolescent Health Programme)

- Adolescents (10-19 yrs)
  - Both boys and girls; both married and unmarried in given age group.
- Under the National Rural Health mission.
- Mental health, nutrition, substance misuse, gender based violence and non-communicable diseases are focus areas.
- Saathiya Resource Kit and Saathiya mobile app has been launched.
- "Saathiya" (a good friend of adolescents) are peer educators that answers questions of adolescents with the help of resource kit.
- Adolescent can also access useful information through Saathiya Salaah mobile app or toll free Saathiya helpline.

### Rashtriya Swasthya Bima Yojana (RSBY)

- To reduce out pocket expenditure on Health.
- All Unorganized sector workers, including those outside BPL category, and their family members (a family unit of five)
- Cashless insurance for hospitalisation in public as well as selected private hospitals.
- Total sum insured would be Rs. 30,000/- per family per annum.
- It also covers maternity benefits.
- Transportation costs (actual with maximum limit of Rs. 100 per visit) within an overall limit of Rs. 1000
- It shall be subsumed under National Health Protection Scheme (NHPS), covered in Economy and Social Development section.

### Project Sunrise

- People living with HIV/AIDS
- To tackle the increasing HIV prevalence in the North-Eastern states.
- Free treatment and care facility

### Mothers Absolute Affection (MAA)

- Mother and Children
- For promotion of breastfeeding and provision of counselling services for supporting breastfeeding.
- It will be monitored by UNICEF.

### ASHA, ANM and AWW

- Accredited Social Health Activist (ASHA) is a trained female community health activist who acts as an interface between the community and the public health system. ASHA must be women resident of the village who is literate with formal education upto class eight and preferably in the age group of 25-45 years.
- Auxiliary Nurse Midwife is a resource person for ASHA and provides on-job training and guidance and ensures that ASHA gets the compensation for performance.
- Anganwadi Worker guides ASHA in performing activities such as organising Health Day at Anganwadi Centre and AWW is a depot holder for drug kits and will be issuing it to ASHA.
**Universal Immunization Programme**

The UIP basket has vaccines:
1. BCG for TB, OPV for poliomyelitis,
2. monovalent measles vaccine for measles,
3. Rota Virus vaccine for Diarrhoea,
4. JEV for Japanese Encephalitis &
5. Pentavalent Vaccine for DPT (diphtheria, pertussis i.e whooping cough & tetanus) and
6. Vaccine for Hepatitis-B &
7. Measles-rubella vaccine (MR) is also added now to the UIP.

**Mission Indradhanush**

- The mission aims to cover all those children by 2020 who are either unvaccinated, or are partially vaccinated against 7 vaccine preventable diseases. It includes diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis B.
- It aims to fully immunize children under the age of two years and pregnant women with all available vaccines.
- The Mission is being implemented in 201 high focus districts in the country in the first phase which has nearly 50% of all unvaccinated or partially vaccinated children. The campaign is part of the Universal Immunisation Programme by 2020.
- The Ministry will be technically supported by WHO, UNICEF, Rotary International and other donor partners.

**Ministry of Heavy Industries and Public Enterprises**

**FAME India Scheme**

- Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India
- TO achieve national fuel security

<table>
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<tr>
<th>Hybrid vehicle manufacturers and consumers</th>
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- The scheme has 4 focus areas i.e. Technology development, Demand Creation, Pilot Projects and Charging Infrastructure.
- It is aimed at incentivising all vehicle segments i.e. from 2 Wheeler to Buses.
- It is under National Electric Mobility Mission Plan 2020.
- Phase (II) of scheme has been launched recently.
<table>
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<tr>
<th><strong>Ministry of Housing and Urban Affairs</strong></th>
<th><strong>NOTES</strong></th>
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<tbody>
<tr>
<td><strong>Pradhan Mantri Awas Yojana Housing for All</strong>&lt;br&gt;(2 crore houses by 2022)</td>
<td>People of all statutory towns&lt;br&gt;• It has 4 components:&lt;br&gt;1. Slum redevelopment with participation of private developers using land as a resource&lt;br&gt;2. Affordable housing in partnership with public and private sector.&lt;br&gt;3. Subsidy for beneficiary-led individual house construction or upgradation.&lt;br&gt;4. Credit-linked subsidy for affordable housing for weaker section.</td>
</tr>
<tr>
<td><strong>National Urban Housing Fund (NUHF)</strong>&lt;br&gt;to finance PMAY.</td>
<td>• The fund will be placed under Building Material and Technology Promotion Council (an autonomous society under Ministry of Housing and Urban affairs).&lt;br&gt;• It will raise funds through non-budgetary sources 60,000 crore and to finance PMAY-H&lt;br&gt;• PAISA Portal for Affordable Credit and Interest Subvention Access is a centralized electronic web platform for processing interest subvention on bank loans to beneficiaries under DAY-NULM (Deendayal Antyodaya Yojana-National Urban Livelihood Mission (NULM)).&lt;br&gt;• Allahabad Bank is the nodal bank for this portal. It enables the government to connect directly with the beneficiaries and ensuring greater transparency and efficiency in delivery of services.&lt;br&gt;• All the States &amp; UTs, all SCBs, RRBs and Cooperative Banks are expected to deploy this portal</td>
</tr>
<tr>
<td><strong>AMRUT</strong></td>
<td>• Atal Mission for Rejuvenation and Urban Transformation's focus is on infrastructure creation that has a direct link to provision of better services to the citizens. It ensures that every household has access to a tap with assured supply of water and a sewerage connection.</td>
</tr>
</tbody>
</table>
| **Smart Cities** | • The objective is to promote sustainable and inclusive cities that provide core infrastructure and give a decent quality of life to its citizens,
<table>
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<tr>
<th>Ministry of Human Resource Development</th>
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<tbody>
<tr>
<td><strong>Sarva Shiksha Abhiyan (SSA)</strong></td>
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NOTES

- a clean and sustainable environment and application of Smart Solutions.
- The focus is on creating a replicable model which are meant to set examples that can be replicated both within and outside the Smart City, catalyzing the creation of similar Smart Cities in various regions and parts of the country.

HRIDAY

- National Heritage City Development and Augmentation Yojana (HRIDAY) is focused on holistic development of heritage cities. The main objective of HRIDAY is to preserve character of the soul of heritage city and facilitate inclusive heritage linked urban development in partnership with State Government. The duration of HRIDAY schemes would be Four Years starting from December 2014 (i.e. Till December 2018).
- It is a central sector scheme with broadly focus on four theme areas i.e. Physical Infrastructure, Institutional Infrastructure, Economic Infrastructure & Social Infrastructure for reviving and revitalizing the soul of Heritage City.
- The projects can be funded directly or through support from other stakeholders including private sector. Coverage (12 Cities) - Ajmer, Amravati, Amritsar, Badami, Dwarka, Gaya, Kanchipuram, Mathura, Puri, Varanasi, Velankanni, Warangal.
<table>
<thead>
<tr>
<th>Program</th>
<th>Sector</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Rashtriya Madhyamik Shiksha Abhiyan</strong></td>
<td>Secondary Education</td>
<td>• Shaala Siddhi - It is a web portal developed by the National University of Educational Planning and Administration (NUEPA) to enable schools to evaluate their performance in 7 key domains under the prescribed framework.</td>
</tr>
<tr>
<td><strong>ASMITA</strong> (An School Monitory Individual Tracing Analysis)</td>
<td></td>
<td>• To track the educational journey of school students from Class I to Class XII. • It is launched under Shala Asmita Yojana (SAY)</td>
</tr>
<tr>
<td><strong>Unnat Bharat</strong></td>
<td>providing rural India with, professional resource</td>
<td>• Connecting 750 institutions of higher education, including IITs, NITs and Indian Institutes of Science Education &amp; Research (IISERs) etc. with local communities to address the development challenges through appropriate technologies.</td>
</tr>
<tr>
<td><strong>SWAYAM</strong></td>
<td></td>
<td>• An IT platform for hosting the Massive Open Online Courses (MOOCs). • Professors of centrally funded institutions like IITs, IIMs, central universities will offer online courses to citizens of India through this platform.</td>
</tr>
<tr>
<td><strong>GIAN</strong> (Global Initiative of Academic Networks)</td>
<td>Higher Education institutions of India</td>
<td>• To attract the best foreign academics to Indian Universities of Excellence. • Under this scheme, courses are being offered by foreign faculty from 38 Countries. • These courses can lead to long-term research collaboration between Indian Institutions and the other Global institutions.</td>
</tr>
<tr>
<td><strong>VISAKA</strong> Vittiya Saksharta Abhiyan</td>
<td>To spread Financial Literacy to masses</td>
<td>• It will actively engage the youths/ students of Higher Education Institutions. • These students will use themselves and encourage others as well to use a digital/ cashless method for transfer of funds.</td>
</tr>
</tbody>
</table>
| **Institutes of Eminence Scheme** | • The scheme is rolled out by University Grants Commission (UGC) aimed to help 20 higher education (10 public and 10 private) institutions from the country break into top 500 in at least one internationally reputed ranking framework in 10 years, and then eventually break into top 100 over time.  
• The selected institutes will enjoy complete academic and administrative autonomy.  
• Eligibility:  
  1. Only higher education institutions currently placed in the top 500 of global rankings or top 50 of the National Institutional Ranking Framework (NIRF) are eligible to apply.  
  2. The private Institutions of Eminence can also come up as greenfield ventures provided the sponsoring organisation submits a convincing perspective plan for 15 years. |
| **Program for International Student Assessment (PISA)** | • PISA is an international assessment that measures 15-year-old students reading, mathematics, and science literacy every three years. First conducted in 2000.  
• The Union Ministry HRD has signed an agreement with OECD for India’s Participation in Programme for International Student Assessment-PISA 2021.  
• The schools run by Kendriya Vidyalaya Sangathan (KVS), Navodaya Vidyalaya Samiti (NVS) and schools in the UT of Chandigarh would be participating. |
| **Impactful Policy Research in Social Sciences (IMPRESS)** | • 1500 research projects will be awarded for 2 years to support the social science research in the higher educational and to enable research to guide policy making  
• Indian Council of Social Science and Research (ICSSR) is implementing agency. |
### Scheme for Promotion of Academic and Research Collaboration (SPARC)

- The scheme aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world.
- Ministry of HRD has launched the web portal of the Scheme.
- Indian Institute of Technology Kharagpur is the National Coordinating Institute to implement the SPARC programme.

### HEFA

- It was set up by central govt. as Section 8 company (company having charitable objectives) in 2017. HEFA will mobilize funds in market and will provide 10 year loans to all centrally-run institutes. For the mobilization of corpus of Rs. 1 lakh crore, central govt. will provide Rs. 8,500 crore.
- Canara Bank will bear the remaining amount as a partner for setting up of HEFA.
- Target – All the projects sanctioned by HEFA are to get completed before 2022. It will directly release the sanctioned amount to vendors or contractors only after the certification of executing agency and educational institution.

### Revitalising Infrastructure and Systems in Education (RISE)

- It was launched to revitalize the infrastructure of higher educational institutions with a total investment of one lakh crore in the upcoming 4 years.
- It will provide low cost funds to all government higher educational institutions to promote higher education.
- It will cover all centrally-funded institutes (CFIs) including central universities, IITs, IIMs, NITs and IISERs.
- It will be financed via a restructured Higher Education Financing Agency (HEFA) that has been constituted as a non-bank finance company. Indian Institutes of Technology (IITs) will get largest part of loans on offer under RISE Scheme.
### Samagra Shiksha Scheme

- It is a centrally Sponsored Scheme (CSS) subsumes 3 erstwhile CSS schemes such as Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).
- It is an integrated Scheme for school education extending support to States from pre-school to senior secondary levels for the first time. It is an overarching programme for the school education sector extending from pre-school to class XII.
- It aims to ensure inclusive and equitable quality education at all levels of school education.
- It envisages the school as a continuum from pre-school, primary, upper primary, secondary to senior secondary levels.

### National Testing Agency

- Union Cabinet has recently approved creation of National Testing Agency (NTA) to conduct entrance examinations for higher educational institutions.
- It will be registered as a society under the Indian Societies Registration Act.
- It will act an autonomous and self-sustained premier testing organization chaired by eminent educationist appointed by Ministry of HRD. It would conduct those entrance examinations which are currently being conducted by the CBSE (NEET, JEE), AICTE etc, thereby relieving them of this responsibility.
- The entrance examinations will be conducted in online mode at least twice a year, giving adequate opportunity to candidates.
- It will be given a one-time grant of Rs.25 crore from the Government to start its operation in the first year. Thereafter, it will be financially self-sustainable.
<table>
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<tr>
<th><strong>Ministry of Labour</strong></th>
<th><strong>NOTES</strong></th>
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</thead>
</table>
| **National Child Labour**  
Project | to suitably rehabilitate the children withdrawn from employment | All child workers below age of 14 years. Adolescent workers below age of 18 years engaged in hazardous occupations  
- Aim is to reduce the incidence of child labour in areas of known concentration of child labour.  
- It is being implemented in certain target areas not whole of India.  
- Adolescent workers from Hazardous Occupations are provided Skilling through vocational training opportunities and existing scheme of skill developments.  
- A Child Labour Monitoring, Tracking and Reporting System is being created. |
| **Atal Bimit Vyakti Kalyan Yojna** | Applicable to all factories and establishments employing at least 10 workers  
- Its beneficiaries will be insured persons covered under Employees' State Insurance Act, 1948 for period of two years continuously.  
- The Employee's State Insurance (ESI) has approved a scheme named 'Atal Bimit Vyakti Kalyan Yojna' for Insured Persons (IP) covered under the Employees' State Insurance Act, 1948. |
| **Portal PENCIL**  
Platform for Effective Enforcement for No Child Labour | Applicable to all factories and establishments employing at least 10 workers  
- The portal creates a robust implementing and monitoring mechanism for enforcement of the legislative provisions of National Child Labour Policy (NCLP).  
- Since the subject of labour is in the concurrent list, the enforcement of the policy depends on respective state governments.  
- This online portal aims to connect the Centre to the state government, district and to all project societies for effective implementation of NCLP.  
- The portal has a component of child tracking system. |
### Ministry of Micro, Small and Medium Enterprises

<table>
<thead>
<tr>
<th>Program Description</th>
<th>Target Group</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zero Defect, Zero Effect (ZED)</strong>&lt;br&gt;• To rate and handhold all MSMEs</td>
<td>MSMEs</td>
<td>• Zero Defect = Top Quality Products&lt;br&gt;• Zero Effect = Minimum negative effect on Environment</td>
</tr>
<tr>
<td><strong>Trade Related Entrepreneurship Assistance and Development (TREAD)</strong>&lt;br&gt;• The scheme envisages economic empowerment of women through trade related training, information and counseling activities. Government of India grant up to 30% of the loan/credit maximum up to Rs. 30.00 lakh as appraised by lending institutions/banks.&lt;br&gt;• The lending institutions/ banks would finance loan assistance for a group of women through NGOs for undertaking non-farm activities.</td>
<td>Women Entrepreneurs</td>
<td></td>
</tr>
<tr>
<td><strong>A Scheme for Promotion of Innovation, Industry &amp; Entrepreneurship (ASPIRE)</strong>&lt;br&gt;• To set up a network of technology centers, incubation centres.&lt;br&gt;• To promote start-ups for innovation and entrepreneurship in rural and agriculture based industry.&lt;br&gt;• Creation of a Fund of Funds with SIDBI for such initiatives.</td>
<td>Traditional Industries and artisans</td>
<td>• Organizes traditional industries and artisans into clusters and make them competitive by enhancing their marketability &amp; equipping them with improved skills</td>
</tr>
<tr>
<td><strong>SFURTI</strong>&lt;br&gt;• Credit-linked subsidy programme Both rural and urban area&lt;br&gt;• The Khadi and Village Industries Commission (KVIC) is the nodal implementing agency at national level.</td>
<td>Self-Employment in non-farm sector</td>
<td></td>
</tr>
<tr>
<td><strong>PM Employment Generation Programme (PMEGP)</strong>&lt;br&gt;• It is technology revolution scheme in the cotton industry, under which Charkas (Spinning wheel for making Khadi) are operated using solar energy. Charkhas spun by hand have a limit on production. Thus developing wheels with more spindles that can run on solar power will increase the production. Government of India will disburse subsidy of Rs. 550 crore to the artisans. The aim is to grow khadi sales from Rs. 26,000 crores to 1 lakh crores.</td>
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</tr>
</tbody>
</table>
**ASPIRE**

- A Scheme for Promotion of Innovation, Rural Industry & Entrepreneurship (ASPIRE) is a scheme launched with an objective to set up a network of technology centers, incubation centres to accelerate entrepreneurship and also to promote start-ups for innovation and entrepreneurship in rural and agriculture based industry. The planned outcomes of ASPIRE are setting up Technology Business Incubators (TBI), Livelihood Business Incubators (LBI) and creation of a Fund of Funds for such initiatives with SIDBI.

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**MINISTRY OF MINES**

<table>
<thead>
<tr>
<th>Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide for the welfare of areas and people affected by mining related operations, using the funds generated by District Mineral Foundations (DMFs).</td>
</tr>
</tbody>
</table>

- Implement various developmental and welfare projects/programs in mining affected areas that complement the existing ongoing schemes/projects of State and Central Government;
- Minimize/ mitigate the adverse impacts, during and after mining, on the environment, health and socio economics of people in mining districts;
- High priority areas like drinking water supply, health care, sanitation, education, skill development, women and child care, welfare of aged and disabled people, skill development and environment conservation will get at least 60% share of the funds.

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**TAMRA**

- Transparency, Auction Monitoring and Resource Augmentation (TAMRA) is a web portal and mobile application, to streamline the process of various statutory clearances required for mining operations. It will display block-wise, state-wise and mineral-wise information of the blocks to be auctioned.
## MINISTRY OF MINORITY AFFAIRS

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nai Roshni</strong></td>
<td>• For leadership development of minority women</td>
</tr>
<tr>
<td></td>
<td>• It has been implemented through NGOs, civil societies and government institutions.</td>
</tr>
<tr>
<td></td>
<td>• It also includes Educational Programmes, Health and Hygiene, Swach Bharat, Financial Literacy, Life Skills, Legal Rights of Women, Digital Literacy, Advocacy for social and behavioural change.</td>
</tr>
<tr>
<td></td>
<td>• It empowers women to stand up for their rights.</td>
</tr>
<tr>
<td><strong>Hamari Dharohar</strong></td>
<td>• To preserve rich heritage of minority communities</td>
</tr>
<tr>
<td></td>
<td>• Exhibitions, preservation of literature/documents, promotion of calligraphy and R&amp;D are some of the activities to be carried out.</td>
</tr>
<tr>
<td></td>
<td>• It aims to spread awareness about the culture and heritage of minority community.</td>
</tr>
<tr>
<td><strong>Nai Manzil</strong></td>
<td>• Education and Skills Training.</td>
</tr>
<tr>
<td></td>
<td>• To bridge the gap b/w Madrasa pass community out and their mainstream counterpart</td>
</tr>
<tr>
<td><strong>USTAAD</strong></td>
<td>(Upgrading the Skills and Training in Traditional Arts/Crafts for Development)</td>
</tr>
<tr>
<td></td>
<td>• 100% central sector scheme.</td>
</tr>
<tr>
<td></td>
<td>• Skill Devt programme in traditional arts/crafts.</td>
</tr>
<tr>
<td><strong>Padho Pardesh</strong></td>
<td>• For providing interest subsidy on educational loans for overseas studies.</td>
</tr>
<tr>
<td><strong>Jiyo Parsi</strong></td>
<td>• To contain the population decline of Parsis in India.</td>
</tr>
<tr>
<td><strong>Seekho Aur Kamao</strong></td>
<td>(Learn &amp; Earn)</td>
</tr>
<tr>
<td></td>
<td>• It aims at upgrading the skills in various modern/traditional skills.</td>
</tr>
<tr>
<td><strong>Nalanda Project</strong></td>
<td>• A Faculty Development Programme for minorities’ higher educational institutions.</td>
</tr>
<tr>
<td><strong>Cyber Gram or Minority Cyber Gram</strong></td>
<td>• To impart digital literacy to students in Madrassa and government schools. Minority concentrated areas are covered.</td>
</tr>
<tr>
<td><strong>Hunar Haats</strong></td>
<td>• HunarHaats are organised by Ministry of Minority Affairs under USTTAD scheme.</td>
</tr>
<tr>
<td></td>
<td>• HunarHaats have become a successful mission to provide employment and income generation opportunities with</td>
</tr>
</tbody>
</table>
| **Pradhan Mantri Jan Vikas Karyakram** | • The erstwhile Multi-sectoral Development Programme (MsDP), a centrally sponsored scheme has been restructured and renamed as Pradhan Mantri Jan Vikas Karyakram.  
• MsDP, a centrally sponsored scheme, launched to address the development deficits in 90 minority concentration districts in the country to address the development deficits.  
• It has been identified as one of the Core of the Core Schemes under National Development Agenda.  
• It aims at improving the socio-economic parameters of basic amenities for improving the quality of life of the people and reducing imbalances in the Minority Concentration Areas.  
• Minority Concentration Areas have been identified based on both population data (25% of the total population belongs to minority communities) and backwardness parameters of Census 2001 of these areas. |

**MINISTRY OF NEW AND RENEWABLE ENERGY**

**Surya Mitra Scheme**  
To create 50,000 trained solar photovoltaic technicians by March 2020.  
ITI (Electrical Wireman) / Diploma in Engineering (Electrical, Electronics & Mechanical) B.Tech are not eligible  
• It involves a course of 600 hours (i.e. 3 months)  
• To create skilled manpower in installation, commissioning, and Operation & Maintenance of solar power plants and equipment.  
• In addition, short term training programmes for small hydro, boiler operations in co-generation plants etc have been organized.  
• The programme is 100% funded by GOI and implemented by National Institute for Solar Energy (NISE) across the country.
### Solar City
To motivate the local Governments for adopting renewable energy technologies energy efficiency measures and
- **60 cities are covered.**
  - Minimum 10% reduction in projected demand of conventional energy at the end of five years.
  - Through a combination of renewable energy sources (not only solar energy) in the city and energy efficiency measures.
  - Master plan is prepared by the Urban Local Body and financing is done by the central govt.

### Kisan Urja Suraksha evam Utthaan Farmers Mahaabhiyan (KUSUM)
- **Subsidy to farmers for solar power**
  - Subsidy on Solar farm water pump
  - Use of barren land to generate solar power
  - Farmers can sell this solar power to the grid.

### MINISTRY OF PETROLEUM AND NATURAL GAS

#### Pradhan Mantri Ujjwala Yojana
- **Women Head of BPL Household Rs.1600 per connection**
  - First welfare scheme implemented by Ministry of Petroleum and Natural Gas.
  - To be implemented over 3 year period (2016-19)
  - BPL household is identified through Socio-Economic Caste Census Data.

#### PAHAL
- Direct Benefit Transfer for LPG consumer scheme called, ‘PAHAL’; aims to reduce leakage of subsidy, reduce intermediaries and eliminate duplicate LPG connections by introducing direct cash transfer of subsidies.
  - LPG consumers, who join the scheme, will get the LPG cylinders at market price and receive the subsidy directly into their bank accounts.

#### Pradhan Mantri LPG Panchayat Scheme
- To distribute LPG connections among rural areas where conventional fuel is used for domestic purposes.
  - Under it, one lakh LPG Panchayats will be activated across country to deal with issue of safe use of LPG as well as discuss its various benefits on environment, health and how it empowers women LPG Panchayat will serve as an interactive platform between those who received LPG cylinders under PMUY. One panchayat will have around 100 LPG
<table>
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<tr>
<th>NOTES</th>
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</table>

• It also aims to connect with beneficiaries of Ujjwala Yojana to resolve issues and wrong traditional beliefs among people through officials of oil PSUs, NGOs, Asha workers and social workers

| Saksham  
(Sanrakshan Kshamta Mahotsav) - 2019 |
<table>
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<tbody>
<tr>
<td>• It is an annual flagship event of Petroleum Conservation Research Association (PCRA)To create focused attention on fuel conservation through people centric activities and To sensitize the masses about the conservation and efficient use of petroleum products leading to better health and environment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pradhan Mantri Urja Ganga</th>
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<tbody>
<tr>
<td>• Jagdishpur-Haldia &amp; Bokaro-Dhamra Natural Gas Pipeline (JHBDPL) project is part of National Gas Grid Project (Pradhan Mantri Urja Ganga) of Ministry of Petroleum and Natural Gas. The 2,655 km project aims to connect the eastern states to the national gas grid. Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal are the beneficiary states. The project will usher Industrial development in East India by supplying environmentally clean natural gas to fertiliser and power plant, refineries, steel plants and other industries. It also provides clean energy to households and transportation in the cities en-route the pipeline. State-run gas utility GAIL India has recently placed orders for 400-km of pipeline.</td>
</tr>
</tbody>
</table>

### MINISTRY OF POWER

<table>
<thead>
<tr>
<th>Pradhan Mantri Sahaj Bijli Har Ghar Yojana- &quot;Saubhagya&quot;</th>
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</thead>
<tbody>
<tr>
<td>All the unelectrified households in all the villages and for all poor households in all the towns in any of the State/UTs of country</td>
</tr>
</tbody>
</table>
| • It was launched on the occasion of the birth centenary celebration of Pandit Deen Dayal Upadhyaya on 25th September.  
• Aims to achieve 24x7 power for all by 2019 by providing electricity connection to each household across the country beneficiaries for free electricity connections would be identified using Socio Economic and Caste Census (SECC) 2011. |
### Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

**Un electrified villages**

- Earlier scheme for rural electrification called Rajiv Gandhi Gramjeeen Vidyutikaran Yojana (RGGVY) has been subsumed in this scheme.
- Rural Electrification Corporation is nodal agency to implement this scheme.

**Major Components:**
- Feeder separation for agricultural and non-agricultural uses.
- Strengthening of sub transmission distribution network
- Metering at all levels

### Ujwal DISCOM Assurance Yojna (UDAY)

**Public sector power distribution companies (Discoms)**

- Financial restructuring of debt of power distribution companies.
- States power DISCOMs can convert up to 75% of their debt into state bonds.
- This debt would not be counted for FRBM limit.
- Measures to improve efficiency at power plants.
- Operational efficiency throughs metering, upgradation of transformers and meters.
- Reducing cost by rationalising coal linkages, improved coal output etc.
- Discoms shall have to comply with Renewable Purchase Obligation.

### National LED Programme

**Electricity Consumers**

- It has two components:
  1. Unnat Jyotiby Affordable LEDs for All (UJALA): To provide LED bulbs to domestic consumers.
  2. Street Lighting National Programme (SLNP):
     - To have LED street light by March, 2019.
     - Being implemented by Discoms and Energy Efficiency Services Limited (EESL), a joint venture of PSUs under the Union Ministry of Power.
| **Street Lighting National Programme (SLNP)** | • The target under SLNP is to replace 1.34 crore conventional street lights with energy efficient LED street lights by March 2019.  
• Energy Efficiency Services Limited, a Public Energy Services Company, is implementing the scheme.  
• It is world’s Largest Street Light Replacement Programme.  
• EESL is a joint venture of NTPC Limited, Power Finance Corporation, Rural Electrification Corporation and POWERGRID. |
| **INSPIRE-2018** | • INSPIRE 2018 has been organised in collaboration with the Bureau of Energy Efficiency (BEE), The Energy & Resources Institute (TERI), Asian Development Bank (ADB), the United Nations Environment Program (UNEP), and the Administrative Staff College of India (ASC).  
• The second edition of International Symposium to Promote Innovation & Research in Energy Efficiency (INSPIRE) was held in New Delhi. It was organised by EESL and World Bank.  
• The symposium focuses on enhancing grid management, e-Mobility, financial instruments and technologies for energy efficiency in India. |
| **UJALA Scheme** | • Unnat Jyoti by Affordable LEDs for All is an energy efficiency scheme to promote efficient lighting, enhance awareness on using efficient equipment which reduce electricity bills and help preserve environment. LED bulbs at 40% of the market price will be distributed to every grid connected consumer. It is implemented by the Electricity Distribution Company and Energy Efficiency Services Limited (EESL). |
### MINISTRY OF ROAD TRANSPORT AND HIGHWAYS

<table>
<thead>
<tr>
<th><strong>Green Highways</strong></th>
<th>Sustainable Development; Local community will get. Livelihood and nutrition.</th>
<th><strong>Green Highways</strong> Mission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project/ National</strong></td>
<td><strong>Afforestation along the National Highway 1% of total project cost has to be put in Green Fund Corpus.</strong>&lt;br&gt;<strong>Plantation would be specific to the area and stretch of the highway.</strong>&lt;br&gt;<strong>Mobile App: To monitor all the projects with real time data from the fields</strong>&lt;br&gt;<strong>Use of satellite imagery for monitoring</strong></td>
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</tbody>
</table>

| **Bharat Mala Project** | **Road and highways project of Government of India.**<br>**Bharat Mala will provide easier access to border areas for armed forces and boost trade via the land route.**<br>**The project will be executed through Ministry of Road, Transport and Highways (MoRTH), NHAI, National Highways and Infrastructure Development Corporation Limited (NHIDCL) and State Public Works Department (PWDs).** | |

| **Setu Bharatam Programme** | **National Highways** | **Aims to make all National Highways free of railway level crossings by 2019.**<br>**About 1500 old and worn down bridges will also be improved.** |

### MINISTRY OF RURAL DEVELOPMENT

<table>
<thead>
<tr>
<th><strong>Pradhan Mantri Awaas Yojana (Gramin)</strong></th>
<th><strong>Using SECC-2011 data for identification of beneficiaries. Unit assistance 1,20,000 in plains</strong></th>
<th><strong>PM Gram Sadak Yojana</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Housing for All&quot; in rural areas Unit scheme</td>
<td><strong>Cost sharing- centre: state = 60:40 in plains and 90:10 in hilly states.</strong>&lt;br&gt;<strong>Delhi and Chandigarh are not covered. Target = one crore houses by March 2019.</strong>&lt;br&gt;<strong>Use of DBT/Aadhaar platform</strong>&lt;br&gt;<strong>Locally appropriate house designs.</strong>&lt;br&gt;<strong>Skill training of Masons = 5 lakhs by 2019</strong></td>
<td><strong>To connect all villages with all-weather roads.</strong></td>
</tr>
<tr>
<td><strong>Villages with population more than 500 in plain areas and more than 250 in hilly areas</strong></td>
<td><strong>Target = 2019</strong>&lt;br&gt;<strong>50% of cess on High Speed Diesel is earmarked for this scheme.</strong>&lt;br&gt;<strong>Rural roads are state subject.</strong>&lt;br&gt;<strong>So, work is done by state agencies.</strong>&lt;br&gt;<strong>Earlier it was 100% sponsored by the centre.</strong>&lt;br&gt;<strong>Now 90:10 for hilly states and 60:40 for other states.</strong></td>
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</tbody>
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**NOTES**

- Bharat Mala Project
- Setu Bharatam Programme
- PM Gram Sadak Yojana
- Pradhan Mantri Awaas Yojana (Gramin)
- Green Highways Project/ National Green Highways Mission
- Bharat Mala Project
- PM Gram Sadak Yojana
- Pradhan Mantri Awaas Yojana (Gramin)
- Green Highways Project/ National Green Highways Mission
- Bharat Mala Project
- Setu Bharatam Programme
- PM Gram Sadak Yojana
| National Rurban Mission (NRM) | 300 smart villages (clusters) over next 3 years. The clusters (smart villages) will be geographically contiguous Gram Panchayat | • The State Governments would identify the clusters which have latent potential for growth.  
• States government will prepare Integrated Cluster Action Plans for Rurban Clusters.  
• PPP model would be used for cluster development.  
• Using funds of various schemes for financing.  
• In addition to it, there will be critical gap. Funding of 30% of project costs. |
|-----------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Deen Dayal Upadhayya Grameen Kaushalya Yojana (DDUGKY) | Rural youth between 15 to 35 age group for poor family | • Shifting Emphasis from Training to Career Progression Post-placement support and migration support Mandatory coverage of SC/ST = 50%, Minority = 15%, Women = 30%  
• Special initiatives under DDU-GKY - Himayat: A special scheme for the youth (rural & urban) of Jammu & Kashmir.  
• Roshini: A special initiative for the rural youth of poor families in 27 Left-wing Extremist (LWE) districts across 9 states. |
| Neeranchal National Watershed Project | Farmland | • It’s a World Bank assisted project.  
• To strengthen and provide technical assistance to the Watershed Component of PM KrishiSichaiYojana, that is under Ministry of Water Resource. |
| SAANJHI / SAGY (SansadAdarsh Gram Yojana) | Three Adarsh villages for every MP by 2019.  
• Thereafter, five such Adarsh Grams will be selected and developed by 2024. | • It is a village development project under which each Member of Parliament will take the responsibility of developing 3 villages intoAdarsh Gram by 2019.  
• The focus is on integrated development across multiple areas e.g. agriculture, health, education, sanitation, environment, livelihoods, etc.  
• Lok Sabha MP chooses these villages from the constituency he represents.  
• Rajya Sabha MP chooses it from the state he represents.  
• MPs cannot pick villages which belong to themselves or their spouses.  
• There is no separate funding for this scheme. |
### National Social Assistance Program (NSAP)
**To Provide social security**
- Aged persons
- Widows
- Disabled persons

- It's a core of the core scheme.
- It comprises of five schemes, namely:
  1. Indira Gandhi National Old Age Pension Scheme (IGNOAPS),
  2. Indira Gandhi National Widow Pension Scheme (IGNWPS),
  3. Indira Gandhi National Disability Pension Scheme (IGNDPS),
  4. National Family Benefit Scheme (NFBS)
  5. Annapurna.
- 100% Central Assistance is extended to the States/Uts to provide the benefits in accordance with the norms, guidelines and conditions laid down by the Central Government.

### Annapurna Scheme
- Senior citizens of 65 years of age or above

- Those who are not getting pension under the National Old Age Pension Scheme (NOAPS) are provided 10 kg of food grains per person per month free of cost.

### Deen Dayal Antyodaya Yojana - National Rural Livelihoods Mission (NRLM)

- Rural areas across the country in all States and Union Territories except Delhi and Chandigarh.

- It is supported by World Bank.
- The scheme aims to organize the poor into Self Help Groups (SHGs) and make them capable for self-employment.
- Organizing at least one- woman member from each rural poor household into SHGs. Special focus on women empowerment.
- The financial support under the programme is mainly in the form of Revolving Fund and Community Investment Funds. start-up enterprises at village levels are also supported.
**NOTES**

**MINISTRY OF SCIENCE AND TECHNOLOGY**

| **Pt. Deen Dayal Upadhayay Vigyan Gram Sankul Pariyojana** | **Villages** | • Department of Science and Technology (DST) will adopt few clusters of villages in Uttarakhand and transform them to become self sustainable in time bound manner through tools of S&T.  
• Local resources and locally available skill sets will be utilised using S&T under the scheme for substantial value addition. |
| **Visiting Advanced joint Research (VAJRA Faculty Scheme)** | **Public funded academic institutions and national laboratories** | • NRIs and overseas scientists/faculties can join Indian institutes temporarily for research and development.  
• It will be implemented by a statutory body called Science and Engineering Research Board (SERB).  
• The residency period of the VAJRA Faculty in India would be for a minimum of 1 month and a maximum of 3 months a year. |
<table>
<thead>
<tr>
<th><strong>NIDHI (National Initiative for Development and Harnessing Innovations)</strong></th>
<th><strong>Start-ups, innovators, entrepreneurs and all the stakeholders related to them</strong></th>
<th><strong>NOTES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRAYAS</strong> (Promoting and Accelerating Young and Aspiring Innovators &amp; Start-ups)</td>
<td>To nurture knowledge-based and technology-driven ideas and innovations into successful start-ups.</td>
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<tr>
<td><strong>The Seed Support System</strong></td>
<td>Aims to provide technological solutions to the pressing needs of the society.</td>
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<td></td>
<td>Components of NIDHI that support each stage of a budding start-up are:</td>
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<tr>
<td><strong>Teacher Associateship for Research Excellence (TARE) Scheme</strong></td>
<td>To provide a grant up to Rs.10 lakhs and an access to Fabrication Laboratory (FabLab) for development of prototype.</td>
<td></td>
</tr>
<tr>
<td><strong>Augmenting Writing Skills for Articulating Research (AWSAR) Scheme</strong></td>
<td><strong>The Seed Support System</strong> which provides up to One Cr rupees per start-up and is implemented through Technology Business Incubators.</td>
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</tr>
<tr>
<td><strong>National Biopharma Mission</strong></td>
<td>The scheme facilitates mobility of faculty members working in state universities, colleges and private academic institutions to carry out research in well-established public-funded institutions such as IITs.</td>
<td></td>
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<tr>
<td><strong>SATYAM</strong></td>
<td><strong>To encourage, empower and endow popular science writing through newspapers magazines, blogs, social media, etc. by young PhD Scholars.</strong></td>
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<td></td>
<td><strong>Aims to tap the tremendous potential in the country to popularize &amp; communicate science and also to inculcate scientific temperament in the masses.</strong></td>
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<td></td>
<td>To create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the sector.</td>
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<td></td>
<td>Implemented by Biotechnology Industry Research Assistance Council (BIRAC), a Public Sector Undertaking of Department of Biotechnology.</td>
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<td></td>
<td>SATYAM stands for Science and Technology of Yoga and Meditation; is a new programme launched by DST to rejuvenate research on yoga and Meditation. Its objective is to tap potential for safer, holistic and cost effective treatment of physical and mental health problems.</td>
<td></td>
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</table>
## Ministry of Skill Development and Entrepreneurship

### Skill India

To train over 40 crore people in India in different skills by 2022

- Various initiatives under this campaign are:
  1. National Skill Development Mission
  3. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
  4. Skill Loan Scheme
  5. Rural India Skill
  6. SANKALP
  7. STRIVE

### Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

To impart skill training to one crore people over the next four years (2016–2020)

- Any Indian national who:
  - a) Undergoes a skill development training in an eligible sector by an eligible training provider.
  - b) Certified during the span of one year from launch of scheme.
  - c) Is availing the monetary award for first and only time.

- Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).

- Skill training would be done based on the National Skill Qualification Framework (NSQF) and industry-led standards.

- Under the scheme, a monetary reward is given to trainees on assessment and certification by third-party assessment bodies.

- Would be implemented through NSDC training partners.

### National Apprenticeship Promotion Scheme (NAPS)

- To train 50 lakhs apprentice

- The youth, who will undergo apprenticeship training:

  - The Industry, who will impart training

- Union Government will directly share, 25% of the total stipend payable and 50% of total expenditure for providing basic training to an apprentice, with employers.

- Implemented by Director General of Training (DGT) under the aegis of Union Ministry of Skill Development and Entrepreneurship (MSDE) Skill Development and Entrepreneurship (MSDE)

- The stipend payable has been directly linked to minimum wages at the state level.

- It has replaced Apprentice Protsahan Yojana
<table>
<thead>
<tr>
<th>Program</th>
<th>Target</th>
<th>Highlights</th>
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<tbody>
<tr>
<td><strong>Pradhan Mantri Yuva Yojana</strong></td>
<td>Educated Youths</td>
<td>• Target: entrepreneurship education and training to over 7 lakh students in 5 years&lt;br&gt;• Also includes easy access to information, mentor network, credit, incubator, accelerator and advocacy to create a pathway for the youth.</td>
</tr>
<tr>
<td><strong>UDAAN</strong></td>
<td>Graduates, postgraduates and three year engineering diploma holders.</td>
<td>• To provide skills training and enhance the employability of unemployed youth of J&amp;K</td>
</tr>
<tr>
<td><strong>Skill Acquisition and Knowledge Awareness for Livelihood Promotion Programme (SANKALP)</strong></td>
<td></td>
<td>• Centrally Sponsored Scheme&lt;br&gt;• To strengthen institutions such as State Skill Awareness for Development Missions (SSDMs), National Skill Development Corporation (NSDC), Sector Promotion Skill Councils (SSCs), ITIs and National Skill Development Agency (NSDA) etc.</td>
</tr>
<tr>
<td><strong>Skill Strengthening for Industrial Value Enhancement (STRIVE)</strong></td>
<td></td>
<td>Central sector scheme&lt;br&gt;• To improve access to quality and market driven vocational training provided in ITIs as well as apprentice ships. It is second phase of STRIVE</td>
</tr>
<tr>
<td><strong>Jan Shikshan Sansthan (JSS)</strong></td>
<td></td>
<td>• (JSS) were established to provide vocational training to non-literate, neo-literate, as well as school dropouts. &lt;br&gt;• new guidelines for Jan Shikshan Sansthan (JSS) aligning them to the National Skills Qualification Framework&lt;br&gt;1. Decentralization of powers for JSSs by providing accountability and independence to district administration.&lt;br&gt;2. To identify and promote traditional skills in the district&lt;br&gt;3. Evidence-based assessment system&lt;br&gt;4. Easy Online certification.&lt;br&gt;5. Linking JSS to Public Finance Management system&lt;br&gt;6. Training of Trainers to develop the capacity through National Skills Training Institutes.</td>
</tr>
<tr>
<td>Ministry of Social Justice and Empowerment</td>
<td>NOTES</td>
<td></td>
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<tr>
<td>------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td><strong>Accessible India Campaign</strong>&lt;br&gt;(Sugamya Bharat Abhiyaan)&lt;br&gt;To make public places and public transports fully accessible to the disabled.</td>
<td>People with Disabilities&lt;br&gt;• It is in line with the UN Convention on the Rights of Persons with Disabilities (UNCRPD) to which India is a signatory.&lt;br&gt;• Three separate verticals for achieving universal accessibility&lt;br&gt; 1. The built up environment,&lt;br&gt; 2. Transportation eco-system&lt;br&gt; 3. Information &amp; communication eco-system.&lt;br&gt;• All citizen centric public websites will be made fully accessible.&lt;br&gt;• &quot;Access Audit&quot; of these buildings and websites will be conducted by professional agencies.</td>
<td></td>
</tr>
<tr>
<td><strong>National Action Plan for Drug Demand Reduction For (2018-2023)</strong></td>
<td>&lt;br&gt;• For addressing the problem of drug and substance abuse in the country.&lt;br&gt;• India is located between Golden Crescent in the west and Golden Triangle in the east.&lt;br&gt;• Government constituted Narco-Coordination Centre (NCORD) in November, 2016 and revived the scheme of &quot;Financial Assistance to States for Narcotics Control&quot;.&lt;br&gt;• Narcotics Control Bureau has been provided funds for developing a new software i.e. Seizure Information Management System (SIMS) which will create a complete online database of drug offences and offenders. Government has constituted a fund called &quot;National Fund for Control of Drug Abuse&quot;&lt;br&gt;• Government is also conducting National Drug Abuse Survey through Ministry of Social Justice &amp; Empowerment with the help of National Drug Dependence Treatment Centre of AIIMS.</td>
<td></td>
</tr>
<tr>
<td><strong>Rashtriya Vayoshri Yojana Camp</strong>&lt;br&gt;Senior Citizen under BPL category suffering from any of the agerelated disability infirmity</td>
<td>&lt;br&gt;• free of cost distribution of Aids and Assistive Living devises organized in Delhi by Artificial Limbs Manufacturing Corporation of India fully funded by the Central Government&lt;br&gt;• The expenditure for implementation of the scheme will be met from the &quot;Senior Citizens’ Welfare Fund &quot;.</td>
<td></td>
</tr>
</tbody>
</table>
**NOTES**

- Beneficiaries in each district will be identified by the State Governments/UT Administrations through a Committee chaired by the Deputy Commissioner/District Collector. 30% of the beneficiaries in each district shall be women.

### MINISTRY OF TOURISM

| **PRASAD**  
Pilgrimage Rejuvenation and Spirituality Augmentation | Drive 25 sites are to be developed. (Related Topics: Map-pointing of these sites.) | • Development and beautification of the identified pilgrimage destinations.  
• Ajmer (Rajasthan), Amritsar (Punjab), Amaravati (Andhra Pradesh), Dwarka (Gujarat), Gaya (Bihar), Kedarnath (Uttarakhand), Kamakhya (Assam), Kanchipuram (Tamil Nadu), Mathura (Uttar Pradesh), Puri (Odisha), Varanasi (Uttar Pradesh) and Vellankani (Tamil Nadu), Patna (Bihar), Ayodhya (Uttar Pradesh), Badrinath (Uttarakhand), Belur (West Bengal), Deoghar (Jharkhand), Guruvayur (Kerala), Hazratbal and Katra (Jammu & Kashmir), Omkareshwar (Madhya Pradesh), Somnath (Gujarat), Srisailam and Tirupati (Andhra Pradesh), Trimbakeshwar (Maharashtra). |
| **Swadesh Darshan** | 13 thematic circuits | • To develop theme-based tourist circuits.  
• These are North-East, Himalayan, Tribal, Eco, Wildlife, Coastal, Desert, Rural, Spiritual, Buddhist, Krishna, Ramayana and Heritage Circuits. |
| **'Adopt A Heritage: Apni Dharohar, Apni Pehchaan'** |  | • Initiative of Ministry of Tourism in close collaboration with Ministry of Culture and Archeological Survey of India (ASI), to develop the heritage sites / monuments and making them tourist-friendly  
• The shortlisted agencies would become 'Monument Mitras' through
the innovative concept of 'Vision Bidding', which will give them the opportunity to associate their CSR activities with a heritage site if the Vision Bid is selected.

- Monument Mitras: Successful bidders selected for adopting heritage sites / monuments by the Oversight and Vision Committee
- Primarily under CSR. No fund is given by Ministry of Tourism.

**Ministry of Drinking Water and Sanitation**

| **Swachhta Pakhwada** | Objective of bringing a fortnight of intense focus on the issues and practices of Swachhata by engaging GOI Ministries/Departments in their jurisdictions.
- An annual calendar is pre-circulated among the Ministries to help them plan for the Pakhwada activities.
- The Ministries observing Swachhata Pakhwada are monitored closely using online monitoring system of Swachhata Samiksha
- Observing ministries are considered as Swachhata Ministries |
| **GOBAR-Dhan Yojana** | The scheme would focus on managing and converting cattle dung and solid waste in farms to compost, biogas and bio-CNG.
- It will help in keeping the village clean while increasing the income of farmers and cattle herders.
- Under it, villagers will be mobilized to create self-help groups (SHGs) and creative societies that will help in clean energy and green jobs initiative.
- Under this scheme, one village in every district of the country would be selected for its implementation.
- Nearly 700 districts would be covered during the current fiscal. |
| **Ganga Gram Project** | Launched under Namami Gange Programme to have a holistic sanitation development in villages on the banks of River Ganga.
- Launched at the Ganga Gram Swachhata Sammelan. |
### Emphasis on
1. Open Defecation Free (ODF)
2. Solid and Liquid Waste Management (SLWM)
3. Water Conservation
4. Ground Water Recharge
5. Modern crematorium
6. Tree plantation
7. Organic and medicinal plant agriculture

### Swachh Survekshan
- Districts and states Award to top ranked states and districts, based on the National Swachh Survekshan Grameen 2018
- Haryana was ranked as best State.
- Satara District of Maharashtra was ranked as best district.
- Uttar Pradesh was rewarded for maximum citizens' participation.
- The criteria of SSG-2018 include survey of public places, citizens' perspective of cleanliness, their recommendations and data from SBMG.

### Swachhata Hi Seva Movement
- Launched across the country on September 15, 2018
- The objective of the campaign is to mobilise people and reinforce the "Jan Aandolan" for sanitation to contribute to Mahatma Gandhi's dream of a Clean India
- Reaching out to the poor and marginalised and providing them with sustainable sanitation services

### Ministries of Women and Child Development
#### Beti Bachao
**Beti Padhao (BBBP)**
- Focus is on
  1. Challenging mindsets and deep-rooted patriarchy
  2. Strict enforcement of PC&PNDT Act
  3. Advancing education of the girl child
  4. Women empowerment
  5. Promoting gender equality
  6. Improving the Child Sex Ratio
  7. Prevention of gender biased sex selection and promoting girls' education not a DBT (Direct Benefit Transfer) scheme. No provision for individual CASH TRANSFER
<table>
<thead>
<tr>
<th><strong>NOTES</strong></th>
<th><strong>Pradhan Mantri Matru Vandana Yojana</strong></th>
<th><strong>SHe- Box</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tri-ministerial effort of Ministries of Women and Child Development, Health &amp; Family Welfare and Human Resource Development</td>
<td>All Pregnant Women &amp; Lactating Mothers (PW&amp;LM) except those in regular employment with the Central Government or State Government or Public Sector Undertaking or those who are in receipt of similar benefits under any law for the time being in force. A maternity benefit rechristened from erstwhile Indira Gandhi Matriitra Sahyog Yojana partial compensation for the wage loss so that the woman can take adequate rest before and after delivery of the first living child. It is implemented in all the districts of the country in accordance with the provision of the National Food Security Act, 2013. Centre for Digital Financial Inclusion (CDFI) is a non-profit organisation. It had conceptualised, designed and implemented the PMMVY-CAS (Common Application Software) System through which disbursements were made. Cost sharing: Centre and the States &amp; UTs with Legislature is 60:40 while for North-Eastern States &amp; three Himalayan States; it is 90:10. 100% Central assistance for Union Territories without Legislature.</td>
<td>Any woman working in any office of Central Government / State Government/ Private organization. Those who had already filed a written complaint with the concerned Internal Complaint Committee (ICC) constituted under the SH Act are also eligible. The online portal to report complaints of Sexual Harassment at Workplace, to all the Central Ministries, Departments and 653 districts across 33 States/Union Territories. Once a complaint is submitted to the portal, it will be directly sent to the Internal Complaints Committee (ICC) of the concerned Ministry/ Department/ PSU/Autonomous Body etc. having jurisdiction to inquire into the complaint. Ensures effective implementation of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (the SH Act), 2013. This statute superseded the Vishakha Guidelines. Under the Act, which also covers students in schools and colleges as well as patients in hospitals, employers and local authorities will have to set up grievance committees to investigate all complaints.</td>
</tr>
</tbody>
</table>
### Krishna Kutir
(widows’ home)

<table>
<thead>
<tr>
<th>Women (widows, women prisoners released from jail and without family support, women survivors of natural disasters, women victims of terrorist/extremist violence etc) above 18 years of age. Girls up to the age of 18 years and boys up to the age of 8 years would be allowed to stay in the Swadhar Greh with their mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• A special home for 1000 widows set under Swadhar Greh scheme and is the largest ever facility of its kind created by government organization.</td>
</tr>
<tr>
<td>• Swadhar Greh Scheme: launched in 2002 for rehabilitation of women in difficult circumstances. Swadhar Greh will be set up in every district with capacity of 30 women.</td>
</tr>
<tr>
<td>• The implementing agencies are mainly NGOs. Other implementing agencies are State Government agencies, Central or State autonomous bodies, Municipal Bodies, Cantonment Boards, Panchayati Raj Institutions and Cooperative institutions.</td>
</tr>
</tbody>
</table>

### Poshan Maah
(September, 2018)

<table>
<thead>
<tr>
<th>Child and mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>• under the Poshan Abhiyan. Objective: to take the messages of POSHAN to the grass root level. an initiative of WCD Ministry and NITI Aayog focuses on several themes - Antenatal Care, Optimal Breastfeeding (Early &amp; Exclusive), Complementary Feeding, Anemia, Growth Monitoring, Girls-education, diet, right age of Marriage, Hygiene &amp; Sanitation, Food Fortification.</td>
</tr>
<tr>
<td>• POSHAN Abhiyaan is a multi-ministerial convergence mission with the vision to ensure attainment of malnutrition-free India by 2022. Objective is to reduce stunting, to reduce level of under-nutrition and other related problems by ensuring convergence of various nutrition related schemes. POSHAN Abhiyaan targets to reduce stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively.</td>
</tr>
</tbody>
</table>

### SABLA

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<tbody>
<tr>
<td>• SABLA/ Rajiv Gandhi Scheme for Empowerment of Adolescent Girls is a centrally sponsored scheme to</td>
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</tbody>
</table>
empower adolescent girls of 11-18 years and it is implemented through the State Governments/UTs.

- Objectives: Enable the adolescent girls for self-development and empowerment, Improve their nutrition and health status, Promote awareness about health, hygiene, nutrition, adolescent reproductive and sexual health (arsh) and family and child care and to educate, skill and make them ready for life's challenges.

### Sukanya Samriddhi Yojana

- It is launched as a part of the Beti Bachao Beti Padhao’ campaign.
- It is a small deposit scheme for girl child to motivate parents to open an account in the name of a girl child and for her welfare to deposit maximum of their savings. The account can be opened at any time from the birth of a girl child till she attains the age of 10 years in any post office or authorized branches of commercial banks. A minimum of Rs. 1000 and maximum of Rs. 1.5 lakh can be deposited during a financial year and fetch an interest rate of 9.1% and provide income tax rebate. The account will get matured in 21 years from the date of opening of account or marriage of the girl child after attaining 18 years of age. Partial Withdrawal for girl child education can be done when she cleared 10th class or turned 18 years.
# Defense Capabilities of India

## Capacity of Indian Navy

<table>
<thead>
<tr>
<th>Name</th>
<th>Key Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>INS Vikrant</td>
<td>First Aircraft Carrier of Indian Navy</td>
</tr>
<tr>
<td>INS Viraat</td>
<td>Second Aircraft Carrier of Indian Navy. Its services came to an end on March 6th, 2017 after 29 years. It had served in British Navy for 25 years. Both of these aircraft carriers were gifted to India by Royal Navy of UK.</td>
</tr>
<tr>
<td>INS Vikrant</td>
<td>First Indigenous aircraft carrier</td>
</tr>
<tr>
<td>INS Vishal</td>
<td>Second Indigenous aircraft carrier. In design phase, expected to be commissioned by 2025.</td>
</tr>
<tr>
<td>INS Vikramaditya</td>
<td>Aircraft Carrier, sold by Russia to India. Currently it is the largest aircraft carrier with Indian Navy</td>
</tr>
<tr>
<td>INS Shivalik</td>
<td>First Stealth warship built by India</td>
</tr>
<tr>
<td>INS Kolkata</td>
<td>Largest Indigenously build Warship</td>
</tr>
<tr>
<td>INS Kamrota</td>
<td>First Indigenous anti-submarine warship</td>
</tr>
<tr>
<td>INS Chakra</td>
<td>First Nuclear Submarine operated by India. It was given by Russia to India</td>
</tr>
<tr>
<td>INS Arihant</td>
<td>India’s first Indigenous nuclear submarine. India completed nuclear triad with this.</td>
</tr>
<tr>
<td>INS Kalvari</td>
<td>These are indigenously build Scorpene class submarines.</td>
</tr>
<tr>
<td>INS Khanderi</td>
<td>They are equipped with anti-ship missile and torpedoes.</td>
</tr>
</tbody>
</table>

### Project 75:
It is project to make six Scorpene diesel submarines by 2022. French Company DCNS will provide design and technology to public sector Mazagon Docks.

## Missile Capacity of India

<table>
<thead>
<tr>
<th>Name</th>
<th>Range</th>
<th>Type</th>
<th>Key Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prithvi</td>
<td>Short</td>
<td>Surface to Surface</td>
<td>First missile developed under Integrated Guided missile development program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ballistic</td>
<td></td>
</tr>
<tr>
<td>Dhanush</td>
<td>Short to</td>
<td>Water (Ship) of Prithvi</td>
<td>Naval Variant (that can be launched from the ship)</td>
</tr>
<tr>
<td></td>
<td>Surface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trishul</td>
<td>Short</td>
<td>Surface to Air</td>
<td>It was a part of Integrated Guided Missile Development Program.</td>
</tr>
<tr>
<td>Akash</td>
<td>Medium</td>
<td>Surface to Air</td>
<td>It can neutralise aerial targets like fighter jets, cruise missiles and air-to-surface missiles as well as ballistic missiles. Akash system is fully mobile and capable of protecting a moving convoy of vehicles.</td>
</tr>
</tbody>
</table>
Astra | Beyond Visual | Air to Air | • It is an all weather missile.  
• It can engage both short range (20km) and long range (80km) target.

Nag | 500 m to 10 km | | • "Fire and Forget" Anti-Tank Missile. It doesn’t need further guidance once it is launched.

Agni | I - Medium, II, III, IV Intermediate, V, VI - Intercontinental (upto-10,000 km) | Surface to Surface Ballistic | • I, II, III, IV - operational  
• V - Testing  
• VI - Under Development  
• Agni was developed under Integrated Guided Missile Development Program and tested in 1989. Rests have been separately developed.  
• Capable of carrying conventional and nuclear warhead

Shaurya | Short to Medium Cruise | Surface to Surface undergrond | • Can be launched from a canister, in which it is stored. Thus, it can remain hidden  
• Hypersonic (7.5 Mach speed)

K Missile Family | | Ballistic | • K for ‘Kalam’ (APJ Abdul Kalam)  
• Submarine Launched Ballistic Missile (SLBM)

Sagarika K-15 | | Ballistic | • SLBM version of Shaurya  
• Hypersonic (7.5 Mach speed)

BrahMos | Short (300km) Now, being enhanced to 600km | Cruise (Related Topics: NSG, MTCR) | • Ramjet  
• Supersonic (Mach 2.8 - Mach3)  
• Can be launched from land, ship, air and submarine.  
• Land and ship variants are operational. Other two are under testing.

Nirbhay | Long (1000 to 1500 km) | Land/Sea/Air to Land Cruise | • Subsonic  
• Can evade detection by radars  
• Tree-top flying technology

Pinaka | 40km to 65km | | • It’s a multiple rocket launcher.  
• It proved useful during Kargil war

**NOTE:** ‘Dhanush’ is also the name of towed howitzer (artillery gun) used by the Indian Army. Its design is based on Bofors. It was included in Republic Day Parade of 2017.

**Difference between Ballistic Missile and Cruise Missile:**
- A ballistic missile travels well outside the atmosphere and then the warhead detaches and falls back to earth.
- It follows the path of a ball thrown upwards which falls down.
- Since it depends on gravity to reach its target, it’s called a ballistic missile.
- A cruise missile cruises (travels) over land or water.
- So, it moves parallel to the Earth surface similar to a jet engine powered airplane.

(Related Topics: Wheeler Island off Odisha Coast, which has been renamed as Abdul Kalam Island)
Indi an Ballistic Missile Defence Programme:
• It is a double-tiered system consisting of two interceptor missiles
  1. The Prithvi Air Defence (PAD) missile/ Pradyumna Ballistic Missile Interceptor: for high altitude (Less than 80km, in exo-atmosphere) interception
  2. The Advanced Air Defence (AAD) Missile/ Ashwin Ballistic Missile Interceptor: for lower altitude (Less than 30km, endo-atmosphere) interception.
• The two-tiered shield should be able to intercept any incoming missile launched 5,000 kilometers away.
• With its successful testing, India became the fourth country to have developed an anti-ballistic missile system, after United States, Russia, and Israel.
Note: Akash Missile System acts as Indian Cruise Missile Defence System.

Swathi - Weapon Locating Radar:
• It is an indigenous mobile artillery locating radar (WLR) developed by DRDO.
• Swathi has a range of 50 km, which brings all artillery guns presently in service worldwide under coverage.

AIRFORCE CAPABILITY OF INDIA

DHRUV
• It is a utility helicopter
• Developed and manufactured by Hindustan Aeronautics Limited (HAL)
• It is designed to meet the requirement of both military and civil operators.
• The helicopter was first exported to Nepal and Israel.

RUDRA
• It is an armed version of HAL Dhruv.
• It is equipped with anti-tank guided missiles (Nag) and air-to-air missiles.
• The sensors include stabilised day and night cameras, infrared imaging as well as laser ranging and designation.

CHETAK
• It is a helicopter, operated by Indian Air Force.

AIRBORNE EARLY WARNING AND CONTROL (AEW&C) SYSTEM
• AEW&C aircraft are airborne radar systems designed to detect and track aircraft, missiles, ships and vehicles and provide command and control to direct friendly forces.
• DRDO developed a multisensor AEW&C system on a carrier jet, in collaboration with CAB (Centre for Airborne Systems) for the Indian Air Force.
• It has 240° coverage through two radiating planar arrays.
• Currently Indian Air Force is using 3 Israeli Phalcon AWACS (Airborne Warning and Control System) which are mounted on Russian IL-76 heavy-lift planes.
• These Phalcon AWACS has a range of 400 kms and 360-degree coverage.
• First indigenously developed (AEW&C) called NETRA has been inducted into Indian Air Force.
• It has been mounted on a Brazilian Embraer-145 jet
• India has become only 4th such nation after United States, Russia and Israel that have indigenously developed such technology.

UAV TAPAS 201(RUSTOM-II):
• It is a drone (Unmanned Aerial Vehicle) meant for meeting the Intelligence, Surveillance and Reconnaissance (ISR) needs of the three Armed Forces.
• It is NOT a UAV meant for combat.
## MILITARY EXERCISES

<table>
<thead>
<tr>
<th>Name</th>
<th>Countries Involved</th>
<th>Type of Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sundarban Moitry</td>
<td>Border Security Force (BSF) and Border Guard Bangladesh (BGB)</td>
<td>Military</td>
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<tr>
<td>SAMPRITI</td>
<td>India - Bangla Desh Army</td>
<td>Military</td>
</tr>
<tr>
<td>Surya Kiran</td>
<td>Indo-Nepal</td>
<td>Military</td>
</tr>
<tr>
<td>Hand-in-Hand</td>
<td>India and China</td>
<td>Military</td>
</tr>
<tr>
<td>Nomadic Elephant</td>
<td>Indo-Mongolia</td>
<td>Military</td>
</tr>
<tr>
<td>Khanjar</td>
<td>India and Kyrgyzstan</td>
<td>Military</td>
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<tr>
<td>Mitra Shakti</td>
<td>India-Sri Lanka</td>
<td>Military</td>
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<tr>
<td>EKUVERIN</td>
<td>India-Maldives</td>
<td>Military</td>
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<tr>
<td>LAMITYE</td>
<td>India and Seychelles</td>
<td>Military</td>
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<tr>
<td>Al Nagah</td>
<td>India and Oman</td>
<td>Military</td>
</tr>
<tr>
<td>Cobra Gold</td>
<td>Asia-Pacific military exercise held in Thailand/India participated</td>
<td>Military</td>
</tr>
<tr>
<td>Exercise Force 18</td>
<td>India and 18 ASEAN+8 countries</td>
<td>Humanitarian and peace keeping operations</td>
</tr>
<tr>
<td>Garuda Shakti</td>
<td>India and Indonesia</td>
<td>Military</td>
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<tr>
<td>Harimau Shakti</td>
<td>India and Malaysia</td>
<td>Military</td>
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<tr>
<td>Maitree</td>
<td>India and Thailand</td>
<td>Military</td>
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<tr>
<td>Bold Kurukshetra</td>
<td>India and Singapore</td>
<td>Military</td>
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<tr>
<td>INDRA</td>
<td>India and Russia</td>
<td>Military</td>
</tr>
<tr>
<td>Exercise Shakti</td>
<td>India and France</td>
<td>Military</td>
</tr>
<tr>
<td>Exercise Yuddh Abhyas</td>
<td>India-US</td>
<td>Military</td>
</tr>
<tr>
<td>Malabar Exercise</td>
<td>India, USA and Japan</td>
<td>Naval</td>
</tr>
<tr>
<td>‘Sahyog-Kaijin’</td>
<td>Indo-Japan</td>
<td>Coast Guard</td>
</tr>
<tr>
<td>SIMBEX-15</td>
<td>India and Singapore</td>
<td>Naval</td>
</tr>
<tr>
<td>Coordinated patrol</td>
<td>India-Indonesia</td>
<td>Maritime</td>
</tr>
<tr>
<td>(CORPAT)AUSINDEX-15</td>
<td>India-Australia</td>
<td>Naval</td>
</tr>
<tr>
<td>SLINEX 2015</td>
<td>India and Sri Lanka</td>
<td>Naval</td>
</tr>
<tr>
<td>Naseem Al Bahr</td>
<td>India and Oman</td>
<td>Maritime</td>
</tr>
<tr>
<td>IBSAMAR</td>
<td>India, Brazil, South Africa</td>
<td>Naval</td>
</tr>
<tr>
<td>Varuna</td>
<td>India and France</td>
<td>Naval</td>
</tr>
<tr>
<td>Exercise KONKAN</td>
<td>Indian navy and Royal Navy (UK)</td>
<td>Naval</td>
</tr>
<tr>
<td>Indradhanush exercises</td>
<td>India and UK</td>
<td>Air Force</td>
</tr>
<tr>
<td>Red Flag</td>
<td>India - US</td>
<td>AirForce</td>
</tr>
<tr>
<td>Desert Eagle II</td>
<td>India - UAE</td>
<td>AirForce</td>
</tr>
</tbody>
</table>
TROPEX: Theatre Readiness Operational Exercise:
- A month-long naval exercise in coordination with the IAF, the Army and Coast Guard.
- 2017 exercise was conducted on the Western Seaboard of India.

PEACE MISSION: Multilateral Joint military exercise of member countries of Shanghai Cooperation Organisation (SCO). For the first time, both India and Pakistan are going to take part in a joint military exercise.

CENTRAL ARMED POLICE FORCES (PARAMILITARY FORCES)

<table>
<thead>
<tr>
<th>Force</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assam Rifles</td>
<td>It came into existence in 1835.</td>
</tr>
<tr>
<td></td>
<td>It has functions of counter insurgency and border security operations along Myanmar border.</td>
</tr>
<tr>
<td></td>
<td>It is under operational control of Indian Army.</td>
</tr>
<tr>
<td>Border Security force (BSF)</td>
<td>It came into existence after 1965 India-Pakistan war.</td>
</tr>
<tr>
<td></td>
<td>It mans borders with Pakistan and BanglaDesh.</td>
</tr>
<tr>
<td>Central Industrial Security Force (CISF)</td>
<td>It was set up in 1969.</td>
</tr>
<tr>
<td></td>
<td>Its job is to provide security to various PSUs and commercial places like Delhi Metro, Airports etc.</td>
</tr>
<tr>
<td>Central Reserve Police Force (CRPF)</td>
<td>It was set up in 1939.</td>
</tr>
<tr>
<td></td>
<td>It is the largest central armed police force in India.</td>
</tr>
<tr>
<td></td>
<td>It looks after internal security in India like naxal operations, conduct of elections etc.</td>
</tr>
<tr>
<td></td>
<td>It also helps with UN peacekeeping missions.</td>
</tr>
<tr>
<td>Indo-Tibetan Border Police (ITBP)</td>
<td>It was formed after India-China war in 1962.</td>
</tr>
<tr>
<td></td>
<td>It guards the India - China border.</td>
</tr>
<tr>
<td></td>
<td>It is also trained in disaster management, UN peacekeeping etc.</td>
</tr>
<tr>
<td>National Security Guard (NSG)</td>
<td>It combats terrorist activities and also internal disturbances in States.</td>
</tr>
<tr>
<td></td>
<td>It is specifically trained to deal with hostage situation.</td>
</tr>
<tr>
<td></td>
<td>They are often referred as Black Cats because of their uniform.</td>
</tr>
<tr>
<td>Sashastra Seema Bal (SSB)</td>
<td>It was established in 1963</td>
</tr>
<tr>
<td></td>
<td>It guards Nepal and Bhutan borders. It also helps control anti-national activities at these borders.</td>
</tr>
</tbody>
</table>

Note: These are few important mandates of these forces. However, almost all of them usually undertake functions like internal security, disaster management, anti-terror operations, UN peacekeeping etc.

Differences between army and paramilitary:
- Paramilitary are under Home Ministry while military is under the Defence Ministry. However, Assam Rifles is under the dual control of both these ministries.
- In ideal case, Army is deployed mostly for border warfare and sometimes in natural calamities. Paramilitary forces are deployed for internal disturbances, insurgency, border protection, elections, VIP protection, terrorism etc.
- All Paramilitary forces, except Assam Rifles, is headed by an officer of Indian Police Service (IPS).
PROJECTS FOR MODERNISATION OF POLICE

Crime and Criminal Tracking Network Systems (CCTNS) scheme:
- It is a project to connect all the police stations in the country to a centralized database.
- It aims to provide the Investigating Officers with tools, technology and information about crime done by several criminals under jurisdiction of several police stations.
- It is being implemented by National Crime Record Bureau.

National Intelligence Grid (NATGRID):
- It links the databases of 22
- Thus it provides comprehensive pattern of intelligence on real time basis.
- Several law enforcement agencies have access to all these databases through NATGRID.

Central Monitoring System (CMS):
- It allows interception of communication (calls, texts, emails etc.) on real time basis by law enforcement agencies.
- Interception takes places without the involvement of service provider.

NATIONAL CRIME RECORDS BUREAU (NCRB)

- It is a central government agency responsible for collecting and analysing crime data.
- It was established in 1986 on the recommendation of National Police Commission.
- It is headquartered in New Delhi and is part of the Ministry of Home Affairs (MHA).

Objectives:
1. Create and maintain secure sharable National Databases on crimes and criminals.
2. Lead and coordinate development of IT applications and create an enabling IT environment for Police organizations
3. National repository of fingerprints of all criminals
<table>
<thead>
<tr>
<th>Name</th>
<th>Purpose</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| Baba Kalyani committee      | SEZ Policy of India                    | 1. The current environment of manufacturing competitiveness and services has to undergo a basic paradigm shift.  
2. Success seen by services sectors like IT and ITES (IT enabled services) has to be promoted in other services sector. |
| Ashok Dalwai Committee      | Doubling farmers’ income               | 1. Farmer producer and village producer organisations (FPO/VPO) could play a critical role in integrating small and marginal farmers into the agricultural market system.  
2. The one-India market concept may benefit from placing agricultural marketing under the Concurrent List. |
| TK Viswanathan committee    | fair market                            | • Creation of two separate codes of conduct.  
• Minimum standards on dealing with insider information by listed companies.  
• Standards for market intermediaries and others who are handling price-sensitive information |
| Sunil Mehta Committee       | resolution of stressed assets          | **Project Sashakt**  
• It is a five-pronged strategy towards resolution of stressed assets Committees and Commission in News (Economy) |
| Uday Kotak Panel            | on corporate governance                | • At least half (earlier 1/3rd) the directors on the board should be independent directors.  
• Minimum of six independent directors and at least one woman director among the independent directors |
| NK Singh Committee | To review Fiscal Responsibility and Budget Management (FRBM) Act | • Apart from FD, Revenue Deficit, Cumulative public Debt target should also be fixed.  
• Updated Targets |
<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fiscal Deficit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revenue Deficit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Debt to GDP</td>
</tr>
</tbody>
</table>
| 15th Finance Commission headed by **Nand Kumar Singh.** | • To decide how revenue has to be distributed between the Centre and the States.  
• To decide the principles on which grants-in-aid will be given to the States.  
• Terms of Reference includes- “the Commission shall use the population data of 2011 while making its recommendations.”  
• The usage of the 2011 Census is being opposed by some States. They have worked on population control and fear losing out on benefits. | • To decide the principles on which grants-in-aid will be given to the States. |
| Bibek Debroy Committee | • For “Mobilization of Resources for Major Railway Projects”  
• For Restructuring of Railway Ministry and Railway Board | • Establishment of independent Rail Regulator  
• Transition to commercial accounting  
• Merger of rail budget with General Budget  
• Encouraging entry of private sector in railway operations. |
| Kelkar Committee | • To Evaluate PPP in India | • Independent regulators for all the sectors going for PPP.  
• Enact PPP Act or national PPP policy document.  
• Amend Prevention of Corruption Act to distinguish between genuine error and malafide action by a public servant. |
### Committee and Commission in News (Non-Economy)

<table>
<thead>
<tr>
<th>Name of the committee/commission</th>
<th>Purpose</th>
<th>Report/recommendation/findings</th>
</tr>
</thead>
</table>
| T. K. Viswanathan committee       | To suggest legal framework to deal with cyber crimes related to hate speech. | • Establish cybercrime cells in each district  
• Amend some sections of IT Act, 2000 and IPC. |
| B. N. Srikrishna Committee        | To review the institutionalization of arbitration mechanism | • Set up of an autonomous body called **Arbitration Promotion Council of India (APCI)**, for grading arbitral institutions in India.  
• Creation of a specialist arbitration bench in courts to deal with commercial disputes |
| N Gopalaswami Panel               | To select 20 institutions of eminence | • **Institute of eminence** is a scheme rolled out by UGC, to help 20 higher education (10 public and 10 private) institutions from country break into top 500 global rankings in 10 years, and then eventually break into top 100 over time. |
| Punchhi commission                | On Centre-State Relations | • Many recommendations about almost all aspects of centre-state relation. |
| Justice Reddy Committee           | On One Rank One Pension (OROP) | |
| A.K Bhargava Committee            | On Net-Neutrality | • **Was setup by DoT not TRAI.**  
• Adhere to the core principles of Net-neutrality. Few exceptions should be made in the interest of national security |
<p>| Dhirendra Singh Committee         | • For Streamlining Defence Procurement Process | • <strong>Strategic Partnership Model</strong>: selective identification of a few big private players and nurturing them through preferential treatment, which would entail co- |</p>
<table>
<thead>
<tr>
<th>Madhav Gadgil Committee / Western Ghats Ecology Panel</th>
<th>• To suggest conservation measures for Western Ghats</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. Kasturirangan committee</td>
<td>• To study the report of Madhav Gadgil Committee for conservation of Western Ghats</td>
</tr>
<tr>
<td></td>
<td>• Only about 37% of Western ghats be declared as ESZ.</td>
</tr>
<tr>
<td></td>
<td>• It also recommended a ban on hydro electric projects here.</td>
</tr>
</tbody>
</table>

### THE BUREAU OF INDIA STANDARD (BIS)

- BIS is the national Standards Body of India working under the aegis of **Ministry of Consumer Affairs, Food & Public Distribution**.
- It is established by the Bureau of Indian Standards Act, 1986
- It was formerly the **Indian Standards Institution (ISI)**, set up under the executive Resolution.
- Its **Headquarter** is in **New Delhi**.
- Major function of the Bureau is the formulation, recognition and promotion of the Indian Standards.
- Product Certifications are to be obtained voluntarily.
- However, for some of the products like Milk powder, Drinking Water, LPG Cylinders, Solar Photovoltaics, few Electronics and IT Goods, steel products etc., certification is mandatory.
- It also formulates the **National Building Code of India**.
- Rearranging the departments of Ministry of Agriculture
- Liberalize the definition of a ‘farmer’ to include cultivators, lessee farmers
- Stop introducing new trains without commensurate inputs to the infrastructure
- Have statutory Railway Safety Authority
- Adopt an advanced signaling system based on continuous track circuiting.
- Total elimination of all level crossings (manned and unmanned)

### ISI MARK

- ISI mark is a certification mark for industrial products in India.
- It has been developed by the Bureau of Indian Standards (BIS)
- The ISI mark is mandatory for certain products to be sold in India, like many of the electrical appliances like switches, electric motors, wiring cables, heaters, kitchen appliances etc., and other products like Portland cement, LPG valves, LPG cylinders, automotive tires etc.
• In the case of most other products, it is voluntary to put an ISI mark.

**BIS Mark**

• BIS is a hallmarking system for gold as well as silver jewellery sold in India.
• It certifies that the piece of jewellery conforms to a set of standards laid by the Bureau of Indian Standards.
• Hallmarking Gold jewellery is not mandatory in India.

**HALLMARK**

• The hallmarking scheme was launched by Bureau of Indian Standards (BIS) on behalf of the Government of India, for gold in the year 2000 and for silver jewelry in 2005. The scheme is voluntary in nature.

*Consumers need to look out for the following markings on gold/silver jewelry:*

1. BIS Standard Mark
2. Purity in Carat/finessness mark. With reference to gold, the marks are:
   • 916 corresponds to 22 carat
   • 750 corresponds to 18 carat
   • 585 corresponds to 14 carat
3. Assaying and Hallmarking Centre identification mark/Number: The logo of a BIS-recognized Assaying and Hallmarking Centre where the jewellery has been assayed and hallmarked
4. Jeweller’s identification mark: The logo of a BIS-certified jeweller/jewellery manufacturer

**Bureau of Energy Efficiency (BEE)**

• Statutory body under Ministry of Power
• Primary objective is to reduce energy intensity of the Indian economy.
• It gives star rating to the buildings based on the Energy Performance Index (EPI).
• EPI is total energy consumed in a building over a year divided by total built up area

**BEE’ STAR LABEL MARK**

• To provide consumers with a reference for energy saving, and thereby cost saving, aspects of electrical household and other equipments, in 2006 the Bureau of Electrical Efficiency (BEE) of Ministry of Power, Government of India, launched a scheme for BEE star on labels. The scheme was invoked for frost-free (no frost) refrigerators, tubular fluorescent lamps, room air conditioners, direct cool refrigerators, distribution transformers, induction motors, pump sets, ceiling fans, LPG stoves, electric geysers and colour TVs.
• The BEE star label has been applicable for following electrical products: To sell mandatory products, a minimum 1 Star rating is mandatory.
ECOMARK

- Eco-mark is issued by the Bureau of Indian Standards (BIS) as a certification mark for the products which are ecologically conforming to the standards prescribed by the BIS.
- It is voluntary in nature and helps identifying eco-friendly products in the market.
- The mark is being issued in around 16 categories like food, medicines, chemicals, electronic goods, paper, lubricating oils, packing materials etc.
- The Eco-mark scheme falls under the ambit of Ministry of Environment, Forest and Climate Change.

ORGANIC MARK

- Organic foods are products of holistic agricultural practices focusing on biodiversity, soil health, chemical free inputs etc., and produced in accordance with Organic Production Standards. The Jaivik Bharat logo for Organic Food is an identity mark to distinguish organic products from non-organic ones. The logo is supported with the tagline “Jaivik Bharat”, at the bottom, which signifies Organic Food from India.

THE ENERGY AND RESEARCH INSTITUTE (TERI)

- It is a non-profit, non-government scientific and policy research institute situated in New Delhi
- Its initiatives include:
  1. World Sustainable Development Summit (WSDS)
     - It's a platform for global leaders and thinkers to discuss various issues related to sustainable development and climate change
     - The theme of 2018 summit was 'Partnerships for a Resilient Planet'.
  2. Lighting a Billion Lives (LABL) - to provide clean lighting access to marginalised communities
  3. Green Olympiad - international environment examination, conducted in association with MoEF
  4. ENERGY TRANSITIONS COMMISSION INDIA:
     - Launched by The Energy and Resources Institute (TERI) on the sidelines of the World Sustainable Development Summit (WSDS) 2018.
     - It is a unique, high-level, multi-stakeholder platform with experts from diverse fields to suggest pathways for energy and electricity sector transitions in India

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

- ISO is an independent, non-governmental international organization with a membership of 161 national standards bodies like BIS.
- It brings together experts to share knowledge and develop voluntary, consensus-based, market relevant International Standards.
- ISO's Central Secretariat is in Geneva, Switzerland.

CREDIT RATING AGENCIES

- A credit rating agency (CRA, also called a ratings service) is a company that assigns credit ratings, which rate a debtor’s ability to pay back debt by making timely interest payments and the likelihood of default.

<table>
<thead>
<tr>
<th>Global credit Agencies</th>
<th>Domestic credit agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Moody’s</td>
<td>1. CRISIL (Credit Rating Information Services of India Limited) - it was the first credit rating agency set up in India in 1987.</td>
</tr>
<tr>
<td>2. Standard &amp; Poor’s</td>
<td>2. CARE (Credit Analysis and Research limited).</td>
</tr>
<tr>
<td>3. Fitch</td>
<td></td>
</tr>
<tr>
<td>National Symbol</td>
<td>Name</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>National Flag</td>
<td>Tricolour</td>
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<tr>
<td>State Emblem</td>
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<tr>
<td>National Anthem</td>
<td>Jana Gana Mana</td>
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<tr>
<td>National Song</td>
<td>Vande Mataram</td>
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<tr>
<td>National Calendar</td>
<td>Saka Calendar</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>National Animal</td>
<td>Royal Bengal tiger</td>
</tr>
<tr>
<td></td>
<td>(Panthera tigris)</td>
</tr>
<tr>
<td>National Bird</td>
<td>Peacock (Pavo Cristatus)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>National Flower</td>
<td>Lotus (Nelumbo Nucipera Gaertn)</td>
</tr>
<tr>
<td>National Tree</td>
<td>Banyan (Ficus bengalensis)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>National Fruit</td>
<td>Mango (Mangifera indica)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>National Pledge</td>
<td>India is my country. All</td>
</tr>
<tr>
<td></td>
<td>Indians are my brothers and</td>
</tr>
<tr>
<td></td>
<td>sisters. ...</td>
</tr>
<tr>
<td>National River</td>
<td>Ganga</td>
</tr>
<tr>
<td>National Aquatic Animal</td>
<td>River Dolphin</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>National Heritage Animal</td>
<td>Elephant</td>
</tr>
</tbody>
</table>
Total 20 questions directly/indirectly appeared in Civil Services Mains 2018 from our Mains Test Series -2018. These are the questions which can be satisfactorily / partially answered from our model answer.

<table>
<thead>
<tr>
<th>Questions that can be satisfactorily answered</th>
<th>Questions that can be partially answered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UPSC Mains Question No.</strong></td>
<td><strong>Dhyeya IAS Mains Test Series Question No.</strong></td>
</tr>
<tr>
<td>GS Paper-II Q-1</td>
<td>Test No. 15-Q-6</td>
</tr>
<tr>
<td>GS Paper-II Q-4</td>
<td>Test No. 1-Q-8</td>
</tr>
<tr>
<td>GS Paper-II Q-6</td>
<td>Test No. 1-Q-14</td>
</tr>
<tr>
<td>GS Paper-II Q-8</td>
<td>Test No. 2-Q-16 &amp; 20</td>
</tr>
<tr>
<td>GS Paper-II Q-9</td>
<td>Test No. 11-Q-14</td>
</tr>
<tr>
<td>GS Paper-II Q-15</td>
<td>Test No. 14-Q-9</td>
</tr>
<tr>
<td>GS Paper-II Q-18</td>
<td>Test No. 2-Q-7</td>
</tr>
<tr>
<td>GS Paper-II Q-20</td>
<td>Test No. 11-Q-5</td>
</tr>
<tr>
<td>GS Paper-III Q-3</td>
<td>Test No. 7-Q-13</td>
</tr>
<tr>
<td>GS Paper-III Q-6</td>
<td>Test No. 2-Q-19 &amp; Test No. 7-Q-6</td>
</tr>
<tr>
<td>GS Paper-III Q-10</td>
<td>Test No. 11-Q-15</td>
</tr>
<tr>
<td>GS Paper-III Q-11</td>
<td>Test No. 14-Q-11</td>
</tr>
<tr>
<td>GS Paper-III Q-18</td>
<td>Test No. 8-Q-18</td>
</tr>
</tbody>
</table>

Two Essays can be answered satisfactorily from our GS Mains Test Series.

<table>
<thead>
<tr>
<th>UPSC Essay No.</th>
<th>Dhyeya IAS Test Series Q. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section - A Topic - 3</td>
<td>Essay Test-1 Sec.-B Topic - 1</td>
</tr>
<tr>
<td>Section - A Topic - 4</td>
<td>Test - 15 Q- 9</td>
</tr>
</tbody>
</table>
8. Assess the utility of Parliamentary Committee System in Indian Democracy. Substantiate your views with recent examples.

नागरिक में संसदीय समिति प्रणाली की उपयोगिता का आंकलन करें। वर्तमान के उदाहरणों के साथ कथन की पुष्टि करें।

(150 words) 10 Marks.

9. The election of the President has become the only “free” vote in India’s Parliamentary democracy. In this context, critically examine the provisions of Anti Defection Law.

राष्ट्रपति का चुनाव एकमात्र ‘स्वतंत्र’ मतदान प्रक्रिया बन गया है। इस संदर्भ में दल-बदल निर्वाची कानून (Anti-defection law) संबंधी प्रावधानों की आत्मनिर्भरता पर मार्गदर्शन कीजिए।

(150 words) 10 Marks.

10. Insolvency and bankruptcy code is legislation with wider implications, but many wrinkles remain in its implementation. Explain.

विपत्ति तथा स्वचालित वस्त्र कोड (Insolvency and Bankruptcy Code) एक व्यापक प्रभाव वाला कानून है, परंतु इसके क्रियान्वयन में काफी समस्याएं हैं। व्याख्या करें।

(150 words) 10 Marks.

11. “Constitution of India provides for a parliamentary form of government in the states as well as Centre yet the office of Governor has created much controversies”. Discuss the above statement in the light of recent events. Do you think the post of Governor has lost its relevance and should be abolished?

“भारत का संविधान राज्य एवं राष्ट्रीय प्रणाली की स्थापना करता है, परंतु इसके उपरांत राज्यपाल एक विवादास्पद पद है।” वर्तमान पदार्थों के प्रकाश दालते हुए उपरोक्त कथन पर चर्चा करें। क्या राज्यपाल ने अपनी प्राधिकृतता को धीरे धीरे और इस पद को समाप्त किया जाना चाहिए?

(250 words) 15 Marks.

12. Constitution (123rd Amendment) Bill, 2017 proposes to set up the National Commission of Backward Classes. Delineating the difference between constitutional and non-constitutional bodies, examine the need for such a body. Do you think it will make a difference?

संविधान (123वें संशोधन) विधेयक, 2017, राष्ट्रीय अन्तर्गत वर्ग आयोग की स्थापना को प्रस्तावित करता है। संवैधानिक एवं नैसंवैधानिक निकायों के मध्य अंतर को चिह्नित करते हुए ऐसी संस्था की ‘आवश्यकता’ का परीक्षण करें। क्या इससे कोई वैधता अपेक्षित है?

(250 words) 15 Marks.

13. “The basic concept of Indian Jurisprudence is that the 100 culprits may let go free but no innocent should be punished.” Discuss the above statement in the context of recent Supreme Court ruling regarding The Scheduled Castes and Tribes (Prevention of Atrocities) Act, 1989.

“भारतीय न्यायशास्त्र के अनुसार, 100 अपराधी युक्त हो सकते हैं परंतु किसी निर्दीश को दंडित नहीं किया जाना चाहिए।” अनुसूचित जाति एवं जनजाति (अन्तराय कोष्ठक) अधिनियम, 1989 के बारे में हालिया स्वाधीन न्यायालय के फैसले से संबंध में उपरोक्त कथन पर चर्चा करें।

(250 words) 15 Marks.

14. ‘To protect and improve the natural environment’ is the duty of state as well as citizens, yet the Right to clean environment remains elusive. Examine the veracity of above statement with respect to constitutional provisions.

‘प्राकृतिक पर्यवेक्षण की रक्षा एवं सुधार’ राज्य एवं नागरिकों, दोनों का कर्तव्य है, इसके उपरांत भी स्वच्छ पर्यावेक्षण का अधिकार यथायथ सिद्ध नहीं हो पाया है। संवैधानिक प्रावधानों के संदर्भ में उपरोक्त कथन की सत्यता की जाँच करें।

(250 words) 15 Marks.
7. The Citizen Charter of comes with a vision that the power of people is more than people in power. Discuss the above statement in line with constitutional provisions it seeks to establish.

7. The Citizen Charter of comes with a vision that the power of people is more than people in power. Discuss the above statement in line with constitutional provisions it seeks to establish.

8. "After Independence, the government assumed the Role of Controller & Administrator. In modern times, the govt acts as a co-ordinator & facilitator of Services." In context of above statement analyse the Role of govt towards NGO's also, examine the need of a vibrant civil society organisations in India.

9. The declination of administrative institution can be attributed to nexus between politicians, bureaucrats and criminals. Critically analyse.

10. “Tribals are neither specimen of museum to be left alone nor they need to be assimilated to mainstream India for development”. Comment on the statement in the light of Nehru’s panchsheel.

11. “Criminal Justice system in India though needs to be reformed yet the reforms should not dilute the standards of justice”. Critically analyze the above statement with special reference to Justice V S Malimath committee report.

12. “Self help groups (SHGs) are fast emerging as powerful tool of socio-economic empowerment of the poor.” Elucidate the above statement with examples. Why do you think most SHGs fail to transform into micro enterprises?

13. “Information Technology is considered an equalizing force but Digital India is witnessing a widening gulf between men and women.” Analyse the underlying reasons for this phenomenon. Also give your suggestions for bridging the digital gender gap.

(150 words - 10 Marks)

(150 words - 10 Marks)

(150 words - 10 Marks)

(150 words - 10 Marks)

(250 words - 10 Marks)

(250 words - 15 Marks)

(250 words - 15 Marks)
14. Unexpected healthcare expenditure is one of the major factors that push individuals below poverty line. In this context, critically analyse the economics of healthcare in India. Do you think the steps taken in Budget 2018 are adequate to address the healthcare issues in India?

(250 words - 15 Marks)

15. “While the euphoria is about smart cities, the reality of India’s urbanisation is a web of increasing inequalities and powerless local authorities.” Analyse the above statement in the context of various initiatives taken by the government of India for improvement of urban infrastructure.

(250 words - 15 Marks)

16. With a teledensity of more than 90% examine the benefits of m-governance along with steps taken by government to promote m-governance. Also enumerate various challenges associated with it.

(250 words - 15 Marks)

17. “The proposed reform in the civil services related to allocation of services and cadres are unconstitutional, impractical and might undermine the very institution they aim to reform”. Examine.

(250 words - 15 Marks)

18. Enumerate the challenges faced by PVTG along with measures taken by government to address the issue.

(250 words - 15 Marks)

19. Improvement in India’s solid waste management can potentially improve public health conditions and mitigate the risks associated with global warming. Discuss.

(250 words - 15 Marks)

20. Assess the role of Digital India in combating the failure of e-governance project in India.

(250 words - 15 Marks)
1. India faces a challenge of “severe under-employment” rather than joblessness per se. Do you agree? What can be done to tackle the problem of under-employment?

(150 words) 10 Marks.

2. “Information Communication technology is quintessential in addressing the Agrarian Distress yet despite the government efforts, the adoption and sustained usage of ICT by farmers is poor”. Critically analyze the above statement with reference to the initiatives taken by government.

(150 words) 10 Marks.

3. To accelerate growth and bring electricity to all at the earliest, India needs to take several steps aimed at increasing electricity generation, overhauling transmission and distribution. Discuss.

(150 words) 10 Marks.

4. “The true potential of an Outcome Budget in India remains Untapped.” Examine the statement and suggest measures for improvement.

(150 words) 10 Marks.

5. Agro forestry is not just a tool to increase farmer's income but also a weapon against the environmental degradation and climate change. Discuss. Why has agro forestry not achieved desired success in India?

(150 words) 10 Mark

6. “GOBAR-Dhan initiative is much more than a waste management exercise”. Discuss. Identify the challenges to its implementation.

(150 words) 10 Mark

7. “The welfare of a nation can scarcely be inferred from the statistical measurement of GDP”. Do you agree? Which alternative measures will you suggest to assess the welfare of a nation?

(150 words) 10 Marks.

8. “Floating the idea of taxing income is a great disservice to the agrarian sector which is in deep crisis”. Critically analyze the above statement in the light of taxing agriculture income in India.

(150 words) 10 Marks.
9. “Hybrid Annuity Model is a unique innovation — a mix of the EPC (engineering, procurement and construction) and BOT (build, operate, transfer) models”. Discuss.

‘हाईब्रिड वार्षिकी मॉडल, ई.पी.एस. (ईंजीनियरिंग, खरीद और निर्माण) और बी.ओ.टी. (बिल्ड, ऑपरेट, ट्रांसफर) मॉडल का मिश्रण’ के रूप में अनोखा नवाचार है। चर्चा करें।

(150 words) 10 Marks.

10. “India simultaneously has a tax base for direct taxes that is too small; and a tax base for indirect taxes that is too large.” Discuss the implications of such an anomalous taxation system for a country like India? Suggest measures to increase the tax-revenue of the government.

“भारत में प्रत्यक्ष करों हेतु कर आधार बहुत लघु है; तथा अत्यन्त करों हेतु कर आधार बहुत बड़ा है। “भारत जैसे देश के लिए ऐसी असंगत करारामण प्रणाली के प्रभावों पर चर्चा करें? सरकार के लिए राजस्व को बढ़ाने के उपायों का सुझाव दें।

(150 words) 10 Marks.

11. India’s geographical diversity and different levels of development across regions mean that targeted action would be required in less prosperous regions to ensure inclusive and balanced growth. Discuss.

राष्ट्रीय भौगोलिक विविधता और क्षेत्रों के विकास के विभिन्न स्तरों का अर्थ है कि समावेशी एवं सूचनात्मक विकास सुनिश्चित करने के लिए कम समूह क्षेत्रों में लक्षित अनुप्रयोग (अभियान) की आवश्यकता होगी। चर्चा करें।

(250 words) 15 Marks.

12. Indian economy suffers from the twin balance sheet problems with some peculiar Indian characteristics. Discuss. How far do you think Public Asset Rehabilitation Agency will help in solving the crisis of Non Performing Assets? 15 marks

भारतीय अर्थव्यवस्था कुछ विविधता भारतीय विशेषताओं के कारण दोहरी बैंकिंग शीट समस्या से प्रभावित है। चर्चा करें। क्या आपको लगता है कि गैर-नियामित संपत्ति के सकट का हल करने में सार्वजनिक संपत्ति प्रणाली के समकक्ष है?

(250 words) 15 Marks.

13. “Minimum support price is an inefficient and ineffective tool for farmer welfare and in fact hurts farmers, consumers and government alike” Critically analyze the above statement .Do you think Price deficiency payment system is an improvement over minimum support price?

“न्यूतम समर्थन मूल्य किसान कल्याण के लिए एक अक्षर और आयप्रदानी उपकरण है और वास्तव में किसानों, उपभोक्ताओं एवं सरकार को समान रूप से नुकसान पहुँचाता है” उपरुपलक कक्ष का आलोचनात्मक विश्लेषण करें। क्या आपको लगता है कि कीमत अभाव प्रभावण प्रणाली न्यूतम समर्थन मूल्य में सुधार है?

(250 words) 15 Marks.

14. “Both human and physical infrastructures are critical for economic growth and the reduction of poverty.” Explain. Do you think there has been massive under investment in infrastructure sector in India? Give reasons for the same.

“आदिक किसान और गरीबी में कमि हेतु मानवीय एवं भौगोलिक आधारभूत संरचना, दोनों महत्वपूर्ण हैं।” व्याख्या करें। क्या आपको लगता है कि भारत में बुनियादी बांध क्षेत्र में कम निवेश हुआ है? कारण सहित स्पष्ट करें?

(250 words) 15 Marks.

15. Poultry sector has huge potential in India, which is yet to be tapped. Discuss the issues associated with different stages of supply chain of poultry sector.

मुद्दापुन्न क्षेत्र में भारत में बड़ी क्षमता के उपरान्त भी अपेक्षित सफलता का अभाव है। मुद्दापुन्न क्षेत्र की आपूर्ति श्रृंखला के विभिन्न चरणों से जुड़े मुद्दे पर चर्चा करें।

(250 words) 15 Marks.
1. “Renewable offshore energy sources face numerous challenges and have imminent ecological concerns.” Elucidate.

“नवीकरणीय अपटरिटीय ऊर्जा स्रोतों में कई चुनौतियों का सामना करना पड़ता है और निकटवर्ती परिस्थितिक चिंताओं का सामना करना पड़ता है।” स्पष्ट करें।

(150 words) 10 Marks.

2. Why predicting Indian monsoon with certainty has been a difficult task? What improvements does Dynamic model of monsoon forecasting make over previous method?

भारतीय मानसून की भविष्यवाणी निश्चित रूप से करना क्यों असंभव काम रहा है? मानसून पूर्वेनुमा ने गतिशील मॉडल के तहत पिछले सुधार क्या हुए हैं?

(150 words) 10 Marks.

3. Recently North India witnessed a chain of thunderstorms killing over 100 people. Elucidate the factors that led to such phenomenon. Why do you think it has become a cause of worry despite North India traditionally witnessing dust storms?

हाल ही में उत्तर भारत में कूड़ों की एक श्रृंखला के कारण 100 से अधिक लोगों की मृत्यु हुई। ऐसे कारकों को स्पष्ट करें जो इस तरह की घटना का कारण बनते हैं। उत्तरी भारत पर्याप्ततारूप से धूल तकनीकों के साधन होने के बावजूद आपको चिंता का कारण क्यों बने हैं?

(150 words) 10 Marks.

4. Give reasons for the following phenomenon

निम्नलिखित घटनाओं के कारण का उल्लेख करें:

A. Why Western Ghats in Karnataka receive more monsoon rainfall?

कर्नाटक के परिवर्ती ढांचों में मानसून वर्षा क्यों होती है?

B. Why does the west coast of India have more ports than the east coast?

पूर्वी तट की तुलना में भारत के परिवर्ती तट में अधिक बंदरगाह क्यों हैं?

(150 words) 10 Marks.

5. Compare and contrast between tropical cyclones and temperate cyclones. How does Jet stream influence temperate cyclones?

उष्णकटिबंधीय चक्रवात और सम्राटीय चक्रवात के बीच तुलना और भिन्नता। जेट स्ट्रीम सम्राटीय चक्रवात को कैसे प्रभावित करता है?

(150 words) 10 Marks.

6. “The shadow zones of body waves give us information about the state of materials in the Earth’s interior.” Explain. What are the other sources of information about the interior of the earth?

“पृथ्वी भाग तरंगों के प्रतिलब्ध क्षेत्र हमें पृथ्वी के अंतर्त्वीय भाग में सामग्री की स्थिति के बारे में जानकारी देते हैं।”

समझें। पृथ्वी के अंतर्त्वीय भाग के बारे में जानकारी के अन्य स्रोत क्या हैं?

(150 words) 10 Marks.

7(a). Explain the concept of isostasy. Give illustrations about the global isostatic adjustments.

भूसंतर की अवधारणा की व्याख्या करें। वैश्विक भूसंतर समायोजन के बारे में चित्र प्रदान करें।

7(b). What do you understand by Earth’s Heat Budget? Explain with the help of a neat diagram.

पृथ्वी के ताप व्रत से आप क्या समझते हैं? एक साफ आंशिक की मदद से समझाओ।

8. What are the factors responsible for origin and modification of ocean currents? How does ocean current modify the coastal climate?

महासागर धाराओं के मूल और संशोधन के लिए जिम्मेवारी कारक क्या हैं? महासागर वातावरण तटीय जलवायु को कैसे संशोधित करता है?

(150 words) 10 Marks.

9. What are rare earth materials? Identify their uses and global distribution with particular reference to India. Why do you think China has near monopoly in rare earth market globally?

पृथ्वी के मुलभूत पदार्थ क्या हैं? विशेष रूप से भारत के संबंध में उनके उपयोग और वैश्विक वितरण को स्पष्ट करें। आपको क्यों लगता है कि वैश्विक स्तर पर पृथ्वी के मुलभूत पदार्थ के बाजार में चीन एकमात्र कारक के का रहेगा?

(150 words) 10 Marks.
10. “Despite having innumerable tree species in the hitherto untouched dense virgin forest of tropical rain forest, lumbering industry in these regions has not yet been properly developed”. Discuss. Identify the factors that have led to concentration of lumbering industry in temperate regions.

"Уничтожение лесов в этих неосвоенных дождевых лесах может быть еще медленнее, чем в регионах". Дискуссия. Определите факторы, которые привели к концентрации лесозаготовительной отрасли в умеренных регионах.

(150 words) 10 Marks.

11. “Beating plastic pollution is not only a choice but an imperative today”. Discuss. Do you think Plastic Waste Management (Amendment) Rules 2018 defeat the objectives of reducing plastic pollution?

"Победить пластиковую загрязненность - это не только выбор, но и необходимость сегодня". Дискуссия. Вы думаете, что правила управления пластиковыми отходами (изменение) 2018 года не достигают цели по снижению пластиковой загрязненности?

(250 words) 15 Marks.

12. According to the recently released “State of India’s Environment 2017: In Figures” report published by the Centre for Science and Environment, nearly 30 per cent of India is degraded or facing desertification. Discuss the causes and actions to be taken avert desertification and loss of productivity.

"Согласно недавно опубликованной отчету “Состояние окружающей среды Индии 2017: В цифрах” Центра науки и окружающей среды, почти 30% Индии подвержены деградации или борьбе с засолением. Дискуссия о причинах и действиях, чтобы предотвратить засоление и потерю продуктивности.

(250 words) 15 Marks.

13. Forest fires in India have increased by 125 per cent in last two years. Discuss the causes and effects of forest fires. What will you recommend to improve forest fire management in India?

"Лесные пожары в Индии за последние два года выросли на 125%. Дискуссия о причинах и последствиях лесных пожаров. Что вы рекомендуете для улучшения управления пожарами в Индии?

(250 words) 15 Marks.

14. Majority of the world’s earthquakes and volcanic eruptions occur along the ring of fire. Discuss the mechanism behind this global pattern. What are the other causes of volcanic activities?

"Больше половины землетрясений и вулканических извержений происходит по кольцу огня. Дискуссия о механизме этой глобальной модели. Что за другие причины вулканов?

(250 words) 15 Marks.

15. “Rainforests of the oceans need special condition for growth and are under increased stress due to anthropogenic factors.” Discuss. What measures should be taken to contain this loss to biodiversity?

"Морские тропические леса нуждаются в специальных условиях для роста и подвержены возрастаню стресса из-за антропогенных факторов." Дискуссия. Какие меры должны быть приняты для ограничения этого ущерба биоразнообразию?

(250 words) 15 Marks.

16. Heat Waves create a heavy toll in different regions of India every year. In this context, discuss the phenomenon of heat waves – its cause, consequence and protection measures.

"Глобальные волны приходят в Индию каждый год. В этом контексте дискуссия о явлении глобальных волн – его причина, последствия и меры защиты.

(250 words) 15 Marks.

17. It is often said that World War-III would be fought over water. In this context discuss the strategic relevance of water in today’s world.

"Часто говорят, что Вторая мировая война будет вестись за воду. В этом контексте дискуссия о стратегической значимости воды в современном мире.

(250 words) 15 Marks.


(250 words) 15 Marks.
TEST - 11
(International Relations & Science & Technology)

1. "The first list of NRC (National register of citizen) was made in 1951 across India according to
the census of that year. But it is for the first time being updated only in Assam". Explain. What
could be the possible implication of new NRC list in Assam?

"एन.आर.सी. (नागरिक का राष्ट्रीय पंजीकरण) की पहली सूची 1951 वर्ष की जनगणना के अनुसार पूरे भारत में उसी
वर्ष बनाई गई थी। लेकिन इसे पहली बार असम में उद्धृत किया जा रहा है।" चर्चा करें। असम में नई एन.आर.सी.
सूची का संभावित प्रभाव क्या हो सकता है?

(150 words) 10 Marks.

2. Despite Financial Action Task Force (FATF) not having power to directly impose sanctions
against countries involved in terrorism financing, yet it has become the spearhead against
global efforts combating the financing of terrorism. Explain. Also discuss how it helps India to
deal with cross-border terrorism.

विश्वीय कार्य कल (एफ.ए.टी.एफ.) के बावजूद आतंकवाद वित्त पोषण में उपचार दूर करने का अधिकार नहीं है, फिर भी यह आतंकवाद के वित्त पोषण से निपटने के विभिन्न प्रयासों के खिलाफ
अम्ल बन गया है। चर्चा करें कि यह भारत की सीमा पार आतंकवाद के निपटने में कैसे सहायक है?

(150 words) 10 Marks.

3. "BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation)
is said to be desirable alternative to SAARC and an extra feather to India's Act East
Policy". Comment.

"बीएमएसटीईकी (बay of bёngal іntііatіоn fоr multі-ѕесtоrаl tесhісаl аnd есоnоmіс соореrаtіоn) ѕаіd tо bе dеsіrаblе аltеrntіvе tо SААRC аnd аn ехtrа fееthеr tо іndіа'ѕ Асt Еаst
роlісу". Соmmеnt.

(150 words) 10 Marks.

4. “Terrorism and global warming, though unrelated, but have many things in common.” In this
context discuss the objectives of Comprehensive convention on International Terrorism. Why
has it been elusive even after two decades of first draft proposal being made by India?

“आतंकवाद और ग्लोबल वार्मिंग, हालांकि असंबंधित है, लेकिन इसमें कई चीजें समान हैं।” इस संदर्भ में अंतरराष्ट्रीय
आतंकवाद पर व्यापक समझौते के उद्देश्यों पर चर्चा करें। भारत द्वारा तैयार किए गए पहले मसोदे प्रस्ताव के दो दशकों
के बाद भी यह प्रारंभिक रूप से है?

(150 words) 10 Marks.

5. The United States has pulled out of the Iran nuclear Deal, and instituted economic sanctions
on Iran. What is the rationale behind this decision? Discuss its likely impact on India and
the world.

संयुक्त राज्य अमेरिका ने ईरान पर प्रारंभ की सीमाएं से वापसी की है, और ईरान पर आर्थिक प्रतिबंध लगाए हैं। इस फैसले
के पीछे तक बयान है? भारत और दुनिया पर इसके संभावित प्रभाव पर चर्चा करें।

(150 words) 10 Marks.

6. India aims to run its first bullet train between Mumbai and Ahmedabad by 2022. What are the
technologies used in this high speed train? Also discuss the problems being faced in
implementation of this project.

भारत का उद्देश्य वर्ष 2022 तक मुंबई और अहमदाबाद के बीच अपनी पहली बुलेट ट्रेन का संचालन करना है। इस
हाई स्पीड ट्रेन में उपयोग की जाने वाली तकनीकों क्या हैं? इस परियोजना के कार्यान्वयन में आने वाली समस्याओं पर
भी चर्चा करें।

(150 words) 10 Marks.
7. What do you understand by space debris? What are the issues involved with them? Explain some of the technologies that can be deployed to clean the space junk.

अंतरिक्ष अवसरों से आय क्या मानते हैं? उनके साथ जुड़े-युक्त क्या हैं? अंतरिक्ष अवसरों को साफ करने के लिए स्वापित कूच तकनीकों की व्याख्या करें। (150 words) 10 Marks.

8. At least one cybercrime was reported every 10 minutes in India in the first six months of 2017. Critically scrutinize the reasons behind raising heights of cyber-crime in India and the government response to these crimes.

वर्ष 2017 के पहले छह महीनों में भारत में हर 10 मिनट में कम से कम एक साइबर क्राइम की सूचना मिलती थी। भारत में साइबर अपराध के विस्तार और इन अपराधों के कारण साफ करने के लिए प्रतिक्रियाएं की पीछे कारणों का आलोचनात्मक विश्लेषण करें। (150 words) 10 Marks.

9. Relations between India and Pakistan have been complex and largely hostile due to a number of historical and political events. A stable government and democratic Pakistan is in the best interests of its neighbourhood especially India. Discuss.

भारत और पाकिस्तान के बीच संबंध कई ऐतिहासिक और राजनीतिक घटनाओं के कारण काफी सीमित तक जटिल और प्रतिक्रियाशील रहे हैं। एक मजबूत सरकार और लोकतात्त्विक पाकिस्तान विश्वास रूप से भारत जैसे पुराने देश के लिए हिंसकार हैं। चर्चा करें। (150 words) 10 Marks.

10. Recent developments have shown a “pro-China” slant to Sri Lanka’s current foreign policy evident in the continued Chinese investment in Sri Lanka and its support of China’s position in the South China Sea dispute. Discuss whether the growing relationship between Sri Lanka and China should be a concern to India.

हाल के घटनाघटनों से चीन अपने चीनी निवासी और विदेशी चीन सात साथ विवाद में चीन की स्थिति के समर्थन में स्पष्ट रूप से श्रीलंका की व्यवस्था नीति के लिए एक “प्रो-चीन” दृष्टिकोण दर्शाया है। चर्चा करें कि क्या श्रीलंका और चीन के बीच बढ़त संबंध भारत के लिए हिंसात्मक विषय होना चाहिए। (150 words) 10 Marks.

11. “It is said that more than a manufacturing-centric Electric Vehicle (EV) policy, we need a set of ecosystem-level EV policies”. Comment in the light of constraints faced by EV industry in India. What are the advantages of EV over conventional fuel vehicles?

“ऐसा कहा जाता है कि एक वित्तियापन केन्द्रित इलेक्ट्रिक वाहन (ई.वी.) नीति से अधिक, हमें परिस्थितिक तंत्र-स्तर की ई.वी. नीतियों का एक समूह चाहिए।” भारत में ई.वी. उद्योग द्वारा सामना की जाने वाली बाधाओं की वृद्धि पर प्रकाश डालें। परिपरिणत ई.वी. वाहनों पर ई.वी. के फायदे क्या हैं?

(250 words) 15 Marks.

12. Fourth Industrial Revolution is characterised by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres. Critically discuss the role of 4th Industrial Revolution (IR) in tackling the major problem faced by the world.

चीनी औद्योगिक क्रांति उन प्रौद्योगिकियों के संलयन की विशेषता है जो भौतिक, डिजिटल और जैविक क्षेत्रों के बीच रेखाएं को धुंधला कर रहे हैं। दुनिया के सामने आने वाली बड़ी समस्याओं से निपटने में चीनी औद्योगिक पुनरुद्धार (आईआर.) की भूमिका का आलोचनात्मक विश्लेषण करें। (250 words) 15 Marks.

13. What do you mean by block chain technology? Do you think block chain technology is going to revolutionize the financial sector in coming years. Analyze. Also throw a light on status of block chain in India.

क्लोक श्रृंखला प्रौद्योगिकी का क्या अर्थ है? ऐसा समझावा है कि क्लोक श्रृंखला प्रौद्योगिकी आगामी वर्षों में वित्तीय क्षेत्र में क्रांतिकारी बदलाव करने जा रही है। विश्लेषण करें। भारत में क्लोक श्रृंखला की स्थिति पर प्रकाश डालें। (250 words) 15 Marks.
14. “Indo-Israel relation is mostly driven by national interest rather than any ideological readjustment”. Comment. Do you think relation with Israel would impact India’s historical commitment to the Palestinian cause?

“भारत-इजरायल संबंध ज्यादातर किसी भी विचारधारात्मक समायोजन के बजाय राष्ट्रीय हित में प्रेरित है।” दिया जा सकता है। वे आपको लगातार है कि इजरायल के साथ संबंध फिलिस्तीनी कारणों के लिए, भारत की ऐतिहासिक प्रभावहीनता को प्रभावित करेगा?

(250 words) 15 Marks.

15. Since Left Wing Extremism is result of accumulation of plethora of causes, the solution also has to be all encompassing. In this context, assess the effectiveness of Solution SAMADHAN by Ministry of Home Affairs.

"कारणों को उलझाने और तराशने के लिए माहौल निर्मल होने होते हैं। इस संदर्भ में, गुड मंगल द्वारा प्रायोजित "समाधान" के हल की प्रभावशीलता का आकलन करें।

(250 words) 15 Marks.

16. “No FIR, no arrest, no talk ... Judgment on the spot. Mob Trial seems to be the new fad in India” Critically comment. Also discuss the role of social media in fomenting mob trial. (15 Marks)

“कोई एफआईआर. नहीं, कोई गिरफ्तारी नहीं, कोई बातचीत नहीं.... मोके पर निर्णय। भारत में जन सुनवाई नया सिद्धांत प्रतीत होता है।” आलोचनात्मक विश्लेषण करें। जन सुनवाई का बढ़ावा देने में सोशल मीडिया की भूमिका पर चर्चा करें।

(250 words) 15 Marks.

17. As the grouping of five countries meets for the 10th BRICS summit at Johannesburg, this diverse group of nations with varying trajectories, continues to be seen as yet another ‘alphabet soup’ with limited potential to transform global governance structures. Critically examine the role of BRICS coalition in the altering worldwide order.

"जोहान्सबर्ग में 10वें ब्रिक्स शिखर सम्मेलन के लिए पाँच देशों का समूह मिलता है, जिसमें विभिन्न प्राधिकारों के बीच विवाद और संघर्ष का आंदोलन किया जाता है।" विश्वव्यापी क्रम में ब्रिक्स गठबंधन की भूमिका का आलोचनात्मक विश्लेषण करें।

(250 words) 15 Marks.

18. Through appropriate illustrations comment how the existence of great Indian diaspora and common colonial history has been influential in constructing decent association between India and various nations spread across the globe.

“भारतीय यात्रयोगी और अमेरिका की सामाजिक संघर्ष का अस्तित्व दुनिया भर में फैले भारत और विभिन्न राष्ट्रों के बीच संबंध बनाने में प्रभावशील रहा है।” दिया जा सकता है।

(250 words) 15 Marks.

19. The amount of Indian black money currently present in Swiss and other offshore banks is estimated to be Rs. 90 lakh crores. What measures has government taken to bring back this black money? Discuss the steps taken by the government to check its proliferation within the country.

"वर्तमान में जिस और अन्य अपतटीय बैंकों में मौजूद भारतीय काले धन की राशि 90 लाख करोड़ रुपये है। इस काले धन का बापास लाने के लिए सरकार ने क्या कठिन उठाए? देश के बीते अपने प्रसार की जांच के लिए सरकार द्वारा उठाए गए कदमों पर चर्चा करें।

(250 words) 15 Marks.

20. The Commonwealth of Nations is regarded as a hangover of the British colonial legacy. Has it lost its relevance in 21st century world? Critically examine the importance of a rejuvenated commonwealth 2.0 for India.

"राष्ट्रमंडल देशों को ब्रिटिश औपनिवेशिक विस्तार का एक बुरा नतीजा माना जाता है। क्या दूसरी शताब्दी की दुनिया में इसकी प्राथमिकता खो गई है? गंभीर रूप से भारत के लिए एक काल्पनिक राष्ट्रमंडल 2.0 के महत्व का परिवर्तन करें।

(250 words) 15 Marks.
14. **Pressure belts on earth’s surface appear to move along with the Sun. Elaborate. What is the impact of moving Pressure belts on the formation of various climatic regions across the globe? Discuss its socio-economic significance.**

Pressure belts on the Earth's surface appear to move along with the Sun. This phenomenon is attributed to the Earth's axial tilt and its revolution around the Sun. As the Earth rotates, the pressure belts, which are regions of high and low pressure systems, drift with the Sun. These pressure belts play a crucial role in the formation of various climatic regions across the globe. The impact of these pressure belts on climate formation is significant, influencing temperature, precipitation, and wind patterns. The socio-economic significance of understanding these phenomena lies in better preparedness for climate-related challenges, such as droughts, floods, and extreme weather events. This knowledge is essential for policymakers and researchers to develop effective strategies to mitigate the effects of climate change.

15. **India is world’s second largest cement market, both in production and consumption. Discuss the factors favoring this production with reference to distribution across India.**

India is the world's second-largest cement market, with significant production and consumption. The factors favoring this production include a robust infrastructure development, urbanization, and industrial growth. The distribution of cement production across India is influenced by several factors, such as proximity to raw material sources, labor availability, and accessibility of markets. Strategic investments in infrastructure, such as roads and railways, have facilitated better connectivity and distribution, enhancing the production and consumption of cement.

16. **Wetlands are considered as the kidneys of the cities. Explain. With reference to threats faced by wetlands, Discuss how new Wetland (Conservation and Management) Rules 2017 addresses it?**

Wetlands, known as the kidneys of cities, play a vital role in regulating water cycles, providing habitat for diverse wildlife, and supporting aquatic ecosystems. They are prone to threats such as pollution, habitat loss, and drainage. The Wetland (Conservation and Management) Rules 2017 aim to protect and conserve wetlands by regulating their use and development. These rules address threats by imposing restrictions on activities that could harm wetlands, such as draining and filling for real estate development.

17. **Increasing Dalit rights assertions in India have unleashed a wave of backlash violence and abuse against Dalits. In light of the statement, explain the reasons for new Dalit assertions by Dalits in India with suitable examples.**

Increasing Dalit rights assertions in India have led to a backlash of violence and abuse against Dalits. The reasons for new Dalit assertions include socioeconomic inequalities, discrimination, and exclusion. Examples include protests and movements against caste-based discrimination, such as the Dalit March against Caste Discrimination in 2013, which highlighted the need for social justice.

18. **It is said that the preference for sons and strict legal enforcement of PCPNDT act has led to the issue of Unwanted girls in India. Discuss. Suggest corrective measures.**

The preference for sons and strict enforcement of the Pre-conception and Pre-natal Diagnostic Techniques (PCPNDT) Act have contributed to the issue of unwanted girls in India. Corrective measures include awareness campaigns, providing incentives for girls, and strengthening the legal framework to penalize cases of gender bias.

19. **Globalization has made revolutionary changes in family structure of India—a total break from the continuity of the past. Comment.**

Globalization has indeed transformed family structures in India, moving away from traditional models. This change is marked by a decline in extended family living arrangements and an increase in nuclear family units.

20. **“In spite of the perceptible decline in Total Fertility Rate (TFR) from 3.6 in 1991 to 2.3 in 2013, India is yet to achieve replacement level of 2.1 as some states like UP and Bihar with large population base still have TFR of 3.1 and 3.4 respectively”. In the light of the statement discuss the social determinants of the population growth.**

The decline in TFR from 3.6 in 1991 to 2.3 in 2013 is significant, but India has not yet reached the replacement level of 2.1. States like UP and Bihar, with large populations, still have TFRs of 3.1 and 3.4. This indicates that social factors, such as education, economic status, and cultural norms, continue to influence fertility rates.
1. “Betting and gambling have always been an integral part of Indian tradition”. Would it be prudent to legalize betting and gambling in India? Discuss.

(150 words) 10 Marks.

2. “Shanghai Cooperation organization is a forum with multiple conflicting interests and is fully aligned with China’s vision of global order.” In this context, what can India gain by joining this group?

(150 words) 10 Marks.

3. India accounts for approximately one third of the world's total population of stunted preschoolers. What are the determinants of stunting? Critically analyse the steps taken by the government to tackle this situation. What else needs to be done?

(150 words) 10 Marks.

4. To what extent Right to Life has been able to preserve human rights in India? In this context, critically analyze the role played by judicial and quasi-judicial bodies.

(150 words) 10 Marks.

5. Corruption is the cancer that is hurting Indian society and economy very badly. What are the reasons for prevalence of corruption in Indian bureaucracy? Suggest ways to make bureaucracy incorruptible.

(150 words) 10 Marks.

6. What are the institutes of eminence? Will these institutes make it to the lists of top ranked global universities?

(150 words) 10 Marks.

7. “Aadhaar is being considered a panacea to all kinds of misgovernance. However, it has a lot of potential for misuse.” In this context, discuss the effectiveness of Aadhaar in ensuring good governance.

(150 words) 10 Marks.
8. “You can change friends but not neighbours.” Discuss the relevance of above statement in International relations. How should India calibrate its foreign policy towards Pakistan in the current scenario?

(150 words) 10 Marks.

9. To what extent 73rd and 74th constitutional amendments have established participatory democracy in India? What are the challenges in improving citizen’s effective participation?

(150 words) 10 Marks.

10. “Section 497 of the IPC is weighted in favour of men.” Do you agree? Is it violative of the fundamental rights granted to citizens of India?

(150 words) 10 Marks.

11. NITI Aayog was established to act as a platform to foster Cooperative Federalism and be a premier policy ‘Think Tank’ to provide policy inputs. Do you think it has made any improvements over planning commission?

(250 words) 15 Marks.

12. “Far from being deliberative, the Rajya Sabha appears to have descended into the same fickleness and passion as the Lok Sabha and has shown a disconcerting trend away from the decorum expected from it”. In the light of the statement critically analyze the relevance of the Rajya Sabha in Indian polity.

(250 words) 15 Marks.

13. Indian constitution is essentially a borrowed constitution - a patchwork of several documents of the world constitutions. Comment. Do you think the foreign nature of our constitution has led to neglect of political traditions and spirit of India?

(250 words) 15 Marks.

14. “Model code of conduct in election is essentially a moral code of conduct which lacks teeth for its enforcement”. In the light of the statement comment on the necessity of giving statutory backing to model code of conduct.

(250 words) 15 Marks.
1. “Economic Reforms are work in progress.” Do you think India has taken too long to implement the reforms? Assess the impact of 25 years of economic reforms on different aspects of economy.

(150 Words - 10 Marks)

2. Recently Rupee depreciated to the historic low value vis a vis Dollar. Give reasons for this fall in value. What is ideal exchange rate for India and what steps are taken by the central bank to achieve the same?

(150 Words - 10 Marks)

3. “Economic activities are being affected by the realities and long shadow of delays and pendency across the legal landscape.” In this context discuss the reasons for pendency and delay of economic cases. Also suggest measures to deal with this issue.

(150 Words - 10 Marks)

4. “India has moved from an environment of 'crony socialism' to one of 'stigmatised capitalism', making the environment for policy reforms a tough one.” Discuss the above statement in the context of changing role of private sector in Indian economy.

(150 Words - 10 Marks)

5. Despite the success of Green Revolution, the quantity of imported edible oils is more than the domestic production of edible oils in India. Why? Suggest concrete measures to reduce this import dependency.

(150 Words - 10 Marks)

6. What are the security features in Electronic voting machines being used in India? Should we continue with EVM or shift to paper ballot, as few developed countries have done?

(150 Words - 10 Marks)
VEER PRATAP SINGH, Rank- 92 CES-2018

I did Mains Test Series (G.S. + Essay) in Dhyeya IAS. Here I found two things remarkable and unparalleled - first one-to-one copy evaluation and 2nd Act of Essay writing.

Apart from quality question papers and their model answers, one-to-one copy evaluation helped me immensely in UPSC Mains 2018. Copy evaluation in front of me helped me to rectify my mistakes in G.S. papers and Essay.

In Essay, I struggled a lot in previous two attempts & scored only 127 & 122. This year under the guidance of Preyush Sir and Madhusudan Sir (DHYEYA IAS), I learnt the art of answer & essay writing. They told me in detail how to write introduction, body and conclusion of an essay to fetch good marks. I am very grateful to Dhyeya IAS. It’s very difficult for me to express my gratitude in words to Preyush & Madhusudan Sir.

This year I scored 412 in G.S. & 147 in Essay.

Veer Pratap Singh
AIR- 92, CES-2018
A lot of factors contributed in my journey from failure to success (AIR 280) over the past 5 years. Being associated with Dhyeya IAS was one of the majors. I was enrolled into a mains test series and was immensely benefited by the regular writing practice of quality questions. The personal guidance provided by Rohith sir and Prakash sir rectified my flaws and gave new dimensions to my GS answer writing. It was especially helpful in ethics paper which boosted my mark from 89 (2017 mains) to 111 (2018 mains).

I then Dhyeya family specially thank Sir for all the support provided. Wishing good luck.

(MD. Jawed Hussain)

AIR - 280, CS 2018
Write two essays, choosing one topic from each of the following Sections A and B, in about 1000–1200 words each:

खण्ड—A / Section—A

1. जलवायु परिवर्तन के प्रति सुनिश्चय भारत हेतु वैश्विक तत्त्वकर
   Alternative technologies for a climate change resilient India

2. एक अच्छा जीवन प्रेम से प्रेरित तथा ज्ञान से संचालित होता है
   A good life is one inspired by love and guided by knowledge

3. कहाँ पर भी गरीबी, हर जगह की समुद्रियों के लिए खतरा है
   Poverty anywhere is a threat to prosperity everywhere

4. भारत के सीमा विवादों का प्रबन्ध—एक जटिल कार्य
   Management of Indian border disputes—a complex task

खण्ड—B / Section—B

5. कृषिगत पैतृकता आधुनिक जीवन का मार्गदर्शक नहीं हो सकती है
   Customary morality cannot be a guide to modern life

6. 'अतीत' मानवीय जीवन तथा मूल्यों का एक स्थायी आधार है
   'The past' is a permanent dimension of human consciousness and values

7. जो समाज अपने सिद्धांतों के ऊपर अपने विश्वासधिकारों को महत्त्व देता है, वह दोनों से हाथ घोड़ी देता है
   A people that values its privileges above its principles loses both

8. व्यवस्था आदर्श के अनुरूप नहीं होता है, बल्कि उसकी पुष्टि करता है
   Reality does not conform to the ideal, but confirms it

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CST-G-CSSP/38 2 BS9—10674
ESSAY - 1

Write two essays, choosing one from each of the following Section A and B, in about 1000-1200 words each:

निम्न खण्ड A व B प्रत्येक से एक विषय चुन कर दो निबंध लिखिए जो प्रत्येक 1000-1200 शब्दों के हों।

खण्ड 'A' SECTION 'A'

1. Sunrise industries: can this be the next big thing for India?
   नवोदित विकासशील उद्योग : क्या यह भारत के लिए सर्वोत्तम वात हो सकती है?

2. Smart city without smart citizens is a myth.
   स्मार्ट नागरिकों के बिना स्मार्ट शहर एक मिथक है?

खण्ड 'B' SECTION 'B'

1. Extreme poverty anywhere is a threat to human security everywhere.
   कहीं भी अत्यधिक गरीबी इस जगह मानव सुरक्षा के लिए खतरा है।

2. An eye for an eye only ends up making the whole world blind.
   आँख के बदले आँख का सिद्धांत विश्व को केवल नेत्रहीन बना सकता है।
3. Extreme poverty anywhere is a threat to human security everywhere

Structure of the essay

Introduction:
- It may contain simple but broad definition of poverty or any anecdote or any interesting fact or quote which can show the linkages of extreme poverty and threat to human security
- It should also give the glimpse of what is to be followed in the essay.

Body:
Broadly it will have following parts
- (If started with anecdote/fact/quote etc) then it may start with definition of poverty in widest sense
- In subsequent paragraphs, the candidate must show the linkages between extreme poverty and how it impacts human security everywhere in multiple dimensions with concrete examples/facts.
- Next arguments can be made as to how poverty alleviation can bring positive changes

Conclusion:
- Conclude on a positive note by suggestions for poverty alleviation and importance of it for everyone’s prosperity.

Content of the essay

Quotes:
- “Poverty is the worst form of violence.”- M K Gandhi
- “Poverty is the parent of revolution and crime.”- Aristotle, Greek philosopher
- Poverty definition: In most simple terms, Poverty is the scarcity of resources. Poverty is a multifaceted concept, which may include social, economic, and political elements. Extreme poverty refers to the complete lack of the means necessary to meet basic personal needs such as food, clothing and shelter

Facts:
- Nearly 1/2 of the world’s population — more than 3 billion people — live on less than $2.50 a day. More than 1.3 billion live in extreme poverty — less than $1.25 a day.
- India has been ranked 37th out of 103 nations in the 2017 global Multi-dimensional Poverty Index (MPI), according to a new report by the Oxford Poverty & Human Development Initiative.

Different dimensions showing threat to human security by extreme poverty

Regional poverty source of conflict
- International poor regions: Afghanistan, Congo, Somalia
- National poor regions: North East, Bastar, Chattisgarh
- Both hotbed of terrorism and insurgency/naxalism and thus threat to other regions of country and world
**Historical precedent:**
- Background of Germany in terms of high unemployment, inflation and massive poverty and hunger and rise of Fascism in such circumstances and later threat to Europe and World
- After decolonization, many poverty stricken regions in Africa and rise of book harams, ISIS etc

**Moral paralysis and crimes:**
- Poor youth taking up organized crimes, drug/arms/human trafficking; e.g. Mexico, Golden crescent and golden triangle amidst poor regions::
- This money later fund terrorism e.g. Taliban opium cultivation

**Economic vulnerability**
- Poverty leads to decreasing of demand. It increases vulnerability to Recession e.g. 1930 Great depression was the result of greedy capitalism. It latter threatened the whole world by massive unemployment, hunger, fall in currency etc
- Abject poverty has made china’s investment led growth model unsustainable in the face of global slowdown

**Inequality led crisis at both national and subnational level**
- 49% of population depends upon agriculture which contributes only 18% of GDP; 17 states have agricultural income below Rs 20000 per annum
  - New farmers movement and trouble to people
  - it is leading to rural urban migration and consequent problems in urban areas like Slum etc (rural poverty making problem to urban areas). Similarly sons of soil doctrine led clashes because of intense competition for meager resources
- Forced migration at international level leading to source of conflicts e.g. Syria and Europe, Rohingya crisis

**Health crisis**
- Poor are more vulnerable to communicable diseases. it may threaten other regions e.g. Ebola, Polio

**Environmental degradation**
- Poor access to technological resources leading to environmental degradation like jhum cultivation, Haryana stubble burning and smog in Delhi
- Access to polluting source of fuel leading to green house gas emissions and indoor pollution

**Case study** of poverty alleviation at one place leading to prosperity at wider level.
- AMUL cooperatives and white revolution
- Kudumbshree SHG in Kerala

**Efforts needed**
- National efforts
Doubling of Farmer's income. A study made by Montek Singh Ahluwalia brought out clearly that agricultural growth and poverty are inversely related; E.g. Rural poverty ratio in Punjab and Haryana declined to 6.4 and 8.3 per cent respectively in 1999-2000. Implementation of M S Swaminathan committee recommendations like raising of MSP etc.

Speedy Development of Infrastructure to generate employment opportunities for the poor and to raise their productivity; It will consist of building of roads, highways, ports, telecommunication, power and irrigation.

Accelerating Human Resource Development: It requires greater investment in educational facilities such as schools to promote literacy, technical training institutes and vocational colleges to import skills to the people. It also demands healthcare by public investment in Primary Health Centres, dispensaries and hospitals. The experience of East and South-East Asian Countries and Kerala in our country shows that poverty can be significantly reduced through investment in human resource development.

Direct Attack on Poverty – Special Employment Schemes for the Poor: e.g. Success of MGNREGA in reducing rural poverty.

It will require implementation of schemes like SarvaShikhaAbhiyan, Ayushman Bharat, Make In India, Skill India, MNREGA, Start up India, Encouraging MSMEs among others.

At international level:

Sustainable development goals implementation

Paris climate deal and climate finance

Financing of development projects by multinational banks specially refinancing micro finance.

Can be used in Conclusion:

- Philosophy of VasudhaivKutumbkatam
- Wipe Every tear from every eye

2. An eye for an eye only ends up making the whole world blind

Structure of the essay

Introduction:

- It may contain simple explanation of the quote along with identification of the author (if you know). It may also have any anecdote or any interesting fact which can show how an eye for an eye has ended up making the whole world blind.
- It should also give the glimpse of what is to be followed in the essay.

Body:

Broadly it will have following parts

- Here candidate must show the how the attitude of an eye for an eye has made the whole world blind in multiple dimensions with concrete examples/facts.
- How this approach might give result in short run but is a failure in the long run
- Way forwards along with case studies to show the effectiveness of the it
3. कहीं भी अत्यधिक गरीबी हर जगह मानव सुरक्षा के लिए खतरा है

निवेदन की संचरणा

परिचय:

- इसमें गरीबों का सतर्क लेखन व्यापक परिभाषा या किसी भी उपाध्ययन या किसी भी रोचक तथ्य या उदारण हो सकती है जो अत्यधिक गरीबों और मानव सुरक्षा के लिए खतरे के संरक्षण को दर्शा सकता है।
- निवेदन में क्या उल्लिखित होना चाहिए कि किसी भी एक झलक प्रदान की जानी चाहिए।

मुख्य भाषा:

- व्यापक रूप से इसमें निम्नलिखित भाषा होंगे:
  - परिवार के अर्थ में गरीबों की परिभाषा से शुरू हो सकता है।
  - बाद के अन्य चित्रों में, उम्मीदवार का अत्यधिक गरीबी और लोग उদारता के साथ कई आयामों में हर जगह मानव सुरक्षा की कौशल प्रभावित करता है, इसके बीच संबंध दर्शाया जाना चाहिए।
- अगले तक्त इस बात पर दिया जा सकता है कि कौन से गरीबों उपुल्लस नकाशात्मक परिवर्तन ली सकता है।

परिवर्तन के लिए विषय-वस्तु:

- उदारण:
  - "गरीबी हिंसा का सबसे बुरा स्वरूप है।" - एम.ई., गांधी
  - "गरीबी क्रांति और अपराध की जनक है।" - अर्पिदित, युगान्त मार्गित
- गरीबों की परिभाषा: सबसे सतर्क शरीरों में, गरीब समाज को आधिकारिक है। गरीबी एक बहुमुखी अवधारणा है, जिसमें सामाजिक, आर्थिक और राजनीतिक तत्त्व प्रासंगिक है। अत्यधिक गरीबी खात्री, कपड़े और आबादी जैसी दुनियापर व्यक्तित्व जहां दुनिया से पूरा करने के लिए आवश्यक समयों के पूर्ण अभाव को दर्शाती है।

तथ्य:

- दुनिया की आबादी का लाभवान 1/3 दर्शन 3 अरब से अधिक लोग - दिन में 250 दौर्ग में कम पर आश्रित रहते हैं। अत्यधिक गरीबों में 1.3 अरब से अधिक लोग एक दिन में 125 दौर्ग में कम पर आश्रित रहते हैं।
- ओस्कर्स्कोर्ड़ गरीबी और मानव विकास पहल की एक नई रिपोर्ट के मुताबिक 2017 वैश्विक बहु-आयामी गरीबी सूचकांक (एम.पी.आई.) में 103 देशों में से भारत 37वें स्थान पर है।

अत्यधिक गरीबों से मानव सुरक्षा को दर्शाते हुए विभिन्न आयाम

- क्षेत्रीय गरीबी विवाह का स्वयं
- अंतरराष्ट्रीय गरीब क्षेत्र: आर्थिक, राजनीतिक, राजमार्ग
- राष्ट्रीय गरीब क्षेत्र: उत्तराखंड, बंगाल, चर्चीसबां
- दोनों आतंकवाद और विद्रोह/विकासीवाद के अभाव इस प्रकार देश एवं दुनिया के अन्य क्षेत्रों के लिए खतरा है।

एवं राष्ट्रात्मक उदारवाद:

- उन्नत बेचेजीय, मुद्राश्रमी, भारी गरीबी एवं बुखारी और ऐसी परिस्थितियों में फास्कीवाद के उदय और बाद में यूरोप एवं दुनिया के लिए खतरे के मामले में जर्मनी की पृष्ठभूमि
- राजनीतिक स्वतंत्रता के बाद, अफगानिस्तान में कई गरीबों प्रभावित क्षेत्रों और अन्य हरम, एक्स.एस.एस. एच का उदय
नैतिक पाठ्यांतर और अपराधः

- गरीब युवा संगठित अपराध, दवा/हथियार/मानव तस्करी में संलग्न हो रहे हैं; जैसे गरीब क्षेत्रों के बीच मेकिस्को, गोल्डन किन्जिट और गोल्डन ड्रागेनः

- यह पैसा बाद में आतंकवाद के लिए निधि कोष के रूप में काम करता है उदाहरण तालिका अफ़ग़ान की ख़ती आर्थिक भूमिका

- गरीबों के कारण मंग भी हमेशा आती है। यह मंग के लिए प्रभावित को बढ़ाता है उदाहरण वर्ष 1930 आतंकित मंग होती पूज्विका का परिणाम था। बाद में थूड़ी सुधारों को भारी बंद्राजगरी, भूख, मुद्रा में गिरावट आदि की चेतावनी दी गई है।

- गरीबों ने चीन के निवेश के नेतृत्व वाले मांडल को जीवित करने अनुभवर्षीय बना दिया है।

अक्षमता ने राष्ट्रीय और उपनिवेश दोनों संरक्षण पर संकट का नेतृत्व किया

- 49% आबादी कुशल पर निर्भर करती है जो सकल चेतानुपाद का केंद्र 18% योगदान देती है; 17 राष्ट्रों में सालाना 20000 रुपये से कम कुशल आय होती है

- नए खिसकों की आवाजाही और लोगों के परंपराओं

- यह ग्रामीण शहरी प्रवास की और आवश्यक है और शहरी क्षेत्रों में दुर्गी-दोपही क्षेत्रों जैसी समस्याएं (ग्रामीण गरीबी बनाने का समय शहरी क्षेत्रों में समस्या) हैं। इसी प्रकार मातृ भूमि के बेंट को कम संस्थाओं के लिए लोकों प्रतिस्पर्धा के कारण संपत्ति का सामना करता पड़ रहा है।

- अंतरराष्ट्रीय स्तर पर जबर्दस्त प्रवास विवादों के रूप में लिए अग्रणी है उदाहरण सीरिया और यूरोप, रोडिया संकट

स्वास्थ्य संकट

- गरीबी तौर स्वास्थ्य गृहमारीयों के लिए अधिक संवेदनशील है। यह आम क्षेत्रों के चेतात्मक दे सकते हैं उदाहरण इंटरला, पॉलियो

पर्यावरणीय युद्धवांश

- तकनीकी संस्थाओं तक खराब पहंच जिससे प्रयास में गिरावट आती है जैसे कि जम्मू की खेती, हरियाणा में जले हुए बूिसे से उत्पन्न झुई

- ईर्षण के प्रदूषण ध्वनि तक पहुँच ग्रीन हाउस मैत्री उत्पत्ति और आतंकित प्रदूषण को बढ़ावा देता है

- गरीबी उन्मुखता का क्रेस अभियान एक ही स्थल पर व्यापक स्तर पर समृद्धि की ओर आगे है।

- अमूल सहायता संस्थाओं और सरकेट क्राइड़

- केंद्र में कुलन्द्रशी एच.एच.जी.

आश्वयक प्राप्त

- किसान की आय को दोगुना करना- मोर्चे संहि अहलवालिया द्वारा किया गइ एक अध्ययन ने स्पष्ट रूप से बताया है कि कृषि विकास और गरीबी विपरीत रूप से सम्बंधित है; जैसे कि 1999-2000 में पंजाब और हरियाणा में ग्रामीण गरीबी अनुज्ञ बढ़े: 6.4 और 8.3 प्रतिशत था। एम.एस. स्वामीनाथन संस्थान संस्थान संस्थान संस्थान संस्थान संस्थान का कायाविषय जैसे एच.एच.जी. का उल्लम्ब आदि।

- गरीबों के लिए बंदोजग अंश उपयोग करने और उनकी उपयोगकर्ता बढ़ाने के लिए बुनियादी ढाँचा का त्वरित विकास; इससे सड़कों, राजमार्ग, बंदरगाह, दुर्योगचार, बिजली और इलेक्ट्रिकल संसाधन शामिल होंगे

- मानव संसाधन विकास में तेजी लाभ: लोगों को कृपया आजार प्रवास के कारण साक्षरता, तकनीकी प्रशिक्षण संस्थाओं और अधिकारियों की सहायता को बढ़ावा देने के लिए स्कूलों में शैक्षणिक सुविधाओं में अधिक निवेश को आवश्यकता होती है। यह प्राकृतिक स्वास्थ्य केंद्र, दवाऱां और अस्पतालों में अधिक निवेश द्वारा स्वास्थ्य देखभाल की मांग भी करता है। हमारे देश में पूर्व दक्षिण-पूर्व एशिया देशों और कोलंबो के अनुभव से पता चलता है कि मानव संसाधन विकास में निवेश के माध्यम से गरीबों को काफी हद तक कम किया जा सकता है।
4. आँख के बदले आँख का सिद्धांत विश्व को केवल नेत्रहीन बना सकता है।

निबंध की संरचना:

परिचय:
- इसमें लेखक की पहचान के साथ उद्धरण के साथ सम्पूर्णकरण हो दर्शाई है (यदि आप जानते हैं)। इसमें कोई भी उपेक्षा या कोई रोको करके हो सकता है जो दर्शाई है कि कंटेक हर आँख पर नजर से पूरी दुनिया को नेत्रहीन बनने से रोका जा सकता है।
- निबंध में क्या उल्लिखित होना चाहिए, इसकी भी एक इतत चरण का आनी चाहिए।

मुख्य भाग:
- व्यापक रूप से इसमें निम्नलिखित भाग होगें
- यहां हमींदर को यह दिखाना चाहिए कि ठोस उद्धरण/उद्धरण के साथ कई आयोज में कंटेक करके हर आँख पर नजर से पूरी दुनिया को नेत्रहीन बनने से रोका जा सकता है।
- इस दृष्टिकोण से परिणाम को वर्ण करके कम करने के लिए सक्षम हो सकते हैं लेकिन लंबे समय के लिए विफल है
- कंटेक अध्ययन के साथ इसके प्रभाव को दर्शाने के लिए आगे बढ़े।

निष्कर्ष:
- शास्त्रपूर्ण परस्पर सह-असलित की और एक दृष्टिकोण के साथ सकारात्मक नोट द्वारा निष्कर्ष निकालें

निबंध के लिए विवरण-वस्तु
- उद्धरण: गंभीर जी ने प्रतिशोध के विनाशकारी परिणामों को उजागर करने के लिए यह उद्धरण दिया।
- प्रत्येक आँख पर नजर के दृष्टिकोण के भयानक परिणाम दिखाते हुए विविध आयाम

एंटीहासिक उद्धरण
- अंतर्गत राजकुमार की मौत के बदले लेने की भावना ने पूरे को विश्व युद्ध 1 में धकेल दिया।
- वर्तमान संघ का बदला लेने वाले हिटलर ने ब्रांचवाल के विकास को जन्म दिया जो बाद में दूसरी विश्व युद्ध को बढ़ावा देने का कारण बना।
- हिंदुओं और मुसलमानों के बीच भारत में विभाजन के बाद संघर्ष
- कृतिदान युद्ध में आपसी विरोधाभास के कारण संघर्ष के विविध भावना अभिव्यक्त (जैसे कूद्दु, विवशन, कॉरिया)

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- व्यक्तिगत स्तर पर, व्यक्तिगत दृष्टियों में गिरावट, दृष्टियों के बीच परिवार्षिक संबंध (उद्धरण के लिए पारिवारिक इग्लें) के चलते पावर के सदस्यों की हत्या की जा रही है।
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