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The Significance of Sustainable Coastal Management for Ocean Environment and Development of Indian Economy

Bangladesh Acquiring a Central Position for India's Cross Border Energy Trade in South Asia

India Becoming Self-Reliant in Space Sector: Startups and Private Sector Getting Access to Space

Operation Octopus: CPRF Fighting Naxalites and Left-Wing Violence

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Director's Message



Mr. Vinay Kumar Singh

The guiding philosophy of the institute, throughout, has been creation of knowledge base. Dhyeya IAS inculcates human values and professional ethics in the students, which help them make decisions that are good not only for them, but also for the society, for the nation, and for the world as a whole. To fulfil its mission in new and powerful ways, each student is motivated to strive towards achieving excellence in every endeavor. It is done by making continuous improvements in curricula and pedagogical tools.

The rigorous syllabi not only instil in them, a passion for knowledge but also attempts to teach them how to apply that knowledge in real-life situations. The programmes lay emphasis on well-rounded personality development of the students and also inculcate the values of honesty and integrity in them.

Yours very truly,

Vinay Kumar Singh
CEO and Founder



Mr. Q H Khan

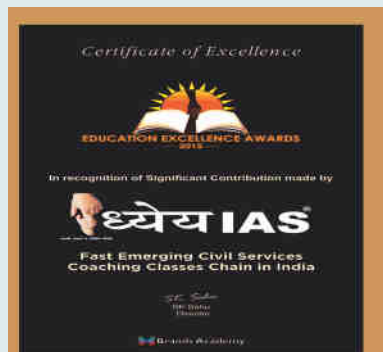
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Yours very truly,

Q H Khan
Managing Director

PREFACE



Current Affairs has an important role in the examinations conducted by Union Public Service Commission and State Public Service Commissions. It is necessary for the candidate to have knowledge of relevant information on issues of national and international importance. Perfect 7 Magazine is being presented fortnightly in front of the students to fulfill this requirement. Preparation of civil services exam is only completed when candidates have holistic knowledge and analysis of the dynamic nature of the current affairs. 'Perfect7' keeps this vision and approach and understands the multidimensional need of students at the content level, so this magazine has presented the current affairs with relevant issues of general studies. Keeping in mind the mains exam, current articles on 7 burning issues, Ethics Case Studies, Biographies of important personalities, coverage of most useful topics of various sections of General Studies and the most important current affairs issues are being covered for Preliminary Examination in which emphasis is being given on environmental, ecology, art and culture, science and technology, economy issues. A short section on Terminology will also be part of Perfect 7 Magazine.

Brain boosters with 7 themes based graphics are being presented in a concise form to enhance the conceptual understanding of the students. Apart from this, updated information on Global Initiatives, Global Institutions, Structure of Organizations, Functioning, Important Reports, and Indices will be included in this magazine, which is asked prominently in the Civil Services Examination. To give emphasis on facts and analysis, keeping in view the trends of new nature of questions in Preliminary and Main Examination of Civil Services, an inclusive magazine is being provided to the students so that they can give the right direction to their preparation by understanding the new requirements of Civil Services Examination. We hope that Perfect 7 in its new form will prove to be very useful. Your suggestions are always welcome.

Vinay Kumar Singh
Founder
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7 IMPORTANT ISSUES



The Significance of Sustainable Coastal Management for Ocean Environment and Development of Indian Economy

Sustainable coastal management in India is not only essential for ocean environment but it is also crucial for the internal security as well as the national security. Since India has a vast coastline, integrated coastal management system becomes even more necessary. India's ministry of environment, forest and climate change, on September 10, inaugurated its first National Conference on Sustainable coastal management in Bhubaneswar. Through this Indian government prioritised issue of coastal securities. Conference is specially important as it has sympathetically considered the issues of coastal communities living near the coastline and how they can be safeguarded from the severe impacts of climate change. Conclusively, the conference emphasized on the need of coastal management system so that the coastal community can be shielded from the drastic effects of climate change. Furthermore, the coastal management is crucial in regard to natural calamities like tropical cyclones and Tsunami which destroy the Indian coastal areas as well as they drastically impact the coastal ecosystem. It is a well known fact that Indian coastal region is crucial for ocean trade, development of blue economy, as well as for providing a test ground to Indian navy.

Importance of integrated coastal management in India:

- Integrated coastal management is one of that necessary requirement for Sustainable

development, overall development and low carbon economy. Therefore, Indian government brought 13 states on a common stage through National Conference on Sustainable Coastal Management and encouraged dialogues on strategy for integrated coastal management. These 13 coastal states were encouraged to cooperate on the crucial issues of coastal species diversity, marine diversity, adapting to climate change and addressing coastal pollution. Moreover, the 6 projects under, Enhancing Climate Resilience of India's Coastal Communities that are operational from 2019 to 2024, were asked to be implemented more assertively. Ministry of environment, forest and climate change is implementing these projects with the help of UNDP. The main motive behind these projects is to safeguard to unprotected communities especially women. Nevertheless, the Indian coast is further important from strategic, economic and social point of view as it is 7th largest coastline in the world and almost 20% of the total Indian population resides in these coastal areas.

- Under this project, an investment will be made on the ecological infrastructure to effectively deal with the risks arising out of climate change. These projects especially emphasize on the capability development

for effectively dealing with the natural calamities like cyclones and storms. Further, it emphasizes on the protection of the livelihood in the coastal areas and it strives to direct the planning and governance of the coastal area to a right direction. The better this project is implemented, the better it will contribute in achieving the climate goals set under National Action Plan on Climate Change 2008. Furthermore, it will be easier to achieve the goals that Indian government determined under Nationally Determined contribution(NDC), 2015.

- This Project is also financially supported by Green Climate Fund. Its worth mention, that Green Climate Fund is constituted by 194 countries of the world and its main aim is to reduce the green house gas emissions and aid in the projects that strive to deal with the climate change. It is a global financial platform that works under auspices of United Nations Framework Convention on Climate Change(UNFCCC) and financially aids for climate change reduction and adaptations.

Measures and initiative in India for sustainable coastal development :

- For sustainable coastal management in India the ministry of environment forest and climate change is executing several plans and schemes.

For instance, National plan for conservation of active ecosystems which works for conservation and management of wetlands on the coastal areas. Also, under conservation and management of mangrove and coral reef program the coral reefs and mangroves are managed and conserved. Further, development of wildlife habitat for conservation and management of protected areas in the country also contributed in strengthening the coastal management. Ministry of Home Affairs India also has implemented an integrated coastal zone management project which was aided by World bank. This project was implemented between 2010-20 in Gujarat, Orissa and West Bengal and its main objective was to conserve the coastal and marine environment. Apart from this, the Indian government, more specifically the ministry of environment approved the budget allocation of 87 crores to the national coastal management program for fiscal year 2021-22 and 2025-26. It's worth mentioning here that in fiscal year 2019-20, 2020-21 and 2021-22 the budget allocation was made 75 crore, 61 crore and 22 crore respectively. However, this year total 87 crore was allocated for this project.

Why the Coastal security is crucial?

- India has 7516.6 km long coastline which is vulnerable to Anti National activities. Indian coastline is surrounded by the Bay of Bengal in the east, by Arabian Sea in the west and in the south it has Indian Ocean apart from mainland and islands. On various occasions, the Indian coastline was put to danger due

to several events of infiltrations and smuggling of weapons, explosives, narcotics, gold and several other objects. The physical proximity of the Indian coast with Sri Lanka, Bangladesh, and other gulf countries has made the coastline even more vulnerable. The eastern coast is near to the gulf countries and this proximity was the reason that the trade from India's West Coast to gulf and East African countries was done through sea route. However, the incidents of piracy affected the interest of many nations including India.

- The security of, important strategic ports, special economic zones, energy projects, and nuclear energy reactors situated in the coastal States, from non state agents like terror organisations, extremist groups, and separatist groups is an issue of national interest and national security. The security of coastal States like Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamilnadu, Andhra Pradesh, Odisha, West Bengal, Daman Diu, Lakshadweep, Puducherry and Andaman and Nicobar group of Islands is essential for India.

Measures taken for Coastal Security in India:

- With the object of securing India's coastline by way of Coastal Security Scheme Phase 1 and Coastal Security Scheme Phase 2 efforts have been made to patrol, monitor and strengthen the infrastructure in these areas. Under these, measures have been taken to prevent illegal movement and control criminal activity in the coastal areas through establishing coastal police stations, outposts and check posts.

The Indian Navy has opened up Joint Operations Centers in Mumbai, Visakhapatnam, Kochi and Port Blair after the Mumbai attack. All coastal security operations are coordinated by these centres and work is being done to strengthen the security efforts by the State Marine Police, Intelligence Bureau and other intelligence agencies and moreover due consideration has been given by the Government of India and the State Governments towards strengthening the Indian Coast Guard, setting up of Fisherman's Watch Groups, installation of Vessel Traffic Management Systems in all major ports. It has also been proposed to set up an apex body to manage the affairs of maritime security.

Apart from this, emphasis has been laid on installation of radars in coastal areas, installation of radar sensors. Presently more than 34 Radar Stations are functional on the mainland of India while 40 Coast Guard Stations are also active and performing security duties. Joint operational exercises of Indian Navy, Coast Guard, Coastal Police, Customs and other organizations are being conducted at regular intervals.

Moreover, measures such as registration of boats, installation of transponders on boats, arrangement of fisherman biometric identity card, coastal mapping, protection of single point moorings, formation of Sagar Prahari Bal have been done to strengthen coastal security.



Bangladesh Acquiring a Central Position for India's Cross Border Energy Trade in South Asia

India has been continuously active in its 'neighbourhood first policy' with respect to Bangladesh and in order to strengthen the bilateral relationship between the two countries (Bangladesh and India) Bangladesh's Prime Minister Sheikh Haseena has recently visited India. Her visit to India proves successful in several aspects as various essential issues are resolved through meaningful dialogues. In recent years, the mutual trust between the two countries has strengthened and both countries have worked mutually on several issues treating them as a common issue for both the nations. During her visit to India in the month of September, Bangladesh's Prime Minister Sheikh Haseena even signed several important agreements with India. Her recent visit to India is rather crucial in several aspects.

Revival of economic ties through Comprehensive Economic Partnership Agreement (CEPA):

During this visit of Sheikh Haseena, the important areas that were agreed upon with India are indicative of the Bangladesh's intentions on revival of its relation with India. Moreover, the relationship between the two countries is not only essential for their mutual benefits but it is crucial for the stability, security and development of entire South Asia and territories around Bay of Bengal. There were several agreements that were brought into light keeping the above mentioned facts, during the Bangladesh's prime

minister visit. The very prominent one is the discussion between the two nations about comprehensive economic partnership agreement (CEPA).

Both nations have decided, in order to give new direction to their bilateral economical relationship, that the comprehensive economic partnership agreement (CEPA) should be put into execution as soon as possible. This decision is crucial as comprehensive economic partnership agreement (CEPA) is the agreement, before a free trade agreement, that will aid in enhancing the mutual trust between the two nations. Since, China seeks to make its strong presence in Bangladesh's market through free trade agreement, which is quite challenging to the Indian economic interests, it should be kept in mind that Bangladesh, apart from being the largest development partner, is the also the largest trade partner for India in South Asia. Thus, if India successfully enters into free trade agreement with Bangladesh, the Indian export to Bangladesh can increase up to 17 billion dollars. India further aims to persuade Bangladesh to lessen the import duty on almost 450 commodities.

Strengthening the bilateral relations through new aspects of cooperation:

India and Bangladesh are of opinion that taking an insight from recent covid-19 pandemic and current global scenarios, both nations

should concentrate on further strengthening their respective economies. During Sheikh Haseena's visit to India several options for cooperation were thought upon, however both the countries eventually agreed on cooperating in the areas of information and technology and space cooperation. Furthermore, the nations agreed upon cooperating in the areas of nuclear energy. Its worth mentioning that India has entered into civil cooperation agreement with 17 other countries.

Strengthening the economies through connectivity and infrastructure development:

- Both India and Bangladesh believe that through connectivity, diversification and developing trade infrastructures at the borders their economies will connect and support each other even more. Consequently, the bilateral trade between the two nations will increase as well. Presently India is the largest market in whole Asia for Bangladesh exports. The yearly bilateral trade of commodities and services between the two countries almost costs around 16 billion dollars.

Furthermore, both countries are negotiating on connecting the power transmission lines. Building the railway bridge on the Rupsa river is a commendable step in the direction of consolidating connectivity. This bridge is a crucial part of the railway

lines developed between the Khulna and Mongla port. The railway lines between Khulna and Mongla ports are developed under line of credit given by India to Bangladesh. India further talked about giving its continuous support for developing and diversifying the Bangladesh railway system.

Energy security and energy trade cooperation between India and Bangladesh:

- During the recent visit of Prime minister Sheikh Haseena, the nations agreed upon the rising challenges for the developing nations due high energy rates. Thus, with the inauguration of the first unit of “Maitri thermal power plant”- a power plant developed with the cooperation of India- the availability of cheap electricity in Bangladesh will increase.
- There are several energy projects ongoing in India and Bangladesh at bilateral level, that are crucial both economically and strategically. With the help of NTPC India, Maitri power plant had been developed in Bangladesh which is now operational. The thermal power plant had been developed as joint enterprise of Bangladesh- India power company which is operating in the Khulna area of Bangladesh. Apart from this, 1320 megawatt Rampal thermal power plant is also being developed as joint enterprise of both nations.
- India Bangladesh friendship pipeline further showcases the energy relations between the two countries. This pipeline is 136 kilometers long, out of which 130 kilometers is in area of Bangladesh while the remaining 6 kilometers is in India. Under this pipeline the Parbotipur and Dinajpur districts of Bangladesh will be supplied diesel from Siliguri district of west Bengal, India. Assam situated Numaligarh refinery Limited (NRL) will fund the construction of the pipeline belonging to the Indian part. India will supply 2.5 lakh tonnes of oil to Bangladesh during first year and after the pipeline is fully constructed, India will supply 4 lakh tonnes oil to Bangladesh every year. Indian government has tried to find every possibility of developing projects in the northeastern states and Bangladesh as Numaligarh Assam is now involved in the project. Its worth mentioning here Bangladesh sought to achieve the ambitious target of “electricity for all” till 2021 and India helped Bangladesh in achieving the same. India further can play a significant role in Energy security of Bangladesh.
- India has also started to supply electricity to Bangladesh. Trans border energy trade has emerged as a crucial means to achieve the targets of Indian foreign policy. Bangladesh is considered as an important base pillar for India’s south Asia centric neighbour first policy and its energy diplomacy, and extended neighbour first policy. In September 2019, Bangladesh signed an agreement of buying 718 megawatt electricity from Reliance Power, India. Under this agreement Bangladesh will buy electricity from India for next 22 years. Reliance power has prepared an investment plan to establish a power plant in Narayanganj of Bangladesh till 2022. Further, in 2019 India entered into an agreement for buying LPG from Bangladesh. In this way, both nations are striving to consolidate their Energy relations. Bangladesh can further be benefitted from India’s renewable energy industry. It has also expressed its interest in solar energy sector of India. Thus, under this, World Bank will aid Bangladesh in establishing the solar power plants. This specifically shows the presence of huge potential for India’s renewable energy sector in Bangladesh.
- Indian government permitted to establish 4 special economic zones in Godda district of Jharkhand for electricity production. The entire electricity produced out of this will be exported to Bangladesh. The entire construction work will be done by 2022 and Adani power, who is authorised for this project, has even finalised the power purchase agreement through which 100% of the electricity produced through these plants will be supplied to Bangladesh. In her recent visit to India, Bangladesh prime minister Sheikh Haseena held a dialogue with the head of Adani power limited about the Energy agreements.
- India and Bangladesh continuously need to enhance cooperation for mutual benefits as there are several elements present that will cause hindrance in the way of territorial cooperation and territorial unity of south Asia. Moreover, China does not compromise with its expansionist mentality in south Asia thus, India and Bangladesh need to work together for their mutual welfare. Bangladesh also needs to keep check on its economic sovereignty when dealing with its economic ties with China so that no other country in south Asia ends up like Sri Lanka.



India becoming self-reliant in space sector: Startups and Private Sector Getting Access to Space

Context:

India's space sector is being opened for the private players. This privatization of the space sector can prove useful in making India self-reliant in the field of space by increasing commercial space projects, space tourism, and space research.

Introduction:

Under the Self-Reliant India Campaign, many steps were taken towards making India self-reliant. Its effect was also seen in the space sector. In the fourth part of the '**Atmanirbhar Bharat Special Economic Stimulus Package' (ANBSESP)** announced by Finance Minister Nirmala Sitharaman, there has been provision of privatization in the Space sector. This privatization will not only give rise to new opportunities in the space but will also give impetus to research and development. However, space is also being an important strategic sector, it is essential to ensure public transparency while taking any step.

Space Sector in India: At a Glance

- The foundation for space research in India was laid in 1962 with the formation of the Indian National Committee for Space Research (INCOSPAR). This committee was formed under the chairmanship of Dr. Vikram Sarabhai, hence he is

also called the 'Father of Indian Space Program. In 1963, India's first sounding rocket, the Nike Apache, was launched from the Thumba Equatorial Rocket Launch Center.

- The Indian Space Research Organization was formed in 1969 by reorganizing the Indian National Space Research Committee and the Center for Space Science and Technology; the result of this step, was the launch of the first Indian satellite Aryabhata (Soviet Union's launch vehicle) in 1975.
- At present, the Indian space program has reached to the Moon and planet like Mars. India's space program is not limited to telecommunications, communication, weather, and strategic experiments, but it is also progressing in areas like space exploration and space tourism.
- India has mastered all the instruments useful for the space sector, such as launch vehicle (PSLV, GSLV), satellites (telecommunications, strategic), etc. Along with this, India ranks among the top 5 countries in the global space world.
- Till now the space sector was completely under the control of the government, but now gradually the space sector is being opened private player participation.

Benefits to India from achieving self-reliance in the space sector:

Reduction in cost and expenses:

At present, more than 95% of the expenditure on space activities and research and development is borne by ISRO and the government; This expenditure will be reduced with entry of private players. This will reduce the pressure on the government resources and the government can use these resources in welfare schemes to make India self-reliant. As per data from 2016 to 2019, space start-ups (with the help of venture capital) are developing from palm-sized satellites to Small Satellite Launch Vehicles (SSLVs), for instance, startups like Agnikul and Sakarut are developing launch vehicles.

Increase in innovation:

With the arrival of startups and the private sector in the field of space, technology and innovation will increase, For example, a private organization Dhruv is working on developing high technology-based solar panels for space satellites.

Reduction in foreign dependence:

Private sector will work on investment, capacity building, research, development, finance, etc. that will reduce India's dependence on foreign institutions. This will help India to achieve self-reliance.

Exploring new dimensions:

Competitiveness will be increased by the private sector. Due to this new dimensions like space tourism and space R&D (educational) will increase.

Increase in global space economy participation:

At present, the global space economy is valued at about \$450 billion and is expected to reach nearly \$1 trillion by 2040. India accounts for only 2% of the global space economy. With the entry of the private sector, India's share in the global market will increase.

Challenges before India's space self-reliance (disadvantages due to private sector coming)

- The Space Activities Bill, pending since 2017 by the Government of India, has not yet been passed. In this bill, there are provisions on matters relating to space crimes, liability for damage done in space, and the private sector, but since this bill has not been passed yet it will be difficult to address the 'liability of the private sector in space'.
- At present, due to the space activities of countries, a huge amount of space debris has been created. because of profit-oriented nature, private sector will not be interested in removing debris from space, which can prove detrimental for the space environment.
- At present, the origination of anti-satellite missile, have space war like conditions. Therefore, the presence of the private sector in the space sector can also impact national security.
- Possibilities of monopoly in this sector is also present due

to costly processes of space.

Do you know ?**Indian National Center for Space Promotion and Authorization (IN-SPACE)**

- It was formed in 2020.
- It is an autonomous single window nodal agency for promoting, authorizing and monitoring, and supervising the space activities of non-government private entities in India.
- It operates under the control of ISRO and shares space infrastructure and premises of ISRO itself. Its decision is binding on other space stakeholders including ISRO.

Space-Based Communication Policy 2020

- The policy objective is to achieve self-reliance in the field of commercial, secure, and social communication by meeting the growing need for space communications. And it also emphasizes developing relevant technologies in this direction.

Way Forward:

- The government will have to support new startups, through initial incubators and grant programs to make research in space technology cost-effective.
- The government will have to make rules to regulate the activities of the private sector in the space sector as soon as possible and this rule should be in line with the standards of outer space convention. In this context or the Government must pass the Space Activities Bill.
- The government should take

the projects through PPP mode in the first few years. Although, the government is working in this direction while private companies are also using the structures built by the government for the launch.

- There is also a need to frame policies related to intellectual property in the field of space.

Conclusion:

In the 21st century, space technology is becoming a part of our personal space, so these steps are going to be very important in this direction. There are some areas of space use (such as space tourism) for which the private sector would be best. Along with this, there are many areas such as space war, navigation control, communication, and strategic activity where there is a huge need for public sector activities. Therefore, it can be said that in the field of space, the public and private sectors are not competitor on each other, but they are mutually-dependent. And their mutual dependency will help make India self-reliant.



Operation Octopus: CPRF Fighting Naxalites and Left-Wing Violence

- Jharkhand Police and Central Reserve Police Force recently carried out a three day special, 'Operation Octopus' against the Naxalites, in which heavy amount of explosives were seized. This operation was carried in the Burha hills of Latehar area. During this operation almost 106 various landmines, more than 360 cartridges, codex wire ammonium nitrate, bombs and several kinds of explosives were seized.
- The Jharkhand police specified that Burha hill is extremely Naxalites affected area and the Maoists have laid landmines at every step, these landmines when blast, they shake the entire area in the vicinity. Both people and the police have incurred huge losses due the Maoists inhabiting in this area. Security forces sieged the Burha hill from every direction in order to execute this operation.
- According to the data given by Indian Ministry of Home Affairs, out of 23 districts of Jharkhand 19 districts are affected by the left-wing violence and several measures are yet to be taken in order to free Jharkhand from Naxalites.
- Central Ministry of Home affairs recently revealed in its report that 16 districts that are under the influence of Maoist group comprise Ranchi, Khunti, Bokharo, Chatra, Dhanbad, Eastern Singhbhum, Gadwa, Giridih, Ghumla, Hazaribagh,

Latehaar, Lohardaga, Palamu, Simdeha, Saraikela-kharsawa, and Western Singhbhum. Out of 25 districts of Jharkhand, 8 districts are under influence of extreme Maoism.

Current situation of left-wing extremism in India:

- Left-wing extremism includes Naxalism and Maoism and related violence to it. According to the latest data of Ministry of Home Affairs, 46 districts of 10 states have left-wing extremism and related violence. Central Government also presented the similar data in Rajya sabha. In 2010, almost 96 districts of 10 states were affected by it. There has been considerable decrease in left-wing extremism in last decade. Total extremism cases reported in 2021 were 505, which is 77% less when compared with 2258 cases in 2009. Further, the number of deaths (citizen and security personnel) due to extremist incidents decreased down to 85%; that is 147 in 2021 from 1005 deaths in 2010.
- Last year, apart from sharing the data regarding the decrease in the left-wing extremism affected areas, the Central Government further informed the parliament that under security related expenditure scheme, the number of districts affected by left-wing extremism has come down to 70 in 2021 from 90 in 2018. Before 2018, the number

of Naxalite and Maoist affected areas accounted 126.

- Decrease in the number of districts affected with left-wing extremism is indicative of the fact that central government is successfully executing the overall development projects in these areas, however the left-wing extremism re-emerges in several new areas due to various reasons. Due to this the central government has to add these new areas in the list of left-wing affected areas. On the other hand when there is considerable decrease in the number of LWE related activities or zero LWE related activities in specific area, the Home Ministry excludes it from the list. For instance in 2018, the government excluded 44 districts from the list while it included 8 new areas where the LWE extremism re-emerged.

Front organisations as a challenge:

- Indian Government's Ministry of Home affairs, under the leadership of Home minister, conducted a review meeting last year on the issue of Left-wing extremism. The meeting was attended by the chief ministers of various states. The main conclusion that was drawn out of the meeting was the 10 states where left-wing extremism exists, Naxalism and Maoism were further strengthened due to front organisations. Hence it was decided in the review meeting that strong

action should be taken against these front organisations. State governments were ordered, that they take strong action against these organisation through appropriate laws. The central government under, Unlawful activities (prevention) act, 1967 can deal with the front organisations.

Front organisation:

- Front organisations play a crucial role in fulfilling the motives of Naxalites and Maoists. These organisation are like by-products of the main Maoist Party (CPI M) who in order to escape any lawful duty keep themselves as a different entity. Front organisation basically spread false news and ill advertisements for the Maoist groups, recruit professional extremists and with the help of all these factors encourage underground agitations. Further, they arrange crucial funds in case of emergency, help the cadres in legal matters and provide a safe haven to underground cadres. Furthermore, they glorify the implicit violence ingrained in Maoist ideology at intellectual level. In other words, these organisations tend to highlight the Maoist ideological approach to urban community and media, justifying the violent bloodshed. According to Ministry of home Affairs, these front organisations are present in 10 states and they are especially active in the states of Andhra Pradesh and Telangana.

Maoism and Naxalite as a challenge:

- Maoism is an ideology, which considers the governance system established by law as the main instrument for injustice, exploitation and suppression.

Thus, it seeks to eliminate every symbol of authority. For instance, it concentrates on destroying schools, hospitals, security posts/tickets which are funded out government funds. Moreover, traditionally too, Maoism does not believe in parliamentary governance system. Thus, it has been boycotting elections. Left-wing extremism modus operandi often involves, not allowing the elections to take place in the Maoist influenced areas, abducting and killing the election staffs and security personnel.

- While Naxalism basically is believed to be emerged out of socio economical inequality, inadequate land reforms, economical backwardness of several areas, and displacement of the tribal people because of development projects. In 2004, after emergence of CPI (M), Naxalites were highly influenced by the Maoist methodology and thus a common essence was visible in the methodology of both.

Central government strategy on dealing with the left-wing extremism

- The central government is applying an overall policy in order to deal with Naxalism and Maoism. Under this, security forces are been deployed as well as several development initiatives are being taken up in the Naxal influenced areas. Consequently, there are only 10 Maoist influenced Indian states that challenge the internal security of India. These states include, Chhattisgarh, Jharkhand, Odisha, west Bengal, Bihar, Maharashtra, Telangana, Andhra Pradesh, Madhya Pradesh and Uttar Pradesh.

If one seeks to understand the perspective of Indian government in dealing with left-wing extremism, they can know it by going through National Policy and action plan on left-wing extremism of 2015. Indian ministry of home affairs since 2015 is executing the national policies and programmes for dealing with Naxalism. In it, four major aspects had been stressed upon that include stress on security related solutions as well as development works, stress on the rights of regional communities and assuring their stakes, improving the governance system and taking appropriate measures for public perception management etc.

- Moreover, under conciliation strategy of ministry of home affairs several prospects have been emphasized upon which comprise, astute leadership, aggressive strategy, incentivising and training, effective intelligence, action plan standards, efficient technology, effective plan for each strategy, and strategy to stall Naxalite funding.
- Home ministry further emphasized, in order to deal with LWE, on usage of biometric equipped drones, smart guns, and trackers for scrutinising the weapons of LW extremists etc. Moreover there has been talk for providing unique identification number for gelatin sticks and explosives.
- In recent years, considerable efforts have been directed towards providing solar lights, mobile towers with 3G connectivity and road rail connectivity in the LWE affected areas.
- There has also been talk of reviewing and amending the

Prevention of Money Laundering Act to prevent access to finance to left-wing extremist groups. Along with this, work is also being done on formation of Joint Task Force for anti-Naxal and Maoist operations, effective intelligence system, use of science and technology.

- To control Left Wing Extremism (LWE), Rs 6,578 crores was released from FY 2014-15 to FY 2021-22 under various schemes of the Ministry of Home Affairs, while from FY 2006-2007 to FY 2013 only Rs 2,181 crores was released.
- Measures such as providing education, health and employment facilities for the inclusive development of Naxal

affected areas have gained momentum in the last few years. The central government is running many schemes in the Naxal affected areas, which include schemes like Special Infrastructure Scheme, Special Central Assistance Scheme, Road Connectivity, Skill Development Scheme, Jawahar Navodaya Vidyalaya, Eklavya Model Residential School, Mobile Connectivity Project and financial assistance.

- 32 Kendriya and 9 Jawahar Navodaya Vidyalayas have been opened in the LWE affected areas. At the same time, under the infrastructure scheme, about one thousand crore rupees have been given to the

areas affected by Left Wing Extremism for various projects between 2017 and 2021. Apart from this, 207 Eklavya residential schools have been sanctioned in Left Wing Extremism affected areas. Almost 1,258 bank branches and 1,348 ATMs have been set up in most of the LWE affected districts while 4,903 new post offices have also been inaugurated.



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Need for Livestock Conservation in India: Challenges and Solutions

Context:

In the current economic scenario, the contribution of secondary and tertiary sectors to the Indian economy is increasing at a very fast pace, but animal husbandry, (the activity of the primary sector) still holds an important place in the Indian economy. The livestock sector accounts for 4.11% of the GDP and means of livelihood for more than 8 crore farmers.

Introduction:

Livestock has an important place in the Indian economy. At present, about 20.5 million people depend on livestock for their livelihood. Livestock contributes about 16% to the income of small farming households, while it contributes 14% to the average income of rural households. In addition, livestock provides livelihood to two-thirds of the rural community. It employs about 8.8% of the population in India. The livestock sector contributes 4.11% to the GDP and 25.6% to the total agricultural GDP. India has the largest number of livestock (535.78 million) in the world. India ranks first in the world in terms of buffalo population, and milk production, and second in the world in terms of goat, fish production, poultry market, and aquaculture.

Contribution of Livestock in India:

- At present, India is the largest country in the world in milk production. According to FAO data, India produced about 209 million tonnes of milk during

2020-21.

- Although the development of the livestock sector has improved the per capita availability of milk, eggs, and meat, the productivity per animal is very low as compared to developed countries. According to the Economic Survey (2021-2022), milk production in the country has increased to 209.96 million tonnes in 2020-21 at a compound annual growth rate of about 6.2 percent as compared to 2014-15.
- India is the country with the third largest sheep population (74.26 million) in the world. With this, India is the ninth largest producer of wool (obtained from sheep) in the world. It provides strength to the textile sector of India.
- Along with this, India comes in top countries in the world in meat production and fish production. Farmers also get help in doubling their income through livestock, this agriculture contributes 25.6% of the GDP.

Challenges in Livestock Sector:

- **Lack of Productivity:** India is the most populated country in the world in the field of livestock but its productivity is low. For example- India has the third largest sheep population in the world but it is at 9th place in wool production.
- **Diseases in Livestock:** Despite good growth in the livestock

sector, infectious animal diseases are hindering the efficient development of the livestock sector. Infectious diseases like Foot Mouth Disease (FMD), Throat, Brucellosis, Lameness, etc. not only affect the health of the animals, but also has broad negative economic effects.

- **Zoonotic diseases:** Zoonotic diseases that spread from animals to humans are also a big problem. Due to traditional animal husbandry practices and limited biosecurity measures, close contact with livestock often increases the chances of zoonotic disease transmission to humans.
 - » According to the statistics, due to FMD alone in cattle in India, there is an estimated economic loss of about Rs 22000 crores annually.

- **Lack of Veterinary Infrastructure:** There is a dearth of veterinary infrastructure in India. And still, most Indian population depends on traditional veterinary medicine. Many states, including Rajasthan, have one vet per one to two lakh animals and many villages still they lack basic testing facilities and necessary infrastructure.

- » The progress of the vaccination campaign is very slow due to the paucity of field staff.

- **Lack of feasibility of vaccination:**

Vaccination schemes have been started by the government to diagnose diseases. However, the absence of testing facilities and the necessary infrastructure is not only a problem for livestock owners but also poses a risk of zoonotic diseases. This is extremely worrying as the cases of zoonotic diseases are increasing and are becoming fatal to the human race as well.

- » Many times the livestock owners feel that due to vaccination, the milk of the animal will decrease or it will lead to abortion. This notion is also a hindrance in the path of 100% vaccination.

- **Decrease in the quality of vaccines:**

Quality of vaccines is another major problem of animal diseases. India currently has 58 million vaccine shortfalls of Brucellosis vaccine requirement. The trials revealed that the existing FMD vaccine samples did not meet the quality criteria. This has raised concerns among farmers as faulty vaccination can lead to the risk of deadly infectious diseases.

Efforts made by the government to solve the challenges arising in the livestock sector

National Animal Disease Control Program

- The government launched the National Animal Disease Control Program (NADCP) scheme in 2019.
- The main objective of this scheme is to have 100 percent FMD vaccination of cattle, buffaloes, sheep, goats, and pigs population and 100 percent Brucellosis vaccination of bovine female calves between 4 to 8

months of age.

- Along with this, a target has been set to vaccinate more than 51 crore animals by 2023-2024 under this scheme.
- It is committed to controlling Foot-Mouth (FMD) and Brucellosis by 2024 and its complete eradication by 2030. For this, the central government has released a budget of Rs 13,343.00 crore for five years (2019-20 to 2023-24).
- However, the road to 100% vaccination by 2030 seems to be difficult given the veterinary infrastructure.

Tagging:

- Tagging of animals is also being done through the 'Animal Productivity and Health Information System' under National Dairy Development Board. However, livestock owners are shying away from tagging their animals.

What can be done?

- **Need to strengthen the infrastructure:** For the success of vaccination there must be adequate facilities in basic veterinary medicine. For this, skilled personnel is required at the grassroots level. Along with this, these skilled workers should be local, so that the confidence in the vaccination of livestock can be strengthened. Mobile Veterinary Units, etc. need to be strengthened.
- **Availability of Funds:** Central and State Governments should allocate more funds for veterinary medicine so that the success of the National Animal Disease Control Program can be ensured. In this context, the state and central government

should work in an integrated manner for animal husbandry and animal vaccination.

- **Awareness:** Animal Husbandry Department should run awareness programs from time to time. So that the confidence of the animal owners is increased and the livestock owners are made aware of the harm caused by these diseases and the benefits of vaccination.

- **Compensation:** Farmers who lose their animals after vaccination due to faulty vaccines should get compensation. At present, there is no provision of compensation in this regard. For this, one-stop centers should be established at the ground level by the Animal Husbandry Department.

Along with this, the problem of animal husbandry and diseases arising in animals can be solved by doing work like improving the quality of vaccines and honoring the excellent cattle owners.

Conclusion:

It is worth noting that livestock is not only a source of income, but it is a living being in itself, so it is necessary to solve their problems. In this context, the government, animal husbandry, and civil society will have to work together so that the importance of 'biocracy' can be given by promoting animal rights and the importance of animal husbandry can be established as an allied activity of agriculture.



Water Crisis in India and Mission Amrit Sarovar

Context:

- Recently, instructions have been given by the Central Government to the Ministry of Railways and the National Highways Authority of India (NHAI) that these ministries, use the soil/silt excavated from ponds/tanks in all the districts of the entire country under the Amrit Sarovar Mission, for their infrastructure.

Introduction:

- In the present world, efforts are being made to bring 'development and environmental protection' together. In this context, the Amrit Sarovar Mission started by the government can prove to be a better step. This mission launched in the Amrit Mahotsav of Independence will not only promote water conservation but will also help in promoting economic development by supporting infrastructure.

Water crisis in India:

- Water stress has reached its epitome in recent years due to rising industrial development, falling groundwater levels, increasing domestic practice of RO puree, and the booming bottled water industry. Most of the groundwater is qualitatively potable and is rapidly getting polluted.
- According to some estimates, the annual per capita availability of water in India has declined by

75%. This availability has come down to 1486 cubic meters in 2021, this situation puts the country in the position of a country with extreme water insecurity.

- According to the Falkenmark Water Stress Index, 76% of the people are currently facing water scarcity.

Factors responsible for India's growing water Crisis:

Fall in level of groundwater:

- India's groundwater level declined by 61% between 2007 and 2017. The key reason for this is the lack of re-storage of water used for irrigation, lack of canal facilities for agriculture, excessive exploitation of groundwater for agriculture, etc. According to a government study, the groundwater level of the country is depleting at the rate of 0.3 meters annually.

Surface water pollution:

- According to the Central Pollution Control Board, 351 rivers in India are polluted. Along with this, 70% of India's water is not fit for use. The most responsible factor for this situation is the release of untreated or partially treated industrial waste into the river water. Apart from this, the problem of agricultural runoff and sewage is also responsible for the pollution of surface water. The availability of

water is indeed essential for industrial development. But the water crisis is going against the dimensions of sustainable development.

Extinction of water bodies:

- At present, the aquatic bodies of India such as ponds, lakes, and wetlands are rapidly disappearing. Due to rapid urbanization, unplanned development, an increase in siltation, salinity, eutrophication, and illegal sand mining, about 2% of India's water bodies have become unusable.

Other factors:

- The water crisis is increasing very much due to changes in water and rainfall patterns, 6% fall in rainfall from 1951 to 2015, climate change, etc. that will have a broader socio-economic and environmental impact.

Effects of the water crisis:

Social Impact:

- Lack of water hinders cleanliness, sanitation,
- More burden on women and children
- Bad effect on the health of refugees, poor, and migrant people from unclean water
- Disputes over inter-state and transboundary water bodies

Economic impact:

- According to a 2016 World Bank study, India may lose up to 6% of GDP in sectors like agriculture,

and fishing by 2050.

- It has also been mentioned by NITI Aayog that the cities with many industrial centers in the country may go to zero groundwater level by next year, which will affect economic development.

Environmental effect:

- Increase in the amount of saline water
- Degradation of groundwater quality
- Increase in ocean warming as well as the increase in factors of climate change.

Prevention of water crisis through Amrit Sarovar Mission:**Amrit Sarovar Mission: At a Glance:**

- Amrit Sarovar Mission was started on 24 April 2022 for water conservation.

Objective:

- This mission aims to develop and rejuvenate 75 water bodies in each district of the country, and to construct 50,000 reservoirs of one acre or more during the 'Azadi Ka Amrit Mahotsav'.

Achievements of Mission:

- So far, more than 12,000 sites have been finalized by the states/districts for the construction of Amrit Sarovar, out of which work has already started on 4,856 Amrit Sarovar.

Activities of Mission and their impact:

- A target has been set to construct 50,000 reservoirs of one acre or more in size through the Amrit Sarovar Mission. This will also increase the number of water bodies. Increasing the number of water bodies will help in reducing the water crisis.
- Under the Amrit Sarovar Mission, the silt produced in the construction of water bodies will

be used for the construction of infrastructure of railways and NHAI, which will give impetus to both 'environmental protection and economic development'.

- Under this mission, watershed development components like MNREGA, 15th Finance Commission grant, PMKSY sub-schemes, and Har Khet Ko Pani Schemes will also be used, which will reduce agricultural runoff, reduce groundwater for irrigation, increase proper irrigation practices. Which will help conserve groundwater and reduce pollution of surface water.
- The technical partner under this mission is the Bhaskaracharya National Institute of Space Applications and Geo-informatics (BISAG-N). This will enhance the administrative quality and technical efficiency of this mission, which will be helpful in the work of water conservation through the scientific method.
- Under this mission, 75 water bodies will be developed and rejuvenated in each district of the country so that regional inequality of water crisis can be reduced.
- Under this mission, public, and non-public resources will be used, so that financing can be done easily. Along with this, there is a provision that the flag hoisting will be done on 15th August on the bodies formed under this mission; This provision will also reduce the menace of forced encroachment of these water bodies.

Other initiatives are taken by the government to solve the water crisis:

- **Jal Shakti Abhiyan:** This is an important program started for water conservation. Under this, the focus has been on the

districts and blocks affected by the water crisis.

- **Catch the Rain Campaign:** This campaign fulfills the purpose of harvesting and conserving rainwater.
- **Jal Jeevan Mission:** The objective of this mission is to ensure the supply of tap water to every rural household in the country by the year 2024.
- **National Water Mission:** It focuses on integrated water resource management. Its objective is to ensure water conservation and equitable distribution of water within and across states.
- **Atal Bhujal Yojana:** This scheme focuses on the identified areas of the water crisis in seven states of the country. Under this, importance has been given to community participation and demand side aspects for sustainable groundwater management.
- **Composite Water Management Index:** This index is developed by NITI Aayog. The objective of index to promote effective water management in Indian states.

Conclusion:

We can say that Mission Amrit Sarovar can prove to be a milestone in reducing the water crisis in India and increasing water conservation. It is an effort to strike a balance between sustainable economic development and 'environmental protection and economic development. However, the most important thing for water conservation is a change in the behavior of the people, so the government should consider converting the Amrit Sarovar Mission into a mass movement like the Swachh Bharat Mission.



India's New Readiness for Cyber Security and Its Aspects

Context:

In the present day, the internet has not only become an integral part of the daily life of a person but it is also affecting vital aspects of life. In this situation, many types of crimes are being born in the field of the internet (cyber world), in this context new preparations are being made by India for cyber security.

Introduction:

Internet is now not only a source of information but it has become a medium for business, entertainment, behavior, etc. At present, it has become a medium of communication and even financial transactions. But with the expansion of the Internet, concerns about cyber crimes are also being attached; India is among the top 10 countries facing cyber-attacks. These incidents have increased manifold during the lockdown period. The cases of phishing, mapping, and scanning of ICT systems have seen a nearly 3-fold increase. Amidst the ongoing standoff between India and China, China has also started on Indian cyberspace. In these circumstances, it is necessary to strengthen the cyber security of the country.

Cyber Crimes:

Cyber crimes are illegal acts that are carried out using computers and cyberspace. Phishing, data theft, Trojan horse, stalking, etc. are the major cyber attacks. At present, there are three major

categories of cyber attacks:

- Financial Cyber Attack
- Cyber attacks against governments
- Cyber Attacks Against Individuals

Some Major Cyber Attacks in India

- The LAZARUS hacker group continues to carry out cyber attacks on financial institutions in India, Bangladesh, and other South Asian countries.
- In a statement issued by the Maharashtra Cyber Department, it has been said that the number of attacks in India's cyberspace has increased as the standoff with China increases. Similar was the case with China and Australia at a time of spurt in cyber attacks in Australia after the trade standoff. According to experts, more than 3 lakh people work in the hacker community of China.
- A student from Chennai identified a bug on the IRCTC website and informed the country's Computer Emergency Response Team ("CERT India") to protect the data of millions of railway passengers.
- In 2020, data of about 20 million users of Big Basket was leaked.
- During 2019-20, there was a loss of about Rs 1.6 lakh crore due to cyber attacks in India.

About Cyber Security:

Cyber security is concerned with protecting your Internet and

network-based digital devices and unauthorized access and information.

The Need for Cyber Security?

- Cyber security has now become an important part of individuals and families as well as organizations governments, educational institutions, and our business. It is affecting public life and privacy along with our financial transactions. Due to Digital India Mission, Corona-induced lockdown, online business, etc., there is demand for increased digital rights. In this situation it is necessary to keep cyberspace safe.
- Internet is very important and beneficial for faculty, students, employees, and educational institutions. However, online learning also raises concerns about online risks.
- Therefore there is an important need for internet users to understand how to protect themselves from online fraud and identity theft. With appropriate information about online behavior and system security, vulnerability is reduced and the online environment is secure.
- In the present times, because of the digitization of national security, governance, and economy, the security of cyberspace has become very essential.

Measures taken for Cyber Security in India:**Information Technology Act- 2000**

- Sections 43, 43A, 66, 66B, 66C, 66D, 66E, 66F, 67, 67A, 67B, 70, 72, 72A and 74 of the Information Technology Act 2000 deal with hacking and cyber crimes. Under this act, the provision of punishment has been described for the offenses like computer hacking, tampering with the records available on the computer, theft, and misuse of communication devices, publication or dissemination of obscene material, etc. For this, provision has been made for financial punishment and imprisonment.

Cyber Security Policy-2013:

- The National Cyber Security Policy is a policy framework brought out by the Department of Electronics and Information Technology. Its purpose is to protect public and private infrastructure from cyber attacks.
- It is committed to keeping a safe cyberspace. The objective of the Cyber Security Policy is to have sufficient robustness in the IT systems to create a secure cyber environment in the country, to transact in cyberspace, and thus to adopt IT in all sectors of the economy.

Indian Computer Emergency Response Team (CERT-In)

- It is an information technology security organization formed on 19 January, 2004 by the Indian Department of Technology, whose objective is to take action in respect of incidents related to computer security as well as to promote IT security across the country.
- To promote effective actions regarding security.

New dimensions of cyber security:

- Earlier the work of internet security breach was done by anarchic elements but now the cyber security of nations is breached by their nation which is known as cyber war.
- Earlier cyber attack was mainly limited to financial transactions but in the present time, it has reached personal and non-personal data as well. The privacy of the individual is also being affected by the expansion in the field of cyber attacks which is a fundamental right under Article 21 in India.
- The hyper-scientific and inclusive nature of artificial intelligence, data analytics, cloud computing, and the Internet of Things (IoT) has transformed cyberspace into a complex domain. With the advent of these technologies, there is a need to create innovative strategies for cyber security.
- Work from home, cryptocurrencies, online learning, and business during the lockdown have led to a huge amount of data reaching cyberspace. Internet traffic has increased by about 56% during the lockdown period. It is also necessary to achieve the objective of localization of these data.
- However, we find that the importance of cyber security has also increased tremendously in the scenario of cyber warfare due to rapidly increasing risks, vulnerabilities, threats, cyber crimes, and frauds toward cyberspace. The Cyber Security Policy of 2013 does not prove effective in the current circumstances. At present, India ranks 10th in the United Nations Global Cyber Security Index. In this situation, India needs to take new steps to achieve new

security dimensions.

Steps to be taken to strengthen cyber security:

- First of all the Parliament must pass the Personal Data Protection Bill and prepare a strong framework for a strong law on the Non-Personal Data Bill as well.
- There is a need to strengthen the existing cyber security framework. There is a need to bring in technical skilled human resources and rapid cyber security response systems in institutions like the National Critical Information Infrastructure Center for coordination at the national level.
- There is a need for improvement in technical and technology courses. Applications of Artificial Intelligence and the Internet of Things should be included in the curriculum.
- Simultaneously, there is a need to make business organizations and the general public aware. An initiative to celebrate Cyber Security Awareness Month has been started by the NASSCOM for awareness, which is a good step.

Conclusion:

At present, the data is the new oil. Along with this, it is necessary for the technical and economic sovereignty of the country that the cyber security system of the country should be strengthened. New scientific applications are emerging in the field of cyber security, these applications not only benefit but the concerns of cyber security also come to the fore.

1 Scheme for Promoting Bulk Drug Parks

Why in News?

The Department of Pharmaceuticals has conveyed 'in-principle' approval to the proposals of the three States -Himachal Pradesh, Gujarat and Andhra Pradesh under the Scheme for "Promotion of Bulk Drug Parks". This is a key initiative to support Bulk Drugs manufacturing in the country.

About the scheme:

The scheme was notified in the year 2020 with a financial outlay of Rs 3,000 crore.

- It aims to reduce the cost of manufacturing of bulk drugs by creating a world class common infrastructure supported by the central government.
- Through this, the competitiveness of the domestic bulk pharmaceutical industry will be enhanced.
- The Department of Pharmaceuticals was formed in the year 2008 under the Union Ministry of Chemicals and Fertilizers for the development of a high potential pharmaceutical industry.

Central financial assistance to the states:

- For each Bulk Drug Park, the Government of India will give a maximum of Rs. 1,000 crore to the concerned state. The amount will be provided as financial assistance.
- The parks will have various common facilities such as: smelting plants, distillation plants, power and steam plants, common emissions treatment plants etc.
- An amount of Rs.3,000 crore has been approved for this scheme during the next 5 years.

New Proposed Bulk Drugs Park:

Under the scheme, proposals were received from 13 States. The Department was guided by an Advisory Committee under CEO, NITI Aayog in the appraisal of the proposals, based on the quantitative as well as qualitative methodology. As per the proposals submitted by these states, Bulk Drugs Parks will be set up at the following places-

- On 1402.44 acres of land in Tehsil Haroli of Una district in Himachal Pradesh,
- On 2015.02 acres of land in Jambusar tehsil of Bharuch district of Gujarat,
- Bulk Drugs Parks will be constructed on 2000.45 acres of land in KP Puram and Kodhaha of Thondagi mandal of East Godavari district of Andhra Pradesh.

These three states have been directed to submit their detailed project reports, evaluate and complete the process for final approval within the next 90 days under the scheme.

Other Initiatives of the Department of Pharmaceuticals:

Production Linked Incentive (PLI) Scheme for domestic manufacturing of KSMs/ Drug Intermediates (DIs) and APIs also falls under this department.

- Under this scheme, a total of 51 projects have been approved, out of which, 14 projects have already been commissioned and have started manufacturing of the drugs.
- PLI for Pharmaceuticals, provides for financial incentive to 55 selected applicants for manufacturing of identified products under three categories

and eligible drugs under this scheme include APIs

Pharmaceutical Industry of India:

- The Indian Pharmaceutical industry is the 3rd largest in the world by volume. India exported pharmaceuticals worth Rs. 1,75,040 crore in the financial year 2021-22, including Bulk Drugs/ Drug Intermediates.
- India exported Bulk Drugs/ Drug Intermediates worth Rs. 33,320 crore in financial year 2021-22.
- However, the country also imports various Bulk Drugs/ APIs for producing medicines from various countries. Most of the imports of the Bulk Drug/ APIs being done in the country are because of economic considerations.

Benefits of the scheme:

- This will reduce the cost of production in the country and will also reduce dependence on other countries for bulk drugs.
- Being self-reliant in manufacturing of bulk drugs will make it easier to ensure affordable health care facilities to the citizens and to maintain a continuous supply of medicines.
- It is expected to create a foothold in the global market by reducing import dependence, encouraging domestic manufacturing of bulk drugs and providing easy access to standardized testing and infrastructure.
- The scheme will also help the industry to meet environmental standards at a lower cost through innovative methods of common waste management system.

2 The New Ensign of Navy

Why in News:

- Recently, the new Naval Ensign has been accepted by the Indian Navy with a new design inspired by our history. The Indian Naval Ensign is also called the Indian White Ensign, or Nishaan, which is used aboard Indian naval vessels, shore establishments and naval air stations as its principal form of maritime identification.

About New Ensign of Indian Navy:

- The New Navy Ensign has two main constituents- the National Flag in the upper left canton, and a Navy Blue- Gold octagon at the centre of the fly side (away from the staff). The Octagon is with twin golden octagonal borders encompassing the golden National Emblem (Lion Capital of Ashoka – under-scribed with ‘Satyamev Jayate’ in blue Devnagri script) resting atop an anchor; and superimposed on a shield. Below the shield, within the octagon, in a golden bordered ribbon, on a Navy Blue background, is inscribed the motto of the Indian Navy ‘Sam No Varunah’ in golden Devnagriscript. The design encompassed within the octagon has been taken from the Indian Naval crest, wherein the fouled anchor, which is also associated with colonial legacy, has been replaced with a clear anchor underscoring the steadfastness of the Indian Navy.
- The New Navy Ensign dropped the St George’s cross, and accepted an Octagon (with twin golden octagonal design borders) as the shape of

Chhatrapati Shivaji Maharaj’s royal seal.

History of the Indian Navy Ensign:

Colonial-era ensign: The Indian Naval Ensign draws its origin from the colonial period. In 1934, the naval service was renamed the Royal Indian Navy (RIN).



Post Independence-era Ensign:

Change in 1950:

- India became a Republic on January 26, 1950, the prefix 'Royal' was dropped, and it was rechristened as the Indian Navy.
- While the Indian defence forces continued with the UK's colonial flags post-Independence, after January 26, 1950, the flags were changed to carry Indian patterns.
- In the Indian Navy’s ensign, the Union Jack was removed, and the tricolour was placed in the canton (top left corner), but the St George’s Cross was retained.

Change in 2001:

- The changed of naval ensign in 2001, derived from the objective of simplicity and the necessity to maintain commonality with the flags of the Indian Army and the Indian Air Force.
- August 15, 2001, Indian government changed this ensign to divest it of its colonial past, substituting the George’s

Cross with the IN’s crest that prominently features an Ashoka Lion atop an elaborate anchor at its centre. The tri-colour remained in its original spot.

Change in 2004:

- In 2004, the St George’s Cross was brought back with an Ashoka emblem at the intersection of the cross. The Naval crest added in 2001 was then removed.

Change in 2014:

- In 2014, yet another change was made when the words ‘Satyamev Jayate’ were included on the flag below the Ashoka emblem in the Devanagari script.

St. George's Cross:

- The Red Cross is represented as St. George's Cross on a white background, named after a Christian warrior known as a valiant warrior involved in the Third Crusade of the Christians.
- This cross is also known as the Flag of England. England is a component of the United Kingdom.
- It was accepted by England and the City of London to identify the English ships that entered the Mediterranean in the year 1190.
- Most Commonwealth countries have retained the Red George Cross at the time of their independence, although several countries such as Australia, New Zealand and Canada have removed the Red George Cross from the naval emblem.

3 Rajpath renamed as Kartavya Path

Why in News:

Prime Minister Narendra Modi inaugurated the revamped & renamed Rajpath as Kartavya Path, which reflected our unity in diversity.

About Kartavya Path:

The entire stretch and the area from the Netaji statue under the Grand Canopy to the Rashtrapati Bhavan will be known as Kartavya Path. As per the NDMC resolution, Kartavya Path includes the erstwhile "Rajpath and Central Vista lawns".

Netaji Subhas Chandra Bose statue:

The jet-black statue of Netaji carved from a monolithic granite is installed in the same place where a hologram statue of Netaji was unveiled on Parakram Diwas (January 23) by PM to mark the 125th birth anniversary of Netaji. The 28 feet tall towering statue of Netaji is one of the tallest realistic, monolithic, handmade sculptures in India. The team of sculptors for executing the statue was led by Shri. Arun Yogiraj.

Cultural Programs during Kartavya Path inauguration:

- To demonstrate the spirit of Ek Bharat – Shrestha Bharat and Unity in Diversity, a cultural festival by 500 dancers - drawn from all parts of the country - was showcased on the Kartavya

Path. When PM Modi arrived at India Gate to unveil the statue of Netaji, he was greeted with traditional Manipuri conch vadyam (conch shell), traditional Chanda (a long drum instrument) from Kerala and Pancha vadyam. The Pancha Vadyam of Kerala is a temple orchestra consisting of five types of instruments. Panchavadyam is played during temple festivals and is believed to have originated in present-day Ernakulam. It has a pyramid-like rhythm structure.

- Sambhalpuri:** The Sambhalpur district of western Odisha is known for its cultural performances, which include a variety of tribal dances related to deity worship. Sambhalpuri dance includes the Dalkhai dance performed by the Binjhal, Soura and Mirdha tribes during Dussehra, the Koisabadi dance in the Gond and Bhuyan communities is performed with two feet long sticks and the Humo & Bauli dance.
- Panthi:** The Panthi dance is native to Chhattisgarh and includes creative formations in which a few dancers stand atop the shoulders of another row of dancers. Wearing white dhotis,

these men play instruments as well and often dance to honour Guru Ghasidas.

- Dhol Tasha:** Dhol and Tasha are drums from Maharashtra, and pathaks are the performers who beat the drums. These performers practice round the year for high-energy performances during the ten days of revelry witnessed at the time of Ganesh Chaturthi.
- Kalbeliya:** It is traditionally related to Kalbeliya Rajasthan, a tribal community of snake charmers. They wear highly embroidered black clothes while dancing and often dance to joyful songs. In 2010, Kalbeliya songs and dances were included in UNESCO's list of intangible cultural heritage.
- Karagam:** Karagam is a dance from Tamil Nadu that is performed while balancing a pot of water on the head. Traditionally, this dance was performed by the villagers in praise of the rain goddess Mari Amman and river goddess, Gangai Amma.

4 New rules related to adoption come into effect from September 1

Why in news:

The new adoption rules, the Juvenile Justice (Care and Protection of Children) Model Rules, 2016, have come into force with effect from September 1, 2022. The new rules have been brought under the

Juvenile Justice (Care and Protection of Children) Amendment Act, 2021.

Provisions of the Juvenile Justice (Care and Protection of Children) Amendment Act, 2021:

- To authorize the District

Magistrates and Additional District Magistrates to issue adoption orders.

- Child care institutions are to be inspected by DM.
- To evaluate the functioning of District Child Protection Units,

Child Welfare Committees, Juvenile Justice Board etc. by DM.

order is sufficient to obtain irrevocable adoption rights.

capable and shall not have any life threatening medical condition.

Any prospective adoptive parents, irrespective of his marital status and whether or not he has biological son or daughter, can adopt a child subject to following, namely:-

- 1) The consent of both the spouses for the adoption shall be required, in case of a married couple
- 2) A single female can adopt a child of any gender;
- 3) A single male shall not be eligible to adopt a girl child

No child shall be given in adoption to a couple unless they have at least two years of stable marital relationship.

What is the Hague Convention?

- The Hague Convention, 1993 protects children and their families from the risks of illegal, irregular, premature or wrongful adoptions abroad.

Conclusion:

- There should be alternative, enabling and gender-just Special Adoption Laws as in other countries.
- In addition, there is a need to investigate malpractice and improve adoption regulations.

Concerns over new rules:

- The cases already running in the courts for the last several months will have to be transferred and the process will have to be started afresh which will delay the adoption order.
- A delay in such an order may mean that the child cannot get admission to the school as the parents do not yet have the birth certificate.
- The parents and lawyers claim that neither the judge nor the DM is aware of the changes in the JJ Act, leading to confusion and delay in the system.

What is the adoption process in India?

- Adoptions in India are governed by two laws- the Hindu Adoption and Maintenance Act, 1956 (HAMA) and the Juvenile Justice Act, 2015. Both laws have different eligibility criteria for adoptive parents.

Hindu Adoption and Maintenance Act, 1956 (HAMA):

- An "adoption home" ceremony or an adoption deed or court

Juvenile Justice Act, 2015:

- Parents have to register on CARA's portal after which a specialized adoption agency prepares a home study report. If thereafter the candidate is found eligible for adoption, then he/she can adopt the child.

Central Adoption Resource Authority (CARA):

- Central Adoption Resource Authority (CARA) has been set up as an autonomous body of the Ministry of Women and Child Development which functions as a nodal body for adoption of Indian children. It is mandated to monitor and regulate in-country and inter-country adoption. CARA is designated as the Central Authority to deal with inter-country adoptions in accordance with the provisions of the Hague Conventions on Inter-Country Adoptions, 1993, ratified by Government of India in 2003.

Who can adopt:

The prospective adoptive parents shall be physically, mentally and emotionally stable, financially

5

President launches Pradhan Mantri TB Mukh Bharat Abhiyaan

- Hon'ble President Smt. Droupadi Murmu has launched Pradhan Mantri TB Mukh Bharat Abhiyaan to reinvigorate the mission of TB elimination from the country by the year 2025. Prime Minister Shri Narendra Modi gave the clarion call to end TB in the country five years ahead of the SDG target of 2030 in March 2018 at the Delhi TB Summit.
- The Pradhan Mantri TB Mukh

Bharat Abhiyaan has been envisioned to bring together all community stakeholders to support those on TB treatment and to accelerate the country's progress toward TB elimination. President Murmu also launched the Ni-kshay 2.0 initiative, a portal to provide a platform for donors to provide various forms of support to those undergoing TB treatment. The three-pronged

support includes nutritional, additional diagnostic and vocational support. The donors, called Ni-kshay Mitras, could be a wide range of stakeholders from elected representatives, political parties, to corporates, NGOs, and individuals.

- The launch event aims to highlight the need for a societal approach that brings together people from all backgrounds

into Jan Andolan to achieve the ambitious target of eliminating TB from the country by 2025. Pradhan Mantri TB Mukh Bharat Abhiyaan is a step towards garnering community support toward a patient-centric health system.

Ni-kshay:

- It is the web enabled patient management system for TB control under the National Tuberculosis Elimination Programme (NTEP). It is developed and maintained by the Central TB Division (CTD), Ministry of Health and Family Welfare, Government of India, in collaboration with the National Informatics Centre (NIC), and the World Health Organization Country office for India.

End TB Strategy:

- WHO developed the End TB Strategy, which was endorsed by the Sixty-seventh World Health

Assembly in 2014. The strategy envisions a world free of TB, with zero deaths, disease and suffering due to the disease. Further, the strategy ambitiously proposes to “end the global TB epidemic” by 2035. The strategy targets a 90% reduction in patients suffering from TB, and a 95% reduction in deaths from TB by 2035.

Sustainable goal and TB:

- Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

Tuberculosis (TB):

- Tuberculosis (TB) is an infectious disease caused by Mycobacterium tuberculosis.
- TB commonly affects the lungs (pulmonary TB) but can also affect other parts (extra pulmonary TB).

- Tuberculosis spreads from person to person through the air, when people who are infected with TB infection cough, sneeze or otherwise transmit respiratory fluids through the air.
- The most common risk factor associated with TB is HIV & other conditions that impair the immune system.

Conclusion:

- According to the Global TB Report 2021, the estimated incidence of all forms of TB in India for 2020 was 188 per 1 lakh population. In India, childhood TB remains a staggering problem, contributing to approximately 31 per cent of the global burden.
- At the same time, MDR TB and X-DR TB are also a cause of concern that should be resolved soon.

6

Mukul Rohatgi to be 16th Attorney General of India

- The Attorney General of India is a prominent constitutional post under the Indian Constitution and Senior Advocate Mukul Rohatgi will once again hold this post. He will be the 16th Attorney General of India.
- The current Attorney General of India, KK Venugopal is retiring on the 30th of September. He was appointed as the 15th Attorney General of India in the year 2017 replacing Mukul Rohatgi. Mukul Rohatgi previously served as the Attorney General of India from June 2014 to June 2017.
- In recent times, as a Senior Advocate, Mukul Rohatgi fought the Lakhimpur Kheri Case and

Cordelia Cruz Drug Case.

About the post of Attorney General:

- Article 76 of the Indian Constitution states that the President of India shall appoint the Attorney General of India. The qualification for the post of the Attorney General of India is similar to that of a Judge of the Supreme Court of India. The Attorney General of India is the chief lawyer for the Government of India and also the main legal advisor to the Government of India. In this context, he plays an important role in establishing the rule of law in the country.
- The Attorney General of India holds the office till the pleasure

of the President and can be removed by the President at any time. There is no fixed ground for removal from this post.

Rights and Powers of Attorney General:

- Article 88 of the Constitution of India states that besides voting the Attorney General has the right to speak and take part in the proceedings of both the Houses of Parliament or their joint sitting and any committee of the Parliament of which he is nominated as a member. Thus, he can take part in parliamentary proceedings but he cannot vote.
- The Attorney General of India is

- entitled to all the privileges and immunities that a Member of Parliament enjoys.
- The post of Attorney General does not fall under the category of government servants, so he is not deprived of private legal practice.
- However, he does not have the right to give advice or brief information on any matter against the Government of India.
- The Solicitor General of India and the Additional Solicitor General of India assist the Attorney General in fulfilling his official duties.

7 The controversy over K.K. Shailaja's nomination for the Ramon Magsaysay Award

Why in News:

Former Kerala health minister KK Shailja refused the prestigious Ramon Magsaysay award, creating a controversy. The former health minister said she was considered for the award for the work which was part of a collective effort and it was not right to receive it in her individual capacity.

About Ramon Magsaysay Award:

- Following the death of President Ramon Magsaysay in 1957, the Rockefeller Brothers Fund (RBF) established the Ramon Magsaysay Awards in the President's honour in agreement with the Philippines government.
- Later, the Fund set up the Ramon Magsaysay Award Foundation, a non-profit organisation to manage Asia's biggest honour.
- Regarded as Asia's version of the Nobel Prize, the award was initially given for contributions to government service, public service, community leadership, journalism, literature and creative communication arts, and peace and international understanding.
- The category of 'emergent leadership' was added later.

Who else won the award this year?

This year, the award is given to –
1. **Sotheara Chhim**, a mental health

advocate from Cambodia.

- Tadashi Hattori**, a Japanese ophthalmologist and humanitarian who has committed his time and resources to provide free eye surgeries in Vietnam.
- Gary Bencheghi**, a young Frenchman who working toward eradicating marine plastic pollution in the rivers in Indonesia's Bali.
- Bernadette J Madrid**, a Filipino paediatrician who has been championing child rights in the country.



Have other Indians received the honour?

- The first award was given out in 1958 to Jose Vasquez Aguilar (Filipinas) & C. D. Deshmukh (India) for their exemplary performance in the service of their respective governments.
- Social reformer Vinoba Bhave won the award in 1958 and Mother Teresa in 1962.

- Activist Kamaladevi Chattopadhyay was given the honour in 1966, filmmaker Satyajit Ray in 1967, and writer Mahasweta Devi in 1997.
- Delhi chief minister Arvind Kejriwal was given the Ramon Magsaysay award in 2006. In 2015, Anshu Gupta, the founder of a non-profit organisation called Goonj, received the award while in 2016, human rights activist Bezwada Wilson won it.
- The last Indian to be bestowed



the honour was journalist Ravish Kumar in 2019.

Conclusion:

- There should never be any politics on the award given for the service of the state. As the award is not for any individual but the country's reputation also got involved.

8

Restrictions on Conversion Therapy for the LGBTQIA+ Community

Why in News:

The National Medical Commission has directed all state medical councils to ban conversion therapy for the LGBTQIA+ community, calling it 'professional misconduct'. The National Medical Commission has done this under the guidelines of the Madras High Court.

Meaning of LGBTQIA+:

Lesbian, gay, bisexual, transgender, queer, asexual and intersex. They are culturally defined as neither male nor female, they are called third gender.

Conversion Therapy and Associated Risks:

- Conversion therapy aims at any kind of interference with a person's gender identity.
- It also involves the process of changing the core identities of youth whose gender identity does not coincide with anatomy.
- Conversion therapy poses a risk of mental health conditions that include anxiety, stress, and drug use that sometimes lead to suicide.
- Recently the Madras High Court ordered agencies to comply with The Transgender Persons (Protection of Rights) Rules, 2020 and the Transgender Persons (Protection of Rights) Act, 2019.
- The court directed the National Medical Commission to issue necessary official notification listing 'conversion therapy' as a professional malpractice.

Other Rules and Decisions to Protect LGBTQIA+:

- In a landmark judgment in September 2018, the Supreme Court unanimously struck down a portion of Section 377 of the Indian Penal Code (IPC) for violating the constitutional rights of equality and dignity.
- In the Puttaswamy case, the Supreme Court held privacy as an inherent fundamental right under Article 21. Right to life and liberty make sexual orientation an essential quality of privacy.

declares that all human beings are born equal in terms of free and dignified rights.

- 28 countries in the world recognize same-sex marriage and 34 countries provide recognition for other same-sex couples.
- In February 2019, Canada announced its new LGBTQ international aid program.
- As of December 2020, 81 countries have laws against



Fundamental Rights on Judgment on the LGBTQIA+ Community:

- Article 14 (Equality before the law),
- Article 15 (Prohibition of discrimination on grounds of race, religion, caste, sex, place of birth),
- Article 21 (Protection of life and liberty)
- Article 19 (Freedom of Expression)

Global scenario:

- Article 1 of the Universal Declaration of Human Rights

discrimination at the workplace based on sexual orientation.

Way Forward:

People of LGBTQIA+ are discriminated based on their gender differences that are rather inborn and the community is not responsible for it. Depriving these people from their basic human rights and equality is a blot to the modern society and human values.

1

Eastern Economic Forum, 2022

Why in News:

- The Prime Minister of India, Shri Narendra Modi addressed the plenary session of the Eastern Economic Forum, 2022. Addressing the 7th Eastern Economic Forum held in Vladivostok, PM once again emphasized on India's Act Far-East policy, which was unveiled in 2019. PM said this policy has now become a key pillar of the "Special and Privileged Strategic Partnership" of India and Russia.

Important pillars of India-Russia relations:

- India has highly prioritised 'the Act Far-East policy'. Through this policy India is expanding bilateral relations in every area.
- Connectivity will play a crucial role in the development of our relations in future. Both countries are already working together on the International North-South Corridor, the Chennai-Vladivostok Maritime Corridor and the Northern Sea

Route to enhance connectivity.

- India is interested in strengthening its partnership with Russia on Arctic issues.
- India has made significant investments in the energy sector in Russian Far East. India has also invested in the pharma as well as diamond sectors.
- Through the supply of coking coal, Russia can become an important partner for the Indian steel industry.
- Shortage of food grains, fertilizers and fuel is a major concern for developing countries.
- We support all peaceful efforts to end the Ukraine conflict.

About "Act Far-East" Policy of India:

- At the plenary session of the 5th Eastern Economic Forum (EEF) in Vladivostok in 2019, Indian Prime Minister Narendra Modi unveiled the 'Act Far East' policy for Russia and announced that India will extend the line of credit of \$1 billion to the development of the Russian Far East.

Eastern Economic Forum:

- The Eastern Economic Forum was established by the Russian President in the year 2015. It serves as a forum for discussion on key issues of the world economy, regional integration, and the development of new industrial and technological sectors, as well as on the global challenges faced by Russia and other countries.

Conclusion:

Russia had been our most reliable friend, however, in recent times, the relationship between India and Russia has evidenced certain pungency. Consequently, Russia's closeness with Pakistan and China has increased. Thus, through the 'Act Far East' policy, we can make our friendship stronger again.

2

India-Saudi Relations, Shared Development, Security and Stability

Why in News:

External Affairs Minister, S. Jaishankar recently completed his first three-day visit to Saudi Arabia.

About the visit:

- EAM S. Jaishankar co-chaired with his Saudi Arabian counterpart, Prince Faisal bin Farhan Al Saud, the first ministerial meeting of the Committee on Political, Security, Social and Cultural Cooperation (PSSC).

- PSSC was established under the framework of the India-Saudi Arabia Strategic Partnership Council.
- He also met with the Gulf Cooperation Council (GCC) Secretary General Nayef.
- The GCC is a regional union comprising Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.
- The two leaders signed a Memorandum of understanding (MoU) on the mechanism of

consultations between India and the Gulf Cooperation Council (GCC).

India – Saudi Arabia bilateral relation:

Background:

- India and Saudi Arabia have centuries-old economic and socio-cultural ties which are still cordial and friendly.
- The diplomatic relationship between the two countries was established in 1947.

- King Abdullah's visit to India in January 2006 was a 'watershed moment' that resulted in the signing of the 'Delhi Declaration' so that a new impetus could be given to bilateral relations between the two countries.
- The 'Riyadh Declaration', signed in 2010, elevated the bilateral relationship to a Strategic Partnership.

Recent high-level visits:

- King Salman conferred the Kingdom's highest civilian honour (Order of Abdulaziz Al Saud) to PM Modi during 2016 visit.
- In February 2019, Crown Prince Mohammed bin Salman, during his visit to India, announced investment of about US\$ 100 billion in India and signed six MoU in the fields of investment, tourism, accommodation, exchange of audio-visual programs.
- PM Modi visited Riyadh again in October 2019, during which the Strategic Partnership Council (SPC) Agreement was signed.
- SPC was established as a high-level council to steer the Indo-Saudi relationship.

Economic Cooperation:

- Saudi Arabia is India's fourth-largest trading partner. More than 18% of India's crude oil imports are sourced from Saudi Arabia.
- Saudi Arabia is currently India's third largest crude oil exporter after Iraq and Russia.
- During FY22 (Apr-Dec), bilateral trade was valued at US\$29.28 billion. India's imports from Saudi Arabia were valued at US\$22.65 billion and exports to Saudi Arabia were worth US\$6.63 billion.
- Saudi Investments in India, as of March 2021, amounted to US\$3.13 billion.

Saudi investment in energy:

- Major proposed investments include the US\$44 billion 'West Coast Refinery & Petrochemicals Project' in Maharashtra, which is being jointly built by Saudi Aramco, Abu Dhabi National Oil Company, and an Indian consortium.
- Indian consortium includes Indian Oil Corporation, Hindustan Petroleum Corporation, and Bharat Petroleum Corporation.

- In the renewable energy sector, Saudi Company AlFanoor has a controlling stake in 600MW Wind Power projects in India.

Cultural Relation:

- India participated as the 'Guest of Honour' at the 32nd edition of the prestigious Saudi National Festival of Heritage and Culture – Janadriyah in February 2018.
- The year 2021-22 commemorates 75 years of India's independence as 'Azadi Ka Amrit Mahotsav'. These celebrations also coincide with 75 years of establishment of diplomatic relations between India and Saudi Arabia.

Indian Community in Saudi Arabia:

- The approximately 2.2 million strong Indian community is the largest expatriate community living in Saudi Arabia.
- In October 2019, the two sides announced that India's e-Migrate system would be integrated with the Kingdom's e-Thawtheeq system to streamline the migration process for workers.

3**UNDP-Human Development Index, 2021****Why in News:**

- India ranks 132 out of 191 countries in the Human Development Index (HDI) 2021, after registering a decline in its score over two consecutive years for the first time in three decades.
- The drop is in line with the global trend since the outbreak of COVID-19 during which 90% of the countries have witnessed a visible setback in human development.

Human Development Report:

- It is published by the Human Development Report Office for the United Nations Development Programme (UNDP). It was devised by the Pakistani Nobel laureate, Mahbub-ul-haq. Human Development Reports (HDRs) have been released since 1990.
- Theme: The theme for Human Development Report 2021-22 is "Uncertain Times, Unsettled Lives: Shaping our Future in a

Transforming World.

Human Development Index:

HDI is a composite index that measures average achievement in human development taking into account four indicators:

- Life expectancy at birth (Sustainable Development Goal 3);
- Expected years of schooling (SDG 4.3);
- Mean years of schooling (SDG 4.4);

- Gross National Income (GNI) per capita (2017 PPP\$) (SDG 8.5)

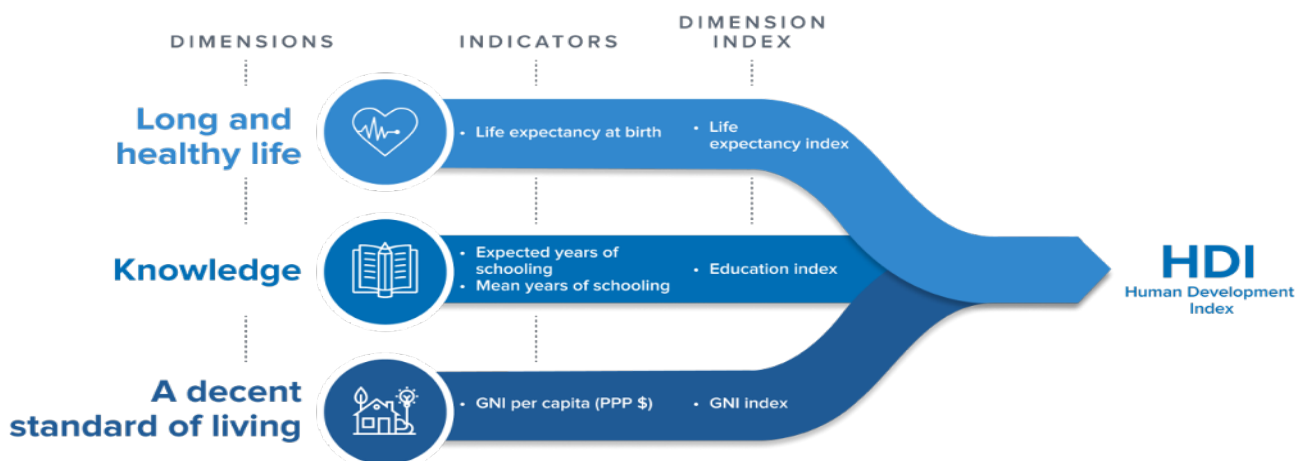
Key Highlights of the Report:

Global Scenario:

- 90% of countries have registered

a decline in their Human Development Index value from 2020 to 2021, which could be an obstruction to the progress towards the Sustainable Development Goals.

- The large contributor to the Human Development Index's recent decline is a global drop in life expectancy, down from 72.8 years in 2019 to 71.4 years in 2021.



Top Five Country	Bottom Five Country:	India's neighbour country:
1. Switzerland	187. Burundi	73. Sri Lanka
2. Norway	188. Central African Republic	79. China
3. Iceland	189. Niger	127. Bhutan
4. Hong Kong	190. Chad	129. Bangladesh
5. Australia	191. South Sudan	143. Nepal
		161. Pakistan

Indian Perspective:

India's HDI value stood at 0.633 in 2021, which was lower than the world average of 0.732. In 2020, too, India recorded a decline in its HDI value (0.642) in comparison to the pre-Covid level of 2019 (0.645).

Like global trends, in the case of India, the drop in HDI from 0.645 in 2018 to 0.633 in 2021 can be attributed to falling life expectancy at birth — 70.7 years to 67.2 years.

- India's expected years of schooling stand at 11.9 years
- The mean years of schooling are at 6.7 years.
- The GNI per capita level is \$6,590(PPP).

Way Forward:

Some steps, which can be instrumental in realising the dream of India in finding a place within the

top slots of HDI, are as follows:

- Investment:** More investment in bedrock areas, such as education, health, infrastructure etc.
- Performance evaluation:** Effective performance evaluation of the projects and activities that are engaged in the social sector development through innovative methods like outcome budgeting, and social auditing.
- Reducing Inequality:** Inequality is found in various forms like social, economic and political and it affects the HDI ranking of India the most. In this regard, rampant corruption in the delivery of services and lack of coordination among agencies have played a major role which needs to be rectified on an

urgent basis.

- Reforms in Governance and Administration:** Adoption of new managerial techniques along with adherence to the principles of 'Good Governance' will bring about comprehensive reforms thus removing the impediments afflicting the real development of the country.
- Innovative solutions:** A greater thrust on research and development is essential to chalk out innovative policies and programmes that will prove instrumental in dealing with new developmental challenges.

4 Indo-Pacific Economic Framework

Why in News:

- The Indian government has decided to stay away from the "trade pillar" during the 'Indo-Pacific Economic Framework' ministerial meeting held in the US.
- India has taken this decision to protect the privacy and protection of its data and to strengthen its own digital infrastructure and laws.
- India has however, agreed on three of the four pillars – Supply Chains (Pillar II); Clean Economy (Pillar III); and Fair Economy (Pillar IV).

Indo-Pacific Economic Framework (IPEF) Ministerial Meeting:

The meeting was held in San Francisco and Los Angeles in September 2022 in which Union Minister of Commerce and Industry Piyush Goyal discussed the following bilateral issues with USTR Ambassador Tai and US Commerce Secretary Gina Raimondo:

- Making the supply chain between India and the US more flexible.
- To create contemporary and modern laws in the digital world

maintaining a high level of data privacy.

- To take decisions on various aspects of IPEF framework based on national interest.
- To make work together to bring about sustainable and equitable development in the Indo-Pacific region by both countries.

About IPEF:

- It is an initiative proposed by the US that aims to strengthen economic partnership among participating countries to enhance resilience, stability, inclusivity, economic growth, fairness and competitiveness in the Indo-Pacific region.
- IPEF is a multilateral economic framework jointly launched by the United States of America and other participating countries of the Indo-Pacific region on May 23, 2022 at the 'Quad Summit' in Tokyo.
- At present, it is a group of 14 countries – Australia, Brunei, Fiji, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States of America and Vietnam.

- These countries together account for 40% of the global GDP.
- India is committed to a free, open and inclusive Indo-Pacific region and is working towards deepening economic cooperation between partners for the development and prosperity of the region.
- It is a non-binding agreement and there is freedom to choose any of the four pillars.

Importance of Indo-Pacific Economic Framework for India:

- India can create a separate and strong geopolitical position in the Indo-Pacific region against China's aggressive nationalist and expansionist policy.
- It can develop technology for clean energy with increased economic investment.

Way Forward:

This Indo-Pacific Economic Framework has worked to maintain a balance between self-reliance and globalization, but challenges such as mutual credibility and complex trade processes still exist in this group.

5 Gulf Cooperation Council and Netflix dispute

- A big dispute has arisen between the Gulf countries and Netflix. The Gulf Cooperation Council (GCC), the most important organization of the Gulf countries, has warned Netflix to remove all contents derogating the Islamic values and culture; otherwise it will be banned in the Gulf countries.

- The GCC has issued a joint statement saying that Netflix is showing a number of programs in which it portrays Islamic people as gay and lesbian and if it continues to do so, it will take legal action against it and it can also be banned. Bahrain, Kuwait, Oman, Qatar and Saudi Arabia and the United

Arab Emirates have strongly condemned Netflix, saying it is hurting religious sentiments in the name of freedom of thought and expression.

- In addition to Saudi Arabia, the United Arab Emirates issued a separate statement warning Netflix to remove content related to same sex

relationships from its platform. Saudi Arabia's state television has even called Netflix an official sponsor of homosexuality in an interview. Significantly, many Muslim-majority countries have made same-sex relationships a punishable offense and have banned films and shows depicting such relationships. Some countries have even put the death penalty on it.

- Last year, the United Arab Emirates and other Muslim countries banned Walt Disney Pixar's animated feature film *Lightyear* from being screened in theaters because such a program depicted a same-sex relationship.

About Gulf Cooperation Council:

- The GCC was formed through an agreement on May 25, 1981 by the 6 Gulf countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. It was formed in Riyadh under the leadership of Saudi Arabia. The headquarters of the Gulf Cooperation Council is also located in Riyadh. The 6 Gulf countries had announced that the special relations between them have been established by the GCC keeping in mind their common political arrangements based on Islamic principles, joint destiny and common objectives.
- The GCC was conceived as a regional common market alongside the Defense Planning Council. The geographical proximity of these countries and the wide adoption of free trade and economic policies helped in the establishment of the GCC.
- The structure of the GCC consists of the Supreme Council, the Council of Ministers and

the Secretariat. The Supreme Council (the apex authority of the Gulf Cooperation Organization) consists of heads of state from 6 member states. The Supreme Council has a general meeting once a year. An emergency meeting can be called at any time by the heads of any two member states. The Supreme Council is chaired by each member state on a rotational basis. Resolutions are passed by majority in the Gulf Cooperation Council.

6 Multinational Naval Exercise Kakadu

Why in News:

INS Satpura and a P8 I Maritime Patrol Aircraft of the Indian Navy reached Darwin in Australia on 12 Sep 2022, for participation in the multinational Exercise Kakadu 2022, hosted by the Royal Australian Navy.

Naval Exercise Kakadu 2022:

- Exercise KAKADU 2022 (KA22) is the premier multilateral regional maritime engagement exercise hosted by the Royal Australian Navy and supported by the Royal Australian Air Force in Darwin, the capital of the Northern Territory of Australia.
- In this exercise, held from 12 to 24 September 2022, as many as 3000 personnel, 15 warships and over 30 aircraft, and 14 navies have been involved.

- The theme of this year's exercise is 'Partnership, Leadership and Friendship'.
- In the harbour phase of the exercise, the ship's crew will interact with the participating navies regarding operational planning and will engage in sporting activities.

About Naval Exercise Kakadu:

- The exercise was initiated in the year 1993 to provide training opportunities for maritime security and surveillance as well as to develop interoperability between nations in maritime and airspace.
- The exercise is conducted biennially in the Darwin and North Australian Exercise Area (NAXA).

- Exercise KAKADU derives its name from Kakadu National Park, which is a protected area in the northern territory of Australia, 171 km southeast of Darwin.

About INS Satpura:

- INS Satpura is a Shivalik-class stealth multi-role frigate that has better stealth and land attack capabilities than the Talwar-class frigates.
- This stealth frigate was built at the Mazagon Dock Limited in Mumbai.
- It was inducted into the Eastern Naval Command headquartered at Visakhapatnam, Andhra Pradesh.

ENVIRONMENT

1 Red-Eared Slider Turtles

Why in News:

- Recently experts have expressed concern regarding the presence of the invasive and exotic South Red-Eared Slider Turtles and how their presence might become a major cause for the Indian native species of turtles to go extinct.
- Out of 356 globally recognized species, India is home to 29 freshwater turtle species among which about 80% are endangered.

Red-Eared Slider Turtles:

Scientific Name: *Trachemys Scripta Elegans* Red-eared slider turtles are native to the south-eastern United States and Mexico.

Protection Status:

- International Union for Conservation of Nature (IUCN) Red List: Least Concern
- It is not included in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- It is not included in the Wildlife Protection Act, 1972.
- It is also not mentioned in the Convention on International

Trade in Endangered Species of Wild Fauna and Flora.

- Red-eared slider turtles are classified as controlled pests under the Victorian Catchment and Land Protection Act, 1994.

Features of Red-Eared Slider Turtles:

- They have a broad red or orange stripe behind their eyes, with narrow yellow stripes marking the remaining black body, neck, legs and tail.
- The distinctive long claws on their front and hind legs are longer in males than in females.

Presence of Red-Eared Slider Turtles in India:

Keeping native tortoises as pets is prohibited in India under the Wildlife Protection Act. However, exotic breeds are not banned and are kept as pets by many families across India.

- These are small and easily domesticated species and are therefore popular as pet turtles.
- In India, these turtles are mainly found in urban wetlands like Sukhna Lake in Chandigarh, Temple Pond in Guwahati, Lakes of Bangalore, Sanjay Gandhi

National Park in Mumbai, Yamuna River in Delhi etc.

Impact on Indigenous Species:

Red-eared slider turtles become very aggressive as they mature, they can influence native turtles for food, nesting and basking sites.

- They eat plants and animals that can finish off a wide range of aquatic species, including fish and rare frogs.
- They can also transfer diseases and parasites to native reptile species.
- This species is considered one of the world's 100 worst invasive alien species.

Way Forward:

- There should be more regulations to prevent the species from entering the Indian environment and negatively affecting it so that their numbers can be controlled.
- These turtles should be captured from urban wetlands and sent to local zoos.

2 Varanasi Tops Cities in Cutting PM10 Levels

Why in News:

Under National Clean Air Programme (NCAP), Varanasi recorded the maximum decline in PM 10 concentration at 53% in 2021-22, compared to the baseline

of 2017.

National Clean Air Programme (NCAP):

NCAP, launched in 2019, is currently being implemented in 131 cities

including 123 Non-Attainment Cities (NACs). NAC is a city that does not conform to the National Ambient Air Quality Standards (NAAQS) for five consecutive years.

Goal: 20% to 30% reduction in

Particulate Matter concentrations by 2024 keeping 2017 as the base year. Reporting and monitoring of physical and financial progress of action plans are done through the PRANA portal (Portal for Regulation of Air Pollution in Non-attainment Cities).

Nodal Ministry: Ministry of Environment, Forest and Climate Change.

The highlights of the Report:

The Ministry of Environment informed that out of 131 cities, the air quality of as many as 95 cities has improved under the NCAP. Moreover, 20 cities out of 95 have achieved the national standards.

- Only 14 of 43 (NCAP) cities, for which data is available, registered a 10% or more reduction in the PM2.5 levels between 2019 and 2021.
- Out of 46 non-NCAP cities with adequate data, 21 recorded significant improvement in their annual PM2.5 value with a 5% or more decline.
- Chennai, Varanasi and Pune exhibited maximum improvement in comparison to other NCAP cities.
- Delhi, Bengaluru, Mumbai, Chennai, Kolkata and Hyderabad have shown significant improvement in air quality in 2021-22 compared to 2017.

- However, Howrah, Durgapur, Aurangabad, Thane, Gaya, Rajkot and Vadodara among others have registered a worsening in air quality.

National Ambient Air Quality Standards (NAAQS):

Ambient air quality refers to the condition or quality of air surrounding us in outdoors.

- Under the authority of the Air (Prevention and Control of Pollution) Act of 1981, India's Central Pollution Control Board outlines national ambient air quality standards.
- The current National Ambient Air Quality Standards (NAAQS) include the following pollutants: SO₂, NO₂, PM₁₀, PM_{2.5}, O₃, Lead (Pb), CO, NH₃, Benzene (C₆H₆), Arsenic (As), Nickel (Ni) and Benzo (a) Pyrene (BaP) in particulate phase only.

National Air Quality Index (AQI):

The measurement of air quality in AQI is based on eight pollutants, namely, PM₁₀, PM_{2.5}, NO₂, SO₂, CO, O₃, NH₃, and Pb.

Particulate Matter (PM): Particulate matter is the sum of all solid and liquid particles suspended in air, many of which are hazardous.

This complex mixture includes both organic and inorganic particles, such as dust, pollen, soot, smoke, liquid

droplets etc.

PM 10: Also known as coarse particles, PM₁₀ is defined as all particles with an aerodynamic diameter of 10 µm or smaller.

- CPCB's performance assessment for NCAP cities has considered only PM₁₀.
- PM₁₀ is usually created directly, from sources like construction sites, road dust, or natural dust storms, instead of secondary atmospheric sources.

PM 2.5: They are also known as fine particles and comprise a grouping of particles with an aerodynamic diameter of 2.5 µm or less.

- They are capable of penetrating deep into the lungs and even entering the bloodstream.
- Fine particles can come from both natural or human-made sources, like Vehicle exhaust, Wildfires, Power plant emissions and other combustion activities.

3

Lobsters And Some Other Species Are Put In 'Red List

- US-based environmental group 'Seafood Watch' has added the lobster and some other species to its "red list," advising people to remove them from their meal menu. It is further declared that the "North Atlantic right whale" is listed as critically endangered both domestically and internationally.

- The protection declaration also includes species that are caught in gillnets, traps, and pots, along with snow crab and Atlantic rock crab.

Ranking of sustainability of seafood matters :

- US-based environmental group 'Seafood Watch' uses a four-colour parameter, from green to

red, to rank the sustainability of seafood. The American lobster was earlier classified under an amber colour rating, alerting seafood aficionados to its harvesting practices.

- This severe warning was taken seriously due to the North American right whale population decline. The US wildlife

authorities have declared that North American right whales are on the verge of extinction.

Lobsters are a staple food of many communities:

- Lobsters belong to the 'crustaceans' family. They are marine animals that have five pairs of legs out of which three of them have claws. They are popularly enjoyed as luxury seafood around the world and are also consumed as a staple food in many communities.
- A lobster body is divided into two main parts comprising the cephalothorax and the abdomen. The head of a lobster comprises the antennae which it uses to sense its surroundings. Generally, a lobster's colour can range from greenish blue to reddish-orange and brown but they are found in a variety of different colours too. It is said that lobsters can live up to 45

years or more and the longevity of different species of lobsters is calculated or guessed based on their size and other important characteristics.

4

Tamil Nadu notifies Nanjarayan Tank as a bird sanctuary

- The South Indian state, Tamilnadu, is known for its commitment to wildlife conservation. Recently, The Tamil Nadu government issued an order to set up a bird sanctuary at Nanjarayan Tank in Tiruppur district.
- With this, the state Government notified the 17th bird sanctuary of Tamil Nadu at Nanjarayan in Tiruppur district.
- K. Ramachandran, Minister for Forests in Tamil Nadu made an announcement in this regard in the State Assembly, in April. Consequently, the government issued the order that the Nanjarayan Tank will be turned into a bird sanctuary by using a government fund of Rs 7.5 crore.
- The Principal Chief Conservator of Forests and Chief Wildlife Warden proposed in this regard. After careful examination, the Tamilnadu government notified the area as 'Nanjarayan Birds Sanctuary' under Wildlife (Protection) Act, 1972.
- The state government considered that the area in Tiruppur had adequate

ecological, fauna, flora, natural and geomorphological significance to protect, propagate and develop wildlife and their environment.

Government may declare to constitute an area which is considered by the State Government to be of adequate ecological faunal, floral,



- It is worth mentioning, Earlier in December 2021, the MK Stalin led DMK government declared the Kazhuveli wetland, located near Villupuram, as the 'Kazhuveli Birds Sanctuary'.

geomorphological, natural or zoological significance for the purpose of conserving the wildlife.

Process of declaration of the sanctuary :

- Section 26A of the Wildlife Protection Act defines the declaration of the sanctuary. It proclaims that the State

5 Phansad Sanctuary to Set Up 'Food Centre' for Vultures

- Phansad wildlife sanctuary, which is located in coastal Maharashtra's Raigad district, has recently decided to set up a 'Food Centre' for Vultures as their numbers fall.
- The sanctuary, about 140 km away from Mumbai, used to have more than 30 vultures until seven years ago. However, most of the birds have now migrated to other areas due to lack of food.
- Green Works Trust, a non-profit organization has decided to set up a food centre as part of the vulture conservation project undertaken by the sanctuary. Members of the Green Work Trust will carry the carcass to the food centre which is expected to attract vultures. Vultures

mainly feed on carrion which has become scarce.

- The sanctuary, spread over nearly 7,000 hectares, is home to more than 160 species of birds, at least 30 species of reptiles and 17 species of mammals.

About Threat to Indian Vultures :

- Vultures were quite common till the 1980s but they are now fighting to survive. Currently, seven species in Africa and eight species in India are threatened with extinction. India has lost 99 per cent population of the three species, namely, the White-backed Vulture, Long-billed Vulture and Slender-billed Vulture.
- The Red-headed and the Egyptian Vulture populations

have also crashed by 91% and 80% respectively. This catastrophic decline had been attributed to the use of diclofenac, a non-steroidal anti-inflammatory drug (NSAID) in veterinary practice during the 1990s.

- Vultures are exposed to diclofenac when they feed on the carcass of an animal that has been treated with diclofenac, 72 hours before its death. The drug is extremely toxic to vultures and impacts their kidneys. Thus, they die of visceral gout.

6 Wildlife Conservation Society- India Report on Sea Cucumber

- According to an analysis by Wildlife Conservation Society-India, Tamil Nadu recorded the highest number of marine wildlife seizures between 2015 and 2021. The analysis, titled "Illegal trade in marine species in India 2015-2021" is based on the assessment of 187 media reports about marine wildlife seizures in India between 2015 and 2021. It recorded illegal marine trade in seven species groups — sea cucumber, coral, seahorse and pipefish, shark and ray, seashell, sea fan and sea turtle.

Findings of the report :

- The report says Sea cucumbers were the most frequently trafficked marine species in India

between 2015 and 2021.

- Tamil Nadu reported the maximum number of sea cucumber seizures (105 incidents), followed by



Lakshadweep (12 incidents) and the Andaman and Nicobar Islands (five incidents)

- Sri Lanka (26 incidents), China (six incidents) and Malaysia (two

incidents) were recorded as countries that are either transit locations or destinations of the intended trade.

About Sea Cucumber :

- Sea cucumbers are part of a larger animal group called echinoderms, which comprises starfish and sea urchins as well. They are listed as an 'endangered species under Schedule I' of the Wildlife Protection Act, of 1972.

1 First Indian Indigenous Vaccine for Cervical Cancer-"CERVAVAC"

Why in News:

Recently, the Union Minister Dr. Jitendra Singh announced India's first indigenous vaccine for the prevention of cervical cancer—"CERVAVAC".

About "CERVAVAC" Vaccine:

It is the first indigenously developed vaccine for cervical cancer treatment in India and is a result of collaboration between Serum Institute of India, Bill & Melinda Gates Foundation, DBT (Department of Biotechnology) and BIRAC (Biotechnology Industry Research Assistance Council).

About Cervical Cancer:

- Cervical cancer is a type of cancer that occurs in the cells of the cervix. The cause of this cancer is a virus called human papilloma virus which enters the body through sexual relations and repeated infection of this virus causes cervical cancer.
- Cervical cancer is the uncontrolled growth of abnormal cells in the lining of the cervix. The cervix is the part of the female reproductive system located in the lower part of the womb, which opens from the womb to the vagina. This cancer is also known as Bachchedani Ka Cancer.
- Cervical cancer is the second most common cancer in India, which is about one-fourth part of cervical cancer deaths in the world.
- According to current statistics, about 1.25 lakh women are diagnosed with cervical cancer every year and more than

75,000 people die from this disease in India.

Symptoms of Cervical Cancer:

- Bleeding between periods.
- Bleeding after intercourse.
- Bleeding that occurs even after menopause.
- Vaginal discharge with strong odor.
- Pain persisting in the pelvis.

initiatives to strengthen Indian vaccine research and development over the past three decades. These include

1. Indo-US Vaccine Action Program
2. National Biopharma Mission,
3. India-CEPI Mission and
4. Mission COVID Suraksha.

These initiatives were launched under Atmanirbhar Bharat 3.0 with the goal of bringing a safe, effective, affordable and accessible indigenous



About Department of Biotechnology (DBT):

- Department of Biotechnology, under the Ministry of Science and Technology, promotes the use and applications of biotechnology for agriculture, health care, animal science, environment and industries. It focuses on achieving new heights in biotechnology research, building wealth by adopting biotechnology as a major precision instrument along with ensuring social justice especially for the welfare of the poor in future.
- The Department of Biotechnology (DBT) has implemented several important

COVID-19 vaccine to the citizens of the country at the earliest.

Way Forward:

This is an important achievement for India, because only the manufacture of this cheap and cost-effective vaccine can make India a self-reliant India and only a healthy India can be a productive India.

This cancer vaccine will help women all over the world and India and in the near future, the next editions 1, 2 and 3 of 'CERVAVAC' can be seen very soon for the world.

2

India's First Nasal COVID-19 Vaccine

Why in News:

Recently Bharat Biotech has developed the country's first COVID vaccine which is to be taken through the nose.

About the Vaccine:

- This INCOVACC vaccine has been developed by Bharat Biotech in association with Precision Virology and Washington University School of Medicine.
- This is the first nasal vaccine developed without injection for the prevention of COVID-19.
- People above 18 years of age will be given one dose of this vaccine.
- This vaccine has been approved by the Drug Controller General of India for emergency use.
- The vaccine can be stored at a temperature of 2 to 8 °C.

Working of the Nasal Vaccine :

- Nasal spray vaccine is given through the nose rather than by injection. It builds immunity in

the inner parts of the nose. It is also considered more effective because the root of most air-borne diseases, including corona, is mainly the nose, and immunity building in its internal parts proves to be more effective in preventing such diseases.



Benefits of this Vaccine:

- The injection will give relief and this will lead to better protection of the lungs.
- By building immunity in the inner parts of the nose, the risk of respiratory infections will be reduced.
- Being free from injections, health workers will not need training.
- It will become easier to vaccinate

children and the elderly.

- Ease in production will lead to production and supply according to the demand around the world.
- Due to the low cost, small and poor countries will be able to buy it at cheap prices.
- There will also be relief from medical waste due to the absence of syringes in it.

Bharat Biotech:

- Bharat Biotech International Limited is an Indian multinational biotechnology company engaged in drug discovery, pharmaceuticals, manufacturing of vaccines, biotherapeutics, pharmaceuticals and health care products. It was founded in 1996 in Hyderabad by Krishna Ella.

3

WEST: A New I-STEM Initiative

Why in News:

I-STEM (Indian Science Technology and Engineering facilities Map) initiative called "Women in Engineering, Science, and Technology (WEST)" was recently launched.

About WEST Initiative:

- The WEST programme will cater to women with a STEM background and empower them to contribute towards science, technology, and innovation ecosystem.
- Women may join the WEST program and explore opportunities to become stakeholders in various domains

and pursue careers in R&D at various levels: technicians, technologists, scientists, and entrepreneurs.

- Opportunities range from operating scientific equipment to maintenance, design and manufacture them.

About I-STEM:

- The Indian Science Technology and Engineering facilities Map (I-STEM), the national web portal for sharing R&D facilities was formally launched in January 2020 by the PM Modi.
- I-STEM is an initiative of Office

of the Principal Scientific Adviser to the Govt. of India (PSA, GOI) under the aegis of Prime Minister Science, Technology and Innovation Advisory Council (PM-STIAC) mission.

- I-STEM project has been accorded extension for five years, until 2026 and enters its second phase with added features.
- I-STEM shall provide a separate platform to scientifically inclined women researchers, scientists, and technologists for pursuing research in basic or applied sciences in frontier areas of science and engineering.

- The Skill Development programmes under the WEST initiative will provide training for women with S&T backgrounds to brush up on their abilities and become engaged in the field as lab technicians and maintenance engineers.
- With this experience, women can become entrepreneurs to serve as consultants for the operation and maintenance of sophisticated equipment/instruments through the I-STEM platform.

Significance:

- It will provide training for women with S&T backgrounds to brush up on their abilities.
- It will help women engage in the field as lab technicians and maintenance engineers, filling crucial gaps in the R&D infrastructure of the country.
- It will also help bring women back into S&T domains after a career break.
- The access to R&D facilities and R&D software platforms (COMSOL, MATLAB, LABVIEW,

and AUTOCAD) available through the I-STEM portal will form a strong support network for women entrepreneurs in S&T.

- A digital consortium "Connect Quickly" for online discussion and immediate support has also been established through the I-STEM WhatsApp and Telegram platforms that will be helpful in providing immediate solutions.

4 India's First High-Throughput Satellite (HTS) Broadband Service

Why in News:

- Hughes Communications India (HCI) and ISRO have jointly launched India's first high-throughput satellite (HTS) broadband service through which high-speed broadband services will be made available in remote areas.
- Kashmir and Himachal Pradesh.
- This broadband service is capable of providing internet connectivity bandwidth of up to 100 Mbps.
- It also provides Wi-Fi hotspots, SD-WAN solutions, mobile networks for community Internet access and satellite Internet services for small businesses.

High - Throughput Satellite Broadband:

- HTS is a communication satellite which provides higher data processing and data transfer capability than conventional communication satellites.

Key Facts:

- HCI - is a joint venture company of US-based Hughes Network Systems and Indian telecom operator Bharti Airtel.
- The service will provide satellite internet to remote parts of India using ISRO's GSAT-11 and GSAT-29 satellites.
- ISRO launched GSAT-11 and GSAT-29 in the year 2018 to provide high bandwidth satellite connectivity to Indian customers. GSAT-11 is capable of providing internet speed up to 14 Gbps through a satellite network.
- The main objective of the newly launched HTS broadband service is to provide high-speed broadband in inaccessible areas.
- Since last one year, this high-speed internet service was tested in many regions like Jammu and



- Reliance Jio and State Bank of India are already connected to Hughes' HTS service.
- Jio uses Hughes' service for 4G backhaul for its terrestrial telecommunications network to provide services at remote locations.
- SBI uses this satellite internet service to provide connectivity to remote bank branches and Automated Teller Machine (ATM) outlets.

Features of HTS:

- **Bandwidth:** It provides a lot of bandwidth at a low cost.
- **Spot-beam:** Spot-beam is used in HTS operation. In comparison, conventional satellites use a single beam.
- **Connectivity:** Their connectivity is much better than a normal communication satellite. The data is transferred between the sender and the receiver in a very short time.

The Way Forward:

- This initiative by Hughes Communications India and ISRO will give a boost to the 'Make in India' program as well as provide high-speed internet service to the inaccessible areas of the country.

5 Clustered Regularly Interspaced Short Palindromic Repeats

Why in News:

- 10 years completed since the publication of the paper that led to the Crisper-Cas9 editing technology by microbiologist Emmanuel Charpentier and biochemist Jennifer Doudna.

About CRISPR - cas9:

- CRISPR is a special type of genetic code or sequence found in bacteria. These sequences are produced by bacteriophages infecting bacteria.
- Bacteria use the CRISPR sequence to remember each virus attack; For this, the bacteria incorporate the DNA of the virus into their Gene.
- Memorizing the CRISPR sequence has the advantage that the bacterium gains immunity in the event of a repeat attack by the same virus.
- Cas 9 enzymes act as molecular scissors that aid in cutting off portions of DNA. These in themselves are a type of gene located near the crisper sequence. When these genes are activated, they produce special enzymes.

Mechanism of CRISPR - cas9:

- First, the guide RNA is made in the laboratory, which helps mark the target gene. After this, the unwanted part is cut off using CRISPR cas9. The desired portion of DNA is attached to the truncated site.

Advantages of CRISPR Technology:

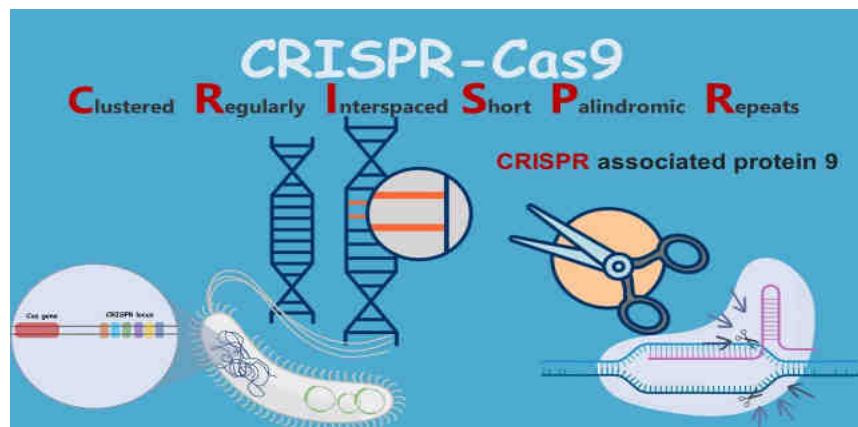
- Diagnostics of rare genetic diseases, aids in the epidemiological determination of genetic diseases and prevention of many fatal diseases including

cancer.

- To manage food security by producing high productive crops with low water requirement crops plants through gene editing.
- To provide more efficient and productive plants that can withstand drought and environmental impact.
- It can aid in increasing the adaptability to climate change and helping crops to be able to tolerate extreme climates. Moreover, it can increase the

Scientific achievements:

- This technology of gene editing therapy has been used in the United States for the treatment of Parkinson's disease.
- China is working on the treatment of cancer through CRISPR.
- In 2015, this technique was used by China where it created a genetically modified super muscular dog by inactivating the myosin gene.
- This technology has been used in Japan to prevent the virus from



carbon absorption capacity of micro-organisms found in crops and soil.

- Can also strengthen the immunity system by inventing new drugs.

Challenges:

- It may encourage unethical genetic modification in embryos and produce designer babies.
- Designer babies may increase inequality.
- It can create such plants or beings that are fatal to humanity.
- The introduction of new genes can cause irreversible damage to environmental gene stores.
- The problem of mutation may arise as an effect of off-targeting.

spreading in the cells of HIV-infected humans.

India's progress in the crisper cas9 sector:

- National Institute of Agricultural Food Technology is using it to make desirable changes in the DNA of bananas.
- Institute of Genomics and Integrative Biology is testing this technology to prevent sickle cell anemia disease.
- Research is being done to replace Streptococcus pyogenes cas9 with the naturally occurring bacterium Francesalisa novices to overcome the problem of off-targeting.

Way Forward:

- Genes that promote human well-being must be designed.
- Human genome editing should not be attempted unless it is confirmed by effective research and unless the social consensus is ensured.
- There is a need to rapid work in the field of agriculture to avoid

climate change.

6**India's First Human Organ Transport 'Drone'****Why in News:**

- Recently, the Union Minister for Road Transport and Highways inaugurated the prototype drone of Indian Drone Technology for quick delivery of human organs to hospitals.

Some Points:

- Recently this facility was launched in MGM Healthcare Hospital, Chennai, on experimental basis. MGM healthcare hospital is the co-founder of this drone technology.
- This drone can be used to carry the organ box up to a distance of 20 km.
- Almost 17,000-18,000 solid organ transplants are performed in India every year. Thus, this drone transport service will aid in saving both time and money.

Organ Transplant in India:

- Worldwide, Spain has the highest number for organ donors which is 34 per million, while India has about 0.03 donors per million. Tamil Nadu has the maximum number of organ donors in India. India requires 6 lakh kidney donations annually and only 6,000 kidney transplants are performed.
- India ranks third in the world in terms of organ transplantation after the United States and China.
- The National Organ and Tissue Transplant Organization was set up by the Ministry of Health

and Family Welfare in 2014 to supervise the process of organ transplantation. Two organizations work under this organisation, namely-

- » Regional Organ and Tissue Transplant Organization (ROTTO) and
- » oState Organ and Tissue Transplant Organization (SOTTO).

Rules Related to Unmanned Drones:

- In India, Drones can only be operated during daylight hours.
- Drone registration is compulsory.
- There is a complete ban on flying drones in the No-Fly Zone.

Way Forward:

- In future, this human organ drone facility will prove to be a milestone towards seamless transport of



organs and it will aid in further enhancing the health services.

Unmanned Drones in India:

The rules for operating drones in India are made and implemented by the Directorate General of Civil Aviation, Government of India.

Unmanned Drones are classified into four parts on the basis of weight-

1. Nano Drone
2. Micro Drone
3. Medium Drone
4. Large Drone

ECONOMY

1 Windfall Tax

Why in News:

Finance Minister Sitharaman defended the windfall tax imposed by the Central Government on domestic crude oil producers, saying it should be seen as a way to keep a check on unprecedented profits made by some oil refiners and companies.

Windfall Tax:

Windfall taxes are designed to tax the profits a company derives from external, sometimes unprecedented events. For instance, the energy price hike during the Russia-Ukraine conflict.

- The United States Congressional Research Service (CRS) defines a Windfall as an unearned, unanticipated gain in income through no additional effort or expense.
- Governments typically levy a one-off tax retrospectively over and above the normal rates of tax on such profits, called windfall tax.

Why are countries levying windfall taxes now?

- Pandemic recovery, and supply issues resulting from the Russia-Ukraine conflict shore up energy demands in turn driving up global prices. The rising prices meant huge and record profits for energy companies like Saudi Aramco, ExxonMobil and Reliance

Industries etc.

- Since the gains stemmed partly from external change, multiple analysts have called them Windfall profits. The U.N. chief urged all governments to tax these excessive profits “and use the funds to support the most vulnerable people through these difficult times.”
- The calls to introduce windfall taxes are also supported by organisations like the IMF, and OECD.
- In July, India announced a windfall tax on domestic crude oil producers who were reaping the benefits of the high oil prices. It also imposed an additional excise levy on diesel, petrol and air turbine fuel (ATF) exports.
- Besides India, a wave of countries including the United Kingdom, Italy, and Germany have either already imposed a windfall profit tax on the super normal profits of energy companies or are contemplating doing so. In July, India announced to impose a windfall tax on crude oil products as well which were gaining additional profit due to price hikes. Consequently, additional excise duty has been imposed on the export of diesel, petrol and air turbine fuel (ATF).

Windfalls on Individuals:

- Windfall taxes can be imposed on individuals who suddenly become prosperous by receiving a significant sum of money through a gift, inheritance, or through game shows, gambling or lottery winnings.

Issues with imposing such taxes:

- Windfall taxes are imposed retrospectively and are often influenced by unexpected events; they can brew uncertainty in the market about future taxes.
- The IMF advice note said that introducing a temporary windfall profit tax reduces future investment because prospective investors will internalize the likelihood of potential taxes while making investment decisions.
- There is another argument about what exactly constitutes true windfall profits, how can it be determined and what level of profit is normal or excessive.
- Another issue is who should be taxed- only the big companies or the small companies should be included as well.
- Companies may argue that it is the profit they earned as a consequence of the industry's risk-taking.

2 World Dairy Conference-2022

Why in News:

The Prime Minister of India inaugurated the World Dairy Summit-2022 at the India Expo Center & Mart, Greater Noida on September

12, 2022.

Key Points:

- The theme of the conference is 'Dairy for Nutrition and

Livelihoods'.

- About 1500 participants across 50 countries including USA, France, Germany, and Canada are participating in this conference

which will be held between 12 to 15 September.

- India is hosting this conference for the second time after a long gap of 48 years. The summit was organised in India for the first time in the year 1974.
- About 800 farmers of the country participated in this conference.

Dairy Sector in India:

- India's dairy model is an example to the world. India produces milk at the lowest cost in the world. The major contribution to the Indian dairy sector is from small farmers. About 70 per cent of women are associated with the dairy sector. This sector employs more than 8 crore families in the country.
- Milk production in India is growing at an annual rate of 6 per cent against the global growth rate of 2 per cent. Milk production in India has witnessed an increase of 44%, from 146 million tonnes in the year 2014 to 210 million tonnes at present. India is the largest milk producing country in the world and its share in global milk production is 23 per cent. Presently, the per capita milk availability in the country is 427 grams as against 330 grams in the

world. India produces three times more milk than China, while 50 percent more than America.

- Improved breeds of buffalo – Banni buffalo of Kutch region of Gujarat, Murrah, Mehsana, Jafrabadi, Nili Ravi and Pandharpuri and the improved breeds of cow – Gir, Sahiwal, Rathi, Kankrej, Tharparkar and Lal Sindhi etc. have increased milk production in India.

Top states in India in milk production:

Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat, Andhra Pradesh, Punjab, Maharashtra, Haryana, Bihar and Karnataka.

Challenges in the Dairy Sector:

The challenges are as follows:

- Lack of organization in dairy industries,
- Lack of management,
- Problem of methane gas emission,
- Effect of deadly diseases in animals,
- Lack of minimum support price,
- Lack of budget allocation,
- Lack of technology as per international standards

Efforts of Government of India:

The Government of India is working

on developing a balanced dairy ecosystem to address the challenges of the dairy sector, such as-

- To promote animal husbandry and dairy for green and sustainable development in villages.
- Implementation of schemes like Rashtriya Gokul Mission, Govardhan Yojana, Digitization of the dairy sector and universal immunization of cattle as well as banning single-use plastic.
- Tagging (biometric identification) of every animal associated with the dairy sector is being done under the name 'Pashu Aadhar'.
- Manufacture indigenous vaccines to eliminate Lumpy skin disease in animals.
- To root out, the Foot and Mouth and Brucellosis disease in animals, by 2025.

Way Forward:

- In the last few decades, the dairy sector has emerged as the lifeline of the rural economy in India, hence the need of the hour is to standardize the quality of dairy products as per international standards and to establish a holistic mechanism for the dairy sector.

3 Electronic Bank Guarantee (e- BG)

- HDFC Bank, India's largest private sector bank, became the first bank in the country to issue an Electronic Bank Guarantee (e-BG) in partnership with National E-Governance Services Limited (NeSL).
- E-BG eliminates the need for the paper-based time consuming process, which often takes 3 to 5 days for completion due to the need for physical pick up from

the bank, delivery of courier to the beneficiary, stamping and verification.

- E-BG boosts efficiency and security while enabling the beneficiary to instantly view a bank guarantee on the NeSL portal.
- The e-BG would be issued on the NeSL portal through an API-based digital workflow.
- Digitisation of the overall bank

guarantee process ensures ease of doing business for MSMEs, who are the major applicants for bank guarantees.

- The e-BG was developed in consultation with the NeSL, CVC-CBI committee and Indian Banks Association (IBA).

Key benefits:

- Bank has developed API-based digital workflow making it

seamless and digital. No need for re-authentication of manual signature.

- Instant notification will go to both the applicant and the beneficiary about the process.
- There is no physical maintenance of record making it easy to operate and also enhancing working capital efficiency of the applicant.
- The secured interface makes it risk-free of fraudulent instruments.

Meaning of Bank Guarantee:

- Bank Guarantee is a promise made by the bank to any third person to undertake the payment risk on behalf of its customers.
- A Bank guarantee is given on a contractual obligation between the bank and its customers. Such guarantees are widely used in business and personal transactions to protect the third party from financial losses.
- This guarantee helps a company to purchase things that it ordinarily could not, thus helping businesses grow

and promoting entrepreneurial activity.

Uses of Bank Guarantee:

- When large companies purchase from small vendors, they generally require the vendors to provide a guarantee certificate from banks before providing such business opportunities.
- Predominantly used for the purchase and sale of goods on a credit basis, where the seller is assured of payment from the bank in case of default by the buyer.
- Helps in certifying the credibility of individuals, which in turn, enables them in obtaining loans and also aids in business activities.

Line of credit (LOC):

- LOC is a financial document which imposes an obligation on the bank to make payment to the beneficiary on completion of certain services as required by the applicant. LOC is issued by the bank when the buyer requests his bank to make payment to the seller on the

receipt of certain goods or services.

National e-Governance Services Limited (NeSL)

- NeSL is India's first information utility and is registered with the Insolvency and Bankruptcy Board of India (IBBI) under the aegis of the Insolvency and Bankruptcy Code, 2016 (IBC). The company has been set up by major banks and public institutions. The primary role of NeSL is to act as a repository of legal evidence containing information relating to any loan/claim.

Conclusion:

- Electronic Bank Guarantee is a considerable step taken by HDFC Bank which will benefit our small-scale industries. This will give impetus to the Indian economy and the country will develop. Keeping up with time every bank should make such arrangements.

4 RBI to prepare a 'white list' of all legal apps

- Taking action against illegal loan apps is crucial for tackling organized economic crimes. Illegal loan apps not only violate the rights of consumers but also help in setting up a parallel economy for criminals in the country. This is the reason why the Reserve Bank of India will prepare a 'white list' of all valid apps and the Union Ministry of Electronics and Information Technology in this context will ensure that only these 'white list' apps are hosted on the App Store. The decision was taken at a high-

level meeting on 15 September chaired by Finance Minister Nirmala Sitharaman on issues related to illegal loan apps.

Other important decisions of the meeting:

- The Reserve Bank of India will monitor mule/rented' accounts used in money laundering and review dormant NBFCs so that these companies are not misused. Mule accounts are generally theft accounts in which illegal money is injected by criminals.
- The Reserve Bank of India

will ensure that the payment aggregators are registered within a time frame and thereafter no unregistered payment aggregators are allowed to function. A payment aggregator is a third-party service provider that allows merchants to accept payments from customers by integrating them into their websites or apps. Google Pay, Amazon Pay, Paytm etc are examples of payment aggregator.

- Ministry of Corporate Affairs will identify shell companies and deregister them to prevent

misuse. A shell company is a company that is only on paper, which is actually used for irregular money transactions.

- All Ministries/Agencies will take all possible steps to check the operations of such illegal loan apps.
- Ministry of Finance will monitor actionable points for implementation on regular basis.

Conclusion:

- Presently, the Indian economy is facing many challenges such as money laundering, tax evasion, data breach, unregulated payment aggregators, the practice of shell companies etc. However, the Government of India has made many efforts to counter these issues. For instance, Prevention of Money Laundering

Act, Digital India, Aadhar Card, PAN Card, changes in Income Tax Act, Demonetisation, MCA 21, GST and regulating the NGOs etc. These initiatives have given positive results in the Indian financial system.

5 Norwegian Central Bank uses Ethereum to Build a Digital Currency

Why in News:

- Norway's Central Bank made a significant advancement in its efforts to develop a digital currency by publishing the open source code for the nation's Central Bank Digital Currency (CBDC), Sandbox, based on Ethereum technology. The use of Ethereum technology by Norway's central bank will promote the decentralization of the national currency. This development is made possible by the ongoing mainstream adoption of cryptographic technology. The sandbox is made to provide a way to communicate with the test network. This will enable features such as mining, burning and transferring RC-20 tokens.
- Ethereum is a decentralized blockchain platform that establishes a peer-to-peer network that securely executes and verifies application code, called smart contracts. Smart contracts allow participants to transact with each other without a trusted central authority.
- Cryptography technology is a technology developed for the use of secure communication that

allows only the sender and the intended recipient of a message to view its contents.

About Central Bank Digital Currency (CBDC):

- CBDC is a digital form of paper currency that is a legal tender issued and backed by a central bank. It is similar to fiat currency and is exchangeable with fiat currency. Digital fiat currency or CBDC can be transacted using wallets backed by the block chain. The Bahamas is the first country to launch its nationwide CBDC Sand Dollar.
- Although the concept of a CBDC was directly inspired by bitcoin, it differs from decentralized virtual currencies and crypto assets, which are not state-issued and lack legal tender.

Purpose:

- Minimizing the risk involved in real currency.
- It reduces the cost of handling notes to transportation and replacement of torn notes.
- It will also move people away from cryptocurrencies as a means of money transfer.

Advantages:

- CBDCs may gradually bring about a cultural shift towards virtual currencies by reducing currency management costs.
- CBDCs can provide an easy means for a reliable sovereign backed domestic payment and settlement system.
- It can also be used for cross-border payments, eliminating the need for an expensive network of correspondent banks to settle cross-border payments.
- It can also pave the way for furthering financial inclusion.

Conclusion:

- In the era of Digital Revolution and Industry 4.0, many countries including India are developing CBDC. Thus it becomes crucial that before adopting CBDC, cyber threat and privacy issue should be resolved.

ART & CULTURE

1 Karma Puja Festival

Why in News:

On September 6, 2022, the Karam Puja festival was celebrated with great enthusiasm in the states of Jharkhand, Odisha, West Bengal, Chhattisgarh and Assam etc.

About Karma Puja Festival:

- It is a brother-sister festival where sisters worship the Karam tree with a decorated plate and wish happiness, prosperity and long life for their brothers.
- Days before the Karma festival, girls collect sand from a river or pond in a bucket. They sow seven types of grains like Barley, Wheat, Corn, Paddy, Gram, Urad, Kulthi etc in that bucket and from the next day they worship and water it daily with turmeric water. The girls sing special songs and dance while playing the 'Mandar' dhol. On the day of worship, the elders and youth of the village bring three branches of the Karam tree home while dancing and singing. These branches are put in the courtyard of the house. This is followed by an overnight celebration. The next day these branches are immersed in the river.

About "Mandar" Dhol:

- It is a folk instrument from Jharkhand which is mainly used for rhythm in the folk music of Jharkhand. It is very popular in Jharkhand and is known as a hand-played drum. It is cylindrical with a bulged centre. One end of it is bigger than the other.

Story related to Karma Puja festival:

- According to ancient legends, there were two brothers named Karma and Dharma, who loved their younger sister very much. Despite working hard, they were very poor. Their sister was a devotee of the Lord and worshipped the Karam tree. Once when the enemies attacked the village, both the brothers fought valiantly to save their sister. Pleased with her brothers, the sister worshipped the Karam tree and wished fortune for her brothers. This made them rich. Since then, brothers and sisters worship the Karam tree together.

Tribal Festivals of Madhya Pradesh and Chhattisgarh:

- Madai festival
- Bhagoria festival
- Adivasi Dussehra of Bastar
- The festival of Nagaji.

Tribal Festivals of Nagaland and Mizoram:

- Bhogali Bihu (January) – Assam
- Wangala (November) – Meghalaya and Assam
- Ka Pamblang Nongkram (November) – Meghalaya

Tribal Festivals of Jharkhand and Odisha:

- Bali Jatra by the Koraput tribe.
- Karma festival by Ho, Kisan, Kol, Bhumij, Oraon, Bhuyan and Binjhal tribes.
- Sume-Gelirak festival,
- Bija Pandu festival,
- Kedu festival of Kondon of Phulbani by the Bonda tribe of Koraput.
- Chaita festival by the tribes of Koraput and Bhuyan.

Tribal Festivals of Southern India:

- Andhra Pradesh-Samakka festival and Telangana-Medaram Jatra festival of Koya tribe.
- Onam (August) – Kerala
- Pongal (January) – Tamil Nadu
- Ugadi (March) – Andhra Pradesh and Karnataka
- Tavashu (April) – Kerala and Karnataka

Ladakh- Dard Aryan festival of 'Dard Aryan' tribe.

2 Mohenjo-Daro Damaged Due to Heavy Rain

Why in News:

According to the Archaeological Department of Pakistan, the World Heritage status of the Harappan site Mohenjo-Daro located in Sindh province is in danger due to heavy

rains and floods.

Threat to the World Heritage:

- Due to heavy rainfall (779.5 mm) in Sindh province of Pakistan from 16th to 26th August, 2022,

Mohenjodaro and its nearby archaeological sites have suffered a lot. These places include Munir Kshetra, Stupa, Great Bath etc.

- Pakistan doubts that the important sites of Mohenjodaro

can be removed from the list of World Heritage Sites, so there is a need to pay special attention to the conservation and protection of these sites.

- The ruins of this site were recognized as a UNESCO World Heritage Site in the year 1980.
- In 2007 the Arab Oryx Sanctuary in Oman, due to poaching and destruction of the species' habitat and in 2009 the Elbe Valley in Dresden in Germany, due to the construction of the Waldschlosschen Road Bridge across the Elbe River, were removed from the world heritage list by UNESCO.

About Mohenjo-Daro:

- Mohenjo-Daro, which literally means 'Mound of the Dead'.

It is the most famous site of a Bronze Age urban civilization. It is believed that the decline of this civilization declined due to reasons like climate change.

- This prehistoric site was discovered in the year 1922 by Rakhal Das Banerjee. It is famous for its brick pavements, developed water supply, drainage, toilets, large granaries and baths, and roads intersecting at right angles to each other and an elaborate town planning system.
- From this site, Wheat, Utensils of Copper and Bronze, Seals, Musical instruments, Large clay pots made on chalk, Copper glass, Two-bladed mill, Measuring stones, Chopped Pieces, Earthen bracelets, Colorful beads etc. have been excavated.

UNESCO:

- UNESCO is a unit of the United Nations Organization that was established on 16 November 1945. Its headquarter is in Paris.

Way Forward:

Heavy rains, floods and human activities have damaged the natural sites of several countries including India, so there is a need for all countries to work together on a concrete strategy for their protection and rescue.

3

Indian organization won the UNESCO International Literacy Prize 2022

- Kalinga Institute of Social Sciences has received the UNESCO International Literacy Prize 2022, the biggest award in the field of literacy. Under this, Kalinga Institute of Social Sciences has been given 20 thousand dollars, a medal and a citation.
- The award has been given to Kalinga Institute of Social Sciences at the Global Awards ceremony held in the African country of Ivory Coast on September 8, 2022.
- With Kalinga Institute of Social Sciences receiving this award, India has received this award 5 times so far and for the first time any institution from Odisha has received this award.
- Kalinga Institute of Social Sciences is the third Indian non-profit organization and the first tribal based organization to

have received this award. This is definitely a proud moment for India. Dr Achyuta Samanta, Founder, Kalinga Institute of Social Sciences announced the award at the campus of his institute.

- Kalinga Institute of Social Science School in Bhubaneswar, Odisha is the largest residential school for tribals in the world. It started in 1993 as a residential tribal school. On 26 August 2017, it became the world's first exclusive tribal university.
- Children from mostly tribal families are brought up in this institution. Here the institution itself bears the expenses of making children suitable for education, food, living, clothing and employment from nursery to higher education. At present, in addition to Odisha, children of tribal families from remote areas

of Jharkhand, Chhattisgarh, West Bengal and Andhra Pradesh are also being educated. These are the children of those families who do not have any means even for their livelihood.

- Here children are being provided with free food, study material, clothes and all the necessary means so that their future can be bright.
- The students of this institute formed the longest human chain for world peace in 2015. It set a Guinness World Record for making the largest human sentence.

NEWS OF NATIONAL AND INTER-NATIONAL IMPORTANCE

1. Tejas Mark-2 Project

Cabinet Committee on Security (CCS) has approved Tejas Mark-2 Project. The CCS has sanctioned 6,500 crore rupees for designing and developing of Tejas Mark-2 fighter jet with proto types, flight testing, and certification. The advanced version of Tejas LCA will feature a series of additions to its flight and fight capabilities. Tejas 2.0 will be equipped with more powerful GEF414 engines in the 98 Kilonewton thrust class, which will allow it to extend its flight range and carry additional payload and weapons in comparison to the existing version. In addition, the new jet will also be equipped with the indigenously developed Active Electronically Scanned Array (AESA) radar, which will be a major upgrade over the existing ELTA's EL/M-2032 multi-mode radar. This decision will give a tremendous boost to indigenous design development of next generation fighter aircraft. It will take forward the initiative of Atmanirbhar Bharat in the field of aircraft manufacturing.



2. Anti-Radiation Pill

With rising fears of a nuclear disaster at Ukraine's Zaporizhzhia power plant growing, the European Union has decided to pre-emptively supply 5.5 million anti-radiation pills to be distributed among residents in the vicinity. After a radiation leak, radioactive iodine floats through the air and then contaminates food, water and soil. Potassium iodide (KI) tablets contain non-radioactive iodine and can help block absorption, and subsequent concentration, of radioactive iodine in the thyroid gland. KI pills taken a few hours before or soon after radiation exposure ensure that non-radioactive iodine in the medicine is absorbed quickly to make the thyroid "full". Potassium iodide (KI) tablets aid in achieving 'thyroid blocking'. KI pills are preventive only and cannot reverse any damage done by radiation to the thyroid gland and do not provide 100% protection.



3. Aspirational District

The NITI Aayog has declared the holy city of Haridwar in Uttarakhand as the best aspirational district. It was launched in 2018 by NITI Aayog. Aspirational Districts are those districts in India that are affected by poor socio-economic indicators. It focuses on the strength of each district, identifying low-hanging fruits for immediate improvement and measuring progress by ranking districts on a monthly basis. There were total 117 districts identified as Aspirational districts. The Aspirational District Programme evaluates the performance of districts based on five key parameters:

1. Health & Nutrition (30%).
2. Education (30%).
3. Agriculture & Water Resources (20%).
4. Financial Inclusion & Skill Development (10%).
5. Infrastructure (10%).



NITI Aayog

4. Stockholm Junior Water Prize

A Canadian student wins 2022 Stockholm Junior Water Prize during a ceremony at World Water Week in Stockholm.

- World Water Week is a conference on global water issues.
- Stockholm Junior Water is an international competition where students aged 15 to 20 years present solutions to major water challenges.
- The prize was given to the student for her research on how to treat and prevent harmful algae blooms.
- The student employed the concept of bio-manipulation and learned which species of zooplankton was best to treat and prevent algae blooms.
- Bio-manipulation is the deliberate alteration of an ecosystem by adding or removing species, especially predators.

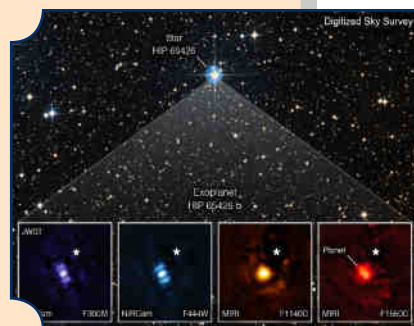


5. HIP 65426B

The James Webb Space Telescope has taken its first picture of an exoplanet, i.e. a planet beyond the Solar System, HIP 65426B.

Key Highlights:

- It is a gas giant planet, meaning it has no rocky surface, and could not be habitable. It is about six to 12 times the mass of Jupiter.
- It is probably around 14 million years old, making it “a baby Jupiter”.
- It was discovered by astronomers in 2017 using the Spectro-Polarimetric HighContrast Exoplanet Research (SPHERE) an instrument installed on the European Southern Observatory Very Large Telescope unit in Chile.
- It is the first exoplanet image ever taken at longer infrared wavelengths, which allow astronomers to study the full range of a planet’s brightness.



6. Preventive Detention

Preventive detentions in 2021 saw a rise of over 23.7% compared to the year before, with over 1.1 lakh people being placed under preventive detention, according to the latest crime statistics released by the National Crime Records Bureau (NCRB). The number of detained persons has been increasing continuously since 2017. Preventive detention under the National Security Act reached an all-time high of 741 in 2020, which has dropped to 483 in 2021. According to Section 151 of the Code of Criminal Procedure, the police has the power to make preventive arrest (to prevent any cognizable offence). Concerning to preventive detention, there is a provision under Article 22(3) of the Constitution. The right of 'protection against arrest and detention' under Articles 22(1) and 22(2) in arrest and the personal freedoms provided under Article 19 and Article 21 does not accrue to the person arrested under Preventive detentions



7. Menu Labelling Norms

The Food Safety and Standards Authority of India (FSSAI) have suspended the licences of 16 food business operators for non-compliance with menu labelling norms.

- The mandatory menu labelling norms for the hospitality industry came into effect on July 1, 2022.
- Menu labelling norms apply to restaurant and hotel players with central licences.
- In addition, restaurant chains operating outlets in ten or more locations must comply with these norms.
- E-commerce aggregators selling food products of such restaurants are also required to declare menu labelling of the food items on their platforms.
- Under the norms, the operators should display calories count, serving size, allergen information and vegetarian/non-vegetarian logo.



8. World Social Protection Report 2020 - 22

According to the latest report (World Social Protection Report 2020-22: Regional companion report for Asia and the Pacific) on social protection by the International Labour Organisation (ILO), only 24.4% of Indians, even fewer than Bangladesh (28.4%), are under any sort of social protection benefit

- The Report is a companion to the ILO's 'World Social Protection Report 2021-22' that gives a regional overview of the social protection in the Asia and Pacific region.
- It notes that Mongolia, New Zealand, Singapore and Australia have 100% social protection net, while in Myanmar and Cambodia, the number stands below 10%.
- As per the report, three out of four workers in the Asia Pacific region are not protected in the event of illness or injury sustained at work



9. The new monarch of England: "King Charles-III"

On September 11, 2022, 73-year-old King Charles-III was officially made the new monarch of England after the death of Queen Elizabeth-II of Britain. He was crowned at St James's Palace in London. Now King Charles is the head of the Commonwealth in addition to the UK and will also be called kings of 14 Commonwealth countries. He has become the third emperor of England under the name King Charles. Born on November 4, 1948, King Charles-III's full name is Charles Philip Arthur George and is the eldest son of Queen Elizabeth-II. Charles Philip, who founded the city of Poundbury in Dorchester, England, is also a skilled painter. Currently his wife is Camilla Parker Bowles.

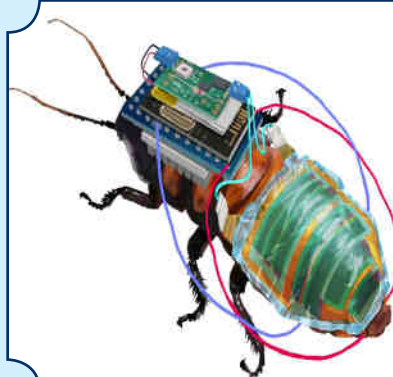
King Charles-I succeeded his father James-I in 1625 as King of England and Scotland, while King Charles-II became King of Britain and Ireland from 1660 to 1685.



10. Cyborg Cockroaches

An international team of researchers led by Japan's scientific institution, RIKEN's Cluster for Pioneering Research (CPR), have devised a system that can create cyborg cockroaches that are part insect and part machine.

- They claim that these insects, whose movements are controlled by tiny integrated circuits, will be able to conduct surveillance in procedures like urban search and rescue, environmental monitoring and inspection of areas dangerous to humans.
- By equipping the cockroaches with small wireless control modules, handlers will be able to control the insect's legs remotely for long periods of time.
- The researchers have designed the system to be rechargeable, by powering it with a super thin 0.004 mm solar cell module that is installed on the dorsal side of the cockroach's abdomen.



11. Diamond Trophy

Neeraj Chopra recently became the first Indian to win the Diamond Trophy, the prestigious title in the finale of the Diamond League series in men's javelin.

Key Highlights:

- The Olympic champion from Tokyo threw 88.44m to finish on the top step of the podium.
- Olympic silver medalist Jakub Vadlejch of the Czech Republic finished second with a best throw of 86.94m.
- The Diamond League encompasses 32 Diamond Disciplines, following a championship-style model.
- Athletes earn points at the 13-series meet to qualify for the final of their respective disciplines.



12. Solar-Powered Unmanned Aerial Vehicle

China has successfully tested its first fully solar-powered unmanned aerial vehicle (UAV) which can fly for months and can function even as a satellite if required.

Key Highlights:

- The Qimingxing-50, with a wingspan of 50 m, is a high-altitude long-endurance drone that is capable of high altitude aerial reconnaissance, assessing forest fire and can also be used for communications.
- This technology will bolster Chinese defences in space and at sea. It can be used in the field of renewable energy, new materials and aeronautical engineering.
- It is also referred to as a 'High Altitude Platform Stations' or a pseudo satellite.



13. Pradhan Mantri Matsya Sampada Yojana (PMMSY)

PMMSY completed its successful second anniversary recently.

Implementing Agency: The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India are implementing this scheme.

- Fishermen, under this scheme, are provided with insurance cover, financial assistance and a facility of Kisan Credit Card as well under the scheme.
- Fisheries growth rate in last 2 years shows an impressive growth of 14.3% from 2019-20 to 2021-22.
- Further, fish production reached an all-time high of 141.64 lakh tons during 2019-20.
- PMMSY is being implemented in all the States and Union Territories for a period of 5 years from FY 2020- 21 to FY 2024-25.
- The main motto of PMMSY is 'Reform, Perform and Transform' in the



14. Hoysala Temples

An expert team, including a representative from the International Commission on Monuments and Sites (ICOMOS), and other officials will visit the Hoysala temples at Belur, Halebid, and Somanathpur.

Hoysala Architecture:

It is the building style in Hindu temple architecture developed under the rule of the Hoysala Empire between the 11th and 14th centuries, in the region known today as Karnataka. It is dedicated to either Lord Shiva or Lord Vishnu, while Jain temples dedicated to past Tirthankaras who were spiritual mentors.

Hoysala temples are called vesara as their unique style seems between Dravida & Nagara styles. Both open & closed mandapas can be found in Hoysala architecture. Hoysala temples have circular pillars in their mandapas. ICOMOS is a professional association that works for the conservation and protection of cultural heritage places around the world. Now headquartered in Charenton-le-Pont, France, ICOMOS was founded in 1965.



15. Arabic translation of Dara Shikoh's Majm ul-Bahrain book released

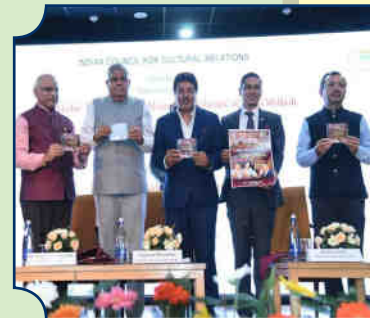
The Vice President Shri Jagdeep Dhankhar released the translated Arabic version of Dara Shikoh's Majma ul-Bahrain. The translator of the book is Mr Amar Hasan.

The book Majma ul Bahrain was devoted to the revelation of unity and diversity among religions.

Dara Shikoh is regarded as a liberal Muslim who tried to find commonalities between Hindu and Islamic traditions. He was the eldest son of Shah Jahan. He is known as the pioneer of the academic movement for interreligious understanding in India.

His most important works are Majma-ul-Bahrain (The Meeting of the Two Oceans) and Sirr-i-Akbar (The Great Mystery) which are devoted to establishing the relationship between Hinduism and Islam.

He translated the Upanishads and other important sources of Hinduism and spirituality from Sanskrit into Persian.



Current Affairs at a Glance

1. CERVAVAC is India's first indigenously developed quadrivalent Human Papilloma Virus (qHPV) vaccine for the prevention of cervical cancer.
2. The Central Council for Research in Ayurvedic Sciences (CCRAS) has taken a unique initiative by developing the Studentship Program for Ayurveda Research Cane (SPARK) scheme.
3. Indian Computer Emergency Response Team (CERT-In) in collaboration with Cyber Security Agency (CSA) of Singapore recently conducted cyber security exercise "Synergy" for 13 countries.
4. A South African court has banned multinational companies from exploring oil and gas on wild shores over environmental concerns.
5. A Chinese firm investing in a sea cucumber farm at Pungudutivu off the Jaffna peninsula in northern Sri Lanka, local fishermen have raised concerns over its potential impact on their livelihoods, marine ecosystem and land.
6. Blue Energy Motors, a two-year-old start-up backed by a Singapore firm, unveiled India's first liquefied natural gas (LNG) fueled green truck at Chakan near Pune.
7. Designed and developed by ISRO's Vikram Sarabhai Space Center (VSSC), the Inflatable Aerodynamic Decelerator (IAD) was successfully test-fired aboard the 'Rohini' sounding rocket from Thumba Equatorial Rocket Launching Station (TERLS).
8. The International Monetary Fund (IMF) approved a preliminary agreement with Sri Lanka on a four-year bailout package of USD 2.9 billion.
9. The Union Home and Cooperation Minister recently announced the formation of a National Level Committee to prepare a new National Cooperation Policy Document.
10. Union Minister of Education and Skill Development & Entrepreneurship Shri Dharmendra Pradhan today participated in the India Ideas Summit organised by the U.S-India Business Council and the US Chamber of Commerce, International Affairs, South Asia.
11. The Minister of Commerce and Industry during his recent visit to the USA launched the US Start-up Bridge program in the Bay Area of San Francisco.
12. The Juvenile Justice (Care and Protection of Children) Amendment Act, 2021 and related rules came into force from 1st September 2022.
13. Recently, Directorate of Revenue Intelligence (DRI) launched Operation 'Gear Box' to check heroin smuggling and seized 39.5 kg of banned substance from Kolkata port.
14. The Ministry of Environment, Forest and Climate Change (MoEFCC), United Nations Development Programme (UNDP) and The Energy and Resources Institute (TERI) have jointly launched the Global Environment Facility Small Grants Programme.
15. Hindi Divas is celebrated every year on 14 September to commemorate the adoption of Hindi as the official language of India.
16. The Shanghai Cooperation Organisation (SCO) summit will be held in Uzbekistan's Samarkand on September 15 and 16, 2022.
17. A new research has shown that an increase of 1.5oC above pre-industrial levels will trigger several climate tipping points.
18. According to the International Monetary Fund data, India has overtaken the United Kingdom to become the fifth largest economy in the world in the last quarter of 2021.
19. Justice D.Y. Chandrachud, the second senior-most judge of the Supreme Court has been named the acting chairman of the National Legal Services Authority by President Draupadi Murmu.
20. The National Green Tribunal (NGT) has imposed a fine of Rs 3,500 crore on the West Bengal government for violating norms on solid and liquid waste management.
21. The Department of Science and Technology has decided to set up India's first Night Sky Sanctuary in the Changthang Wildlife Sanctuary area of Ladakh.

1. Why in News:

- Taragiri, a frigate under Project 17A, was launched on 11 September 2022 from Mazagon Dock Shipbuilders Limited, Mumbai.

2. About "Taragiri":

- Taragiri is named after a mountain range in the Himalayas located in Garhwal, Uttarakhand.
- It is the fifth ship of Project 17A frigates.
- These ships are improved versions of P17 frigates (Shivalik class).
- The launch weight of the ship is about 3510 tonnes.
- Integrated construction methodology is used during ship building.
- It involves hull blocks construction in different geographical locations and integration/erection on Slipway at MDL.
- The ship has been designed by the Indian Navy's in-house design organization- Bureau of Naval Design.

3. Taragiri will have:

- State-of-the-art weapons,
- Sensors,
- An advanced action information system,
- An integrated platform management system,
- World-class modular living spaces,
- A sophisticated power distribution system,
- A host of other advanced features.
- It will be fitted with a surface-to-surface supersonic missile system.
- Air defence capability:** Designed to counter the threat of enemy aircraft and anti-ship cruise missiles will revolve around the

4. About Project-17A:

- Project 17 Alpha Frigates (P-17A) was launched by the Indian Navy in 2019.
- The project was launched to build a series of 7 stealth guided-missile frigates.
- Manufacturing is taking place at two companies—Mazagon Dock Shipbuilders Limited (MDL) (4 Frigates) and Garden Reach Shipbuilders and Engineers (GRSE) (3 Frigates).
- Under the P17A programme, 5 ships have been launched.

- Nilgiri,
- Udaygiri,
- Taragiri,
- Himgiri
- Dunagiri
- Keeping 'Atmanirbhar Bharat' in mind, 75% of the orders for equipment and systems of Project 17A ships are being placed to indigenous firms including MSMEs.

5. Benefits of Shipbuilding Industry:

- A 'strategic industry', with a vital role to play in the nation's security as well as industrialisation and job creation.
- It will boost the nation's ocean-based 'blue economy'.
- 'Civil-military integration' will mean modern infrastructure and skilled manpower of civil shipyards can be utilised for Navy's programmes.

6. Challenges to Indian ship-building industry:

- Statutory burden
- Levies
- Bank guarantees
- Working capital
- Lack of educational institutions

7. Opportunities for Indian shipbuilding industry:

- Low labor cost
- Strong domestic demand
- Supporting industry infrastructure for some components
- Long coastline
- Replacement demand
- New-building prices



Taragiri

vertical launch and long range surface to air missile system.

- Two 30 mm rapid-fire guns will provide the ship with near-defense capability
- One SRGM (Super Rapid Gun Mount) gun will enable it to provide effective naval gunfire support.

1. Why in News:

- Department of Science & Technology (DST) has announced the setting up of India's first Dark Sky Reserve in Hanle, Ladakh.

2. About Hanle Dark Sky Reserve

- Hanle, is about 4,500 metres above sea level.
- It hosts telescopes and is regarded as one of the world's most optimal sites for astronomical observations.
- The proposed Dark Sky Reserve will be located at Hanle in Ladakh as a part of Changthang Wildlife Sanctuary.

3. About Dark Sky Reserve:

- A Dark Sky Reserve is public or private land with a distinguished nocturnal environment and starry nights that is developed responsibly to prevent light pollution.
- According to the International Dark Sky Association (IDSA) website, these reserves "consist of a core area meeting minimum criteria
 - » For sky quality and natural darkness,
 - » A peripheral area that supports dark sky preservation in the core."

4. How does a site become a Dark Sky Reserve?

- Individuals or groups can nominate a site for certification to the IDSA.
- Designated categories,
 - » International Dark Sky parks,
 - » Communities,
 - » Reserves,

5. IDSA criteria for Dark Sky place:

- It is either publicly or privately owned;
- It is accessible to the public partially or entirely during the year.
- The land is legally protected for scientific, natural, educational, cultural, heritage and/or public enjoyment purposes;
- The core area of the land provides an exceptional dark sky resource relative to the communities and cities that surround it;
- The land offers prescribed night sky brightness either for a reserve, park or sanctuary.

6. Who is developing India's first Dark Sky Reserve?

- The Ladakh Union Territory administration is leading the efforts in establishing the country's first Dark Sky Reserve.
- The Department of Science and Technology and experts from the Indian Institute of Astrophysics (IIA), Bengaluru, are providing scientific and technological support in developing this first-of-its-kind facility.
- The formal decision to set up this Dark Sky Reserve was made through a Memorandum of Understanding (MoU) signed between officials from
 - » IIA, Bengaluru,
 - » The Ladakh UT
 - » The Ladakh Autonomous Hill Development Council in June this year.



India's first Dark Sky Reserve

- » Sanctuaries
- » Urban Night Sky Places.
- The certification process is similar to that of a site being awarded the UNESCO World Heritage Site tag or getting recognised as a Biosphere Reserve.
- Between 2001 and January 2022, there have been 195 sites recognised as International Dark Sky Places globally.

1. Why was Ladakh chosen for the project?

- Ladakh is a unique cold desert located about 3,000 metres above sea level with high mountainous terrains.
- Long and harsh winters with minimum temperatures dropping to minus 40 degrees Celcius make large parts of the UT highly inhabitable.
- This aridity, limited vegetation, high elevation and large areas with sparse populations – all make it the perfect setting for long-term astronomical observatories and dark sky places.
- But the primary objective of the proposed Dark Sky Reserve is to promote astronomy tourism in a sustainable and environment-friendly manner.
- It will be one of the world's highest-located sites for optical, infrared, and gamma-ray telescopes.

1. Why in News:

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, has approved the Ministry of Railway's proposal to revise the railways' land policy to implement PM Gati Shakti framework (Cargo related activities, Public utilities & Railway's exclusive use).

2. Impact:

- This will help in attracting more cargo to railways, increase railways' modal share in freight transportation thereby reducing logistics cost of the industry.
- This will bring more revenue to railways.
- This will simplify approvals for utilities as envisaged in PM Gati Shakti Programme.
- This will help in development of public utilities like
 - » electricity, gas, water supply,
 - » telecom cable, sewage disposal,
 - » drains, optical fibre cables (OFC),
 - » pipelines, roads, flyovers,
 - » terminals, regional rail transport, urban transport etc.
- in an integrated manner.
- This policy amendment will enable employment generation potential of about 1.2 lakh employment.

3. Benefits:

- This policy amendment will enable employment generation potential of about 1.2 lakh employment.

4. Financial Implications:

- No additional expenditure will incur.
- Liberalizing the land leasing policy would open avenues for all stakeholders /service providers /operators to establish more cargo related facilities
- It will render their participation assisting in generation of additional cargo traffic and freight revenues to Railways.

**Railways Land for
Implementing PM Gati
Shakti Framework****6. Implementation strategy and target:**

- Comprehensive Policy document will be framed and implemented within 90 days of cabinet approval.
- The approvals for setting up utilities envisaged under PM Gati Shakti Programme will be simplified.
- 300 PM Gati Shakti Cargo Terminals would be developed over the next five years.

5. Details:

- The revised railways' land policy will enable integrated development of infrastructure and more cargo terminals.
- It provides for long term leasing of railway land for cargo related activities for a period up-to 35 years @ 1.5% of market value of land per annum.
- The existing entities using railway land for cargo terminals will have the option to switch to the new policy regime after transparent and competitive bidding process.
- 300 PM Gati Shakti Cargo Terminals would be developed over next five years and about 1.2 lakh employment would be generated.
- This will increase modal share of rail in freight transportation and reduce overall logistics cost in the country.
- For Optical Fibre Cables (OFC) and other smaller diameter underground utilities, a one-time fee of Rs. 1000/- will be charged for crossing railway track.
- The policy provides for use of railway land at nominal cost for setting up of solar plants on railway land.
- The policy also encourages development of social infrastructure on railway land at a nominal annual fee of Rupee 1 per sqm. per annum.

1. Why in News:

The Union Cabinet have approved a new centrally sponsored scheme- PM SHRI Schools (PM Schools for Rising India).

2. About PM SHRI Schools:

- This will be a new scheme for development of more than 14500 schools across the country.
- PM SHRI Schools will showcase all components of the National Education Policy 2020.
- The PM SHRI schools will deliver quality teaching for the cognitive development of students.
- It will strive to create and nurture holistic and well-rounded individuals equipped with key 21st century skills.
- Scheme of PM SHRI schools (PM Schools for Rising India) is to be implemented as a Centrally Sponsored Scheme
- The total cost of project is Rs. 27360 crore with central share of Rs. 18128 crore for the period of five years from year 2022-23 to 2026-27.

4. Major illustrative interventions:

- Quality and Innovation
- Beneficiary oriented entitlements under RTE Act. 100% of PM SHRI Schools will receive Science and Math Kits.
- Annual School Grants
- Early Childhood Care and Education including Balvatika and Foundational



PM SHRI Schools

- Literacy and Numeracy
- Equity and Inclusion including provision of safe and appropriate infrastructure for girls and CWSN.
- Encouraging flexibility in choice of subjects offered to students.
- SHRI Schools will be covered under ICT, smart classrooms and digital initiatives.
- Strengthening of existing infrastructure
- Green School initiatives

5. Quality Assurance of PM SHRI Schools

- Showcase of NEP 2020
 - Student registry for tracking enrolment and learning progress
 - Improvement in learning outcomes of each child to achieve levels above state and national average
 - Every middle grade child exposed/oriented to cutting edge and 21st century skills
 - Every secondary grade child passes out with at least one skill
 - Sports, Arts, ICT for every child
- These schools will be developed as vibrant schools focusing on all round development of children.

3. Key features:

- PM SHRI will provide high-quality education in an equitable, inclusive and joyful school environment.
- It will take care of the diverse background, multilingual needs, and different academic abilities of children
- It will make them active participants in their own learning process as per the vision of NEP 2020.
- PM SHRI Schools will provide leadership to other schools in their respective regions by providing mentorship.

- The PM SHRI Schools will be developed as Green schools, incorporating the following environment friendly aspects:
 - » solar panels and LED lights,
 - » nutrition gardens with natural farming,
 - » waste management, plastic free,
 - » water conservation and harvesting,
 - » study of traditions/practices related to protection of environment,
 - » climate change related hackathon and
 - » awareness generation to adopt sustainable lifestyle.

6. Beneficiaries:

More than 18 lakh students are expected to be direct beneficiaries of the scheme. Further impact will be generated through the mentoring and handholding of the schools in vicinity of PM SHRI schools.

1. About the Portal:

- Many government entities at the Center, State, District and Local levels are providing online services that have made the life of the citizens simpler and have also increased transparency and efficiency.
- These services are provided through multiple websites.
- In order to list these services in a well categorised and searchable interface, National Government Services Portal has been developed under the ambit of India Portal project which is being designed, developed and hosted by the National Informatics Centre (NIC).
- NIC is a premier ICT organization of the Government of India under the aegis of the Ministry of Electronics & Information Technology.
- The purpose of this portal is to facilitate the listing of online services provided by various government entities under one platform and ensuring standardization with respect to content architecture and classification of services.

2. History:

- The Portal has been developed as a Mission Mode Project (MMP) under the National e-Governance Plan (NEGP) of the Government.
- The portal was launched in November 2005.

3. Vision:

- The objective behind the Portal is to provide a single window access to the information and services provided by the Indian Government to citizens and other stakeholders.
- An attempt has been made through this Portal to provide

4. Portal management:

- The content of this Portal is managed centrally by the National Portal Content Management Team from the National Portal Secretariat.
- It is the goal of the management team to continue the enhancement and enrichment of this Portal in terms of content coverage, design and technology on a regular basis.

5. Categories:

- Education and learning
- Health and wellness
- Electricity, water and local services
- Money and taxes
- Jobs
- Justice, Law and Grievances
- Travel and Tourism
- Business and self-employed
- Births, Death, Marriages and Child care
- Pension and Benefits
- Transport and Infrastructure
- Citizenship, Visa & Passports
- Agriculture, Rural and Environment
- Science, IT and Communications
- Youth, Sports and Culture



National Portal of India

comprehensive, accurate, reliable and one stop source of information about India and its various facets.

- The current Portal is a metadata driven site that links to the other Indian Government Portals/websites for most updated information.

5. Important Abbreviations used in the website:

BRAF: Bio-informatics Resource and Application facility

CARE: Centre for Advanced Computing Research and Education

G2B: Government-to-Business

G2C: Government-to-Citizen

G2E: Government-to-Employees

C-DAC: Centre for Development of Advanced Computing

CEG: Centre for e-Governance

CMS: Content Management System

DEA: Department of Economic Affairs

DOEACC: Department of Electronics Accredited Computer Course

FIPB: Foreign Investment Promotion Board

1. Why in News:

Ministry of Culture will organize the inaugural programme of the year-long commemoration of the Hyderabad Liberation Day, on 17th September 2022. The Government of India has approved the yearlong commemoration of the "Hyderabad Liberation Day" for the period 17th September, 2022 to 17th September, 2023.

2. Reason for the celebrations:

- The year-long commemoration is aimed at paying tribute to all those who gave their life for the liberation of Samsthan and its merger with the Indian Union.

3. History:

- On 17th September 1948, more than one year after India secured Independence from the British, the state of Hyderabad got its independence from Nizam's rule.
- History is replete with illustrations of struggles in the entire freedom movement including the struggle of Ramji Gond against the British; the fight of Komaram Bheem; the valour of Turrebaz Khan in 1857 who wanted to hoist the Indian national flag on the residence of the British Resident Commissioner at Koti in Hyderabad city.
- The struggle became vociferous after Indian independence. With the spontaneous participation of people chanting Vande Matram and with the demand of the merger of the samsthan into the Indian union, the struggle transformed itself into a massive people's movement.

4. Role of Sardar Patel:

- The liberation of Hyderabad was possible due to the swift and timely action by first Minister of Home Affairs of India, Shri Sardar Vallabhbhai Patel under Operation Polo.

**Hyderabad Liberation Day****7. The Recognition:**

- The state governments of Maharashtra and Karnataka officially observe September 17 as the Liberation Day.

5. About Operation Polo:

- Operation Polo was the code name for the September 1948 "police action" against Hyderabad state by the then-independent Dominion of India.
- It was a military operation in which the Indian armed forces annexed the Nizam-ruled princely state.
- India, on the instructions of Home Minister Sardar Patel, did the operation in Hyderabad.
- Operation was started on September 13, 1948, and completed on day 5, September 17.
- Sardar Patel had major doubts about the Nizam of Hyderabad's intentions due to the state's location.
- Hyderabad state was in the heart of India, surrounded by land.
- The Nizam was not interested in forging connections with India, which implied he had other ideas in mind.
- As a result, Sardar Patel put up an inquiry team to find out what the Nizam was up to. i.e. Hyderabad was friendly with Pakistan yet opposed to India.
- On 18th September 1948, Operation Polo was terminated after the Indian Army accepted the surrender of the Nizam of Hyderabad's army.

6. The areas liberated:

The state of Hyderabad under the Nizam included :

- the whole of current day Telangana,
- the Marathwada region in Maharashtra that included the districts of Aurangabad, Beed, Hingoli, Jalna, Latur, Nanded, Osmanabad, Parbhani and
- districts of Kalaburagi, Bellary Raichur, Yadgir, Koppal, Vijayanagara and Bidar in current day Karnataka.

1. Why in News:

Recently, the Indira Gandhi Urban Employment Guarantee Scheme has been started by the Rajasthan government.

2. About the Scheme:

- Indira Gandhi Urban Employment Guarantee Scheme has been implemented by the Government of Rajasthan since 9 September 2022.
- The nodal department of this scheme is "Autonomous Governance Department (Swayatt shasan Vibhag), Government of Rajasthan".
- According to the estimates of the Government of Rajasthan, an expenditure of Rs.800 crores will be incurred per year on this scheme.

3. The objective of the Scheme

- To provide 100 days of employment in a year to the family living in urban areas.
- To secure the livelihood of the eligible family by providing 100 days of guaranteed employment in a year.
- The applicant should be a resident of Rajasthan state.
- Poor and needy intended families living in urban areas
- Preference will be given to poor people (especially those who have lost their livelihood during the pandemic) through this scheme.

is visible on the economy of Sri Lanka.

- According to critics, this plan is part of the electoral strategy.
- The process of registration of this scheme is online, in which case there will also be concerns about data protection.

4. What works can be done under this scheme

Environmental protection:

- » Plantation of trees in public places and protection of plants.
- » Work related to garden maintenance and horticulture.
- » Preparation of saplings in nurseries under urban bodies, forest, horticulture, and agriculture departments.

Water conservation:

- » Removal of soil, cleaning, and improvement work of water bodies (pond, Gianni, etc.).
- » Construction of rainwater harvesting structures, and

rejuvenation of water sources.

Sanitation-related work:

- » Solid Waste Management
- » Labor work for house-to-house collection and segregation of urban waste.
- » Segregation of waste at dumping site/ MRF center.
- » Cleaning and maintenance of public/community toilets and urinals, drains/drain.
- » Work related to preventing property defacement, and removal of encroachments.

Convergence Functions:

- » Convergence in construction work under Pradhan Mantri Awas Yojana (Urban) and Chief Minister Jan Awas Yojana.
- » Convergence in the construction work of various schemes of the Central and State Governments.

Service-related:

- » Labor work in Kayan House/ Gaushala.
- » Functions of multi-task services like record keeping etc. in urban body offices.
- » Heritage protection.
- » To do work related to heritage conservation.

Other tasks:

- » Work related to security/boundary wall/guard etc. of urban bodies and public land.
- » Works of parking development and management of parking lots in urban areas.

5. Benefits of this Scheme:

- Economically weak families, helpless families who are unable to get employment, means of income to unemployed families.
- The role of MNREGA was very important in bringing the rural economy back on track during the Corona period, so the Rajasthan government started this scheme for street vendors, people working in dhabas or restaurants, and other categories of people living in urban areas. This scheme will try to improve



Indira Gandhi Urban Employment Guarantee Scheme

the post corona condition of the urban poor.

- This scheme will improve the livelihood of the urban poor and make them financially empowered.
- The work done under this scheme promotes sustainable development, cleanliness, and cooperation.

6. Associated Challenges:

- At present the states are running in fiscal deficit, so this scheme will affect their financial system.
- The doctrine of populism is not permanent and its impact

MCQs based on Preliminary Exam

1. Consider the following statements regarding 'Purple Notice' issued by INTERPOL:
 1. It is issued to warn of an event, a person, an object or a process representing a serious and imminent threat to public safety.
 2. It was issued for warning against investment frauds via dating applications last year.Which of the above statement/s is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
2. Consider the following statements about Mahananda Wildlife Sanctuary:
 1. It is located between Teesta and Mahananda river.
 2. It has been designated as an 'important bird area' due to its critical role in the conservation of birds and their habitat.
 3. Rufous-necked hornbill is one of the main attractions for bird watchers.Which of the statements given above are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
3. Consider the following statements about benchmark rates for financial contracts, Secured Overnight Financing Rate (SOFR) and London Interbank Offered Rate (LIBOR):
 1. SOFR is based on the secured interbank overnight interest rate and LIBOR is based on the interest-rate average calculated from estimates submitted by the leading banks in London.
 2. LIBOR is a replacement for SOFR.
 3. LIBOR is forward-looking while SOFR is backward-looking.
 4. SOFR is overnight rate while LIBOR has a long tenor.Which of the above statements are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1, 3 and 4 only
 - (d) 1, 2, 3 and 4
4. Consider the following statements about the Monarch butterfly :
 1. Its scientific name is 'Danaus plexippus'.
 2. Its official status under the IUCN Red List is Critically Endangered.
 3. It is famous for seasonal migration.
 4. Destruction of milkweed habitat is one of the contributing factors in its population decline.Which of the above statements are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1, 3 and 4 only
 - (d) 1, 2, 3 and 4
5. Consider the following indigenous martial arts and their states of origin:

Martial Arts	: State of Origin
1. Kalaripayattu	: Tamilnadu
2. Gatka	: Punjab
3. Thang-Ta	: Mizoram

Which of the above pair/s is/are correctly matched?
 - (a) 1 and 2 only
 - (b) 2 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
6. Consider the following statements about the STARS project:
 1. It is being implemented as a Centrally Sponsored Scheme under the Department of School Education and Literacy (DoSEL).
 2. It has been launched with financial support from World Bank.
 3. The project covers 10 states.Which of the statements given above are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
7. Consider the following types of fatty acid:
 1. Monounsaturated fatty acid
 2. Polyunsaturated fatty acid

3. Saturated fatty acid
Which of the above type/types of fatty acid/s constitute trans fats?
- (a) 1 and 2 only
(b) 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
8. Consider the following Constitutional amendments and their main provisions:
- | | |
|---------------------------|---|
| Constitutional Amendments | : Main Provisions |
| 1. 77th | : Introduced Article 16(4A) |
| 2. 81st | : Introduced Article 16(4B) |
| 3. 82nd | : Inserted a condition in Article 332 |
| 4. 85th | : Provided for reservation in promotion for SC/ST employees with retrospective effect |
- Which of the above pairs are correctly matched?
- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 2, and 4 only
(d) 1, 2, 3 and 4
9. Consider the following statements regarding Defamation laws in India:
1. Defamation can be both civil wrong as well as a criminal offense.
 2. Criminal defamation has been specifically defined under section 498 of IPC.
 3. Section 499 of IPC provides for punishment of criminal defamation.
- Which of the statement/s given above is/are correct?
- (a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3
10. Consider the following passes and places they link:
- | | |
|-------------------|--|
| 1. Banihal Pass | : Leh with Kargil of Ladakh |
| 2. Lipu Lekh Pass | : Kashmir Valley with the outer Himalaya and the plains to the south |
| 3. Nathu La Pass | : Sikkim with Autonomous Region of Tibet, China |
| 4. Rohtang Pass | : Kullu Valley with the Lahaul and Spiti Valleys of Himachal Pradesh |
- Which of the above pair/s is/are incorrectly matched?
- (a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 3 and 4 only
11. Which of the following report/s is/are published by the Reserve Bank of India?
1. Report on Trend and Progress of Banking in India.
 2. Financial Stability Report.
 3. Indian Banking Industry Report.
- Select the correct answer using the codes given below
- (a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3
12. Regarding 'Ruthenium-106', consider the following statements:
1. It is produced from the fusion of Uranium 235.
 2. It can be used as a therapy in 'Ocular tumors'.
 3. It can be found in the residue of spent nuclear fuel.
- Which of the statement/s given above is/are correct?
- (a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3
13. With reference 'e-courts' project in India, consider the following statements:
1. The project was conceived upon the recommendations of an e-Committee set up in 2019.
 2. The project is being funded by the Ministry of Electronics and Information Technology.
- Which of the above statement/s is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
14. Consider the following statements:
1. The National Tiger Conservation Authority (NTCA) is a statutory body under The Wildlife Protection Act of 1972.

2. The Wildlife Institute of India (WII), is an autonomous institution under the Ministry of Environment Forest and Climate Change which conducts the National Tiger Census.

Which of the above statement/s is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

15. Consider the following statements about Dhokra Art:

1. The term "Dhokra" has been named after the Dhokra Damar tribes, the traditional metalsmiths from West Bengal and Odisha.
2. It is a 'Ferrous metal casting style' that uses the 'cire-perdue technique'.

Which of the above statement/s is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

16. Which of the following are the primary duties of ASHAs?

1. ASHA counsels women on birth preparedness, the importance of safe delivery, breastfeeding and complementary feeding, immunization, contraception, and prevention of common infections.
2. ASHA takes steps to create awareness and provide information to the community on the determinants of health such as nutrition, basic sanitation, and hygienic practices.
3. It works with the Village Health and Sanitation Committee of the Gram Panchayat to develop comprehensive village health plans.
4. ASHA provides primary medical care for minor ailments such as diarrhoea, fevers, and first aid for minor injuries.

Select the correct answer using the code given below

- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 3 and 4 only
(d) 1, 2, 3 and 4

17. Consider the following statements about the Parliamentary Privileges:

1. Parliamentary privileges are special rights,

immunities and exemptions enjoyed by the two Houses of the Parliament, their committees, and their members.

2. Parliamentary privileges extend to the President of India.
3. Parliament can exclude strangers from its proceedings and hold secret sittings to discuss some important matters.

Which of the statement/s given above is/are correct?

- (a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

18. Consider the following statements regarding Sambhar Lake:

1. It is the largest inland salt lake in India.
2. It represents the depression of the Vindhya Range.
3. It forms part of the desert circuit in the Centre's Swadesh Darshan Scheme.
4. It houses one of the largest salt manufacturing units in the country.

Which of the above statements are correct?

- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 3 and 4 only
(d) 1, 2, 3 and 4

19. Consider the following statements regarding the Thar Desert:

1. It forms a natural boundary along the border between India and Pakistan.
2. It is bordered by the Aravalli Range to the southwest.
3. It has a temperate desert climate.

Which of the statement/s given above is/are correct?

- (a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

20. Consider the following organisms:

1. Coelacanth
2. Horseshoe crab
3. Ginkgo tree

Which of the above organisms are examples of living fossils?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

21. Consider the following statements regarding Smart Cities Mission:

1. It is being implemented by the Ministry of Housing and Urban Affairs.
2. It is financed as a Centrally Sponsored Scheme.
3. 'Nurturing Neighbourhoods Challenge' is associated with this Mission.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

22. Consider the following statements regarding Mandarin duck:

1. It is considered as one of the most beautiful ducks in the world.
2. It is native to South Asia.
3. Its status in IUCN Red List is 'Critically Endangered'.

Which of the statement/s given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

23. Consider the following Regulatory bodies of India:

1. Reserve Bank of India
2. Securities and Exchange Board of India
3. Pension Fund Regulatory and Development Authority
4. Insurance Regulatory and Development Authority

Securities Appellate Tribunal can hear and dispose of appeals against which of the above bodies?

- (a) 1 and 2 only

- (b) 2 and 3 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

24. Which of the following Schemes/Programmes of Government provide for Mental Healthcare Services in India?

1. National Health Mission
2. Rashtriya Kishore Swasthya Karyakram
3. Ayushman Bharat
4. Pradhan Mantri Swasthya Suraksha Yojana

Select the correct answer from the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

25. Consider the following Military Exercises:

1. SIMBEX-20 : Trilateral maritime exercise between the Indian Navy, Republic of Singapore Navy and Royal Thai Navy.
2. SITMEX-20 : Bilateral maritime exercise between the Indian Navy and the Republic of Singapore Navy.

Which of the above pair/s is/are correctly matched?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

26. Consider the following statements regarding the All India Trade Union Congress (AITUC):

1. It was formed in 1921.
2. Lala Lajpat Rai was its first General Secretary.
3. It was split to form National Trade Union Federation (NTUF) and Red Trade Union Congress (RTUC).

Which of the statement/s given above is/are correct?

- (a) 1 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

27. Consider the following places:

1. Achanakmar- Amarkantak Biosphere Reserve-

- Chhattisgarh, Madhya Pradesh
 2. Agasthyamalai Biosphere Reserve- Kerala and Tamil Nadu
 3. Khangchendzonga National Park- Sikkim
 4. Panna National Park and Tiger Reserve - Madhya Pradesh
 5. Manas National Park- Assam
- Which of the above sites are included in the 'World Network of Biosphere Reserves' list of UNESCO?
- (a) 1 and 2 only
 - (b) 1, 2 and 3 only
 - (c) 1, 2, 3 and 4 only
 - (d) 1, 2, 3, 4 and 5
28. Consider the following statements about the National Commission for Protection of Child Rights (NCPCR):
1. It is a constitutional body.
 2. For the NCPCR, the protection of all children in the 0 to 18 years age group is of equal importance.
 3. It is under the administrative control of the Ministry of Women & Child Development, Government of India.
- Which of the statement/s given above is/are correct?
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
29. Consider the following air pollutants:
1. Sulfur Dioxide
 2. Nitrogen dioxide
 3. Carbon Dioxide
 4. Nitrogen Monoxide
 5. Carbon Monoxide
 6. Ammonia
- Which of the above pollutants are included in National Air Quality Index (AQI)?
- (a) 1, 2, 3 and 4 only
 - (b) 2, 3, 5 and 6 only
 - (c) 1, 2, 5 and 6 only
 - (d) 3, 4, 5 and 6 only
30. Consider the following statements about Karlapat Wildlife Sanctuary:
1. It is located in the Kalahandi district of Odisha.
 2. Tropical Evergreen Forest is prominent vegetation of this sanctuary.
- Which of the above statement/s is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
31. Consider the following statements regarding Maulana Abul Kalam Azad:
1. He was the second Union Education Minister of India.
 2. His birth anniversary is celebrated as National Education Day.
 3. He was responsible for setting up of University Grants Commission (UGC).
- Which of the statement/s given above is/are correct?
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
32. Consider the following submarines of the Indian Navy:
1. Arihant
 2. Chakra
 3. Kalvari
 4. Vela
 5. Shalki
- Which of the above submarines are part of Project-75?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 3 and 4 only
 - (d) 4 and 5 only
33. Consider the following statements regarding methods used by investigative agencies:
1. The polygraph test is based on the injection of sodium pentothal.
 2. Narcoanalysis Test induces a hypnotic state.
 3. The P-300 test maps the activity of the brain of a suspect.
- Which of the statement/s given above is/are correct?
- (a) 1 only
 - (b) 2 only

- (c) 2 and 3 only
- (d) 1, 2 and 3

34. Which of the following qualities characterize Persistent Organic Pollutants (POPs)?

1. Bio-accumulation in the fatty acids in living organisms.
2. More soluble in water.
3. Short-range of environmental transport.

Select the correct answer from the code given below:

- (a) 1 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

35. Consider the following statements regarding the Cotton Crop:

1. It is a Kharif crop.
2. It grows well in Alluvial soil.

Which of the above statement/s is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

36. Consider the following statements regarding Jamia Milia Islamia university:

1. It was established during the Khilafat and Non-Cooperation Movement.
2. It was initially located in Aligarh.
3. Dr. Mukhtar Ahmad Ansari was its first chancellor.

Which of the statement/s given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

37. Consider the following statements regarding Nag Missile:

1. It is India's third-generation, anti-tank guided missile.

2. It has an operational range of 100 m to 500 m.
3. It is an all-weather missile.
4. It has a single-shot hit probability of 50%.

Which of the above statements are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

38. Consider the following indicators:

1. Undernourishment
2. Child wasting
3. Child stunting
4. Child morbidity
5. Child mortality

Which of the above indicators are components of the Global Hunger Index (GHI)?

- (a) 1 and 2 only
- (b) 1, 2, and 3 only
- (c) 1, 2, 3 and 4 only
- (d) 1, 2, 3 and 5 only

39. Consider the following statements:

1. Atal Tunnel is the world's longest highway tunnel above 10,000 feet from the Mean Sea Level (MSL).
2. It has been built under Banihal Pass in Jammu and Kashmir.
3. The total length of the tunnel is 9.02 km.
4. It has been built by the National Highway Authority of India.

Which of the above statements are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

40. Which of the following beaches have the 'Blue Flag' tag in India?

1. Padubidri and Kasarkod beach (Karnataka)
2. Kappad beach (Kerala)
3. Eden beach (Puducherry)
4. Marina beach (Tamilnadu)

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 1 and 3 only

- (c) 1, 2 and 3 only
(d) 1, 2, 3 and 4
41. Consider the following Hepatitis viruses:
1. Hepatitis A
 2. Hepatitis B
 3. Hepatitis C
 4. Hepatitis D
 5. Hepatitis E
- Which of the above are transmitted through the consumption of contaminated water or food?
- (a) 1 and 2 only
 - (b) 1 and 5 only
 - (c) 2 and 3 only
 - (d) 2, 3 and 4 only
42. Which of the following water bodies are declared as Ramsar sites?
1. Lonar Lake- Maharashtra
 2. Soor Sarovar- Uttar Pradesh
 3. Kabartal Wetland- Bihar
 4. Asan Conservation Reserve- Uttarakhand
- Select the correct answer from the code given below:
- (a) 1 and 2 only
 - (b) 1 and 3 only
 - (c) 1, 2 and 3 only
 - (d) 1, 2, 3 and 4
43. Consider the following species of vultures found in India:
1. Oriental white-backed vultures
 2. Long-billed vultures
 3. Slender-billed vultures
 4. Red-headed vultures
 5. Egyptian vultures
- Which of the above species are critically endangered?
- (a) 1 and 2 only
 - (b) 1, 2 and 3 only
 - (c) 1, 2, 3 and 4 only
 - (d) 1, 2, 3, 4 and 5
44. Consider the following statements regarding Chapare Virus:
1. It causes a rare Ebola-like illness that is believed to have first originated in rural Bolivia.
2. It belongs to the Arenaviridae family.
 3. It is generally carried by rats.
- Which of the statement/s given above is/are correct?
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
45. Consider the following statements regarding types of Diabetes:
1. Type 1 diabetes occurs due to decreased response of the body towards insulin.
 2. Type 2 diabetes occurs due to a lack of insulin secretion in the body.
- Which of the above statement/s is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
46. He actively participated in the protest against the partition of Bengal; joined Anushilan Samiti at a young age; tried to throw a bomb at a British judge; he was:
- (a) Lala Hardayal
 - (b) Sachindra Sanyal
 - (c) Khudiram Bose
 - (d) Bhagat Singh
47. Which of the following adds/add nitrogen to the soil?
1. Excretion of urea by animals
 2. Burning of coal by man
 3. Death of vegetation
- Select the correct answer using the codes given below:
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
48. Which of the following diseases can be transmitted from one person to another through tattooing?
1. Chikungunya
 2. Hepatitis B
 3. HIV-AIDS
- Select the correct answer using the codes given below

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

49. Consider the following statements:

1. Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes.
2. Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.

Which of the above statement/s is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

50. Consider the following statements:

1. Biodiversity hotspots are located only in tropical regions.
2. India has four biodiversity hotspots i.e.,

Eastern Himalayas, Western Himalayas, Western Ghats, and Andaman and the Nicobar Islands.

Which of the above statement/s is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

ANSWER

- | | | | |
|---------|---------|---------|---------|
| 1. (b) | 16. (d) | 31. (c) | 46. (c) |
| 2. (d) | 17. (c) | 32. (c) | 47. (c) |
| 3. (c) | 18. (c) | 33. (c) | 48. (b) |
| 4. (c) | 19. (a) | 34. (a) | 49. (c) |
| 5. (b) | 20. (d) | 35. (a) | 50. (d) |
| 6. (a) | 21. (d) | 36. (b) | |
| 7. (b) | 22. (a) | 37. (b) | |
| 8. (c) | 23. (c) | 38. (d) | |
| 9. (a) | 24. (d) | 39. (b) | |
| 10. (b) | 25. (d) | 40. (c) | |
| 11. (d) | 26. (b) | 41. (b) | |
| 12. (c) | 27. (c) | 42. (d) | |
| 13. (d) | 28. (c) | 43. (c) | |
| 14. (c) | 29. (c) | 44. (d) | |
| 15. (a) | 30. (a) | 45. (d) | |

MCQs Based on Current Affairs

1. With reference to 'Gayaji Dam', consider the following statements:

1. This dam is built on the Falgu river under the direction of IIT (Roorkee).
2. It is the longest rubber dam in India.

Which of the above statements is/are correct?

- A. only 1
- B. only 2
- C. 1 and 2
- D. Neither 1, nor 2

Answer: C

2. With reference to the Attorney General of India, consider the following statements:

1. He is a Chief Legal Adviser and Principal Advocate to the Government of India.
2. He is appointed by the President under Article 76 of the Indian Constitution.
3. On October 1, 2022, Mukul Rohatgi is going to become the Attorney General for India for the second time.

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 2 only
- D. 1, 2 and 3

Answer: D

3. With reference to the 'National List of Essential Medicines (NLEM)', consider the following statements:

1. 384 medicines have been included in this list.
2. This list has been launched by the Prime Minister of the country.
3. Free distribution of these medicines has been ensured.

Which of the above statements is/are false?

- A. only 1
- B. 2 and 3 only
- C. 2 only
- D. 1, 2 and 3

Answer: B

4. Where in the country the headquarters of the National Pharmaceutical Pricing Authority is located?

- A. New Delhi
- B. Jaipur

- C. Kanpur
- D. Pune

Answer: A

5. With reference to Human Development Report 2021-22, consider the following statements:

1. India ranks 122nd in the Gender Inequality Index.
2. India's life expectancy in the year 2021 was 67.2 years.
3. India's rank was 128 in the year 2020.

Which of the above statements is/are false?

- A. only 1
- B. 2 and 3 only
- C. only 3
- D. 1, 2 and 3

Answer: C

6. In terms of number of world heritage sites, what is the rank of India in the world?

- A. 6th
- B. 5th
- C. 8th
- D. 7th

Answer: A

7. Which of the following statement(s) is/are correct?

1. India uses cassava, wheat, broken rice, rotten potatoes etc. for ethanol production
2. India exports more than 40 percent of rice in the world
3. Thailand is the largest exporter of rice in the world

- A. 1 and 2 only
- B. 2 and 3 only
- C. only 3
- D. 1, 2 and 3

Answer: A

8. With reference to Cervical Cancer, consider the following statements:

1. It is the second most common cancer among women in India.
2. India has developed the first indigenous vaccine -"CERVAVAC" for this.

Which of the above statements is/are correct?

- A. only 1
- B. 2 only
- C. 1 and 2
- D. Neither 1, nor 2

Answer: C

9. With reference to the new Emperor of England 'King Charles-III', select the correct statement:

- A. He was officially made emperor on September 13, 2022.
- B. At present His age is 75 years.
- C. He was crowned at Buckingham Palace in London.
- D. He is the eldest son of Queen Elizabeth II.

Answer: D

10. With reference to the 36th National Games, select the false statement:

- A. Kerala is hosting the 36th National Games.
- B. The theme of these games is "Celebrating Unity Through Sports".
- C. The mascot of these games is Savaj.
- D. This time these games also include indigenous games like Mallakhamb and Yogasana.

Answer: A

11. Who among the following player has become the first Indian player to win the final of 'Diamond League-2022'?

- A. Neeraj Chopra
- B. Devendra Jhajharia
- C. Shivpal Singh
- D. Achint Shiuli

Answer: A

12. With reference to Mohenjo-Daro (Mound of the Dead), consider the following statements:

- 1. This site was discovered by Rakhal Das Banerjee in the year 1922.
- 2. This site is located on the banks of Indus river in Larkana district of Sindh province of Pakistan.
- 3. Evidence of huge bath, granary, bronze dancer statue, Pashupati Mahadev's seal, beard man stone, woven cloth have been found from this site.

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

Answer: D

13. With reference to Karma Puja festival, consider the following statements:

- 1. This festival is celebrated with great enthusiasm

in the states like Jharkhand, Odisha, West Bengal, Chhattisgarh and Assam etc.

2. The main purpose of celebrating this is to wish the brothers happiness, prosperity and long life by sisters.

3. The 'Mandar' drum is played in this festival.

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 2 only
- D. 1, 2 and 3

Answer: D

14. With reference to World Dairy Convention-2022, consider the following statements:

1. The conference focused on the theme 'Dairy for Nutrition and Livelihoods'.

2. This conference was held for the first time in India in the year 1974.

3. Prime Minister of India inaugurated it on 12 September 2022 in Greater Noida.

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

Answer: D

15. Which country has prepared the first nasal spray COVID vaccine on September 5, 2022?

- A. Britain
- B. India
- C. China
- D. Russia

Answer: B

16. With reference to the PM-Shri scheme, consider the following statements:

1. This scheme was announced by the President on September 5, 2022, on the occasion of Teacher's Day.

2. 'PM-Shri' school to act as a laboratory for New Education Policy, 2020

3. Under this scheme, 14,500 schools will be developed and upgraded across the country.

Which of the above statements is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

Answer: B

17. In which cities of the United States of America

was the ministerial meeting of the Indo-Pacific Economic Framework Group organized during September 2022?

- A. San Francisco and Los Angeles
- B. New York and Washington
- C. Washington and San Francisco
- D. Los Angeles and New York

Answer: A

18. Who is the new head of United Nations Human Rights?

- A. Volker Turk
- B. Antonio Guterres
- C. Mary Robinson
- D. Michelle Bachelet Jeria

Answer: A

19. Which state has constituted a committee on Uniform Civil Code under the chairmanship of Justice Ranjana Prakash Desai?

- A. Uttar Pradesh
- B. Uttarakhand
- C. Karnataka
- D. Madhya Pradesh

Answer: B

20. Which of the following institutes has successfully developed India's first superconducting magnet system used in MRI machines?

- A. IUAC, New Delhi
- B. IIT, Madras
- C. IIT, Delhi
- D. IIT, Mumbai

Answer: A

21. 'Operation London Bridge', which was in news recently, is related to?

- A. a joint military exercise between India and England.
- B. the planning of events related to the death of the head of state in Britain.
- C. Britain's Defence Forces campaign.
- D. Economic agreement between India and Britain.

Answer: B

22. With reference to the Prime Minister's TB Free India Campaign, consider the following statements?

- 1. Under this scheme, India is committed to end TB by 2025.
- 2. Leverage of CSR activities is one of the objectives of

Pradhan Mantri TB Mukh Bharat Abhiyan.

Which of the above statements is/are correct?

- A. only 1
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

23. With reference to attachment, consider the following statements:

- 1. It is related to the sale of fertile land.
- 2. Attachment is not considered a valid document under the Code of Civil Procedure.

Which of the above statements is/are correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: D

24. Which country has inaugurated the 'Maitri Super Thermal Power Project' built under India's concessional financing scheme?

- A. Sri Lanka
- B. Bangladesh
- C. Nepal
- D. Myanmar

Answer: B

Dr. Verghese Kurien



Dr. Verghese Kurien was one of the few people in independent India who had made an unprecedented contribution to the country's economic development, agriculture, employment, and the strength of the cooperative movement. Every year on 9th September, the death anniversary of Dr. Verghese Kurien is celebrated. From 1965 to 1998, he was the founding chairman of the National Dairy Development Board. He was the father of the 'Indian White Revolution', which helped India emerge as the world's largest producer of milk.

In the late 1960s, Dr. Kurien started a project called Operation Flood. Through an investment of Rs 1700 crores in a project lasting 25 years, Operation Flood helped increase milk production in India to a value of Rs 55000 crores per annum, which was more than achieved by any other development program in the world.

Operation Flood emerged as India's largest rural employment program and opened up a wide spectrum of institutional, techno-economic, industrial and social activities of dairy development.

Dr. Kurien's innovative ideas and leadership not only helped in the work of dairy development but also helped in other sectors like edible oils, fruits and vegetables.

At the request of the Government of India, he started a pilot project for the procurement and marketing of fruits and vegetables in Delhi in the mid-90s. The project was focused on providing a direct link between the producers of fruits and vegetables from different states and the consumers of Delhi.

Dr. Kurien also revolutionized the business of edible oils by launching the 'Dhara' Cooperative Project in 1979, the Cooperative Project of Oilseeds Growers established a direct link between the producers and the consumers of oils thereby reducing the role of oil traders. The main objective of this project was to stabilize oil prices, reduce India's dependence on food imports and encourage oilseed growers to increase production.

Dr. Kurien was a visionary and he came to be known as an institute builder. He established the Institute of Rural Management (IRMA) at Anand in 1979 to provide management training and research support to cooperatives being set up across the country. He assisted in the reorganization of the National Cooperative Dairy Federation of India in 1988 to provide a national level body for the country's state cooperative dairy federations. He established the Anandalaya Shiksha Samiti to provide quality school education to the children of the employees working in various institutions of Anand. In 1994, he helped set up Vidya Dairy to provide hands-on experience of dairy plant management to graduate students in dairy technology. He also served as the founding President of the Gujarat Cooperative Milk Marketing Federation from 1973 to 2006.

Dr. Kurien's main contribution has been in the systematic shaping of institutions and systems, by which people developed themselves, as he believed that human development can be done by providing the tools of development in the hands of the peoples. He believed that the best wealth of this country are people of this country, who have devoted their whole life in harnessing the power of the people in a way that would promote their larger interests.

Dr. Verghese Kurien received many honors and awards during his tenure, including Roman Magsaysay Award for Community Leadership, Padma Shri Award, Padma Bhushan Award, Krishi Ratna Award, Wattler Peace Prize, Carnegie Foundation Award, World Food Awards, World DairyExpo Awards, Wisconsin Awards, International Acclaimed Personality Award by USA.

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AN INTRODUCTION



Dhyeey IAS, two decades old institution, was founded by Mr. Vinay Singh and Mr. Q. H. Khan. Ever since its emergence it has unparalleled track record of success. Today, it stands tall among the reputed institutes providing coaching for Civil Services Examination (CSE). The institute has been very successful in making potential aspirants realize their dreams which is evident from the success stories of the previous years.

As the nation progresses, the young generations become more conscious and aware about their career options. There is plethora of jobs and one among them is civil services, the most prestigious service in the country, which needs no introduction. It attracts many young minds hailing from almost all spectra of academic disciplines. The popular belief that the examination for this service is only meant for the brilliant lots has become a taboo as it also attracts the hardworking, sincere and disciplined minds. The saying- "In the end passion and hard work can substitute natural talent" holds true. It gives immense power and opportunity for young folks to bring about the positive changes in the society which would bring harmony and development. It inculcates values, moral, ethos and feeling of national integrity.

Quite a large number of students desirous of building a career for themselves are absolutely less equipped for the fairly tough competitive tests they have to appear in. Several others, who have a brilliant academic career, do not know that competitive exams are vastly different from academic examination and call for a systematic and scientifically planned guidance by a team of experts. Here one single move may invariably put one ahead of many others who lag behind. Dhyeey IAS is manned with qualified & experienced faculties besides especially designed study material that helps the students in achieving the desired goal.

Civil Services Exam requires knowledge base of specified subjects. These subjects though taught in schools and colleges are not necessarily oriented towards the exam approach. Classes at Dhyeey IAS are different from classes conducted in schools and colleges with respect to their orientation. Classes are targeted towards the particular exam. Classroom guidance at Dhyeey IAS is about improving the individuals' capacity to focus, learn and innovate as we are comfortably aware of the fact that you can't teach a person anything, you can only help him find it within himself.

We feel that despite brilliance and diligence, most of the students are lacking proper guidance and aptitude needed to clear Civil Services Examination. This is why, we at Dhyeey IAS amalgamated the traditional as well as modern approach of teaching by incorporating best educators of the industry ably supported by Academic Associates, Class Notes and printed Study Material, routine as well as surprise Tests. Due to its arduous efforts, Dhyeey IAS is able to carve a niche among all the civil services coaching institutes in India. Access to an institution is as important as the quality of Institution. Our faith in this philosophy made us grow. With 12 Face to Face Centers located in different parts in India, Distance Learning Program, Live Streaming Centers and Residential Academy, we have made truly pan India presence. Ever since the foundation the institute has produced a heavy pool of bureaucrats both at central and state level. Dhyeey IAS not only aims at imparting the content of civil services in best way but also nurturing the aspirants as leaders of tomorrow who have a responsibility of fulfilling the dreams of around 1.4 billion Indians. Dhyeey IAS has guided over 50,000 aspirants with more than 4500 selections in civil services. Our journey is a small contribution for the development of the society and nation by nurturing the potential civil services aspirants.

Considering the toughness of Civil Services Exam, where success rate is a meager 0.1 percent, Dhyeey IAS has continuously produced phenomenal results over the years. Year after Year Dhyeey IAS is being recognized for imparting guidance to civil services aspirants using benchmarked quality practices. On the basis of scalability, innovation, achievements, impact potential our efforts and contribution have been acknowledged and rewarded with Education Excellence Awards by ET NOW, Brands Academy, Times of India, etc. This has enhanced motivation, pride and self-esteem of entire Dhyeey family.

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