

# PERFECT

Complete Fortnightly for UPSC and PCS Exam



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Green Technology in India: Progress, Possibilities & Collaborations

Need to Reform UN Refugee Convention

Need of Effective steps to Protect the Environment from Hazardous Chemicals

Evaluation of the Role of AFSPA in Maintaining Stability & Security in North-East India

OPS vs NPS: Issues & Related Dimensions



Rising Demand of Caste Census in India: Impact & Evaluation Aadhaar: Security & Privacy Concerns, Dimensions and Solutions

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- 1. First of all, Perfect-7 Current Affairs Magazine is published **every 15 days** to keep students up-to-date with current affairs, while other coaching institutes have monthly magazines which aggregate the current affairs of the month. Due to large number of current affairs, students are often unable to read all the articles. Eventually they become dependent on annual and half yearly magazines.
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- 8. Perfect-7 Magazine contains prelims and mains exam focused mock questions through which students can make their preparation more precise.

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# **For Next Issue**

- > Evaluation of India's foreign policy on relations with Israel and Palestine
- Contemporary Aspects of Abortion Laws in India: Discrepancies and Solutions
- > Steps taken towards mineral resource conservation in India, especially strategic minerals
- > Management of malnutrition in children: Necessary to protect child empowerment
- Good governance in India: Efforts made to strengthen it and related challenges
- > Role of regional councils in promoting cooperative federalism
- R&D Roadmap for National Green Hydrogen Mission in India unveiled

# Message



Vinay Singh Founder Dhyeya IAS

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 to 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 needs of 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 national, international, environment, ecology, art and culture, science and technology, economic issues.

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. Columns have been included in the format of the magazine keeping in mind the factual needs of the candidates, mental development, developing writing technique etc. Along with this, we have been introducing new segments according to the changing needs of the candidates and these initiatives will continue in future also. Hope this issue will prove useful for all of you. Your suggestions are always welcome.

Best wishes.



# PERFECT nightly for UPSC and PCS Exam

# **In This Issue**

-6

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# **Important Issues**

1.	Rising	<b>Demand</b>	of	Caste	Census	in	India:	
	Impact	& Evalua	tio	1				5

2. Need of Effective steps **Protect** the 7-8 **Environment from Hazardous Chemicals** 

3. Evaluation of the Role of AFSPA in Maintaining Stability & Security in North-East India

11-12 4. Need to Reform UN Refugee Convention

5. OPS vs NPS: Issues & Related Dimensions 13-14 6. Aadhaar: Security & Privacy Concerns,

15-16 **Dimensions and Solutions** 

7. Green **Technology India:** Progress, 17-18 **Possibilities & Collaborations** 

>	National	19-23
	International	24-28
>	Environmental	29-33
>	Science and Tech	34-38
>	Economy	39-43
>	Miscellaneous	44-48
>	News of National and International Importance	50-53
>	Current Affairs at a Glance	54
>	Place in News	55-56
>	Brain Boosters	57-63
>	MCQ Based on Current Affairs	64-67
<b>&gt;</b>	MCQs based on Preliminary Exam	68-73
>	Practice Questions for Mains Exam	74

# Rising Demand of Caste Census in India: Impact & Evaluation

India is known as a country of linguistic, ethnic and religious diversity since the ancient times where the system was run by the socio-politically stratified caste system. This caste system has been prevalent for centuries which divides people into social strata or classes, which means that when a child is born his/her position in the social hierarchy is decided based on the caste in which he/she is born. In ancient times, Indian society was mainly divided into four Varnas comprising Brahmin, Kshatriya, Vaishya and Shudra. People of different classes derived their livelihood from specific occupations and children born in their families also followed the same occupations thereby maintaining a hierarchical ranking of occupations and hereditary occupational specialization. This class system was prevalent in both ancient and medieval India with an objective of administration and often as a way to admit new people of new territory while maintaining the hierarchy of the native people. After independent India, this Varna system took the form of a class system which included the general class, backward class, scheduled caste and scheduled Tribes. Presently where occupation is a matter of choice rather than something inherent, this classification is merely constricted to the point of view of the vote bank by political parties, which is again oriented towards the same system which is colloquially called discrimination.

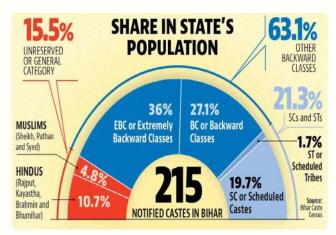
# Reference:

After the high demand of caste census by regional parties of Bihar for years, recently the caste census data was released by the state government which revealed that the population of Other Backward Classes (OBC) and Extremely Backward Classes (EBC) combined in the state is around 63% of the total population.

# **History of Census and Caste Census in India:**

- During the British rule in India, the census was started in 1872 by then Viceroy Lord Mayo. From the year 1881, a provision was made that the census would be held every 10 years. From 1881 to 1941, information related to caste was also recorded but in 1941 data related to caste was not declared. After independence, when the first census was conducted in India in 1951, only people belonging to Scheduled Castes and Scheduled Tribes were classified under the caste.
- The first Backward class Commission of OBC, known as the Kelkar Commission formed in 1953, had advocated caste-wise enumeration of the population in the 1961 census, however, steps were not taken on the caste census on the grounds that caste census could not be conducted as per the law. The Supreme Court also reiterated in many related cases that caste census cannot be conducted as per law because the Constitution considers population and not 'caste or religion'.
- During 1970s after the Emergency, many regional political parties emerged whose politics was based on caste. In the year 1979, the Government of India constituted the Mandal Commission on the issue of giving reservation to socially and educationally backward castes. In its report Mandal Commission recommended giving reservations to OBC category people also.
   By 1990 the issue of caste census was too much

linked with reservation because political parties started raising their demands from time to time. This was notified by Vishwanath Pratap Singh's government in 1990 by giving 27% reservation to OBCs. In the year 1992, the case related to this reservation was challenged in the Supreme Court in the popular case of Indra Sawhney. In its decision, the Honourable Court validated this reservation however it ordered that the limit of reservation cannot exceed 50%.



- When the UPA government won again in the 2009 Lok Sabha elections, more than 100 MPs put pressure on the government to collect data on socio-economically backward classes during the 2011 census on which the then Congress government agreed.
- Consequently, the Socioeconomic caste census was conducted in 2011, but the caste-related data obtained in this process was never made public. Similarly, a caste census was conducted in Karnataka in the year 2015, but the data obtained in it was never made public.

# Caste census in Bihar and other states:

The report titled 'Bihar Caste Based Survey'



highlighted that the total population of the state is around 13 Cr. As per the report, the Other Backward Class (OBC) population in the state is 27.13%, while the Extremely Backward Class (EBC) population is 36.02%. In Bihar, the Scheduled Caste population is 19.65% and the Scheduled Tribe population is 1.69%, while the General Caste population is around 15.53%. The report also shows that Hindus constitute 81.99% of the population, while Muslims constitute 17.71%.

> Unlike the lists of Scheduled Castes and Scheduled Tribes (which are exclusively central subjects), there are lists of Other Backward Classes for individual states and union territories also. According to the central government list, there are 2,479 OBCs in the country, while according to the state and union territory lists, the number is 3,150. In some states, orphans and destitute are included as OBCs. In some other cases Scheduled Castes converted into Christianity and Islam religion are also listed as OBCs.

# **Objective of caste census:**

- One of the main objective of caste census is to enable families to be ranked based on their socio-economic status after which state governments can prepare a list of families living below the poverty line.
- The caste census provides authentic information about the caste-wise population and the socio-economic status and education status of different castes and sections of the country.
- ➤ The data obtained by conducting such a census will be used as a basis to help in providing the benefits of government welfare schemes to needy people. Courts in India have also stressed in many cases the necessity of adequate data regarding the reservation.

# **Problem with caste census:**

- Caste has an emotional element because the caste census has political and social implications. There have been concerns that counting castes may help strengthen or rigidify identities. Everyone fears that this may increase caste polarization in society. This can affect the relationships between people in the society. Sardar Vallabhbhai Patel, the first Home Minister of the country who merged more than 500 princely states into India, was against the caste census due to similar reasons.
- The caste census will be used to decide reservations and welfare benefits in the future, so respondents may lie about their caste (or sub-caste) or their material assets. It has also

been observed that the need for conducting caste census is emphasised by the parties which were founded on a particular caste; this highly undermines the principles of equality and the democratic election system.

Under Article 246 of the Indian Constitution, Census is a Union List subject listed at serial number 69 of the Seventh Schedule of the Constitution. Census is used by the government, policy makers, academicians and other individuals to collect data on the population of Indians, access resources, chart social change and conduct delimitation exercises etc. Census in India comes under the Census Act, 1948 under which all data is considered confidential.

# **Rationale of Reservation Policy:**

Some supporters suggest that the a caste census will help reservation policymakers to have a more accurate idea about the affirmative action required. This data is currently available for the SC and ST population, while the OBC population is estimated at around 52% based on the Mandal Commission and the census conducted in the year 1931. In 2017, Justice G. Rohini Committee was appointed to examine the sub-classification of the OBC category in which only a few castes of the OBC communities are availing most of the benefits of reservation. This committee was formed to provide benefits to those castes that are deprived of the benefits of reservation.

# **Conclusion:**

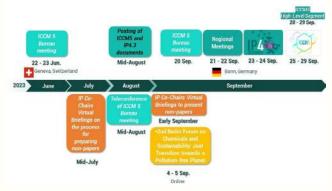
India needs to be bold and decisive in tackling questions of caste through data and statistics in the same way the United States tackles issues of race by collecting data around race, class, language, inter-racial marriage and other metrics. Dr B.R. Ambedkar had said that if India has to attain a proud place among the community of nations, then first all castes would have to be destroyed. In the present time, we should work on strategies for inclusive and equitable development. Most importantly, it is more necessary to improve the existing database than to get into the debate on whether caste should be counted or not. The 21st century is the right time to work towards eliminating the caste system from India; otherwise, it will hinder the development of the people of the country, both individually and collectively and at all social, political and economic levels.

# Need of Effective steps to Protect the Environment from Hazardous Chemicals

The fifth International Conference on Chemical Management (ICCM5) was organized in Bonn, Germany from 25 to 29 September in which representatives of nations across the world came together to discuss the goal of a world free from chemical side effects. This global framework moves forward with a vision of a chemical and waste-free Earth for a safe, healthy and sustainable future. It aligns with the principles and values of the Sustainable Development Goals, the Kunming Montreal Global Biodiversity Framework and the Global Convention on Plastic Pollution. The framework is based on 28 goals that focus on effectively managing chemicals and wastes. Under this, national governments have shown their commitment to creating regulatory norms and a corresponding environment to reduce chemical pollution by 2030 and promote other safe alternatives. Under this global framework, industries have committed to take action to manage toxic chemicals to combat the negative impacts of chemical pollution by 2030.

# Relation of Global Framework to Agriculture and Environmental Protection:

- This global framework calls for eliminating high-risk pesticides from agricultural use by 2035 while focusing on safer alternatives. It recognizes the need to strengthen the interconnections between climate, biodiversity, human rights and health agendas. The negative effects of pesticides have been discussed in this meeting. Such chemicals are being used all over the world and they are badly affecting the environment, agriculture, health, animals, sustainable development, everything. The use of pesticides is having adverse effects on human health and the environment.
- According to the Food and Agriculture Organization (FAO), a pesticide is any substance or mixture of substances used to prevent, destroy or control any pest, including vectors of human or animal disease, unwanted species of plants or animals. Pesticides are classified according to the type of pests they kill, such as insecticides (to kill insects), Herbicides (to destroy poisonous plants), Rodenticides (to target rodents or rodents like rats etc.) Bactericides (chemicals that destroy bacteria), Fungicides (chemicals that destroy fungi), Larvicides (chemicals that kill larvae).



# Financing proposal to combat chemical pollution:

There is a call for an integrated approach and coordination among nations on the issue of

- financing for a toxic chemical-free Earth. It has also been decided to create and manage a dedicated trust fund by the United Nations Environment Program (UNEP) to deal with chemical pollution and for management work in this direction. Governments, private sector, NGOs, foundations will be able to contribute to this fund. Germany has committed an initial contribution of EUR 20 million to the Fund.
- On the other hand, the African Group, supported by Latin American and Caribbean groups and a number of NGOs, has proposed at the ICCM5 meeting that a "globally coordinated fee" be imposed on basic feedstock chemicals, which would lead to the creation of a fund that would finance that could be used for effective management of use of chemicals and waste.
- There are countries however that have opposed this proposed "Globally Coordinated Fee" and they include: China, the European Union, the US, Japan, Iran, India, Pakistan, Saudi Arabia and Russia. These countries say that it is not justified to make such an arrangement by imposing taxes or fees to create a special fund in a voluntary agreement (Global Framework on Chemicals).
- ➤ ICCM5 has also launched a Global Alliance on Highly Hazardous Pesticides to take action towards the implementation of the new global framework. It focuses on building capacity to eliminate the most hazardous chemicals and manage chemical wastes, and recommends national governments to address weak enforcement regimes in chemical waste management.

# Conclusions from the Second Berlin Forum on Chemistry and Sustainability:

The second Berlin Forum on Chemicals and Sustainability was organized in September 2023. It was organized by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection. Under this forum, a high-level



- dialogue on 'human health and environment' was organized. It was organized with the aim of taking action towards a pollution-free earth, which was also addressed by the Environment Minister of India at the virtual level.
- The conference aims to promote shared global understanding of critical chemical and waste management issues while providing important political direction. The main objective of the 2nd Berlin Forum on Chemicals and Sustainability was to garner support for "The Strategic Approach to International Chemicals Management (SAI) 'Beyond 2020' during the upcoming 5th meeting of the International Conference on Chemicals Management (ICCM5) and to ensure high level of ambition.
- The Strategic Approach to International Chemicals Management (SAICM) was adopted in 2006. It is a policy framework to promote chemical safety throughout the world. Its initial objective was to achieve sound management of chemicals throughout their life cycle so that by 2020, chemicals are produced and used in ways that have minimal adverse impacts on the environment and human health. The scope of SAICM is almost unlimited, covering both toxic chemicals and hazardous industrial activities. It is noteworthy that SAICM does not impose any binding obligations on countries.

# **Stockholm Convention to combat chemical risks:**

- ➤ This convention was adopted to protect human health and the environment from persistent organic pollutants(POPs). Nations were invited to sign it in Stockholm, Sweden in 2001 and it became operational in 2004. Persistent organic pollutants have been listed in various annexes of the Stockholm Convention after extensive scientific research, deliberations and negotiations among member states.
- This convention was brought in to ban nine of the Dirty Dozen Chemicals, limit the use of DDT for malaria control, and curb the indiscriminate production of dioxins and furans. convention lists twelve different chemicals in three categories: eight pesticides (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene), two industrial chemicals (polychlorinated biphenyls and hexachlorobenzene) and two unintentionally PoPs (dioxins and furans).

# Rotterdam Convention on the Handling of Chemicals and Pesticides:

The Rotterdam Convention (formally, the Rotterdam Convention on the Prior Informed

- Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade) is a multilateral treaty to promote shared responsibilities regarding the import of hazardous chemicals. The convention promotes the exchange of information and requires exporters of hazardous chemicals to use appropriate labeling, include instructions on safe handling, and inform buyers of any known restrictions or bans. Under this convention, signatory nations can decide whether to allow or ban the import of chemicals listed in the treaty, and exporting countries are obliged to ensure that manufacturers in their jurisdictions comply.
- The Prior Informed Consent Regulation (PIC, Regulation) administers the import and export of certain hazardous chemicals and imposes obligations on companies that wish to export these chemicals to non-EU countries. Its purpose is to promote shared responsibility and cooperation in the international trade of hazardous chemicals, and to protect human health and the environment by providing developing countries with information on how to safely store, transport, use and dispose of hazardous chemicals. PIC regulation applies to restricted or severely restricted chemicals, including industrial chemicals, pesticides and biocides, for example, benzene, chloroform, atrazine and permethrin. Export of these chemicals is subject to two types of requirements: export notification and explicit consent.

## **Conclusion:**

It is well known that hazardous chemicals like pesticides can harm soil health, contaminate drinking water, spread in the air, affect the environment on a large scale and even harm birds, mammals and fish. Despite this, it is also true that pesticides have become an integral part of modern agriculture and complete eradication or restriction is not justified given the food safety consequences. The need of the hour is to encourage farmers to adopt less pesticides and organic farming, zerobudget natural farming etc. Besides, attractive advertisements on pesticides that affect farmers should also be banned so that their use cannot be increased. Considering the changing environment, pesticide manufacturers should also change their production system from toxic to environmentfriendly pesticides. For example, Urea has been promoted by the Government of India in the form of Neem Coated Urea.

# Evaluation of the Role of AFSPA in Maintaining Stability & Security in North-East India

A recently released government official notification said, "The Governor of Manipur has approved declaring the entire State of Manipur, except the areas falling under the jurisdiction of 19 police stations, as 'Disturbed Area' under the AFSPA Act. The decision will be effective for a period of six months from October 1, 2023." This decision has been taken to deal with the ethnic violence in the hilly areas of Manipur in the last few months. The areas where the Disturbed Areas Act has not been implemented include Imphal, Lamphel, Shahar, Singjamei, Sekmai, Lamsang, Pastell, Wangoi, Porompat, Heengang, Lamlai, Iribung, Limakhong, Thoubal, Bishnupur, Nambol, Moirang, Kakchin and Jirabam. Thus, the areas dominated by the Meitei population have been excluded from the ambit of AFSPA.

- has been extended for six months in four districts of the north-eastern state of Assam namely Dibrugarh, Tinsukia, Sivasagar and Charaideo. On the other hand, it has been lifted from four districts of Jorhat, Golaghat, Karbi Anglong and Dima Hasao from October 1 and the status of 'disturbed area' of these four districts has been removed. Along with this, the duration of 'Armed Forces (Special Powers) Act' has also been extended for the next six months from October 1, 2023, in some parts of Arunachal Pradesh and Nagaland.
- It is noteworthy that due to the continuous efforts of the Central Government and with unprecedented improvement in the security situation of North-East India, the number of disturbed areas in Nagaland, Assam and Manipur have been reduced under the Armed Forces Special Powers Act from April 2022. However, with the new emerging security challenges, the Central Government has had to re-impose AFSPA in many areas.

# **More about the Act:**

- Government, on the basis of the Governor's report, declares any state or region as disturbed and deploys Central Security Forces there. In this, the state government has also been given the right to impose AFSPA through the Governor. This right for the administrator of the Union Territory has also been mentioned in the AFSPA Act, 1958. The state or central government declares an area as disturbed due to differences or disputes between different religious, racial, language, regional groups, castes, communities.
- Section 3 of the AFSPA Act empowers the Governors of states and union territories to issue an official notification in the Gazette of India, after which the Center gets the authority to send armed forces to civilian areas. According to the Disturbed Areas (Special Courts) Act, 1976, once the area is declared disturbed, status quo will have to be maintained for a minimum of

three months. State governments can suggest whether this Act should be implemented or not, but under Section 3 of this Act, the Governor or the Center has the power to take their suggestions into consideration or not.



# -: About AFSPA :-

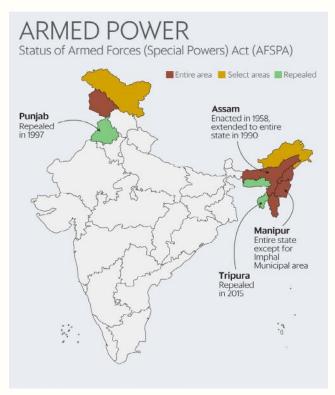
- AFSPA originally went into effect in 1958 to address the Naga uprising. Due to the extreme law and order situation, the central government classified the North East as a "disturbed area." After 1958, the AFSPA has been incrementally applied to cover the seven states in the North East. It was initially known as the Armed Forces (Assam and Manipur) Special Powers Act, 1958. After the states of Arunachal Pradesh, Meghalaya, Mizoram and Nagaland came into existence after the amendment in 1972, the Act was also made applicable to these states. The law has also been in force in large parts of Jammu and Kashmir since the 1990s.
- The Act grants unrestricted authority to the Armed Forces and the Central Armed Police Forces deployed in "disturbed areas" to execute anyone breaking the law, to detain and search any property without a warrant, and to do so while being shielded from legal action and prosecution. The Act was revised in 1972 and it then gave authority to the Central government and the States to designate a region as "disturbed" at the same time.
- According to Section 4 of this law, a security force officer can search any place in case of suspicion and can give orders to destroy that place in case of danger. Under this law, army personnel also have the right to open fire on a person breaking the law. Even if that person dies during this period, his Responsibility will not be on the officer who opened fire or gave such order.

## **Contended Issues in the Act:**

Armed forces can arrest any person without any



- warrant. They can use any kind of force during arrest.
- A military officer can enter a house without a warrant and use force to recover any family member, property, arms or ammunition.
- A vehicle can be stopped and searched if there is suspicion of illegal carrying of weapons.
- If a person is arrested then he has to be immediately produced at the nearest police station to explain why he was arrested.



# **Human Rights and AFSPA:**

Abolition of AFSPA has been recommended on several occasions due to the potential for misuse of the Armed Forces Special Powers Act in North-East India. Allegations of discrimination, fake encounters, violation of human rights, misbehaviour with women, wrongful confiscation of people's property and other corruption in the matter of security of ethnic communities have been leveled against AFSPA security personnel and evidence for the same have also been found. Despite this, AFSPA has been imposed from time to time in the North Eastern states to control extremist violent organizations, violent conflicts between ethnic communities and elements running separatist movements against the Indian Union. AFSPA has often been extended by 6 months given

- serious insecurity situations by the Central Government and State Governments.
- Since law and order is a subject of the State List and federal ideals are followed in India, it is necessary to adopt a strategy to enhance the capacity of state governments in security measures. Along with this, the legitimate demands of various communities, majorities, minorities, and ethnic communities should be fulfilled through development programs and projects in various North Eastern states in such a manner that socio-cultural harmony can be maintained there.

# Efforts towards peace and stability of North East:

During the last 4 years, to realize Indian Prime Minister Narendra Modi's vision of a peaceful, prosperous and developed North East, the Home Ministry has signed several historic agreements, which resolved decades-long problems. Some of them are described below:

- The NLFT(SD) agreement in Tripura in August 2019, to bring the militants from the path of violence into the mainstream of society.
- The Bodo Accord of January, 2020 has resolved the 5 decade old Bodo problem of Assam.
- ➤ In January 2020, a historic agreement was reached to resolve the decades-old Bru-Reang refugee crisis, under which 37,000 internally displaced people are being resettled in Tripura.
- ➤ The Karbi-Anglong Agreement of September, 2021 has resolved the long-running dispute over the Karbi region of Assam.
- An agreement has been signed with the tribal groups of Assam in September 2022.

# **Conclusion:**

- The Government of India is committed to counter insurgency in the North-East region and the Central Government has been in constant dialogue with the State Governments and other stakeholders in this regard. Disturbed area notification under AFSPA was completely lifted from Tripura in 2015 and from Meghalaya in 2018 due to improvement in the security situation by the Modi government.
- According to the Home Ministry, effective steps taken by the Central Government have significantly improved the security situation in the north-eastern states and accelerated development. Compared to the year 2014, there has been a 76% reduction in extremist incidents in the year 2022. Similarly, during this period, deaths of security personnel and civilians have decreased by 90% and 97% respectively.

# **Need to Reform UN Refugee Convention**

The issue of protection of refugee rights has been discussed in the international community for a while now. Nations have different perspectives about it. Some nations view it from a humanitarian point of view while others relate it with a question of national internal security.

Recently, Britain called for reform of the United Nations Refugee Convention (Vienna Convention) 1951. Britain alleged that the UN Refugee Convention is no longer relevant to its goals. British government is considering about providing electronic tags to illegal refugees coming to Britain so that they can be monitored. Earlier British government had implemented a historic step in the form of the Illegal Immigration Act, which gives the right to detain people who have come to Britain illegally and then deport them to a safe country like Rwanda.

# **Highlights of the UN Refugee Convention:**

The problem of refugees has become a humanitarian crisis on a global scale. To deal with this, the United Nations Refugee Convention was adopted in 1951 under the auspices of the United Nations High Commissioner for Refugees. This convention, ratified by 150 countries, gives a legal definition of refugees and mentions the rights of displaced persons. It also mentions the legal obligations of member states to protect refugees. The main principle of this convention is 'non-refoulement' which means that a refugee should not be forced to return to a country where their life and liberty could be seriously threatened. It is now seen as customary international law. UNHCR plays the role of guardian of the Vienna Convention, 1951 and its 1967 Protocol. This convention expects various states to play a sensitive role in respect of the human rights of refugees at the collective

# **UNHCR's Definition of Refugee:**

- According to UNHCR, a refugee is a person who is forced to leave his/her country due to persecution, war or violence. A refugee is a person who faces a strong fear of persecution at various levels in his or her home country because of race, religion, nationality, political opinion, or membership in a particular social group. Such people, for various reasons, leave their home country, go beyond its international borders and try to live temporarily or permanently in another country. War, ethnic or tribal and religious violence have also been a contributing factor to the refugee crisis.
- UNHCR says that 67% of the world's refugees come from only 5 countries. UN believes that two-thirds of refugees globally come from five

states: Syria, Afghanistan, South Sudan, Myanmar and Somalia. If we look at the internal policies of these countries, their military structure and the state of their governance system, there has been a lack of democratically elected governments, authoritarianism and dictatorship have been promoted, restrictions have been imposed on freedom of thought and expression and incidents like war, war crimes and crimes against humanity, ethnic cleansing and ethnic repression have been seen here. On this basis, the problem of refugees remains a major global challenge.

# **Lacunas in Refugee Crisis Management:**

- Long-standing Refugee Situations: Syrian conflict's exodus, the Rohingya movement from Myanmar, and Afghan displacement are some of the many examples that are hardly close to settlement. The current framework addresses the refuge problem rather unsustainably and has less scope to absorb new regimes.
- Challenge of Integration: Refugees often stay in protracted situations for the justified reasons like national security and national identity. Lack of proper identification however takes away their basic right of accessing the essential services. In Turkey, for instance refugees faced challenges in accessing healthcare during the recent earthquake since they lacked acceptable IDs. In India, for refugees to access Covid vaccines demanded mandatory IDs because of which they were excluded by design.
- Mismatched Responsibilities: As per the statistics, Low and middle-income countries (LMCs) host 85% of all refugees. The ability of these countries to accommodate refugees has been further weakened by Covid-19 Pandemic as their frail health infrastructure was strained by helping local residents and refugees. The pandemic further deteriorated their economical progress against poverty. In contrast to this, the global north has 15% percent of the refugees and most of the financial power of refugee organizations.
- Lack of Moral Obligation: The convention has been often undermined by the countries that were initially advocating for its creation and implementation. These countries are managing refugee issues from a 'management framework', claiming the necessity to 'manage' the crisis, thus restricting entry. From redirecting and stopping small boats to building walls have



become a response to people fleeing painful circumstances

# **Rohingya refugees and India:**

- Rohingva refugees crisis is a major humanitarian crisis which has affected the UN and its human rights agencies as well as the relations between Myanmar, India and Bangladesh. Rohingya are a predominantly Muslim ethnic community who mostly live in the Rakhine state of western Myanmar. These people speak a dialect of Bengali instead of the Burmese language commonly spoken there. Although, Rohingya have been living in Myanmar for centuries, Myanmar believes that they are people who migrated to Myanmar during colonial rule and thus they have not been given full citizenship status by the Myanmar government. Burmese Citizenship Law of 1982 states that as an ethnic minority, a Rohingya will be eligible to obtain Myanmar citizenship only if the male or female Rohingya can provide proof that their ancestors resided in Myanmar before 1823, otherwise they would be denied citizenship. Residents will be considered resident foreigners or associate citizens even if one of their parents is a citizen of Myanmar.
- Since Rohingya Muslims have not received citizenship status, they have been deprived of basic facilities there. they cannot become a part of the Myanmar civil service and are victims of linguistic exploitation. According to Amnesty International, Rohingya women have been brutally raped by Myanmar soldiers. Even senior citizen, women and children have not been spared by the military forces and their movement has been restricted in Rakhine state.

## Why India has restrictions about Rohingya influx?

As per Home Ministry of India, there has been major influx of Rohingya via land route from Bangladesh and about 40 thousand Rohingya refugees live in India. India considers all Rohingya refugees as illegal migrants and is seeking an effective repatriation agreement to send them back to their country of origin. This decision has surprised many since India has always supported human rights and selfdetermination rights. There are several reasons behind such decision. India needs to maintain strong relations with all South Asian countries according to its Neighborhood First policy and Gujral Doctrine while on the other hand India is highly conscious of its internal security. It has faced a lot of challenges arising from Chamka refugees coming from Bangladesh to Assam in large numbers. If India supports Rohingya, then in some way or the other it will be compelled to provide security to Tamils, Madhes, Chakmas

- then national interests will be compromised.
- In South Asia, there is no regional legislation to deal with the refugee crisis. so, India has not signed the United Nations Refugee Convention, 1951, nor has it ratified the United Nations Anti-Torture Convention, 1987.
- In the context of Rohingya, the interests of three nations are affected and to avoid tension in bilateral relations, it is necessary that India takes and implements concrete action on the repatriation of Rohingya. There is nothing better than returning to the country of origin, but it is certain that if there is a possibility of threat to the lives of Rohingya after their return, then work should be done seriously keeping in mind bilateral cooperation and the principle of non-refoulement of the United Nations. The Government of India has provided 250 selffunded houses for the Rohingva people in Myanmar in 2019 with a commitment to invest \$25 million over the next five years. India wants to solve this problem through humanitarian assistance methods.

# **India and Vienna Convention:**

- India is not a party to the Vienna Convention on the Rights of Refugees, 1951, and its Protocol 1967. There is also no national refugee law in India under which various cases of refugees can be dealt with. Despite this, India provides asylum to people from neighboring countries and respects the mandate of UNHCR in this matter. India has served as a place of refuge from time to time primarily for people from Tibet, Myanmar, Afghanistan and Sri Lanka, but India has also been conscious of its internal and national security in this regard.
- The geographical location of India and its neighboring countries have directly or indirectly posed challenges of India to internal and national security. India shares international borders with 7 countries.
- Proper identification of illegal immigrants and refugees is essential to ensure that the visiting individual or community is not a terrorist, arms smuggler, drug trafficker or any other type of criminal. Due to refugees coming and settling in India, there is pressure on the resources of various states of India, they have to be provided basic facilities and legal aid also has to be arranged for them. It also has to be ensured that there is no cultural or social conflict with the local community. Thus, it is a challenging task to provide shelter to a refugee community in India in such a way that it does not prove to be harmful to India on grounds of security and development etc.

# **OPS vs NPS: Issues & Related Dimensions**

In recent times, the Debate surrounding the Old Pension Scheme (OPS) versus the National Pension System (NPS) has ignited discussions in economic and political circles across the country. The demand for reverting to the OPS has gained momentum, with several states, including Rajasthan, Chhattisgarh, Jharkhand, Punjab, and Himachal Pradesh, announcing their shift back to the OPS. In response to this growing clamor, the Union government has formed a committee, headed by Finance Secretary TV Somanathan, to investigate the OPS versus NPS debate. The committee aims to assess if modifications are necessary within the National Pension System framework to enhance pension benefits while maintaining fiscal prudence.

# Understanding Old Pension Scheme (OPS) and National Pension System (NPS):

# **Old Pension Scheme (OPS):**

The Old Pension Scheme, also known as OPS, is applicable to all government employees appointed before January 1, 2004. This scheme operates as a "defined benefit scheme," entitling government employees to receive 50% of their last drawn salary plus Dearness Allowance (DA) as pension after their retirement. Under the OPS, the government shoulders the entire pension amount, while fixed returns are guaranteed for employee contributions to the General Provident Fund (GPF).

# **National Pension System (NPS):**

The National Pension System (NPS) was introduced on January 1, 2004, and was made mandatory for central government employees, along with staff of states that adopted the scheme. It remains voluntary for the unorganized sector workforce. Unlike OPS, NPS functions as a "defined contribution scheme," where government employees are required to make a defined contribution of 10% of their basic pay and dearness allowance (DA), with a corresponding contribution from the government. The NPS does not offer a defined benefit; instead, pension benefits are determined by factors such as the amount of contribution made, the age of joining, the type of investment, and the income generated from those investments.

# **Status of NPS:**

At the inception of NPS in 2004, all central government employees joining after this date were mandatorily enrolled in the National Pension System (NPS). It was optional for state governments to adopt the NPS, and most states did so, with the exception of West Bengal and Tamil Nadu. However, recently, several states have decided to return to the OPS.

# Reasons for Introducing the National Pension System:

Limited Coverage of OPS: OPS covered only government employees, constituting approximately 12% of the total workforce in the country. NPS aimed to extend pension coverage

- to workers in the unorganized sector, allowing them to voluntarily join the system.
- Fiscal Burden on Governments: The OPS imposed a significant fiscal burden on both central and state governments. With each new pay commission award, the basic salaries of government servants increased, escalating the financial burden on the exchequers. The expenditure on Union civil service pensions in 2004-05 accounted for approximately 2.31% of the GDP, and the implicit pension debt of the Government of India amounted to around 56% of the GDP.
- Burden on Future Generations: Under the OPS, the contributions of the current generation of workers were directly used to finance the pensions of retirees. This represented a direct transfer of resources from the current generation of taxpayers to fund pensioners.
- ➤ Disincentivized Early Retirement: OPS discouraged early retirement because the pension was fixed at 50% of the last drawn salary. As a result, even disinterested government employees often delayed retirement to maximize their pension benefits, leading to underutilization of human resources.
- Flexibility: NPS offers subscribers the freedom to choose their fund manager and preferred investment options, including a 100% government bond option. It also allows for a guaranteed return option to provide an assured annuity.
- Simplicity and Portability: Opening an NPS account provides a Permanent Retirement Account Number (PRAN) that remains valid throughout the subscriber's lifetime. NPS is also portable across jobs, as the PRAN account remains the same.
- Well-Regulated Scheme: NPS is overseen by an NPS Trust responsible for monitoring the performance of fund managers, with a trustee bank efficiently managing fund flows. A custodian is appointed to hold securities, with subscribers as beneficial owners of the assets.

# **Issues with the National Pension System (NPS):**

Market Volatility and Uncertainty: Contributions under NPS are invested in the market through



fund managers, which can lead to concerns about market volatility and uncertainty. Some fear that NPS may not deliver the same benefits as the old scheme, particularly during periods of market instability. For example, SBI reports indicate that NPS asset growth has been affected by geopolitical conflicts and may fall short of its target.

- ➤ Increased Burden on Employees: Unlike the OPS, where the government bore the entire pension burden, NPS requires employees to contribute 10% of their basic pay and DA. This has reduced the disposable monthly income in the hands of employees while offering no assurance of pension benefits.
- Lack of General Provident Fund (GPF) Benefits: Under OPS, fixed returns were guaranteed for employee contributions to the General Provident Fund (GPF). NPS lacks such GPF provisions, leaving subscribers without the security of fixed returns.

# Why Some States Are Shifting Back to OPS and Concerns Raised:

- 1. States that have decided to shift back to the OPS cite several reasons:
- Political Gains: OPS has been politicized, attracting support from government employees, a vocal and influential pressure group with significant voting power. Political parties may see this shift as a strategy to gain a favorable vote bank.
- Deferment of Matching Government Contribution: Transitioning to OPS allows governments to delay matching contributions to NPS by several years. However, this provides only temporary relief as they will face larger financial commitments when employees under NPS begin to retire.
- 2. Concerns raised against the reimplementation of OPS include:
- Lack of Proper Funding Mechanism: There is no separate corpus allocated for funding the pension liability under OPS. Additionally, no clear mechanisms exist for raising and disbursing pension funds to retirees.
- Un-sustainability: OPS is considered unsustainable due to the escalating pension liabilities resulting from increasing dearness allowances (DA) and rising life expectancy rates.
- ➤ Increased Burden on States: The return to OPS would further strain the financial stability of state governments, with a quarter of their revenues already devoted to pensions, potentially leading to increased state debts.
- **Burden on Taxpayers:** Taxpayers of the current generation are already responsible for

funding pensions under OPS and government contributions for newer employees under NPS. Reverting to OPS would place a heavier financial burden on taxpayers.

# **Way Forward:**

Various economists and experts have proposed potential solutions for the OPS versus NPS conundrum, many of which are under consideration by the TV Somanathan committee:

- Designing an "Assured Pension Scheme": Some states have suggested the creation of an "assured pension scheme" linked to a minimum level of pay rather than the last drawn salary, as offered by OPS.
- Combining OPS and NPS Elements: A new pension framework could be developed by merging the "defined contribution" aspect of NPS with the "defined benefits" of OPS, offering a balanced approach.
- Role of Future Pay Commissions: Future pay commissions could consider the concept of "cost to company" (C-to-C) and factor in the cost of assured pensions when determining pay revisions.
- Implementing CAG Recommendations on NPS Reform: Key recommendations from the Comptroller and Auditor General (CAG) regarding NPS reforms should be put into practice. These include establishing a robust system to ensure registration of nodal offices and eligible employees, penalizing delays, and providing compensation to avoid subscriber losses.

# **Conclusion:**

- The debate surrounding the Old Pension Scheme and the National Pension System is multifaceted and complex. While NPS offers flexibility, portability, and well-regulated structures, it also introduces market volatility and increases the financial burden on employees. On the other hand, OPS, while attractive to government employees, poses sustainability challenges and places a significant fiscal burden on the government.
- In light of the current scenario, reforming NPS to provide a greater degree of assurance to subscribers appears to be a sensible approach. The TV Somanathan committee's recommendations and the adoption of measures that combine the strengths of OPS and NPS could offer a viable solution. Finding a balance between the interests of government employees and the fiscal prudence required to sustain pension systems is crucial in shaping the future of retirement benefits in India.

# Aadhaar: Security & Privacy Concerns, Dimensions and Solutions

"UIDAI is committed to ensuring the security and confidentiality of the information collected. All the information will be collected in the transit protection software provided by UIDAI. UIDAI has a comprehensive security policy committed to the security and integrity of its information. The compilation process involves strong security and storage protocols at the compilation location. UIDAI has issued its guidelines, which are available on its website. There is a provision of strict punishment for any kind of security violation, under this, even the disclosure of any identity will be punished. CIDR may also have to face punitive consequences for unauthorized access, such as hacking etc. and tampering with information." - CEO UIDAI

# **Context:**

- Recently, credit rating agency Moody's Investor Service released a report, 'Decentralised Finance and Digital Assets,' which advocates for decentralized digital identity systems instead of centralized biometric systems like India's Aadhaar. Referring to "security and privacy vulnerabilities posed by centralized ID systems like Aadhaar". The report states "the Aadhaar system faces hurdles, including the burden of establishing authorization and concerns about biometric reliability."
- The government has strongly refuted these claims terming Aadhaar as "the most trusted digital ID in the world,". The government has stated that "it is evident that the authors of the report are unaware that the seeding of Aadhaar in the MGNREGS database has been done without requiring the worker to authenticate using their biometrics, and that even payment to workers under the scheme is made by directly crediting money in their account and does not require the worker to authenticate using their biometrics."

# The Significance of Aadhaar:

Addhaar, administered by the Unique Identification Authority of India (UIDAI), assigns a unique identification number to Indian residents. During enrolment, demographic information, along with biometric data like fingerprints and iris scans, is collected. The primary goal of UIDAI is to provide every resident with a unique ID and combat corruption in accessing welfare programs by eliminating fraudulent beneficiaries.

# **Aadhaar in Welfare Schemes:**

- The government has incorporated Aadhaar into various government-to-citizen cash transfer programs to tackle issues of ghost beneficiaries and reduce duplications, resulting in significant cost savings.
- ➤ Ghost Beneficiaries: One of the primary motivations for Aadhaar integration was to eliminate "ghost" beneficiaries, individuals who fraudulently access benefits in the name of

deceased or non-existent individuals.

Cost Savings: The usage of Aadhaar in welfare schemes has yielded substantial cost savings by reducing duplicate or fraudulent claims, thus optimizing the allocation of resources.

## **Aadhaar in Cash Withdrawals:**

Addhaar plays a vital role in facilitating cash transfers. To utilize Aadhaar for MGNREGA payments, workers' Aadhaar numbers must be linked to their job cards and bank accounts. The Aadhaar-enabled Payment System (AePS) allows individuals to withdraw funds using biometric authentication.

# **Concerns with Aadhaar's Implementation:**

Despite its widespread use, Aadhaar-based systems have encountered several challenges. Some of them are mentioned below:

- Quantity Fraud: In the distribution of rations, the prevalent type of corruption is quantity fraud, where beneficiaries receive less than their entitled share. Aadhaar does not address this issue effectively.
- For example, several organizations and researchers have provided evidence demonstrating that the main type of corruption is quantity fraud, which happens when, say the entitlement for a ration card holder is 35 kg of rice but the dealer only gives 30 kg.
- ➤ Authentication Failures: Many individuals in rural areas face authentication failures due to unreliable internet connections, fading fingerprints, or lack of phone connectivity for OTP verification. The extent of these failures remains undisclosed.
- The data on the number of attempts to authenticate and the extent of authentication failures are not public. A report by the Comptroller and Auditor General of India (CAG) from 2022 states "UIDAI did not have a system to analyze the factors leading to authentication errors."
- Authentication Errors: Discrepancies between job card information and UID data can lead to authentication errors, causing wage payment delays and complications.



- Misdirected Payments: Aadhaar payments can be misdirected when an individual's Aadhaar number gets linked to another person's bank account, making it challenging to detect and resolve such issues.
- For example, Aadhaar payments got redirected to Airtel wallets causing much havoc. Misdirected payments through Aadhaar are difficult to detect and are nearly impossible to resolve.
- **Questionable** Savings Claims: Claims of substantial savings through Aadhaar implementation in MGNREGA have been challenged by researchers, citing insufficient funds as the primary reason for wage payment delays. A recent working paper using 31 million MGNREGA wage transactions demonstrates no statistical evidence of these claims and points to a lack of sufficient funds as the reason for delays.

# **Security Concerns:**

- The use of Aadhaar for banking transactions is fraught with security risks. Banking correspondents using the AePS operate without any accountability framework. Some of them ask individuals to biometrically authenticate multiple times. Each authentication gives access to the banking correspondents to operate the individual's bank account.
- Several studies and news reports have highlighted how using AePS, money from workers' accounts has been withdrawn or that they have been signed up for government insurance programs without consent. The Rs. 10 crore scholarship scam in Jharkhand in 2020 exemplifies this.

# **Current Impasse:**

- The government's push to mandate Aadhaar-based payments in MGNREGA has faced resistance due to issues like the deletion of active workers' job cards and dilutions of accountability. Critics express concerns about the government's intentions regarding linking voter IDs with Aadhaar.
- A recent paper by Chakradhar Buddha and Laavanya Tamang in the Economic & Political Weekly shows that the job cards of several active workers have been deleted on the grounds of being "ghosts."

# Steps to be taken:

Invest in research and development to improve the reliability of biometric technologies, particularly in challenging environmental conditions like hot and humid climates. Continuously update and upgrade biometric

- hardware and software to reduce authentication errors and ensure accurate identification.
- The government must restrict mandatory Aadhaar to permissible purposes and must also provide viable alternatives when Aadhaar authentication fails.
- Benefits should not be withdrawn or suspended without prior notice. Concerned persons should be allowed to respond or appeal.
- The UIDAI must ensure an easier enrolment, updation, and retrieval of lost card processes to all, for free, at the block level or below, in a well-supervised public facility.
- A comprehensive review of the Aadhaar Payment Bridge System and direct benefit transfer systems is essential.
- RBI and NPCI should monitor all types of payment problems and place detailed monthly reports in the public domain.
- The NPCI should ensure stronger safeguards against the vulnerabilities of AePS and better grievance redressal mechanisms should be developed.
- Informed consent norms should be reviewed.
- ➤ The Aadhaar Act could be amended to reinstate the dropped provision for independent oversight of the UIDAI by a high-powered "Identity Review Committee."
  - Aadhaar is a 12-digit identification number issued by the Indian government, providing proof of identity and address for residents. It is unique and valid for a lifetime, enabling access to various services.
  - Direct Benefit Transfers (DBT) aim to simplify fund distribution, reduce fraud, and improve the government's delivery system. It started in 2013 and uses a common platform called CPSMS or PFMS. Key components include the Beneficiary Account Validation System and payment integration with RBI, NPCI, banks, and Aadhaar.

## **Conclusion:**

While Aadhaar has undoubtedly brought transparency and efficiency to welfare programs, it is crucial to address the challenges and concerns raised by its implementation. Balancing security, accessibility, and reliability is essential to ensure that Aadhaar continues to benefit those it was intended to serve. Addressing these concerns will help optimize the effectiveness of Aadhaar in government welfare schemes while safeguarding the rights and privacy of citizens.

# Green Technology in India: Progress, Possibilities & Collaborations

"Avoiding a climate disaster will require a new Industrial Revolution. Half the technology needed to get to zero emissions either doesn't exist yet or is too expensive for much of the world to afford. The solution is creating better technological alternatives where it is cheaper to accomplish the same goal in a climate-conscious way."-Bill Gates "We are standing at the dawn of a technological revolution centered on green technologies. This emerging wave of technological advancements is set to wield a profound influence on the global economy. It is crucial for developing nations to seize a greater share of the value generated by this technological revolution to foster economic growth. India's growth in the next 10 years will be driven mostly by electrification (EV), energy transition, green technology and renewables as they stand to offer a huge and long-term business opportunity for the country."

# What is Green Technology?

- For Example: Hydrogen Fuel Technology etc.
- For Green Technology has a diverse set of goals. The primary aim of green technologies is to meet societal needs without damaging or depleting the planet's natural capital. The aim is to satisfy current demands without compromising on quality. It also aims to promote the development of the green technology sector and its contribution to the national economy.

# **Types of Green Technology:**

- Green technology is a broad category that encompasses several forms of environmental remediation. While climate change and carbon emissions are now considered among the most pressing global issues, there are also many efforts to address local environmental hazards.
- ➤ Green Hydrogen Technology: Green hydrogen is achieved through a process of electrolysis powered by renewable energies such as wind or solar. Electrolysis involves using an electrical current to break down the water molecule into oxygen and hydrogen by electrodes.
- Emission Treatment Technology: Most modern cars are equipped with three-way catalytic converters. "Three-way" refers to the three regulated emissions it helps to reduce Carbon Monoxide, Hydrocarbon and Nitrogen Oxides. The converter uses different types of catalysts, for reducing and oxidizing the pollutants.
- Waste to Energy (WTE) Conversion Technology: It can be employed to convert residual wastes into clean energy, rather than sending these wastes directly to landfill. Recycling and Waste Management.
- Wastewater Treatment Technology: Membrane technology has emerged as an example of a

- novel technology for waste water treatment. Membranes are employed as filters in separation processes in a variety of applications in this technology.
- Solar Energy Technology: Solar technologies convert sunlight into electrical energy either through photovoltaic (PV) panels or through mirrors that concentrate solar radiation. This energy can be used to generate electricity or be stored in batteries or thermal storage.
- ➤ Ethanol Technology: Ethanol technology produces ethanol from agricultural residue feedstock. It has the potential to significantly reduce emissions from the transportation and agricultural sectors in India. This technology converts biomass feed to alcohol within 24 hours.
- ➤ Electrical Vehicles: An electric vehicle is any vehicle that is powered entirely or partially by electricity. EV's can be categorized into the following main types:
- **Hybrid:** Hybrids have both a gasoline engine and an electric motor for increased fuel economy, but operates like a traditional car.
- ▶ Battery Electric: BEVs run on electrical power from battery packs, and do not contain an internal combustion engine. BEVs are 100% electric, and must be plugged in to charge.
- However, electric vehicles require a host of innovations in other spheres, such as highcapacity rechargeable batteries and charging infrastructure.

# India's Efforts and progress in Green Technology Adoption:

- Freen technology in India is projected to achieve a market size of \$ 45-55 bn within the next five years, with an estimated annual growth rate of 25-30%.
- India has set ambitious targets for 2030, which encompass multiple aspects of sustainable development. These targets include achieving a cumulative installed capacity of non-fossil fuel-based electricity generation of 500 GW, so that it comprises of 50% of cleaner non-fossil fuel of the installed capacity mix.



- Indian Railways has made significant progress in reducing its carbon footprint and fuel costs and is committed to achieving a 'net-zero' carbon emissions status by 2030. One of its key initiatives toward decarbonization is the complete electrification of the Railways' broad-gauge network. This transition from diesel-powered locomotives to electric ones aims to eliminate carbon emissions and decrease reliance on fossil fuels
- The National Green Hydrogen Mission was set up with the objective of India becoming a global leader in the production and distribution of Green Hydrogen.
- International Solar Alliance aims to amplify the adoption of solar energy and drive down the cost of solar power generation. This is achieved through the aggregation of demand for solar finance, technologies, innovation, research and development, as well as capacity building.
- The adoption of electric vehicles in India has been aided by supportive policies like the National Electric Mobility Mission Plan (NEMMP) and the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME).

# Potential of Green Technology in India:

- India is a fast-growing nation that has a massive demand for energy. With the growing importance of green energy and working towards sustainable development goals, India's power generation mix is transitioning towards a greater proportion of renewable energy. The foremost goal of deploying renewable energy in India is to advance economic development, improve energy security, better access to energy sources, and mitigate climate change.
- India's total installed renewable energy capacity touched 168.96 GW mark by February 2023-end. Out of the total 168.96 GW, 64.38 GW is solar power capacity, 51.79 GW hydro, 42.02 GW wind and 10.77 GW bio power. Another 82.62 GW of green energy capacity is under implementation.
- Moreover, India ranked 3rd in the renewable energy country attractive index and is the 3rd largest energy-consuming country in the world. India committed to a 40% share of power generation from non-fossil fuel sources at the Conference of the Parties (COP)-21 in Paris in 2015, and India has already met this goal. India also proposed it's five-pronged strategy, 'Panchamrit' to achieve the country's goal of Net Zero Emissions by 2070.
- > This scenario has created much potential for adoption of green technologies in India.

# **India's Collaborations in Green Technology Sector:**

> To promote the adoption of Green technology,

- Government of India has collaborated with various Governments.
- ➤ The India-Denmark Green Strategic Partnership on capacity building and technology transfer in the areas of offshore wind, energy modelling, and integration of renewable energy.
- The India-Sweden Green Transition Partnership (ISGTP) was launched in November 2022 to promote exchange of carbon-neutral business practices and solutions, co-create localised innovations and share expertise and knowledge related to the green transition. In the first phase, focus will be on three areas of cement, steel and automotive for green transition.
- ➤ US-India Renewable Energy Technology Action Platform (RETAP) was launched with main focus on green hydrogen, wind energy, long duration energy storage, and to explore geothermal energy, ocean/tidal energy and other emerging technologies as mutually determined in the future.
- Further with an aim to clean the environment, India and USA have signed an agreement under which the USAID will support Indian Railways to achieve its target of becoming a net-zero carbon emitter by 2030.
- India and United Kingdom have jointly developed India-UK "Net Zero" Innovation Virtual Centre. It will provide a platform to bring stakeholders from both countries together to work in some of the focus areas including Decarbonization of manufacturing process & transport systems and Green Hydrogen as renewable source.
- ➤ India and Brazil with an aim to reduce its dependence on crude oil imports by learning and adopting advanced technologies deployed for ethanol mixing.

# Way Forward:

- For Green technological change is among the most appealing solutions to many environmental problems, as it offers the chance to cure the problem rather than treating its symptoms. Via green technological change, harmful emissions, waste or resource use can be avoided, often without substantial reductions to consumption possibilities.
- We've reached a point where we need to take a step back and consider that green technology is becoming very important to mankind. It does not take a rocket scientist to realize that humanity must take action to protect the atmosphere and save energy supplies. Going green can just help us get out of our current dilemma. Before things get out of hand, we must recognize the role of green technologies in resolving this problem.



# **National Issue**





# Joshimath Subsidence

# Why in News:

To find out the causes of land subsidence in Joshimath, Uttarakhand, separate studies were conducted by eight major institutes of India including the Indian Space Research Organization (ISRO). These studies have pointed out various factors like seismic activities, construction defects, population pressure, and poor drainage systems as some of the major causes of subsidence.

# **Important points of the report:**

- Joshimath city is situated on a group of Vakrita rocks (composed of thick mica-garnetkyanite and sillimanite bearing psammitic metamorphics) covered with morainic deposits, along with irregular boulders and varying types of soils.
- Eight major institutes of the country (Wadia Institute of Himalayan Geology, National Geo-Physical Research Institute, National Institute of Hydrology, IIT Roorkee, Indian Institute of Remote Sensing, Geological Survey of India, Central Ground Water Board and Central Building Research Institute) have submitted their report in which concerns have been expressed by clarifying many facts.
- ➤ Central Building Research Institute in its report said that Joshimath city has masonry 44%, RCC 42% and other (traditional, hybrid) 14% construction of which 99% is non-engineered. This means that they are not complying with the provision of National Building Code of India 2016.
- In this report, by mapping various springs, drainage networks and areas of land subsidence, it was estimated whether there is some relationship between land subsidence and subsurface water in Joshimath.

# Reasons and mitigation initiatives:

- The report attributed slow and gradual land subsidence due to earthquakes. Also, the main cause of land subsidence appears to be internal erosion due to subsurface water drainage which may be due to infiltration of rainwater/snow melting/discharge of wastewater from houses and hotels.
- One of the major reasons for increased Joshimath's landslides and other natural disasters is increased human activities.
- The report recommended the safe disposal of

- water from upstream areas and waste disposal as the top priority.
- Although in view of the proper security and safety of Joshimath in 1976, an 18-member committee formed under the leadership of the then Collector of Garhwal M.C. Mishra had warned about this. The committee had also given short-term and long-term suggestions, but they were not taken into account.

## **Measures to save Joshimath:**

- All heavy projects currently underway in Joshimath should be stopped immediately and a detailed environmental damage assessment should be conducted for all small projects.
- Special attention needs to be paid to drainage because the same sewerage water leaks into the loose rocks and negatively affects them.
- The help of Border Roads Organization and military organizations can be taken for improvement and cooperation.

# Way Forward:

The present disaster system, environmental protection, impact assessment committees and human society need to learn from the natural disaster in Joshimath. We need to re-evaluate the construction system of hilly and disaster-prone states because development at the expense of the environment has disastrous repercussions.



# Goa State Shack Policy

# Why in News:

Goa Government has approved the 'Goa State Shack Policy 2023-2026' for the construction of temporary seasonal structures, beach shacks, deck beds, and umbrellas along the beach for the next three tourist seasons.

# **About Goa State Shack Policy:**

- ➤ This policy will allot licenses for three years to unemployed persons of Goa to operate temporary shack on the beach for the three tourist seasons which will be from approximately 1 September to 31 May each year; however, it will be mandatory to close the temporary structures by 10 June every year.
- As per the policy, 259 shacks are permitted on the nominated beaches in North Goa and 105 shacks are permitted in South Goa.
- Licenses for operating these shacks will be allotted by draw of lots on the basis of categories and one shack per family is permitted.

# About the change in the new policy:



- Under this, for allotment of shacks on the beach, the age of the applicants should be between 18 to 60 years.
- Under this, 90 percent of shacks will be allotted to those applicants who have at least one year of experience in running shacks and 10 percent will be allotted to those with no experience.
- In this new policy, it has been made mandatory for huts to serve Goan cuisine.
- A digital coast has been proposed on the beaches, where POS machines will be provided to shanty allottees to facilitate digital transactions by customers.
- ➤ Under this policy, sub-renting of shacks will attract a fine of Rs. 25 lakh, which is 150 percent more than the current fine of Rs. 10 lakh. A fine of 10,000 has been ordered if the toilets are found unhygienic.

# Criticism of the shack policy?

- Under this policy it has been provisioned that the applicant should be unemployed and should not be involved in any other business directly or indirectly. The cost of building a shack is a minimum of 15 lakh and can go up to 1 crore.
- As per the policy deck beds, tables, chairs, umbrellas, and sofa sets must be kept within 15 meters from the front of the hut area which must be picket fenced. The shack owners say the picket fence will hinder the movement of tourists and fishermen on the beach.

# **Way Forward:**

Shack owners' associations have strongly objected to the three-year license period, saying it requires huge investment for setup. If they are not allowed to run the shanties after the license expires, the business may become unprofitable.

# Unlawful Activities (Prevention) Act

# Why in News:

The NewsClick founder and editor-in-chief, Prabir Purkayastha, and the head of its human resource department, Amit Chakravarty were recently arrested under Unlawful Activities (Prevention) Act, 1967. The action was based on an F.I.R. that was filed on August 17 based on the Enforcement Directorate's inputs that NewsClick had allegedly received illegal funding from China, routed through the United States.

# **About the F.I.R:**

The F.I.R was filed under UAPA Sections 13 (unlawful activities); 16 (terrorist act); 17 (raising funds for terrorist acts); 18 (conspiracy); 22

(C) (offences by companies, trusts); along with IPC Sections 153A (promoting enmity between different group) and 120B (criminal conspiracy).

### Main issues:

- FIR was invoked under Section 16 which prescribes punishment for terrorist acts. Although the court has defined which activity is considered a terrorist act- Terrorist activity is that which travels beyond the capacity of law enforcement agencies to deal with under ordinary penal law (Supreme Court's decision in the case of Hitendra Vishnu Thakur).
- Freedom of speech for media (article-19) It is alleged by NewsClick that they have been raided because they dissented from the government on the matter of farmer protests, CAA and the 2020 Delhi riots.
- Violation of the Principle of Natural Justice-Rule against Bias, Rule of Fair Hearing, and Reasoned Decision. These principles ensure that decision-makers are impartial. Also, these principles make sure that all the parties have an opportunity to present their case, and that decisions are based on reasoning.

### **About the Act:**

- Unlawful Activities (Prevention) Act Passed in 1967.
- The act's main aim was the effective prevention of unlawful activities and associations in India.
- The central government is the main authority to declare an act unlawful.
- > Both Indian and foreign nationals can be charged.
- It also applies to the offenders in the same manner, even if the crime is committed in a foreign land, outside India.
- Under the UAPA, the investigating agency can file a charge sheet in maximum of 180 days after the arrests and the duration can be extended further after intimating the court.
- The Act empowers the Director General of the National Investigation Agency (NIA) to approve the seizure or attachment of property when the case is investigated by the said agency.
- It also included the provision of designating an individual as a terrorist.
- The bail process is very stringent and it depends on the court's discretion.

## **Conclusion:**

Under the UAPA, 4,690 persons were arrested between 2018 and 2020, but only 3% were convicted. Moreover, under the UAPA, getting bail is tough, and so the accused spends most of the trial period inside prison. Of the 1,338 persons convicted under the UAPA in the U.P. between 2018



and 2020, only 6% got convicted, while none of the other 94% got bail. This is a clear-cut violation of freedom of speech and the right to life.

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# Ichamati River

# Why in News:

Dredging work at National Waterways 44 (Ichamati River) in West Bengal was started by the Ministry of Ports, Shipping and Waterways. The Ministry with its continuous efforts is developing and modernizing National Waterways to promote inland water transport as a more cost-effective and environmentally friendly mode of transportation.

## More about this Initiative:

- The work for dredging from Tentulia to Kalanchi for 23.38 km is being commenced for achieving navigational depth of 1.5 m (1.2 m +0.3 m tolerance) as per mandate and increasing tidal influence in the river.
- Water hyacinths, weeds, wastes including plastic and non-plastic materials, and natural and artificial (dumped materials) are cleared to bring improvement of navigability.
- This project is funded by the state government and central government (under the Sagarmala project).

# **About Ichamati River:**

Ichamati River is a transboundary river which flows through India and Bangladesh and forms the boundary between the two countries. The river is facing the problem of siltation causing a thin flow of water in the dry season and floods in the rainy season.

# **About the National Waterway:**

- ➤ To promote Inland Water Transport (IWT) in the country, 111 waterways have been declared as National Waterways (NWs) under the National Waterways Act, 2016 which came into effect from 12 April 2016.
- ▶ India has over 14500 km of water way that can be navigated. However, these inland waterways have been unutilised, as compared to other countries in the world. This includes canal backwaters, rivers and creeks amongst many other types of water bodies.

### **Conclusion:**

National waterways and rivers are very important for the overall development of the country. The rivers play a very important role in agriculture and navigation in the country. In recent times government has been working to utilise and protect the rivers for the development of the country through initiatives like Catch the Rain, Jal Shakti Abhiyan, Namami Gange Mission etc.



# Global Innovation Index 2023

# Why in News:

India ranked 40th out of 132 economies in the Global Innovation Index 2023 which is a great improvement from rank 81 in 2015. Global Innovation Index (GII) was published by the World Intellectual Property Organisation. The theme of the index is Innovation in the face of uncertainty. Apart from China (12th place), no other middle or lower-middle-income economy features in the top 30.

### **Pillar of the Index:**

- > **Institutions:** Measure the quality of a country's regulatory body and business climate.
- ➤ Human Capital and Research: Make evaluations such as education, research and development (R&D), investments, and availability of skilled labour force.
- > Infrastructure: Examine the quality of the infrastructure
- Market Sophistication: Examine the quality of domestic and international markets.
- **Business Sophistication:** Assessing the quality of the business environment
- Knowledge and Technology Outputs: Measuring the results of innovation efforts, including patents, scientific publications, and high-tech exports.
- Create outputs: Measuring the output of Innovation related technology



## **About Global Innovation Index:**

- The Global Innovation Index, published annually by WIPO, measures an economy's innovation performance. It helps countries to assess and improve the innovation ecosystem.
- It has also been recognized by the UN Economic and Social Council in its 2019 resolution on Science, Technology and Innovation for



Development as an authoritative benchmark for measuring innovation in relation to the Sustainable Development Goals (SDGs).

# How India improved it's ranking:

- The major reasons behind the consistent improvement in India's GII ranking are immense knowledge capital, the vibrant start-up ecosystem, and the amazing work done by public and private research organizations.
- Further, NITI Aayog's Atal Innovation Mission has played a major role in expanding the Innovation ecosystem. NITI Aayog has been working tirelessly to ensure the optimization of the national efforts for bringing policy-led innovation in different areas such as electric vehicles, biotechnology, nanotechnology, space, alternative energy sources, etc.

# Major issues with scientific development in India:

- Lack of proper funding to the institution and research institutions.
- Low private participation in the scientific development of the country.
- Brain drain to Western countries.
- Improper utilisation of skilled labour force and technical background people.
- Attraction toward administrative jobs like IAS and IPS of the technical background people.

# **Conclusion:**

The world is moving towards Industrial Revolution 4.0 which is based on hyper technologies and scientific development. Now, the need of the hour is to invest in human capital and physical infrastructure related to innovation and technologies.



# Why in News:

The Law Commission of India has published a special report (no. 283) on the age of consent under the POCSO Act. The report came in the wake of a reference made by the Karnataka High Court related to the reconsideration of the age of consent under the act.

## The Report:

The report made it clear that the government should not change the status quo of the age of consent in the POCSO Act. Instead, it should introduce guided judicial discretion while sentencing in cases that involve the tacit approval of children in the 16 to 18 years age bracket. It means that the court has the power to decide whether consent applies or not in the age group of children between 16 to 18 years.

# What is Tacit Approval?

- It means that the person is agreeing to something or approving it without actually saying so, it also means not making any disapproval at the time of sex. For deciding actual tacit approval, the Court is the final authority.
- For this, certain amendments would be required in the POCSO Act, 2012 to remedy the situation in cases involving tacit approval, though not consent under law, on the part of children aged between 16 and 18 years.

# **Statistics of Crime against Children:**

- According to an NCRB report, crimes against children across India increased by 16.2 per cent between 2020 and 2021.
- The total number of crimes in 2021 against children was 1,49, 404 in all States and UTs compared to 1,28,531 in 2020.
- MP has reported the highest number of cases against children followed by Maharashtra and UP. Among UT, Delhi tops the list.
- Nagaland reported the lowest crimes against children in all states.
- About 36 per cent of crimes against children were POCSO-related cases in 2021.
- UP has reported the highest number of cases under POCSO followed by Maharashtra and Madhya Pradesh.

# **Measures to Prevent Crime Against Children:**

- There is a need to sensitise the people about the child offences.
- The act and rules which were enacted for the protection of children should be properly implemented.
- Efforts should be made to reduce poverty and increase the skill development of children.
- Most of the offences against children are committed by their relatives, so there is a need for ethical education among families and relatives.
- Identification of hotspots related to child crimes and proper monitoring of these hot spots.
- Proper usage of science and technology in handling crimes related to children.

# **About POCSO Act, 2012:**

- It was enacted as a result of India's ratification of the United Nations Convention on the Rights of the Child in 1992.
- This special law aimed to address the crimes of sexual exploitation and sexual abuse of children, which were either not specifically defined or not adequately punished.
- The Act defines a child as any person under the age of 18 years and provides for punishment according to the seriousness of the offence.



It is gender gender-neutral law.

### **Conclusion:**

The constitution of India has many articles which protect children from child abuse and offences. Article 14, 15, 21, 21A, 23, 39A, 45 and 51A(k) of the Indian Constitution has special provision related to children's rights. The need of the hour is that adequate laws and rules are implemented that not only safeguard and provide justice but sensitize society so that a better atmosphere can be provided for our future generation to thrive in.



# Why in News:

Lancet, a medical journal has released a report titled 'Women, Power and Cancer' highlighting gender disparity in cancer care. The report highlights societal apathy towards women's health, lack of awareness and absence of quality healthcare professionals at the primary level.

# Causes of cancer deaths in women:

- Limited awareness and financial barriers: Women face a lack of timely and appropriate care due to limited knowledge, lack of financial resources and unavailability of services at the local level.
- ➤ Under-representation of women in leadership roles: The report highlights the under-representation of women in leadership positions, in the field of cancer care. This often results in discrimination and harassment based on gender. According to the report, the cost of unpaid cancer care by women accounts for about 3.66% of India's national health expenditure.
- Low health-seeking behaviour: Health-seeking behaviour is low among women, especially in economically disadvantaged families. There is often a lack of priority in the treatment of women, which has a disparate impact. For example, both men and women are equally affected by cancer caused by tobacco, but men are given more priority in its treatment.
- Social stigma: Breast and cervical cancer cases are quite common among women. Despite this, they hesitate to get treatment due to associated social stigmas. Many women hesitate to approach male doctors which leads to delays in diagnosis and treatment.
- Limited access to health facilities: Hospitals located far from home for screening, diagnostic tests and treatment further add to the problem, leading to delays in care.

# **Lancet report findings:**

- Despite the higher risk of cancer in men, the mortality rate from cancer incidents is higher in women. Globally, 48% of new cancer cases and 44% of cancer-related deaths are among women.
- Nearly 6.9 million cancer-related deaths of women in India were preventable and 4.03 million cancer deaths were treatable. 37% of these deaths could have been avoided with prompt and correct treatment.

# The Burden of Cancer

The numbers of patients and deaths have been increasing; however, in many cases, the disease is preventable and curable

## **OVER THE YEARS**

YEAR	INCIDENCE	MORTALITY		
2020	13.92 lakh	7,70,230		
2021	14.26 lakh	7,89,202		
2022	14.61 lakh	8,08,558		
2025	15.69 lakh (projected)			

Source: National Cancer Registry data presented in Parliament; ICMR National Centre for Disease Informatics and Research study

# INCIDENCE PER 1 LAKH, 2020\*





\*Estimate

## COMMON CANCER SITES

MALE: Lung, mouth, prostate, tongue, stomach (36% of all cancers) FEMALE: Breast, cervix, ovary, uterus, lung (53% of all cancers)

## FOR WOMEN. SCREENING MATTERS

BREAST & CERVICAL, the two most common cancers in women, are highly preventable and treatable.

SELF-EXAMINATION of breasts every month, and a clinical examination by a doctor every year, is important. Women who detect any lumps during self-examination must consult a doctor immediately. Women over age

40 should get a mammography once a year.

A PAP SMEAR TEST to check for precancerous growth in the genitals is recommended for women ages 25-60. HPV TEST to detect human papilloma virus that causes the majority of cervical cancers, can be done every 5-10 years.

# **Lancet Report Recommendations:**

- Regular data collection and monitoring: The report emphasizes the need to systematically collect gender and sociodemographic data for cancer health statistics. This data will help in properly addressing targeted problems.
- Policies to reduce risks: It is important to develop and implement policies to reduce cancer risks. It is necessary to strengthen the laws in this regard for the sake of public health.
- Promoting women's participation in cancer research: Equal participation of women in cancer research is essential. This will help in addressing cancer-related issues in women.

# Way Forward:

Most women delay in getting treatment due to financial, social and family reasons and do not take their health seriously. The mortality rate among women can be reduced through timely screening, accessible healthcare and informed policies.







# Why in News:

UNFPA (United Nations Population Fund) India, in collaboration with the International Institute for Population Sciences (IIPS), unveiled the highly anticipated "India Ageing Report 2023." This report sheds light on the challenges, opportunities and institutional responses surrounding elderly care in India, as India navigates a demographic shift towards an ageing population.

# **Key Findings of the Report:**

- As per the report, the elderly population in India is growing rapidly, with a decadal growth rate of 41% and is likely to surpass the population of children (0 to 15 years old) by 2046. 20% of India's population will be elderly by 2050.
- In India, more than 40% of the elderly are poor categories. Poverty among the elderly is a concern, affecting their quality of life and healthcare utilization.
- There are significant inter-state variations in the elderly population and their growth rates.
- Most southern States and States such as Himachal Pradesh and Punjab reported a higher share of the elderly population than the national average in 2021, a gap that is expected to widen by 2036.
- The sex ratio among the elderly has been climbing steadily since 1991 to till date. Between 2011 and 2021, the ratio increased in India as a whole and across all regions, barring the Union Territories and western India.
- The report further states that in India, Women have a higher life expectancy at ages 60 and 80 compared to men, it varies across states and territories.
- ➤ The elderly in India have a low awareness of the various social security schemes designed for them. Half of the elderly (55%) are aware of the old-age pension scheme (IGNOAPS), 44% about the widow pension scheme (IGNWPS) and 12% about the Annapurna Scheme.

# **Key problems related to ageing in India:**

- Poorness of the old age people.
- Low awareness about social welfare schemes run by the government for the welfare of elderly people.
- Social discrimination against elderly people and abuse by family members.
- ➤ Health challenges of elderly people.

# Measures that need to be taken:

Enhancing geriatric care to cater to the unique

- healthcare needs of seniors.
- Addressing the health, financial empowerment, and capacity-building needs of the elderly population.
- Community-based organizations should increase their engagement in the digital empowerment of elderly people.
- Increasing social assistance, old age homes, and elder abuse awareness campaigns from corporate houses.

# **Conclusion:**

Older people are a valuable resource for any society. Ageing is a natural phenomenon with opportunities and challenges. There is a need to reshape the thought process so that ageing is not lost youth but a new stage of opportunity and strength.

# Relationship between India and Maldives

# Why in News:

Recently elected Maldivian president President Muizzu has said that he would not allow foreign military presence in the country. Indirectly targeting India, he is considering China to be its closest ally. Muizzu won the election based on the 'India out' campaign. However, he further said that he hoped to revive Maldives-India relations based on the principles of respect for sovereignty and enhance the bond between both countries to new heights.

## **India-Maldives Relations:**

- India and Maldives conduct many Joint Exercises like- "Ekuverin", "Dosti" and "Operation Shield.
- India provides training to the Maldivian National Defence Force (MNDF)
- In 2022, the National College for Policing and Law Enforcement (NCPLE) was inaugurated by India's External Affairs Minister. NCPLE is the largest grant project executed by India in Maldives.
- A drug detoxification and rehabilitation centre in Addu City in Maldives was built with Indian assistance. The centre is one of 20 high-impact community development projects being implemented by India in areas such as healthcare, education, fisheries, tourism, sports and culture.
- India's company is developing the largest-ever infrastructure project in Maldives which is the Greater Male Connectivity Project (GMCP).
- India is Maldives' 2nd largest trading partner. With the signing of the bilateral USD 200 million Currency Swap Agreement in 2022 between RBI and Maldives Monetary under the SAARC



- currency swap agreement of 2012, the trade between India and Maldives might increase further.
- ➤ JMC Projects Limited of India has signed an agreement with the Maldives government to develop Hanimaadhoo International Airport.

## **India's Concerns:**

- India's major concern has been the impact of political instability in the neighbourhood on its security and development. The newly elected president is considered apprehensive towards India which is going to make the situation even tougher.
- Many terrorist groups like the Islamic State (IS) and Pakistan-based jihadist groups have been increasing their presence in Maldives, which indirectly threatens the security of India. Pakistan-based terror groups might use remote Maldivian islands as a launch pad for terror attacks against India and Indian interests.
- Maldives has emerged as an important country in South Asia for China's String of Pearls. Given the uncertain dynamics of Sino-Indian relations, China's strategic presence in the Maldives remains a concern.

# **Way Forward:**

India must ensure that its interests are not hampered. It must play a key role within the Indo-Pacific security space to ensure regional security in South Asia and surrounding maritime boundaries. Currently, the 'India Out' campaign has gained momentum in Maldives which should be not taken lightly by the Government of India. The issues raised by 'India Out' supporters should be effectively handled and the people of Maldives must be made aware of India's intentions behind projects on the island nation. This will ensure better integration of the people with overall betterment and security of South Asia.

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# India- Afghanistan Relationship

# Why in News:

Afghanistan embassy in India has shut down its operation citing a lack of support from India. The mission also cited failure to meet expectations in serving Afghanistan's interests as one of the reasons. Following Article 45 of the Vienna Convention on Diplomatic Relations (1961), all property and facilities of the Embassy will be transferred to the custodial authority of the host country.

# The repercussions of the embassy closure:

- Historic ties and longstanding partnerships between Afghanistan and India will be affected.
- The security of India can be threatened.

- Terrorist activities might increase due to the strangled relationship between India and Afghanistan.
- Afghanistan is a major investment partner of India and the embassy closing can lead to a toll on investment.

# **Importance of Afghanistan:**

- Afghanistan is located at a strategic location in South Asia and is relevant for India as a geographical neighbour.
- It is critical to regional and domestic security and stability within South Asia and India. Further, it is of great importance as a means of counterbalancing Pakistan and China.
- Radicals in Afghanistan have often been used by Pakistan to export terrorism to Kashmir. If Pakistan gains major say in Afghanistan's governance structure, it would be detrimental to India's regional security.
- A friendly Afghanistan is also crucial for India's access to Central Asia and Eurasia through Chabahar, which bypasses Pakistan.
- Central Asia has large reserves of oil and natural gas. Afghanistan is an energy bridge and thus is key to achieving India's strategic objectives.

# The developmental partnership between India and Afghanistan:

- India has constructed major projects like the Parliament Building in Kabul, the Zaranj Delaram highway which connects Chabahar port in Iran and the Salma Dam Project (Afghan-India Friendship Dam).
- India has also signed a trilateral preferential trade agreement with Afghanistan and Iran.
- India is supplying military hardware like military vehicles for the Afghan National Army and Mi-25 and Mi-35 choppers for the Air Force.
- India is also providing scholarships and skill development to Afghan students.

# **Conclusion:**

The closure of the embassy is a very difficult decision for the Afghanistan government. The Indian government should monitor the situation very carefully so that India's interest in Afghanistan are not compromised.



# Israel-Palestine Conflict

# Why in News:

Israel was recently attacked by Hamas with more than 5 thousand missiles without any prior warning, in which more than 200 innocent people were killed and thousands were injured. In response, Israel also carried out a pinpoint attack with missiles in



which hundreds of innocent people lost their lives. **About the Conflict:** 

- The conflict between Israel and Palestine began in the late 19th century when Jews were being persecuted in the Palestinian territories. To escape this oppression, the Jews started a movement which is known in history as the 'Zionist Movement'. In the Zionist movement, the Jews achieved success against the Palestinians.
- During the First World War, in 1916 AD, a secret agreement called 'Sykes-Picot' was signed between Britain and France under which it was decided that after the end of the World War, Palestine would be under British control.



- Next year in 1917, the 'Balfour Declaration' was made in which it was agreed to establish a Jewish homeland while accepting the demand for the formation of a country for the Jews.
- Later, the United Nations presented a partition plan to establish independent Jewish and Arab states in Palestine, which was accepted by the Jews of Palestine but the Arabs expressed their disagreement on it.
- Immediately after this plan, in 1948, the Jews declared the independent state of Israel. In protest Arab countries like Egypt, Jordan, Iraq and Syria attacked Israel. At the end of the war Israel occupied more land than was mandated by the UN partition plan. This led to a conflict between Israel and the Arab states that culminated in the famous 'Six Day War' in 1967. In this war, Israel established its dominance over the parts called 'West Bank'

- and 'East Jerusalem',
- Later, under the 'Oslo Peace Agreement' signed in the year 1993, it was decided that this area would be divided into two parts, one part of which was proposed to be given to Palestine and the other part to Israel. During the same Oslo Peace Accords, Palestine also gave official recognition to Israel as a country.

# **Reasons for Present Conflict:**

- The reason for the ongoing violence and instability is the missile attacks by Hamas. Hamas is a fundamentalist Sunni Muslim organization which is supported by Syria and Iran. At present, this organization has established its control over a place called the Gaza Strip.
- The Gaza Strip is a Palestinian-dominated area located on the coast of the Mediterranean Sea. This organization called Hamas does not believe in the 'two-state solution' suggested by the United Nations Organization and the 'Oslo Peace Agreement'. This organization completely rejects all Israeli claims in this area.

### **Conclusion:**

India is a supporter of the two-nation solution suggested under the Oslo Peace Accords and wants both countries should be created while protecting human values. Israel has always been helping India whether it was the Kargil war or intelligence sharing during the Mumbai attacks. India is Israel's third-largest trading partner in Asia and seventh-largest globally. India must keep its interests in mind before taking any decision.

# Global Net Freedom is Declining

# Why in News:

As per the new report published by Freedom House, a Washington DC-based non-profit, the global Internet freedom has declined for the 13th consecutive year. The environment for human rights online has deteriorated in 29 countries, with only 20 countries registering net gains. On a scale of 1 to 100, where '100' represents the highest digital freedom and '1' represents the worst digital freedom. Iceland emerged as the leader with a score of 94 while India got a score of 50.

# **Highlights of the Report:**

The report highlights that individuals faced legal consequences for online expression in a record in 55 countries this year. The number of countries making mass arrests and imposing multi-year prison sentences for online activities



- has increased from 18 in 2014 to 31 in 2023.
- Elections emerged as a catalyst for digital repression. Before the elections, incumbent leaders in various countries criminalized speech, restricted access to independent news sites, and imposed information controls to influence electoral outcomes in their favour.
- Concerning India, the report highlights the inclusion of censorship, including AI-based systems, within India's legal framework. Information Technology (Intermediary Guidelines and Digital Media Ethics Code) rules 2021; obligation of large social media platforms to employ AI-based moderation tools for different types of content.
- The report cited the Indian government's direction to YouTube and Twitter to restrict access to a BBC documentary on communal violence. IT rules force these platforms to use automated scanning tools to remove related content.
- The report evaluates countries on five censorship methods:
  - » Internet connectivity restrictions,
  - » Blocks on social media platforms,
  - » Blocks on websites,
  - » Blocks on VPNs,
  - » Forced content removal.
- On these parameters, India has also been involved in blocking websites with political, social or religious content, disrupting ICT networks, deploying pro-government commentators to manipulate online discussions, and conducting technological attacks against government critics and human rights organizations.

## **Conclusion:**

The global decline in internet freedom is a matter of concern, partly due to the increasing use of AI for censorship and misinformation campaigns. The implications of this trend on freedom of expression, privacy and democracy require vigilant monitoring and international action to protect digital rights in an increasingly interconnected world.

# 6 Indian Ocean Rim Association

# Why in News:

India participated in the 23rd Council of Ministers (COM) meeting and the 25th Committee of Senior Officials of the Indian Ocean Rim Association (IORA) held in Colombo, Sri Lanka, under the leadership of External Affairs Minister S. Jaishankar.

- In this meeting, India was appointed to the post of Vice President of IORA for the year 2023-25 and it was also decided that India will be the President of IORA in 2025-27.
- The COM adopted the Colombo Communique and the 'IORA Vision 2030 and Beyond'.

# Important statements by India:

- Reiterate demand for free open Indo Pacific.
- India is ready to represent the voice of the Global South.
- IORA country should be guided by UNCLOS, 1982 law.



# **Importance of the Indian Ocean Region:**

- As the third largest ocean, the Indian Ocean Region (IOR) is a lifeline for nearly 35% of the global population.
- About 85 per cent of trade in India takes place through the Indian Ocean region.
- It is a huge reservoir of natural resources such as minerals fish etc.
- Geostrategic importance for security purposes.

# **About Indian Ocean Rim Association (IORA):**

- ➤ The Indian Ocean Rim Association (IORA), formed in 1997, is an inter-governmental organisation aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region through its 23 Member States and 11 Dialogue Partners.
- Secretariat- Mauritius
- The Jakarta Concord adopted at the first IORA Leaders' Summit in 2017 outlines the core objectives to be achieved in the six priority areas and the two cross-cutting issues. These are Maritime Safety and Security, Trade and Investment Facilitation, Fisheries Management, Tourism and Cultural Exchanges, Disaster Risk Management, Academic Science and Technology Cooperation, Blue Economy and Women's Economic Empowerment.



## **Member:**

- Currently, IORA has 23 member states and 11 dialogue partners.
- Members: Australia, Bangladesh, Comoros, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, United Arab Emirates, Yemen.
- Dialogue Partners: China, Egypt, Saudi Arabia, Germany, Italy, Japan, South Korea, Russia, Turkey, the United Kingdom and the United States.

# **Way Forward:**

The IORA members must focus more on security issues in the Indian Ocean Region and should ensure least military presence so that the peace and tranquillity of the region is undisturbed and maintained. This region must be used for the growth and prosperity of the nations, not for rivalry and personal gains.



# India-Tanzania Relations

# Why in News:

Samia Suluhu Hassan, President of Tanzania, recently paid a state visit to India from 8-10 October 2023.

# Major developments during the meeting:

- Memorandum of Understanding between the Ministry of Electronics and Information Technology of India and the Ministry of Information Technology of Tanzania.
- Technical Agreement between Indian Navy and Tanzania Shipping Agencies Corporation on sharing of White Shipping Information.
- Cultural Exchange Program between the Government of India and the Government of Tanzania for the year 2023-2027.
- Memorandum of Understanding between the National Sports Council of Tanzania and the Sports Authority of India.
- Memorandum of Understanding between Jawaharlal Nehru Port Authority of India and Tanzania Investment Center for the establishment of an Industrial Park in Tanzania.
- Memorandum of Understanding between Cochin Shipyard Limited and Marine Services Company Limited on Cooperation in the Marine Industry.

# **Other Areas of Cooperation:**

# **Political Relations:**

Both nations expressed satisfaction at their

- growing level of bilateral political engagement and strategic dialogue on regional and global issues, including the outlook for the Indo-Pacific and the implementation of the Indian Ocean Rim Association's Outlook on the Indo-Pacific.
- ➤ The AU's approach to peace and security in Africa aligns with the SAGAR approach, with a focus on the development of the Blue/Ocean economy.



# **Defense Cooperation:**

- Both sides expressed interest in enhancing cooperation in the field of the defense industry.
- The First India-Tanzania joint Exclusive Economic Zone (EEZ) monitoring exercise was held in July 2023.
- India and Tanzania agreed to cooperate under the framework of the Indian Ocean Rim Association to ensure a peaceful, prosperous and sustainable Indian Ocean region.

# **Trade and Investment:**

- India is among the top five investment sources for Tanzania, with 630 investment projects worth US\$3.74 billion registered.
- ➤ Both nations are exploring the possibility of setting up an investment park in Tanzania and are seeking to promote bilateral trade in local currencies.
- ➤ 98% of product lines from Tanzania are imported tariff-free using India's Duty-Free Tariff Preference (DFTP) scheme.

# Wav Forward:

This visit marks an important stepping stone towards the mutual cooperation between India and Tanzania in various fields. Further, it embarks on the greater goal of enhancing the relations not just between the two countries, but the entire African Union and the Global South.



# **Environmental Issue**





# India, Japan launch \$600 million fund for environment projects

# Why in News:

India's National Investment and Infrastructure Fund (NIIF) and Japan Bank for International Cooperation (JBIC) jointly launched a \$600 million fund for climate and environment projects. The Indian government will contribute 49% to the target corpus for the India-Japan fund, which is also NIIF's first bilateral fund, while the remaining 51% will be contributed by JBIC.

# **About the Fund:**

- India-Japan Fund will focus on investing in environmental sustainability and low carbon emission strategies and aims to play the role of being a partner of choice to further enhance Japanese investments into India.
- It is NIIF's first bilateral fund and will be managed by NIIF Limited. JBIC IG, a subsidiary of JBIC, will support NIIFL in promoting Japanese investments in India.

# **India-Japan Environmental Partnership:**

- India and Japan are working together through the Clean Energy Partnership in the environmental sector. This partnership would work on the agenda covered in the India-Japan Energy Dialogue 2007 and will subsequently expand into areas of mutual benefit.
- In this series, the first India-Japan environment week was held in New Delhi from January 12-13, 2023.
- India has set an ambitious target of achieving net zero by 2070 while Japan has initiated a goal of becoming a net zero by 2050. Both countries are utilising new technologies and economic models that would help reduce emissions.
- ➤ The Quadrilateral Security Dialogue, commonly known as the Quad, has also announced the Clean-Hydrogen Partnership for technology development, efficiently scaling up the production of clean hydrogen and accelerating trade in clean hydrogen in the Indo-Pacific region.

### **About NIIF:**

- NIIF is a sovereign wealth fund, founded in 2015 to provide an investment platform for international and Indian investors.
- It is a platform for national and international investors to invest equity capital in domestic economic and social infrastructure. It manages three types of Funds: Master Fund, Fund of

- Funds, and Strategic Investment Funds. NIIF's projected corpus is USD 6 billion.
- While the government holds a 49% stake in the fund, 51% is held by domestic institutional investors, sovereign wealth funds, international pension funds and others like the US International Development Finance Corporation (USIDFC), multilateral development banks including the Asian Infrastructure Investment Bank (AIIB), Asian Development Bank (ADB) and New Development Bank (NDB).

# **Conclusion:**

The setting up of the India-Japan fund represents the growing strategic and economic partnership between the two countries. This fund will invest in India's renewable sector, circular economy, clean and green city and renewable energy which ultimately will fulfil the goal of sustainable development and will aid in achieving the target of the Paris Agreement.



# **New Species of Fish**

# Why in News:

Scientists of the Zoological Survey of India (ZSI) have recently discovered a new species of vibrant orange-coloured marine fish in the deep waters of Digha Mohana, West Bengal.

## **About the New Fish Species:**

- The new species, commonly known as gurnards or sea robins, belongs to the family Triglidae. It has been named Pterygotrigla intermedica, its characteristics are very similar to species like Pterygotrigla hemisticta.
- This is the fourth species of the Pterygotrigla genus reported so far from India and there are a total of 178 species in the Triglidae family worldwide
- Specimens of this fish were found to be very different from other guaranaid species in various aspects such as snout length, the shape of the internal space and the shape of the cleithral spine.
- It had a combination of characteristics such as long opercular spines and very short cleithral spines; Features include lateral line, gill rakers on the upper limb and 12-13 on the lower limb of the first gill arch and a large dark spot between the 4th and 6th spine of the first dorsal fin.
- It contributes to increasing knowledge about the unique marine ecosystems in Indian waters and highlights the country's strong presence in



marine biodiversity.

# **Zoological Survey of India:**

- The Zoological Survey of India (ZSI) was started in 1916 to promote survey, exploration and research regarding the flora and fauna of the British Indian Empire.
- It is the apex organization on animal classification in the country.
- Its activities are coordinated by the Conservation and Survey Division under the Union Ministry of Environment, Forest and Climate Change.
- ZSI is headquartered in Kolkata and has 16 regional centres across the country.
- It is a designated reserve for the national zoological collection as per section 39 of the National Biodiversity Act, 2002.

# **Objective:**

- To promote survey, investigation, research and documentation of animal taxonomy in the Indian subcontinent.
- Conduct status surveys of threatened and endemic species.
- Preparation of Red Data Book, Fauna of India and Fauna of the States.
- To conduct bio-ecological studies on important communities/species.
- To prepare database of species recorded in the country.
- Maintenance and development of the National Zoological Collection.

### Work:

- It publishes a Red Data Book on Indian animals, similar to the IUCN Red Data Book.
- > Staff training, capacity building and human resource development.
- To conduct Geographic Information System (GIS) and remote sensing studies of animal species.
- Development of ENVIS and CITES centres.
- Conduct collaborative research programs with other organizations.

# Amphibian Species at Risk of Extinction due to Climate Change

# Why in News:

Recently a new study published in the scientific journal Nature said that two out of five amphibian species are at risk of extinction due to climate change.

# **Key Features of the Study:**

The assessment evaluated the extinction risk of more than 8,000 amphibian species from

- all over the world, including 2,286 species evaluated for the first time.
- More than 1,000 experts from around the world, including scientists and researchers from Assam-based biodiversity conservation organization, Aranyak and other Indian institutions, have contributed their data and expertise.
- According to the study, between 2004 and 2022, some serious threats have pushed more than 300 amphibians close to extinction. Climate change was the primary threat to 39% of these species.
- The study said climate change is particularly worrying for amphibians because they are particularly sensitive to changes in their environment.
- The study says amphibians are facing climate change as humans alter climate and habitats. They are unable to move very far to escape climate change-induced increases in the frequency and intensity of extreme heat, wildfires, droughts, storms, and extreme temperatures.
- Three out of every five salamanders species are at risk of extinction primarily as a result of habitat destruction and climate change, making them the most threatened group of amphibians in the world.

# Other threats to the amphibian:

- ▶ Habitat destruction and degradation affect 93% of all threatened amphibian species. It underlines the importance of expanded habitat and corridor protection in the places most important for biodiversity.
- Disease caused by chytrid fungus is the main cause of the decline of amphibian species in Latin America, Australia, and the United States.
- Four amphibian species have become extinct since 2004, including the Chiriquí harlequin toad (Atelopus chiriquiensis) from Costa Rica, the sharp-snouted day frog (Taudactylus acutirostris) from Australia, Craugastor myllomyllon and the Jalpa false brook salamander (Pseudoeurycea exspectata), both from Guatemala.

# **Global Hotspots:**

- Amphibians face heighest level of risk at the mountains and forests of India's Western Ghats, Sri Lanka, Madagascar, the Caribbean islands, the tropical Andes, Mesoamerica, western Cameroon, and eastern Nigeria.
- It also included the Atlantic Forest biome of southern Brazil, central and southern China, and the Southern Annamite Mountains of Vietnam.



Of all of the comprehensively assessed groups on the IUCN Red List, amphibians are the second most threatened group and remain the most threatened vertebrate class.

# Way Forward:

Since 1980, 120 species have improved their Red List status, of which 63 species have improved habitat conservation and management from countries such as Malaysia, Costa Rica, Sabah, and the Western Ghats in India.

# Dakar Declaration on Climate Change

# Why in News:

Ministers from the world's 46 least developed countries (LDCs) released the Joint Dakar Declaration 2023 on Climate Change, outlining their expectations and priorities for the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28). COP28 will be held in Dubai, United Arab Emirates from November 30, 2023, to December 12, 2023.

# **Key points of Dakar Declaration:**

- Urgent global emissions reductions, increased climate finance, a strong outcome for the operation of the new Loss and Damage Fund, and an ambitious global stocktake to close the gap in global climate action.
- Developed countries must present a clear road map to at least double the adaptation finance they provide by 2025 through public, grantbased financing.
- A new collective quantitative target on climate finance should provide new and additional resources and be several times the current \$100 billion per year limit.
- Recognizing the specific needs and special circumstances of LDCs, as well as taking into account the implementation of Article 6 of the Paris Agreement Capacity Building Programme.
- Operationalizing the UNFCCC centralized carbon market mechanism by 2024.

# **LDCs and Climate Change:**

- Although LDCs account for more than 14 percent of the global population, they account for only 1 percent of emissions from fossil fuels and industrial processes. These countries bear the least historical responsibility for climate change yet they are forced to adapt beyond their capabilities and are at the forefront of the climate crisis.
- Intergovernmental Panel on Climate Change's Synthesis Report for the Sixth Assessment

Report Cycle (IPCC AR6), shows that global greenhouse gas (GHG) emissions continue to increase and global warming is rapidly approaching 1.5°C. The report urges all parties, especially major emitters, to urgently and significantly reduce GHG emissions. It advises that the Parties should reconsider and strengthen the 2030 targets in their NDCs to align with their fair share in the global effort required to limit warming to 1.5°C.

# **Way Forward:**

If global production and consumption patterns continue, the prospects for limiting warming to 1.5°C as per the 2015 Paris Agreement will be out of reach. COP28 is an opportunity to accelerate climate action towards 1.5°C pathways to meet the needs of LDCs. A successful COP28 will require all countries to come together to make deep cuts in global emissions, scale up renewable energy on a large scale, and ensure that no one is left behind in tackling this crisis.

# 5 Flood Caused by Bursting of Glacial Lake in Sikkim

# Why in News:

14 people have been killed and 102 are missing in Sikkim after the South Lhonak Lake- a glacial lake situated in the state's northwest at 17,000 ft, burst due to incessant rains, leading to the release of water in downstream areas. This caused the rise of water levels in Teesta river that flooded at least four districts according to Sikkim State Disaster Management Authority (SSDMA).

# **About Glacial Lake Outburst Flood (GLOF):**

- This is a type of explosive flood that occurs when water is released from a glacier or morainedammed by a dam.
- GLOFs are caused by various factors; including earthquakes, heavy rainfall, increased water flow, and avalanches.
- Such eruptions, known as GLOFs, have the potential to release millions of cubic meters of water in a short time, causing devastating flooding downstream.
- When the glacier melts, the water in these glacial lakes accumulates behind moraine dams, naturally forming lakes made of ice, sand, pebbles, and ice debris.
- Unlike earthen dams, due to the weak structure of a moraine dam, a moraine dam situated at the top of a glacial lake collapses suddenly, causing large amounts of flooding.

**South Lhonak Lake susceptible to GLOF:** 



- Due to rising global temperatures, glaciers in the Sikkim Himalaya are melting rapidly, creating many glacial lakes and expanding the already existing lakes in the region.
- At present there are more than 300 glacial lakes in the Sikkim Himalayas. 10 lakes, including South Lhonak Lake, have been identified as vulnerable to flooding.
- A report published by the Forest and Environment Department of the Government of Sikkim found that the area of the lake has increased significantly over the past five decades.
- Lake Lhonak has increased by approximately 1.5 times its size and South Lhonak by approximately 2.5 times.
- Seismic activity of magnitude 6.9 in 2011 has increased GLOF risk in the area.

# Important steps to tackle the expansion of South Lhonak Lake:

- Members of Sikkim's Department of Science, Technology, and Climate Change have decided to drain lake water from South Lhonak Lake.
- There are plans installing three eight-inch wide and 130-140 meter long high-density polyethylene (HDPE) pipes in the lake to drain out the water.

# Way Forward:

To deal with such disasters, assessment of vulnerabilities, risks, severity, and establishment of monitoring and early warning systems for vulnerable glacial lakes will have to be done, and the rescue, relief, rehabilitation, and reconstruction process will be accelerated.



# Why in News:

Chief Minister of Punjab has announced that the state will ban the cultivation of Pusa-44 rice varieties from next year. This variety covers 70 to 80 percent of the total area of the state under paddy cultivation, and farmers of Punjab were satisfied with its high yield.

### **PUSA-44 Cultivation:**

- This variety of rice was developed by the Indian Council of Agricultural Research (ICAR) in 1993.
- Py the end of 2010s, it had gained widespread popularity among farmers across the Punjab, covering approximately 70 to 80% of the area under paddy cultivation.
- By 2018, the Punjab government reduced the area under PUSA-44 to 18 per cent of the total

- area under paddy, but it rebounded to 22 per cent last year.
- According to the Agriculture Department, in the previous year, 7.74 lakh hectares (19.12 lakh acres) of paddy were under Pusa-44, out of a total non-Basmati paddy area of 26.61 lakh hectares.

# **Benefits to farmers:**

- ➤ The yield of PUSA-44 is around 85 to 100 mann (34 to 40 quintals) per acre, whereas the average yield of other varieties is 28 to 30 quintals per acre.
- If the weather is favourable, farmers may get 36 to 40 quintals per acre yield from PUSA-44.
- Currently, the Minimum Support Prince (MSP) offered for paddy is Rs 2,205 per quintal, so if it yields farmers 7-10 quintals more than the other varieties, then it will add to their income by Rs 15,000 to 22,000 per acre.

## **Reasons for the ban:**

- It is a long-duration variety, which takes about 160 days to mature. It takes approximately 35 to 40 days more than other varieties, requiring 5-6 additional cycles of irrigation.
- ▶ 102 of the state's 141 agricultural development blocks were declared 'dark zones', in which the rate of groundwater depletion exceeded the rate of recharge, and the water was available at depths of 200 to 300 feet or more.

# How does stubble burning increase the problem?

- Pusa varieties produce about 2 % more stubble than smaller varieties, which becomes a problem when cultivated on a large-scale.
- Due to its longer maturity period, it is harvested just before wheat sowing. Farmers need 20 to 25 days between paddy harvesting and wheat sowing, hence cases of stubble burning increases.

# **Way Forward:**

Given the groundwater depletion in Punjab and the availability of short-duration paddy varieties, the government aims to conserve irrigation water by banning this variety.

# National Framework for Climate Services

# Why in News:

India has launched its first national-level framework for providing climate services and information. The National Framework for Climate Services (NFCS) is led by the India Meteorological Department (IMD). NFCS is based on the Global Framework for Climate Services (GFCS).



## **About NFCS:**

- ➤ NFCS are multi-stakeholder platforms to develop and deliver climate services. In line with the global framework, national frameworks are based on country-specific climate and stakeholder needs.
- Their goal is to coordinate institutions so that they can work together to co-design, co-produce, communicate, deliver, and harness climate action.
- With respect NCFS in India, the nation may also add other relevant sectors such as hydrology, power, renewable energy, transport, dams and irrigation, and health agencies at the Centre, State and other levels along with the identified areas of focus.

# **Nodal Agency:**

IMD will be the nodal agency for the formulation and implementation of the national framework in India.

# **NCFS** in Other Countries:

Since the announcement of the Framework for Climate Services in 2009, Switzerland, China, Germany and the United Kingdom have launched NFCS.

About Global Framework for Climate Services

# (GFCS):

- The GFCS is a partnership of governments and organizations globally to produce and better use climate information and services.
- It aims to bring a seamless working platform to users of climate information and services and help them determine and mitigate climate risks across key sectors – agriculture, energy, disaster management, health and water.
- The establishment of the GFCS was announced during the third World Climate Conference held in Geneva in 2009.
- This framework is led by the National Meteorological and Hydrological Services (NMHS) in their respective countries.
- Currently, the GFCS focuses on priority areas such as agriculture and food security, energy, health, water and disaster risk reduction.

# **Conclusion:**

There are several sporadic areas across landmass and oceans for which no meteorological data is available. With the launch of NFCS, the Meteorological Department aims to strengthen observation networks on land and sea, improve data flow and use it to run weather and climate models to ultimately obtain climate predictions.





# Science-Tech



# 1 R2

# R21/Matrix-M Malaria Vaccine

# Why in News:

The R21/Matrix-M malaria vaccine developed by the University of Oxford and the Serum Institute of India, leveraging Novavax's adjuvant technology, has been recommended for use by the World Health Organisation (WHO) after meeting required safety, quality and effectiveness standards. This is the second malaria vaccine recommended by the WHO after the RTS, S/AS01 vaccine.

# **About R21/Matrix-M:**

- The R21/Matrix-M malaria vaccine is a readily available vaccine that can be manufactured on a large scale at a modest cost.
- The Matrix-M component is owned by Novavax, which is licensed by the Serum Institute for use in endemic countries.
- This malaria vaccine has been licensed for use in three countries in Ghana, Nigeria and Burkina Faso.
- The Phase III clinical trial of the vaccine was conducted including on 4,800 children in Burkina Faso, Kenya, Mali, and Tanzania.

# What is Malaria?

- Malaria is a fever caused by a parasite called Plasmodium. It is spread by the female Anopheles mosquito.
- The disease is found in tropical and subtropical regions around the equator, including sub-Saharan Africa and much of Asia.
- Of the total five species of Plasmodium parasite, two species, P. falciparum, and P. vivax, are considered the most dangerous.

## **Symptoms of malaria:**

- The initial symptoms of malaria include fever, headache, sweating, chills, vomiting, etc.
- In severe cases, it can even cause organ failure, coma, and death.

# Malaria cases and eradication efforts:

- In 2020, 29 of the 85 malaria-endemic countries accounted for 96 percent of malaria cases. Globally, India contributes 1.7 percent of malaria cases and 1.2 percent of deaths.
- According to WHO, about 15 million malaria cases are reported annually in India, with approximately 19,500–20,000 deaths.
- An increase in cases and deaths has been reported in all high-burden to high-impact (HBHI) countries except India between 2019 and 2020.

- Malaria cases are estimated to be 241 million globally in 85 endemic countries in 2022, compared to 227 million in 2019. Most of the cases came from African countries, which accounted for 95 percent of the cases.
- A target has been set to reduce malaria cases and death rates by 90% by 2030.

# **Way Forward:**

Malaria is a global public health problem that affects the majority of the population. The Joint Action Plan of Tribal and Health Ministries and the implementation of the HIP-Malaria portal will help in curbing the spread of malaria and improve the prevention, diagnosis, and treatment of the disease.



# Use of CRISPR Technology

# Why in News:

According to a new study published in the journal Nature Communications, scientists have used a gene-editing technique called CRISPR to create chickens that have some resistance to avian influenza. The researchers edited the chicken gene to form ANP32A, which the flu virus hijacks to mimic itself.

# **About the Study:**

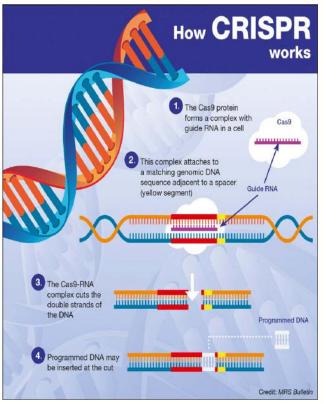
- Scientists have used a gene-editing technique called CRISPR to create chickens that have some resistance to avian influenza.
- The study suggests that genetic engineering could potentially be a tool to reduce the toll of bird flu, a group of viruses that pose a serious threat to both animals and humans.
- However, the study also highlights the limitations and potential risks of the approach.
- The researchers found that some significant infections still occurred, especially when the gene-edited chickens were exposed to very high doses of the virus. And when scientists edited just one chicken gene, the virus quickly adapted. The findings suggest that multiple genes will need to be edited to create fluresistant chickens and that scientists will need to proceed carefully to prevent further evolution of the virus.

# **About Bird Flu:**

Avian influenza refers to a group of flu viruses circulating in birds. Over the past several years, a highly lethal variant of the bird flu virus known as H5N1 has spread rapidly around the world, killing countless farm and wild birds. It



has also repeatedly infected wild mammals and has been detected in a small number of people. Although the virus is adapted to birds, scientists worry that it may acquire mutations that help it spread more easily between humans, potentially leading to a pandemic.



Many countries have tried to eliminate the virus by increasing biosecurity on farms, isolating infected premises, and culling infected herds. But the virus has become so widespread in wild birds that it has proven impossible to stop, and some countries have begun vaccinating poultry, although the effort presents some logistical and economic challenges.

# **About CRISPR Technology:**

CRISPR-Cas9 is a technology that allows highly specific and rapid modification of the DNA in a genome, which is the complete set of genetic instructions in an organism.

### **Conclusion:**

There had been several pandemics and epidemics that had zoonotic origin. The recent COVID 19 pandemic and health hazard of the swine flu are some of several examples that exemplify the potential threat these pathogens can cause to the whole biodiversity and humanity. The integrated approach of 'One Health' supplemented by cohesive research and development is the need of the hour.

# 3 Uterus Transplant

# Why in News:

Recently, the doctors at the Churchill Hospital Oxford, U.K., conducted the country's first uterus transplant. They removed the uterus from a 40-year-old woman and transplanted it to her 34-year-old sister, who had a rare condition that affected her ability to reproduce. While the womb was functional, only a live birth in the near future can prove that the transplant succeeded. Although, many countries have successfully transplanted the uterus before.

# **About Uterus Transplant:**

- Uterus transplant involves the transplantation of a woman's womb and it can help women lacking a uterus meet their reproductive needs.
- ➤ The first live birth after a uterus transplant occurred in Sweden in 2014, marking a breakthrough in the treatment of uterus factor infertility.

# **About the Transplantation Procedure:**

- The donor uterus, whether from a living donor or a deceased donor, is rigorously tested for viability before transplantation. These tests include gynaecological examinations, cancer screening etc.
- Since procedure does not connect the uterus to the fallopian tube, (which ensures that the egg travels from the ovary to the uterus) the person with a transplanted uterus cannot get pregnant through natural means.
- Instead, doctors remove the recipient's egg cells, create embryos using in vitro fertilization, and freeze them (cryopreservation). Once the newly implanted uterus is 'ready', the doctor implants the embryo into the uterus.
- Robot-assisted laparoscopy is used to precisely remove the donor uterus, making the procedure less invasive.
- After the transplant procedure, the vital uterine vessel (the network of vessels connecting the heart to other organs and tissues of the body) and other vital connections are methodically reestablished.

### **Side Effects:**

- Side effects include kidney and bone marrow toxicity and increased risk of diabetes and cancer.
- For these concerns, the uterus should be removed after successful delivery and regular follow-up is recommended for at least a decade after childbirth.



# **Uterus Transplant in India**

India has joined Sweden and the United States among countries with successful uterus transplants. The cost of uterus transplant surgery in India currently ranges from Rs 15-17 lakh, making it a more cost-effective option for many.

# **Conclusion:**

Uterine transplantation represents a remarkable medical advancement that offers hope and possibilities for individuals facing uterine factor infertility. Although challenges remain, ongoing research and technological advances continue to expand the horizons of reproductive medicine.



# Digital India Act 2023

# Why in News:

Recently, the announcement of the Digital India Act 2023 (DIA) will be an important step towards establishing a future-ready legal framework for the country's growing digital ecosystem. It is a proactive approach by the Ministry of Electronics and Information Technology (MeitY) towards shaping the digital future of the country.

# **Key points related to Digital India Act 2023:**

- The new Digital India Act will replace the twodecade-old Information Technology Act 2000 (IT Act)
- It is designed to address the growth, challenges, and opportunities of the Internet and emerging technologies.
- Its main objective is to align India's regulatory landscape with the digital revolution of the 21st century.
- When the IT Act was introduced, the Internet was in its nascent stage and was struggling to keep pace with the rapid changes in technology and user behavior.
- India's Internet user base has increased from 5.5 million at the time of the inception of the IT Act to 850 million.
- This will also lead to an evolving nature of Internet use, with the proliferation of cyberstalking, trolling, and doxing of users with various mediators.

# **Major provisions of the Act:**

- The Act contains a spectrum of important provisions aimed at addressing the ever-evolving digital landscape.
- It will emphasize online security and trust while remaining consistent with changing market dynamics and international legal principles,

- along with a commitment to protect citizens' rights in the digital sphere.
- It will emphasize the growing importance of artificial intelligence (AI) and Blockchain technologies and provide new guidelines for their use.
- It will advance the concept of an open Internet and strike a balance between accessibility and necessary regulations to protect users.
- It will mandate Know Your Customer (KYC) norms which will curb criminal activities.

# Main challenges related to the Act:

- This can hamper entrepreneurial initiatives and deter foreign investment, especially in emerging technologies.
- This could lead to a more cautious approach among 'safe harbor' platforms, and impact freedom of expression.
- This will pose a significant challenge in balancing the interests of various stakeholders, including tech giants while ensuring the protection of civil rights.

# Way Forward:

This Act will be an important step towards ensuring a secure, accountable, and innovative digital future for India. It will represent a visionary approach to regulation in an era of constant change and will play a key role in shaping the digital landscape of the country for generations to come.



# Multimodal Artificial Intelligence

## Why in News:

The recent developments by OpenAI, Google, and Microsoft, such as GPT-4V, integration of DALL-E 3 into ChatGPT and assistance with Bard, highlight the significance of multimodal artificial intelligence in the present world.

# **About Multimodal Artificial Intelligence:**

- Multimodal Artificial Intelligence refers to a type of AI system that can simultaneously understand and process information from multiple modalities or sources, such as text, images, video, audio, and other forms of data.
- This means that it can analyse different types of data and extract insights to gain a more comprehensive understanding of a situation or problem.

# What technologies are associated with multimodal AI?

Multimodal AI systems are typically built from a series of three main components-



- An Input Module: a series of neural network responsible for ingesting and processing, or encoding, different types of data such as speech and vision.
- A Fusion Module: responsible for combining, aligning and processing the relevant data from each modality -speech, text, vision, etc.
- An Output Module: responsible for creating the output from the multimodal AI, including making predictions or decisions or recommending other actionable output the system or a human operator can utilize.

#### Importance of multimodal artificial intelligence:

- Enhanced Understanding: Multimodal AI can provide a richer and more nuanced understanding of data by combining information from different sources. For example, it can analyse both text and images in a news article to gain a deeper understanding of the content.
- ➤ Improved Accuracy: Combining data from multiple modalities can lead to better accuracy in tasks such as natural language processing (NLP), computer vision and speech recognition. This helps AI systems make more informed decisions.
- Real-world applications: Multimodal AI has a wide range of practical applications, such as health care (integrating medical images with patient records), autonomous vehicles (processing both visual and sensor data), and content recommendation systems (Analysis of text and user behaviour).
- ▶ **Better user experience:** In applications like virtual assistants or chatbots, multimodal AI can better understand and respond to users by considering both their spoken words and visual cues.
- Problem-solving: Multimodal AI can help solve complex problems that require insights from different data sources. For example, in disaster response, it can analyse text reports, satellite images, and sensor data to assess the situation and plan a response.

#### **Conclusion:**

With the development of such advanced forms of intelligence systems, huge volumes of data are produced. Such data volumes are expensive to store and expensive to process. Also, combining and synchronizing different types of data can be challenging because the format of data from multiple sources will not be the same. These challenges need to be addressed for the proper use of multi-model artificial intelligence in agriculture, healthcare energy etc.

# 6 mRNA Vaccines

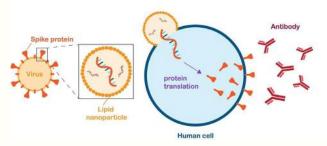
#### Why in News:

Katalin Karikó and Drew Weissman, have recently received Nobel Prize in medicine for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19. Nucleoside-modified messenger RNA (modRNA) is a synthetic messenger RNA (mRNA) in which some nucleosides are replaced by other naturally modified nucleosides or synthetic nucleoside analogues. modRNA is used to induce the production of desired proteins in certain cells.

#### **About Vaccine:**

- Vaccines help prevent infection by preparing the body to fight foreign invaders (such as bacteria, viruses, or other pathogens).
- All vaccines inject a harmless piece of a particular bacteria or virus into the body, triggering an immune response. Most vaccines contain weakened or dead bacteria or viruses.
- However, scientists have developed a new type of vaccine that uses a molecule called messenger RNA (mRNA) instead of part of the actual bacteria or virus.
- Messenger RNA is a type of RNA that is essential for protein production. Once cells finish making proteins, they rapidly break down the mRNA.
- The mRNA from vaccines does not enter the nucleus nor they alter the DNA.

#### Mechanism of mRNA Vaccine



#### **About mRNA Vaccines:**

- mRNA vaccines work by introducing a fragment of mRNA that matches the viral protein, usually a small piece of protein found on the outer membrane of the virus. Using this mRNA, cells can produce viral proteins.
- As part of the normal immune response, the immune system recognizes that the protein is foreign and produces special proteins called



antibodies.

- Antibodies help protect the body from infection by recognizing individual viruses or other pathogens, attaching to them, and marking the pathogens for destruction.
- Once produced, antibodies remain in the body even after the pathogen is rid of it so that the immune system can respond immediately if reexposed.
- If a person is exposed to the virus after receiving an mRNA vaccination, antibodies can quickly recognize it, attach to it, and mark it for destruction before it can cause severe disease.
- Individuals who receive the mRNA vaccine are not exposed to the virus, nor can they become infected with the virus from the vaccine.

#### Conclusion

mRNA vaccines represent a promising alternative to the traditional vaccine approach. Their high potency, potential for rapid development, low-cost manufacturing and safe administration will benefit the overall health and well-being of people.



#### **Psyche Mission**

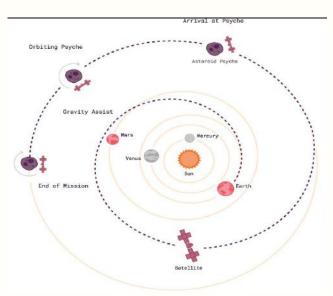
#### Why in News:

SpaceX Falcon Heavy rocket launched NASA's Psyche spacecraft from Kennedy Space Centre in Florida, which is designed to help scientists learn about the formation of rocky bodies in our solar system.

#### **About the Mission:**

- The Psyche mission is a journey to a unique metal asteroid orbiting the Sun between Mars and Jupiter.
- After escaping Earth's gravity, the Psyche mission will employ solar electric propulsion to complete its extensive six-year voyage to the metal-rich asteroid.
- Psyche spacecraft is scheduled to reach its destination in 2029 covering a distance of approximately 2.2 billion miles.
- Following its arrival, the spacecraft will orbit the asteroid for 26 months, capturing images, mapping the surface, and gathering crucial data to ascertain the composition of the Psyche asteroid.
- They will be employed to identify traces of a magnetic field on the asteroid, analyze its chemical composition, and gather information about both its mineral makeup and surface features.
- In addition to its primary mission, the Psyche

- spacecraft will host a leading-edge technology demonstration called NASA's Deep Space Optical Communications (DSOC) experiment.
- The goal of DSOC is to test high-bandwidth optical communications on Earth during the early stages of the Psyche spacecraft's journey.



#### **About Asteroid Psyche:**

- The asteroid known as Psyche, with an estimated width of 173 miles (279 kilometers) and a surface area of roughly 165,800 square kilometers, is believed to represent either a partial or complete remnant of a planetesimal's iron-rich core, which served as a foundational element in the creation of rocky planets.
- It is believed that this asteroid endured multiple high-impact collisions when the solar system was forming. These collisions might have stripped away Psyche's outer layer of rocky material.
- Psyche holds the potential to offer valuable insights into the development of Earth's core and the cores of other terrestrial planets. There is also a possibility that Psyche could be the leftover piece of a completely distinct type of iron-rich celestial body. However, complete consensus has not yet been reached on any aspect.

#### **Conclusion:**

The rationale behind studying Psyche lies in its high metal content. Discoveries from this metal-enriched asteroid have the capacity to enrich our comprehension of how planets come into existence. Scientists hope that understanding the asteroid will tell us more about planetary cores and Earth's own formation.



# **Economic Issues**



# SUGAM REC' Mobile App

#### Why in News:

REC Limited, a Maharatna Central Public Sector Enterprise under the Ministry of Power has launched a mobile application, 'SUGAM REC' exclusively for current and future investors in REC's 54EC Capital Gain Tax Exemption Bonds. This mobile app will provide investors with complete details of their investment in REC 54EC bonds.

#### **About the Mobile App:**

- ➤ Through this app, investors will be able to download their e-bond certificates, apply for new investments, download important forms related to updating KYC, and can also connect with REC's investor cell through call, email, or WhatsApp.
- The mobile application can be downloaded free of cost on Android and iOS platforms.
- > This is one of the many digital initiatives of REC.

#### **About Section 54EC bonds:**

Section 54EC bonds are a type of fixed-income financial instrument that offers tax exemption under capital gains to investors under Section 54EC of the Income Tax Act.

#### **Advantages of 54EC Bond:**

- An important advantage of 54EC bonds is the opportunity to save tax.
- One can reinvest the money and avail of tax benefits by investing the income received from the sale of this bond.
- This allows investors to optimize their tax obligations and reduce their overall tax bill.
- It provides a safe investment platform for investors seeking stability and confidence.
- It allows individuals to manage their savings in line with their preferences and investment strategy.

#### **About REC Limited:**

- REC Limited, established in 1969, is an NBFC focused on financing and development of the power sector across India.
- ➤ It provides financial assistance to State Electricity Boards, State Governments, Central or State power utilities, independent power producers, rural power co-operative societies, and private sector utilities.

#### **Way Forward:**

Under Section 54EC of the Income Tax Act, 54EC Bonds will provide a suitable investment option to individuals and Hindu Undivided Families (HUFs)

providing tax-saving benefits and interest-earning opportunities. By reinvesting the sale profits into 54EC bonds, individuals can effectively save tax and potentially increase the overall returns on their investments.

# 2 Social Impact Bond

#### Why in News:

NABARD raised 1041 Cr through its Social Impact Bond, which matures in five years, at a coupon rate of 7.63%. NABARD's base issue price is 1000 Cr and a green shoe option of another 2000 crore. The bonds have received AAA ratings from both CRISIL and ICRA

#### **About Social Impact Bond (SIB):**

- A social impact bond (SIB) is an outcomebased bond where returns are paid after desired outcomes related to the social sector. A social impact bond is not a bond, per se, since repayment and return on investment (ROI) are contingent upon the achievement of desired social outcomes.
- Investing in social impact bonds has risen in recent years as a way for investors to give back to the community, as well as a way for companies to expand their social responsibility.
- The first social impact bond was issued in 2010 by Social Finance Ltd.

#### **Features of Social Impact Bond:**

- Social impact bonds are risky investments because they are completely dependent on the success of the social outcome.
- Unlike normal bonds, social impact bonds are not affected by variables such as interest rate risk, reinvestment risk or market risk.
- The success of social impact bonds can be difficult to determine, as they are based on social impact, which is often difficult to measure. For this reason, financing for social impact bonds is a very difficult process.

#### The benefit of Social Impact Bond:

- Project developers will work hard as funding will only be accessed when their project delivers the intended outcome.
- ➤ Good governance and trust of the people will increase the government services.
- New funding mechanisms will evolve which will lead to fresh funding in the social sector.

#### **About India's first skill impact bond:**

The Skill Impact Bond is India's first development



impact bond for skilling and employment, to benefit 50,000 young Indians over four years, 60% of whom would be women.

- As an innovative outcomes-based financing tool that leverages private sector capital and expertise, the Skill Impact Bond shifts its focus from inputs like training and certification to outcomes like job placement and retention for India's vouth.
- The collaboration also aims at strengthening the capacity of India's technical and vocational education ecosystem through knowledge exchange, evidence and data generation and mainstreaming good practices.

#### **Conclusion:**

NABARD's successful issuance of this Social Impact Bond underlines the growing interest in socially responsible investments and demonstrates its commitment to supporting rural and agricultural development initiatives.

#### Indian Economy Likely to Grow at 6.3% in FY 2024

#### Why in News:

Recently, the World Bank's India Development Update stated that India, which is a major economic partner in the South Asia region, is expected to grow at 6.3 percent in 2023-24.

#### **Key Features of the Report:**

- Sharing sectoral growth projections, the report said the agriculture sector is expected to grow by 3.5 percent, industry by 5.7 percent, and services by 7.4 percent during 2023-24.
- The report expects a gradual decline in food prices as food prices normalize and government measures help increase the supply of key commodities.
- Retail inflation is expected to stand at 5.9 percent this fiscal year.
- Fiscal consolidation will continue in FY2024 and the central government's fiscal deficit is projected to decline from 6.4 percent of GDP to 5.9 percent.
- The report expects public debt to stabilize at 83 percent of GDP.
- The current account deficit is expected to reduce to 1.4 percent of GDP this financial year. It will be substantially financed by foreign investment and supported by large foreign reserves.
- The report said that women in rural areas are lagging behind men in jobs.
- The urban worker population ratio (WPR) has increased by 1.4 and 2.3 percentage points for

men and women respectively compared to the previous year.

	forecast for 2023-24 by 0.3 percentage points						
Rate cut likely early ne fiscal		Full impact of 250 bps tightening yet to be felt					
GDP (%	GRO	OWTH, YOY)					
FY23	7.2	2					
FY24	6.3	3					
FY25	6.5	Series and Address designations					
FY26	6.5	5					

#### **Impact on Scheduled Commercial Banks (SCBs):**

- The asset quality of Scheduled Commercial Banks (SCBs) will continue to improve and will lead to higher loan growth, a decline in slippages, better recovery, and disposal of bad loans.
- The report said the gross non-performing assets (NPAs) of SCBs as a proportion of gross advances fell to a low of 3.9 percent by March 2023 compared to 5.9 percent in March 2022.

#### **Growth rate of South Asia:**

- The report said South Asia is expected to grow by 5.8 percent this year, higher than any other developing region in the world, but slower than the pre-pandemic pace and falling short of meeting its development targets.
- India's growth rate has increased by 0.2 percentage points in 2023 due to strong data.

#### **Way Forward:**

Private consumption is expected to grow from 5.9 percent this year to 6 percent next year and 6.4 percent in 2025-26, and government consumption is expected to grow from 4.1 percent this year to 5.1 percent and 5.8 percent in the next two years.

### Unemployment rate in urban areas dropped to 6.6% in O1

#### Why in News:

The urban unemployment rate fell to 6.6 percent in the first quarter, April-June, of this financial year, according to the quarterly bulletin of the Periodic



Labor Force Survey (PLFS) released by the Ministry of Statistics and Program Implementation (MoSPI).

#### **Key points related to the survey:**

- According to the survey, the unemployment rate for urban women and men in the age group of 15-29 years in April-June 2020 was 36 and 34.3 percent respectively.
- The urban unemployment rate for persons above 15 years of age based on current weekly status declined to 5.9 percent in the April-June quarter from 6.0 percent in the previous quarter and 7.1 percent in the year-ago period.
- The unemployment rate for women also dropped to 9.1 percent in April-June, from 9.2 percent in the previous quarter and 9.5 percent in the year-ago period.
- There has been an increase in the employment of both men and women in self-employed categories or working on their own accounts and supporting household enterprises.
- The unemployment rate among urban women and youth in the age group of 15-29 years rose to 23.4 percent in April-June, from 22.9 percent in the previous quarter.
- For urban men aged 15-29 years, the unemployment rate increased to 15.9 percent in April-June from 15.6 percent in the previous quarter, down from 17.4 percent in April-June 2022.

#### 

#### Some other unemployment rate figures:

- Himachal Pradesh (13.8 percent), Rajasthan (11.7 percent), Chhattisgarh (11.2 percent), Jammu and Kashmir (10.9 percent) and Kerala (10 percent) recorded unemployment rates higher than the national average.
- The unemployment rate in Delhi (2.7 percent), Gujarat (2.8 percent), West Bengal (4.4 percent), Bihar (6.1 percent), Maharashtra and Haryana (6.5 percent) is lower than the national average.

➤ Key labor market indicators of labor force participation rate (LFPR), worker population ratio (WPR) and unemployment rate for persons aged 15 years and above in urban areas improved in the April-June quarter as compared to earlier.

#### **Unemployment rate before COVID-19:**

- The LFPR for individuals aged 15 years and above in the current weekly status (CWS) ranged from 46.2 to 47.8 percent during the pre-pandemic period. The LFPR during April-June 2023 was 48.8 percent which is higher than the labor force participation rate in the pre-pandemic period.
- The WPR for persons aged 15 years and older ranged from 41.8 percent to 44.1 percent. The WPR during April-June 2023 was 45.5 percent which is higher than the worker-population ratio observed in the pre-pandemic period.
- The unemployment rate for individuals aged 15 and over ranged from 7.8 percent to 9.7 percent.
- ➤ In the first wave, in April-June 2020, the unemployment rates for urban women and men aged 15-29 years were 36 and 34.3 percent, respectively.

#### **Way Forward:**

Urban Unemployment PLFS is based on the current weekly status approach, under which a person is considered unemployed if he or she did not work even for an hour on any day during the week although work was available.

# RBI's Open Market Operation

#### Why in News:

The Reserve Bank of India's announcement on Open Market Operation (OMO) sale of government securities to manage liquidity in the system took the bond market by surprise as the central bank did not reveal any specific timeline for the proposal. In response, the yield on the benchmark 10-year government bonds shot up by 12 basis points to 7.34 per cent as the market anticipates an OMO shortly, which is expected to tighten liquidity in the system.

#### Why did it surprise the markets?

- The forthcoming festive season may tighten liquidity in the market. However, RBI's different approach for example Open market operation took everyone by surprise.
- The unexpected announcement of OMO by RBI, the timing of the announcement, and the



shift towards more active liquidity management in line with inflation targeting and financial stability concerns came as a surprise to the markets.

This uncertainty and change in outlook caused market participants to re-evaluate their expectations and strategies.

#### Why does RBI want OMO?

- Petail inflation is above the tolerable limit set up by the monetary policy committee. This stance is in alignment with the central bank's objective of anchoring inflation at 4 per cent. Although RBI said that: merely keeping inflation below the upper band of the target range (at 6 per cent) is insufficient, a more proactive approach is essential.
- ➤ RBI may have to consider OMO sales to manage liquidity, consistent with the stance of monetary policy. However, the timing and quantum of such operations will depend on the evolving liquidity conditions

#### **Open Market Operations:**

- Open Market Operations is one of the tools that the Reserve Bank of India (RBI) uses to regulate the money supply and liquidity conditions in the economy.
- MOs are the sale and purchase of government securities (G-Secs) and treasury bills (T-Bills) by the RBI in the open market. When the RBI wants to bring liquidity into the system, it purchases G-Secs and T-Bills from the market, thereby increasing the money supply. Conversely, when the RBI wants to absorb excess liquidity from the system, it sells G-secs and T-bills in the market, thereby reducing the money supply.

#### **Conclusion:**

Although RBI announced the Open market operation, many experts believe that it is not the right time to announce such types of measures from the central bank. Till date, the market is not even fully working with its potential; such measures might prove harmful to the financial market and cause a decline in investment and production.

# Periodic Labour Force Survey (PLFS)

#### Why in News:

Recently, the sixth Annual Report was brought out by NSSO based on the Periodic Labour Force Survey conducted for persons aged 15 years and above from July 2022 to June 2023.

#### **Key findings:**

#### Usual status (ref. 365 days):

- In rural areas, the labour force participation rate (LFPR) increased from 50.7% in 2017-18 to 60.8% in 2022-23 while for urban areas it increased from 47.6% to 50.4%. LFPR for males in India increased from 75.8% in 2017-18 to 78.5% in 2022-23 and the corresponding increase in LFPR for females was from 23.3% to 37.0%.
- ➤ In rural areas, worker population ratio (WPR) increased from 48.1% in 2017-18 to 59.4% in 2022-23 while for urban areas it increased from 43.9% to 47.7%. WPR for males in India increased from 71.2% in 2017-18 to 76.0% in 2022-23 and the corresponding increase in WPR for females was from 22.0% to 35.9%
- In rural areas, the unemployment rate (UR) decreased from 5.3% in 2017-18 to 2.4% in 2022-23 while for urban areas it decreased from 7.7% to 5.4%. UR for males in India decreased from 6.1% in 2017-18 to 3.3% in 2022-23 and the corresponding decrease in UR for females was from 5.6% to 2.9%.

#### Current weekly status (ref. 7 days):

- In rural areas, LFPR increased from 48.9% in 2017-18 to 56.7% in 2022-23 while for urban areas it increased from 47.1% to 49.4%. LFPR for males in India increased from 75.1% in 2017-18 to 77.4% in 2022-23 and the corresponding increase in LFPR for females was from 21.1% to 31.6%.
- ▶ In rural areas, WPR increased from 44.8% in 2017-18 to 54.2% in 2022-23 while for urban areas it increased from 42.6% to 46.0%. WPR for males in India increased from 68.6% in 2017-18 to 73.5% in 2022-23 and the corresponding increase in WPR for females was from 19.2% to 30.0%.
- In rural areas, UR decreased from 8.4% in 2017-18 to 4.4% in 2022-23 while for urban areas it decreased from 9.5% to 7.0%. UR for males in India decreased from 8.7% in 2017-18 to 5.1% in 2022-23 and the corresponding decrease in UR for females was from 9.0% to 5.1%.

#### **Indicators:**

- Labour Force Participation Rate (LFPR): LFPR is defined as the percentage of persons in the labour force (i.e. working or seeking or available for work)in the population.
- Worker Population Ratio (WPR): WPR is defined as the percentage of employed persons in the population.
- Unemployment Rate (UR): UR is defined as the percentage of persons unemployed among the



persons in the labour force.

Activity status - The activity status of a person is determined based on the activities pursued by the person during the specified reference period.

#### **About Periodic Labour Force Survey:**

Recognizing the importance of availability of labour force data at more regular time intervals, the National Statistical Office (NSO) launched the Periodic Labour Force Survey in April 2017.

#### The purpose of PLFS:

- To estimate key employment and unemployment indicators (e.g. worker population ratio, labour force participation rate, unemployment rate) over a short time interval of three months for urban areas only in 'Current Weekly Situation' (CWS).
- To estimate employment and unemployment indicators in both 'normal situation' (PS+SS) and CWS in both rural and urban areas annually.

# 7 Tea Industry in India

#### Why in News:

The Indian Tea Association (ITA), in its status paper Tea scenario 2023, expressed that the industry is passing through a phase of acute financial crisis with prices not keeping pace with the rising cost of production.

#### Reasons behind such crisis:

- The ITA said while tea prices rose at a compounded annual growth rate (CAGR) of about 4% over the last decade, cost of vital inputs such as coal and gas grew at a CAGR of 9-15% during the same period.
- Besides, the exponential increase in production following the emergence of small tea growers resulted in surplus tea remaining in the system as domestic consumption and exports have not grown to absorb it.
- Exports to Iran droped: The export scenario is grim as shipments to Iran, which constitutes almost 20% of total tea exports from India, are uncertain. This is due to the payment issues causing financial stress to exporters.

#### **About Tea industry in India:**

- India is the second largest producer of tea globally. Indian tea is among the finest teas in the world due to strong geographical indications, heavy investment in tea processing units, continuous innovation, advanced product mix and strategic market expansion.
- The northern part of India is the largest

- producer, accounting for about 83% of the country's annual tea production in 2021-22, with the majority of production coming from Assam followed by West Bengal.
- The southern part of India produces about 17% of the country's total production, with the major producing states being Tamil Nadu, Kerala and Karnataka.
- India is one of the top 5 tea exporters in the world, accounting for about 10% of total exports.
- India exports tea to more than 25 countries around the world. Russia, Iran, UAE, US, UK, Germany and China are some of the major importers of tea from India.

#### **Government Initiatives:**

- Promotion of Packaged Tea of Indian Origin: to help Indian exporter's market tea of Indian origin in foreign markets, the Tea Board of India launched this scheme.
- The scheme assists with promotional campaigns- reimbursement up to 25% of costs, displays in international department stores, product literature and website development, and inspection fees reimbursed up to 25%.
- ➤ Tea Development and Promotion Scheme: The scheme was launched by the Tea Board of India in November 2021 for the period 2021-26. The objective of this scheme is to increase the productivity and quality of tea production in India.

#### **About Tea Board of India:**

- The Tea Board of India was established in 1953 for the development of the tea industry in India. It started functioning in 1954. The Board is based in Kolkata and has 17 offices across India.
- Being the regulatory body, the Board exercises control over growers, manufacturers, exporters, tea brokers, auction organizers and warehouse owners through various control orders notified under the Tea Act.
- The responsibilities of the Board are to increase production and productivity, improve the quality of tea, promote markets and welfare measures for plantation workers, and support research and development.

#### Way Forward:

To mitigate the situation, the government may consider enhancing RoDTEP (Remission of Duties or Taxes on Export Products) incentive cap for high quality CTC, orthodox and Darjeeling teas.



# Miscellaneous Issues





# Delhi most polluted city in the country between: CPCB

#### Why in News:

Recently a report by the Central Pollution Control Board (CPCB) revealed that Delhi remains the most polluted city in India despite the reduction in air pollution. Of the top 10 most polluted cities, five are in the National Capital Region (NCR), while two are in Bihar and three cities are in Assam, West Bengal, and Madhya Pradesh.

#### **Key points related to the report:**

- The report said that Nalbari in Assam, Asansol in Bengal, and Gwalior in Madhya Pradesh are the three most polluted cities in India.
- Delhi, Faridabad, Ghaziabad, Noida, and Meerut in NCR secured the top five spots in the list, followed by Patna and Muzaffarpur in Bihar.
- According to the report, the highest PM2.5 level in the country has been recorded in Delhi at 100.1 µg/m3.
- A 24 percent decline has been recorded in the air quality in Patna, which has decreased from 80.7 μg/m3 to 99.7 μg/m3.
- Poor conditions were also recorded in Asansol (47.7 μg/m3 to 74 μg/m3) and Gwalior (43.1 μg/m3 to 71.8 μg/m3).
- ▶ PM2.5 levels fell by 10 percent in Delhi, 17 percent in Faridabad, 24 percent in Noida, 27 percent in Ghaziabad, 22 percent in Meerut, and 14 percent in Muzaffarpur.
- While PM 2.5 levels increased by 31 percent in Patna, 39 percent in Asansol, and 29 percent in Gwalior, indicating a significant deterioration in air quality.

#### Air Quality during winter:

- Air pollution was highest in Delhi during the months of October to March, due to various reasons like cold temperatures, less rainfall, bursting of firecrackers and stubble burning, etc.
- The six major capitals of India that are known to have air quality challenges include Delhi, Mumbai, Kolkata, Bengaluru, Lucknow, and Patna.
- According to the report, last winter, from October to December, PM2.5 levels dropped in Delhi, Faridabad, Noida, Ghaziabad, and Meerut in NCR compared to the data for the same period in 2021.

#### Top cities with the cleanest air:

Mizoram's capital Aizawl tops the list of 10 cities

in India with the cleanest air. The concentration of PM2.5 here was 11 µg/m3, followed by Chikkamagaluru in Karnataka (17.6 µg/m3) and Mandikheda in Haryana (17.7 µg/m3).

#### Way Forward:

Measures like Pradhan Mantri Ujjwala Yojana, Peripheral Expressways and Hyperlocal development around Delhi are positive actions towards the environment and continuous improvement in air quality through an air shed approach and scientific approach is required.



#### Sarna Religious Code

#### Why in News:

Recently there has been a demand by the Chief Minister of Jharkhand to recognize the 'Sarna Religious Code' for the tribals, whose tribal population in the state has declined from 38% to 26% in the last eight decades. The decline in their population will adversely affect the policies of tribal development under the Fifth and Sixth Schedule of the Constitution.

#### **About Sarna Religion:**

- Those who follow the Sarna religion consider themselves to be a part of a religious group.
- Recognition of the Sarna Code will ensure the nature-worshiping tribal communities demand of preserving their identity.
- A large population of Jharkhand follows the Sarna religion.
- The living scriptures of this religion are water, forest, land and nature. The culture, worship methods, ideals, and beliefs here are also different from all the popular religions.
- ➤ The communities following this religion do not worship idols; believe in the protection of forests, and worship trees and hills.
- Its followers are found in the tribal regions of Jharkhand, Bihar, Odisha, West Bengal, and Assam.

#### What is the Sarna Religion Code?

- The demand for the Sarna Religion code means that in the form that is filled out for every person during the census in India, a separate column should be made to mention the religion of tribals like all other religions.
- Just as people of Hindu, Muslim, Jain, Sikh and Buddhist religions mention their religion in the census form, in the same way, tribals should also be able to mention their Sarna religion.



# Why is the demand for Sarna's religious code necessary?

- ➤ The demand for the Sarna religious code is being raised so that they can be recognized as a separate religion and this nature-worshipping tribal community can be confident about their identity.
- > The demand of the Sarna community is necessary for their security. Many groups in this community are on the verge of extinction and if they are not protected on the principle of social justice, their language and culture along with their existence will cease to exist.

#### **Way Forward:**

The Sarna Dharma Code should be implemented for the tribals as they have their own culture, rituals, places of worship, and distinct customs. Religious recognition is provided under the fundamental right to practice any religion under Article 25 of the Constitution.



#### Why in News:

Recently, the Nobel Prize 2023 were announced. This award is given in six different fields, including physics, chemistry, medicine, literature, peace, and economics. The Nobel Prizes were first awarded in 1901.

#### **About Alfred Nobel:**

- Alfred Bernhard Nobel was born on 21 October 1833 in Stockholm, Sweden. He was a Swedish chemist, engineer, and industrialist who invented the explosive dynamite.
- Alfred Nobel had mentioned this award in his will. He had asked that most of his wealth be kept in a fund and its annual interest be rewarded to those who have made outstanding contributions to mankind.

#### **Key Points of Nobel Prize 2023:**

#### **Physics:**

- Awarded to three scientists Pierre Agostini, Ferenc Krausz, and Anne L'Huillier for their experimental discoveries.
- They have discovered experimental methods of generating attosecond pulses of light to study electron mobility in materials.
- It refers to the study and understanding of the behavior and movement of electrons within atoms and solids.

#### **Chemistry:**

The Nobel Prize in Chemistry was awarded to Moungi G. Bawendi, Leuis E. Brus and Alexei

- I. Ekimov for the discovery and synthesis of quantum dots.
- Quantum dots may contribute to flexible electronics, tiny sensors, thin solar cells, and encrypted quantum communications.
- Quantum dots are nanoscale particles, whose size typically ranges from 1 to 100 nanometers.
- Quantum dots can enhance the quality of displays such as LED lamps, and television screens, and illuminate tumor tissue during surgery by emitting light.

#### **Medicine:**

- The award has been given to Hungarian biochemist Kaitlin Karikó and American physician-scientist Drew Weissman.
- ➤ The award has been awarded for discoveries related to nucleoside base modification, which have enabled the development of effective mRNA vaccines against COVID-19.
- Dendritic cells, which play a critical role in our immune system, had the ability to recognize in vitro transcribed mRNA as foreign, triggering an inflammatory response.
- In vitro, transcribed mRNA is a type of synthetic RNA that is produced in the laboratory using a DNA template and RNA polymerase.

#### Peace:

- This year's Nobel Peace Prize was awarded to Iranian rights activist Narges Mohammadi for her fight against the oppression of women in Iran and the promotion of human rights and freedom for all.
- She is a woman, a human rights advocate, and a freedom fighter.

#### Literature:

- ➤ Jon Fosse, the voice of the unspoken, who expressed human emotions in simple words, has been awarded the Nobel Prize for Literature for his innovative plays and prose.
- ➤ His significant works are 'A New Name: Septology VI-VII,' 'I Am the Wind,' 'Melancholy,' 'Boathouse,' and 'The Dead Dogs.'
- John Fosse is known for his writing style called 'Fosse Minimalism'.

#### **Economics:**

- Professor Claudia Goldin has been awarded the Nobel Prize in Economics for improving the understanding of gender discrimination in the labor market.
- Goldin is the third woman to be honored with this award.
- Goldin highlights the decline in women's participation in the labor market over the past 200 years, the wage gap between men and women, and the fact that many women in high-



- income countries are likely to be better educated than men.
- Foundation received from Sveriges Riksbank (Sweden's central bank) on the bank's 300th anniversary in 1968.

#### Way Forward:

Alfred Nobel's will in 1895 was inspired by a faith in the human community. The Peace Prize was to be awarded to the person who 'has done the most for fraternity among nations, for the abolition or reduction of standing armies, and for the organization and promotion of peace congresses.



#### Why in News:

Recently the Ministry of Cultural Affairs of Maharashtra has signed a Memorandum of Understanding (MoU) with the Victoria and Albert Museum in London to bring back the famous 'Wagh Nakh' of Chhatrapati Shivaji Maharaj. This ancient weapon will be handed over to the Maharashtra government for a period of three years and will be displayed in the museums of the state.

#### What is Wagh Nakh?

- Wagh Nakh, literally means 'tiger's claw', is a medieval claw-like dagger that was used throughout the Indian subcontinent.
- The Wagh Nakh has four claws mounted on a band with two rings for the first and fourth fingers.
- Designed to fit over the knuckles or hidden under the palm, the weapon consisted of four or five curved blades that were attached to a glove or strap.
- It was a weapon used for personal protection or sneak attack that could easily cut through skin and flesh.

#### Relation of Wagh Nakh and Shivaji:

- The use of Wagh Nakh is related to the story of the murder of Afzal Khan by Shivaji. Khan was the commander of the Adil Shahi Sultanate of Bijapur.
- Shivaji was a former vassal of the Adil Shahi Sultanate, but rebelled in the 1650s and took control of the Konkan fort and large parts of the the territory.
- Khan marched into the Konkan and demanded a meeting with Shivaji. But Shivaji felt betrayed so he prepared for the meeting by wearing a chainmail under his cloak and hiding the Wagh Nakh in his sleeve.

During the meeting, Khan attempted to stab Shivaji under the guise of a hug. But Shivaji remained protected by his armor and in retaliation tore out Khan's intestines with his Wagh Nakh. Ultimately, Khan was beheaded by one of Shivaji's men, and Shivaji's army was victorious.

#### How did Wagh Nakh reach London?

- This weapon was brought to Britain by James Grant Duff (1789-1858), an officer of the East India Company. Duff was the Company Resident (political agent) of Satara State from 1818–22.
- It is also said that this weapon may have been awarded to him when Bajirao II, the last Peshwa of the Marathas, surrendered to the British in June 1818 after their defeat in the Third Anglo-Maratha War.

#### **Way Forward:**

Chhatrapati Shivaji's descendant Shivaji IV gifted the diamond and ruby-studded sword 'Jagadamba' to Albert Edward, the Prince of Wales who later ascended the throne as King Edward VII in 1875–76.



#### Why in News:

The 19th Asian Games were held in Hangzhou, China from 23 September 2023 to 8 October 2023. These games were originally scheduled to be held in 2022 but were postponed due to the COVID-19 pandemic.

#### **About the 19th Asian Games:**

- A total of 40 sports and 61 disciplines took centre stage across 54 competition venues in Hangzhou and five co-host cities.
- Chenchen, Congcong, and Lianlian, a group of robot mascots of the Hangzhou Asian Games, represented the city's cultural heritage. The trio together was called 'Memories of Jiangnan' and derived its name from a poem by Bai Juyi
- The torch for the 19th Asian Games was named "Eternal Flame "and its design was inspired by the Liangzhu Culture, dating back nearly 5,000 years, which is a testament to the longevity of Chinese civilization.
- Esports and breaking (breakdance)made their debut as recognized and official sporting events.

#### **About the Awards:**

India won 107 medals including 28 gold medals in the Asian Games 2022 making this the best performance in terms of the total number of medals won in the continental multi-sport



event.

- India also managed to top the medal table in four different events at this edition of the Asian games namely; archery, cricket, kabaddi and hockey.
- The top four countries in the medal tally were China, Japan, the Republic of Korea and India

#### **About Asian Games:**

- The Asian Games is the largest sporting event in Asia, held once every four years. They are organized by the Olympic Council of Asia (OCA).
- The symbol of the Asian Games is the rising sun with rings.
- > It is recognized by the International Olympic Committee.
- For the first time, the Asian Games were held in New Delhi in 1951.

#### **Regulation:**

The Asian Games were regulated by the Asian Games Federation from 1951 to 1978. Since 1982, the Asian Olympic Council has governed the Asian Games.

#### India as host:

- India is a founding member of the Asian Games and also the host of the first Asian Games.
- The 9th edition of the Asian Games was also held in New Delhi in November and December 1982.

#### **Conclusion:**

The present era marks the growing stature of sports culture in India which was exemplified by the fruitful results in Asian games. Many schemes such as Khelo India, and OUR TOPS, have become the vehicle of sports culture in India which is a good sign for future sports goals.



#### Why in News:

Recently, India has been ranked 111th out of 125 countries in the Global Hunger Index-2023. India's neighbouring countries, including Pakistan (102nd), Bangladesh (81st), Nepal (69th), and Sri Lanka (60th), have performed comparatively better in the index.

#### **About the Index:**

- This index is published annually jointly by Concern Worldwide and Welthungerhilfe and measures hunger on a 100-point scale, with 0 being the best (no hunger) and 100 being the worst.
- It comprehensively measures and tracks hunger

at the global, regional and country levels.

It aims to trigger action to reduce hunger around the world.

#### - India's hunger reality -

In the 2023 Global Hunger Index, India ranks 111th out of 125 countries. India has the world's highest child wasting rate at 18.7%, indicating severe undernutrition. Additionally, 16.6% of the population is undernourished. Women aged 15 to 24 years face a high prevalence of anaemia at 58.1%.

WITH A SCORE OF 28.7 IN THE 2023 GLOBAL HUNGER INDEX, INDIA'S LEVEL
OF HUNGER IS IN THE 'SERIOUS' CATEGORY

INDIA
28.7

10.0–19.9 20.0–34.9 28.7

low moderate serious atomics outcomely alarming stronger atomics.

#### **Indicators in the Index:**

- ➤ **Undernutrition**-The portion of the population that is undernourished.
- Child wasting- Children under five years of age weigh less than their height.
- Child stunting- The share of children under five years of age who are short for their age
- Child mortality- Mortality rate of children under five years of age

#### **India's performance:**

- According to the report, India's score of 28.7 in the Global Hunger Index-2023 puts it in the "severe" category.
- The child wasting rate in India is an alarming 18.7 percent, indicating severe malnutrition.
- ➤ Undernutrition Rate: The rate of undernutrition in India is reported to be 16.6 percent, further highlighting the seriousness of this issue.
- ➤ Child Mortality Rate: The mortality rate for children under five years of age in India has been recorded at 3.1 percent.
- The report highlights a significant concern, with 58.1 per cent of women aged 15 to 24 in India affected by anaemia.

#### **Government's response to the report:**

The Global Hunger Index continues to be a flawed measure of 'Hunger' and does not reflect India's true position. The index is an erroneous measure of hunger and suffers from serious



methodological issues. Three out of the four indicators used for the calculation of the index are related to the health of children and cannot be representative of the entire population. The fourth and most important indicator 'Proportion of Undernourished (PoU) population' is based on an opinion poll conducted on a very small sample size of 3000.

#### Way Forward:

India's ranking underscores the persistent challenges in addressing hunger and undernutrition. However, the government of India has prioritized several key activities to address the challenge of malnutrition under Mission Saksham Anganwadi and Poshan 2.0 (Mission Poshan 2.0). The Ministry of Women and Child Development has developed and deployed the 'Poshan Tracker' ICT Application provides daybased z-scores, to dynamically determine stunting, wasting, underweight, and obesity status based on a child's height, weight, gender, and age. To date, more than 13.96 Lakh (1.396 Million) Anganwadi Centres are registered on the application, benefitting over 10.3 Crore (103 Million) beneficiaries, including pregnant women, lactating mothers, children under 6 years, and adolescent girls. For more fruitful results there is a need to provide awareness among people on how they can make the best out of such initiatives and lead a healthy life.



#### Why in News:

A first-ever yak milk product, Arunachal Yak Churpi, has received the Geographical Indication tag. Two other unique products from the frontier state, Khaw Tai (Khamti rice) and Tangsa Textile, have also received GI certifications that will now offer legal safeguards and enhance their marketability with Arunachal as their place of origin.

#### **About the Churpi:**

Churpi is prepared from the milk of Arunachali yak, a unique breed found in the West Kameng and Tawang districts of the state. It is reared by tribal yak pastoralists known as Brokpas who migrate along with their yaks to higher reaches during summers and descend to mid-altitude mountainous regions in winter.

#### **Importance:**

- Arunachal Yak Churpi is highly valued for its nutritional content, especially its protein content.
- In the rugged and cold areas of Arunachal Pradesh, where vegetation can be scarce,

- Churpi serves as a valuable source of protein and other nutrients for tribal yak herders and their communities.
- Its nutritional richness makes it an essential dietary component for people living in these challenging high-altitude areas.
- Churpi holds deep cultural significance in the daily life and traditions of the people of Arunachal Pradesh.
- It is often used in traditional dishes, and its preparation and consumption are woven into the fabric of local customs and rituals.
- Churpi is an integral part of the tangible cultural heritage of the region and plays an important role in preserving and carrying forward the cultural heritage of Arunachal Pradesh.

#### Khaw Tai (Khamti Rice):

- The Khaw Tai, a chewy sticky rice variety of the Namsai region, is cultivated by traditional Khampti tribal farmers.
- When it is steamed, made into a roll and wrapped in a leaf, it is known as khautoum. The best of them is khaupuk which is made with sticky rice and sesame seeds.

#### **Tangsa Textile:**

- The Tangsa textile products produced by the Tangsa tribe of Changlang district are famous for their exotic designs and vibrant colours.
- This traditional craftsmanship reflects the cultural richness of the region.

#### What is a GI tag?

- GI tag is a name or mark used on certain products that represent a specific geographical location or origin.
- Geographical indications are recognized under Articles 1(2) and 10 of the Paris Convention on Intellectual Property Rights (IPR) and Articles 22 to 24 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.
- India enacted the Geographical Indications of Goods Act, 1999, which came into force on 15 September 2003, to protect such indications.
- A registered GI is valid for 10 years. It can be renewed from time to time for a further period of 10 years each.

#### **Conclusion:**

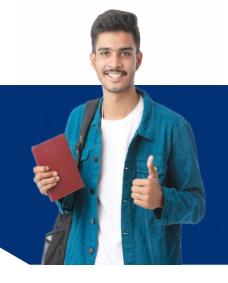
The GI tag for Arunachal Yak Churpi is not only a recognition of a unique and culturally significant product but also a means to promote the conservation of the distinctive Arunachal Yak breed and support the livelihoods of yak herders in the challenging high-altitude regions of Arunachal Pradesh.







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### **News Of National and International Importance**

#### **National Service Scheme Award**

Recently, the President of India, Smt. Droupadi Murmu has presented the National Service Scheme Award for the year 2021-2022 at Rashtrapati Bhavan.

#### **Key points related to the award:**

- ➤ The Ministry of Youth Affairs and Sports presents the National Service Scheme Awards every year to appreciate and reward the outstanding contributions made in voluntary community service by universities, program officers/NSS units, and NSS volunteers.
- At present, there are about 40 lakh volunteers formally associated with NSS from across the country.
- The first prize carries a sum of Rs. 5, 00,000 along with a trophy.
- The second prize carries Rs. 3, 00,000 lakh along with a trophy.
- Each NSS unit is presented with a trophy worth Rs. 2, 00,000.
- Each Program Officer is awarded Rs. 1, 50,000 along with a certificate and silver medal and each volunteer is awarded Rs. 1, 00,000 along with a certificate and silver medal.
- NSS is a Central Sector Scheme that was started in the year 1969 with the primary objective of developing the personality and character of young students through voluntary community service.
- NSS volunteers, through regular and special camp activities, work towards literacy and education, health, family welfare and nutrition, environmental protection, social service programs, programs for the empowerment of women, programs related to economic development activities, rescue and relief during disasters, and Work on sanitation-related activities.

#### India-Bangladesh Joint Military Exercise

Recently India and Bangladesh began the 11th edition of the annual joint military exercise Sampriti in Umroi, Meghalaya. The exercise conducted by both countries is a symbol of a strong bilateral defense cooperation initiative. With its inception in Jorhat, Assam in 2009, the exercise has had ten successful exercises by 2022.

#### **Key points related to military exercised:**

- ➤ This exercise was conducted for 14 days in which 350 personnel participated. This exercise played an important role in enhancing interoperability between the two armies, sharing tactical exercises, and promoting best practices.
- > The Bangladesh contingent consisted of 170 personnel, who were led by the 52nd Bangladesh Infantry.
- The Indian contingent mainly include soldiers from battalions of the Rajput Regiment.
- ➤ 20 officers from each contingent participated in the Command Post Exercise (CPX) and focus on making decisions after intensive deliberations. This was be followed by a Field Training Exercise (FTX) in which ground-level operations were validated.
- The FTX included a series of joint tactical exercises for counter-terrorism operations such as hostage rescue, crowd control measures, and use of helicopters in counter-terrorism operations, etc.

#### 22nd Law Commission Submitted the Report

Recently, the Karnataka High Court, in a letter to the Law Commission, has requested to reconsider the age of consent criteria for sexual relations. Because in recent times the number of cases of girls above 16 years of age falling in love, eloping and having sex is continuously increasing.

#### **Key points related to the report:**

- The report asked the Commission to reconsider the age criteria in view of the increasing number of cases under the Protection of Children from Sexual Offenses Act 2012 and the Indian Penal Code 1860.
- It urged to suggest an amendment to the POCSO Act, providing discretionary power to the Special Judge not to impose statutory minimum punishment in cases where there is clear actual consent on the part of the girl or where such relationships result in marriage, children With or without children.



- Section 154 of the Code of Criminal Procedure, 1973 was amended to enable the online registration of FIRs.
- The report has recommended that the government hold simultaneous elections for the LokSabha and state assemblies in the national interest.

#### **Telangana Super Thermal Power Project**

Recently the 800 MW first unit of Phase 1 of NTPC's Telangana Super Thermal Power Project was dedicated to the nation. The project will provide low-cost power to Telangana and boost the economic development of the state.

#### **About Project:**

- This project will provide low-cost power to Telangana and boost the economic development of the state. It will be one of the most environment friendly power station in the country.
- Phase I of this Super Thermal Power Project has been set up at the premises of NTPC's existing Ramagundam station in Peddapalli district at an approved cost of 10,998 crore.
- Being a pit-head power station with ultra-supercritical technology, the project will also help in low-cost power to the state of Telangana.
- It will reduce coal consumption and CO2 emissions in India, making it one of the most environment-friendly power stations in India.
- It is dedicated to providing reliable, affordable, and sustainable electricity, with a diversified portfolio of thermal, hydro, solar, and wind power plants.

#### Bhashini (DIBD) and RBIH

The collaboration between Reserve Bank Innovation Hub (RBIH) and Digital India Bhashini Division (DIBD) Bhashini takes aim at breaking down the language barriers prevalent in the financial services landscape. Through their combined efforts, both are set to explore and develop innovative solutions that foster linguistic inclusivity.

#### **About DIID:**

The vision of Bhashini is to "harness natural language technologies to enable a diverse ecosystem of contributors, partnering entities and citizens for the purpose of transcending language barriers, thereby ensuring digital inclusion and digital empowerment in an Aatma Nirbhar Bharat.

#### **About RBIH:**

- Reserve Bank Innovation Hub (RBIH), a wholly-owned subsidiary of the Reserve Bank of India (RBI), works to enable frictionless finance for Indians.
- RBIH aims not only to strengthen the Indian financial system but also to keep India at the forefront of global financial innovation.

#### Formation of Turmeric Board in Telangana

Recently the Telangana Assembly has approved the formation of a National Turmeric Board for the convenience of turmeric farmers in the state.

#### **Key Points:**

- The central government has decided to increase turmeric exports from the current 1,600 crore to 8,400 crore per year by 2030.
- It will also include members from the Ministry of AYUSH, Department of Pharmaceuticals, Ministry of Agriculture and Farmers Welfare, Ministry of Commerce and Industry, and senior state government representatives from the three states.
- Representatives of national/state institutions involved in research, turmeric farmers, and exporters will also be members of the board. A Secretary will be appointed to the Board by the Commerce



Ministry.

- India is the largest producer, consumer, and exporter of turmeric in the world. In the year 2022-23, turmeric was cultivated in a 3.24 lakh hectare area in India, in which 11.61 lakh tonnes were produced.
- Turmeric is grown in 3.24 lakh hectares in the country, producing about 11.61 lakh tonnes, which is 75% of the world's production.
- Lt is cultivated mostly in Maharashtra, followed by Telangana, Tamil Nadu, and Odisha.

#### **Veer Gatha Project 3.0**

Recently, more than 1.36 crore school students from all 36 states and union territories have participated in the third phase of the Veer Gaatha project.

#### **About Project Veer Gatha:**

- Project Veer Gatha was established in 2021 under the Gallantry Awards Portal (GAP) with the aim to disseminate details of the acts of bravery of Gallantry Award winners and the life stories of these brave hearts among the students so as to enhance the feeling of patriotism. So that they can go and be inspired.
- This project has deepened this noble objective by providing a platform for school students to undertake creative projects/activities based on gallantry award winners.
- More than 8 lakh students participated in the Veer Gatha Project (Version-I) and more than 19 lakh students participated in the Veer Gatha Project (Version-II).
- This year in Veer Gatha Project 3.0, there will be District and State/UT winners and all such winners will be honored by the respective District and State/UT.

#### IAF Chief unveils new Ensign as the Force marks 91st anniversary

Recently the Chief of the Indian Air Force (IAF) unveiled a new flag for the force on the occasion of its 91st anniversary, incorporating the Air Force Crest in the top right corner of the flag.

#### **Key Points:**

- For this, the old flag of the Air Force was taken down and respectfully handed over to the Air Force Chief. Now this flag will be displayed in the Air Force Museum.
- The Air Force Chief also handed over citations to four units. These include 16 squadrons, 142 helicopter units, 901 signal units, and 3 base repair depots.
- On this occasion, the Air Force Chief said that the power of the Air Force is useful both in peacetime and wartime. For this, we will have to keep adopting new technologies so that we can meet the emerging challenges.
- The old Royal Indian Air Force (RIAF) ensign consisted of the Union Jack in the upper left canton and the RIAF roundel (red, white, and blue) on the fly side.
- The national emblem is the new IAF crest, with Ashok Singh at the top and 'Satyamev Jayate' written in Devanagari below it.
- Below the Ashok Singh is a Himalayan eagle with its wings spread, representing the fighting qualities of the Indian Air Force.
- A light blue ring surrounds the Himalayan Eagle bearing the inscription 'Indian Air Force' and the motto of the Indian Air Force in golden Devanagari below the Himalayan Eagle.

#### ASI plans to set up Experimental Gift Shops

Recently the Archaeological Survey of India (ASI) is planning to set up gift shops in its monuments, which will provide an opportunity for cultural and creative industries to work in association with the monuments. **Key points:** 



- Its main objective is to leverage souvenirs to generate interest in and promote heritage monuments.
- Interested parties are encouraged to envision exciting offerings using technology and historical techniques that will be regionally significant and globally relevant.
- From incorporating one district one product products to the re-creation of old games from ancient and medieval India, it can expand the relevance of souvenirs.
- This will enable ASI to deliberate on the policy of running high-quality souvenir shops at monuments of national importance as the objective of such shops is to provide visitors an experience that helps the people of India connect with their heritage.
- These shops can serve as a playground for creative ideas where craftsmen, artisans, corporate groups, boutique manufacturers, and startups can participate in the creation of items that are directly linked to the culture of India.

#### Human Settlement in the World's Most Vulnerable Flood Areas

According to a recent World Bank report, human settlement in the world's most vulnerable flood areas has increased by 122% since 1985. Due to this, many more people have become aware of water disasters caused by climate change.

#### **Key points related to the report:**

- The report said the world's overall built-up areas increased by 85 percent from 1985 to 2015 and the most protected areas saw an 80 percent increase.
- The study said that as a country becomes a little wealthier, there is a shift from rural to urban and people leave the country and move to cities, which are often near waterways, which can lead to flooding.
- This problem is more common in middle and low-income countries.
- Rich countries like the US and parts of Europe are seeing a greater increase in flooding than other regions.
- China and Vietnam have more than tripled their settlement over the past 30 years, far more than their dry land areas.

#### Lek Ladki Scheme

Recently, the Maharashtra government has implemented the Lek Ladki scheme designed for the empowerment of girls. Under this, an amount of 1 lakh 1 thousand will be given to the girls. This financial assistance will be given in different phases after the birth of the girl till she turns 18 years of age.

#### **Key points related to the plan:**

- The Lek Ladki plan was announced in the March 2023 budget session.
- The scheme will empower girls in the state by encouraging the birth of girls in the state to increase the birth rate of girls, promote education, reduce mortality, prevent child marriage, and reduce malnutrition.
- Under this scheme, girls from families holding yellow and orange ration cards will get benefits.
- If a girl is born in such a cardholder family, an assistance of 5,000 will be given.
- After this, when the girl starts going to school, she will be given 4,000 by the government in the first class.
- In the sixth grade, the girl child will get government assistance of 6,000. 8,000 will be given in the eleventh class.
- When the girl becomes adult, she will be given 75 thousand from the state government. In this way, the girl will get a total of 1 lakh 1 thousand. This scheme will benefit approximately 2.5 lakh girls in the state.

# Current Affairs at a Glance

- 1. Lieutenant General Raghu Srinivasan took charge as the 28th Director General of Border Roads Organization. He has taken charge in place of Lieutenant General Rajiv Chaudhary. Prior to appointment as DGBRO, he held the post of Commandant of the College of Military Engineering, Pune.
- 2. Uttar Pradesh government launched a month-long 'Har Ghar Solar' campaign in Lucknow and Varanasi to promote the use of renewable energy through installation of solar rooftops. The government aims to generate 6,000 MW of solar power through rooftops under the Solar Policy, 2022.
- 3. From October 1, 28% GST rate has been implemented on online gaming, casino and horse racing.
- 4. India has jumped 72 places to reach 47th spot in 'Speedtest Global Index'.
- 5. Vice Admiral Tarun Sobti has been appointed as the new Deputy Chief of the Naval Staff. He is a navigation and direction specialist. He has succeeded Vice Admiral Sanjay Mahendru.
- 6. The central government has declared the National Liberation Front of Tripura, All Tripura Tiger Force and related groups as unlawful associations under the Unlawful Activities (Prevention) Act. The Home Ministry has banned these organizations for five years.
- 7. Tamil writer Sivashankari has been honored with 'Saraswati Samman 2022'. She has been given this honor for her composition 'Surya Vamsam'. Her book was published in 2019. 'Saraswati Samman' is an important honor given in the field of literature which is given by K.K. Birla Foundation.
- 8. Reserve Bank of India has imposed a fine of Rs 5.39 crore on Paytm Payments Bank Limited for violation of 'Know Your Customer (KYC)' norms. Vijay Shekhar Sharma is the founder and managing director of Paytm Payments Bank.
- 9. Under 'Setu Bandhan Yojana', Union Road Transport and Highways Minister Nitin Gadkari has approved seven bridge projects in Arunachal Pradesh. This cumulative cost of project is worth Rs 118.5 crore.
- 10. Navneet Munot, Managing Director and CEO of HDFC AMC, has been elected as the Chairman by the Association of Mutual Funds in India (AMFI).
- 11. The 16th Agricultural Science Congress (ASC) organized by the National Academy of Agricultural Sciences (NAAS) concluded in Kochi.
- 12. Assembly elections in Mizoram, Chhattisgarh, Madhya Pradesh, Rajasthan and Telangana will be held next month between 7th and 30th November, while counting of votes in the five states will take place on December 3rd.
- 13. India and Italy signed an agreement to boost their defense ties including co-development and co-production of military equipment after wide-ranging talks in Rome between Defense Minister Rajnath Singh and his Italian counterpart Guido Crosetto.
- 14. Dr.Samia Suluhu Hassan, the first woman President of Tanzania, was awarded an Honorary Doctorate by Jawaharlal Nehru University for her significant role in strengthening India-Tanzania relations, promoting economic diplomacy, regional integration and achieving success in multilateralism.
- 15. According to the Finance Ministry, during April 1 to October 9, India's gross direct tax collection has increased by 17.95% to Rs 11.07 lakh crore, while the net collection has registered an increase of 21.82%. This collection is 52.50% of the total budget estimate of direct taxes for the FY 2023-24.
- 16. Insurance Regulatory and Development Authority of India (IRDAI) will deploy Bima Vahak in every gram panchayat before December 31, 2024.
- 17. The International Olympic Committee (IOC) has decided to suspend the Russian Olympic Committee with immediate effect for violating the territorial integrity of Ukraine.

### **Place in News**

#### Maghreb region of Africa

- Members of the European Parliament and international experts participating in a recent conference in Madrid have urged all the countries of the European Union (EU) to support the Moroccan autonomy initiative, now more than ever, in order to resolve the dispute over the Sahara and ensure the stability of the Maghreb region.
- ➤ The Maghreb is the North African region made up of Algeria, Libya, Mauritania, Morocco and Tunisia. In 1989, the five Maghreb countries established the Arab Maghreb Union to promote cooperation and economic integration. Mediterranean Sea is at the north of the Maghreb region.



#### Africa's Sahel Region

Recently, a military coup was witnessed in Niger, part of the Sahel region of Africa. Other countries in the Sahel region have also witnessed some form of military coup or civil war-like situations from time to time.

#### About the Sahel region:

- The Sahel is a semiarid region of western and north-central Africa that extends from Senegal to Sudan.
- It forms a transitional zone between the dry Saharan desert in the north and the humid savannah in the south. The Sahel region consists of 12 countries, but the political region of the Sahel region consists of 10 countries (Mali, Niger, Burkina Faso, Chad, Mauritania, Senegal, Nigeria, Sudan, South Sudan and Eritrea).
- Africa's Great Green Wall Program was also initiated here to tackle the problem of desertification in the region. Broadly speaking, the Sahel extends from Senegal in the west to south of the Sahara and Ethiopia in the east of Africa.

#### Measures to ensure stability:

- A security force has been formed with the aim of bringing stability to the Sahel region of Africa, which requires further support for its effective operation. It is important to find political and economic solutions to the challenges the Sahel region is facing.
- The joint force, named G5-Sahel, was formed five years ago following a suggestion from the African Union and support from the Security Council. The participating countries include Burkina Faso, Mali, Mauritania, Niger and Chad.
- Sahel region, Africa Saudi Algeria Libya Egypt Arabia Mali Niger Chad Sudan Eritrea South Senegal Burkina Democratic Faso Republic of the Congo

Through the G5-Sahel, action has been taken to improve coordination in countering armed groups in the region and to enhance cooperation for economic development and security.



#### Liptako-Gourma Region

- Recently, the ministerial delegation of the three Sahel countries Mali, Niger, and Burkina Faso announced a mutual defense agreement in Bamako, the capital of Mali. It provides a framework for mutual defense and assistance between the three countries.
- > The agreement was signed under the provisions of the Liptaco-Gourma Charter, which established the Alliance of Sahel States. Mali is part of the Liptako-Gourma region, the border region between Burkina Faso and Niger.



#### Gaza Strip

- The Gaza Strip, a small strip of land located on the eastern coast of the Mediterranean Sea, has been a focal point of conflict and tension for decades. This narrow strip of land, just 365 square kilometers (141 sq mi) in area, is home to approximately 2 million people and is one of the most densely populated areas in the world.
- The Gaza Strip is bordered by Egypt to the southwest and Israel to the north and east. To the west, it is bounded by the Mediterranean
- The population of the Gaza Strip is predominantly Palestinian, with the majority being Sunni Muslims. There is also a small Christian minority, which has lived in the area for centuries.

#### West Bank:

- The West Bank is a landlocked region on the Mediterranean coast of Western Asia, bordered by Jordan and the Dead Sea to the east and Israel to the south, west, and north.
- In the 20th century, the Gaza Strip became part of the British Mandate of Palestine and after World War II, it became a disputed territory.
- After the 1948 Arab-Israeli War, Gaza came under Egyptian administration and the Palestinian refugee crisis began. Israel occupied the Gaza Strip and the West Bank during the Six-Day War in 1967, a situation that persists today.

#### What is the Golan Heights?

- The Golan Heights is a mountainous region located in southwestern Syria. This area is located on the border of Israel, Lebanon, and Jordan. This area is strategically and politically important.
- Erez Jerusalem o Crossing 6 nautical miles fishing limit GAZA ISRAEL Gaza City 15 nautical miles fishing limit Wadi Gaza Mediterranean Sea ISRAEL GAZA 5km 2 miles Khan Younis Urban areas Refugee camps ▲ Border crossings Israeli-declared Rafah Crossing buffer zone High risk area Kerem Shalom **EGYPT** goods crossing No-go area
- Israel has occupied a 1,150 square km area of the Golan Heights. According to Syria, the Golan Heights is an area of 1,860 sq km, of which 1,500 sq km is occupied by Israel.
- Israel captured the Golan Heights in 1967 after the Six-Day War with Syria. Syria tried to recapture the Golan Heights during the 1973 Middle East War but failed to do so despite inflicting heavy losses on Israel in the war.

#### National Mission on Natural Farming



About the Scheme

To motivate
farmers to adopt
chemical free
farming and
enhance the reach
of natural farming,
the Government has
formulated National
Mission on Natural Farming
(NMNF) as a separate and
independent scheme from 202324 by up scaling the Bhartiya
Prakritik Krishi Paddati
(BPKP).

#### Budget

NMNF will cover 7.5 lakh ha area by developing 15,000 clusters in next 4 years with total budget outlay of Rs. 1584 crore (GoI Share).

#### Principles to follow

- Adoption of diversified cropping system-based agriculture.
- Recycling of naturally available nutrients in fields.
- Recycling of on-farm generated biomass.
- Use of locally developed and refined practices based on plant, animal and microbial source as raw materials.
- Innovative practices continuously evolve on the field of farmers based on the cropping pattern, local climatic conditions, altitude, soil quality, severity and variability of insects and pests etc.

#### Aim

- To promote alternative system of farming for freedom from external purchased inputs, cost reduction and thereby increasing income of farmers.
- To popularize integrated agriculture-animal husbandry models based on desi cow and local resources.
- To collect, validate and document Natural Farming practices being practiced in various parts of the country and to encourage participatory research with farmers on further up scaling.
- To undertake activities for awareness creation, capacity building, promotion, and demonstration of Natural Farming.
- To create standards, certification procedure and branding for Natural Farming products for national and international markets.

#### **Benefits of Natural Farming**

- Farming reported similar yields to those following conventional farming. In several cases, higher yields per harvest were also reported.
- Ensures Better Health: As Natural Farming does not use any synthetic chemicals, health risks and hazards are eliminated. The food has higher nutrition density and therefore offers better health benefits.
- Environment Conservation: Natural Farming ensures better soil biology, improved agrobiodiversity and a more judicious usage of water with much smaller carbon and nitrogen footprints.
- ➤ Increased Farmers' Income: Natural Farming aims to make farming viable and aspirational by increasing net incomes of farmers on account of cost reduction, reduced risks, similar yields, incomes from intercropping.
- Employment Generation: Natural farming generates employment on account of natural farming input enterprises, value addition, marketing in local areas, etc. The surplus from natural farming is invested in the village itself.
- Reduced Water Consumption: By working with diverse crops that help each other and cover the soil to prevent unnecessary water loss through evaporation, Natural Farming optimizes the amount of 'crop per drop'.
- Minimized Cost of Production: Natural Farming aims to drastically cut down production costs by encouraging farmers to prepare essential biological inputs using on-farm, natural and homegrown resources.

#### PM GatiShakti



### About the Scheme

PM Gati Shakti - National Master Plan for Multimodal Connectivity, is essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects. The multimodal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another.

#### **Expected Outcomes**

- Mapping of Connectivity Projects
- Holistic Transport Connectivity
- Enhanced Competitiveness
- Economic Growth and Employment

#### Aim of PM Gati Shakti

- The PM GatiShakti is intended to break Departmental Silos.
- It intends to bring in more holistic and integrated planning and execution of projects with a view of addressing the issues of multi-modal connectivity and last-mile connectivity.

#### Vision

- PM Gati Shakti will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more competitive.
- It will also leverage technology extensively including spatial planning tools with ISRO imagery developed by BiSAG-N.

#### Planners and Mandate

- An Empowered Group of Secretaries (EGoS) headed by the Cabinet Secretary and secretaries of 18 ministries as members, has been set up.
- Head of the Logistics Division of the Ministry of Commerce and Industry serves as the Member Convenor of the group.
- The EGOS has been mandated to review and monitor the implementation of the PM GatiShakti National Master Plan (NMP) to ensure logistics efficiency.
- It is empowered to prescribe framework and norms for undertaking any subsequent amendments to the NMP.

#### Pillars of the Plan

- Comprehensiveness: It includes all the existing and planned initiatives of various Ministries and Departments with one centralized portal. Each and every Department will now have visibility of each other's activities providing critical data while planning & execution of projects in a comprehensive manner.
- Prioritization: Through this, different Departments are able to prioritize their projects through cross–sectoral interactions.
- Optimization: The National Master Plan assists different ministries in planning for projects after identification of critical gaps.
- > Synchronization: PM GatiShakti helps

- in synchronizing the activities of each department, as well as of different layers of governance, in a holistic manner by ensuring coordination of work between them.
- Analytical: The plan provide the entire data at one place with GIS based spatial planning and analytical tools having 200+ layers, enabling better visibility to the executing agency.
- Dynamic: All Ministries and Departments are now able to visualize, review and monitor the progress of cross-sectoral projects, through the GIS platform. It helps in identifying the vital interventions for enhancing and updating the master plan.

#### Pradhan Mantri Krishi Sinchayee Yojana



### About PMKSY

To accord high priority to water conservation and its management, Pradhan Mantri Krishi Sinchayee Yojana has been formulated. The Cabinet Committee on Economic Affairs chaired by Hon'ble Prime Minister had accorded approval of PMKSY in its meeting held on 1st July, 2015.

#### Funding

- ➤ It is a Centrally Sponsored Scheme.
- The funding pattern will be 90:10 for NE and Himalayan states and UT of Jammu & Kashmir and Ladakh & 60:40 for other states.

#### **Nodal Department**

State Agriculture Department will be the Nodal Department for implementation of PMKSY.

- treatment, rain water harvesting, insitu moisture conservation and other allied activities on watershed basis.
- Converging with MGNREGS for creation of water source to full potential in identified backward rainfed blocks including renovation of traditional water bodies.

#### Objective

- Achieve convergence of investments in irrigation at the field level.
- Enhance the physical access of water on the farm and expand cultivable area under assured irrigation.
- Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
- Improve on-farm water use efficiency to reduce wastage and increase availability both in duration and extent.
- Enhance the adoption of precision-irrigation and other water saving technologies.
- Enhance recharge of aquifers and introduce sustainable water conservation practices.
- Explore the feasibility of reusing treated municipal waste water for periurban agriculture.
- Attract greater private investments in irrigation.

#### **Programme Components**

#### **Accelerated Irrigation Benefit Programme(AIBP):**

To focus on faster completion of ongoing Major and Medium Irrigation including National Projects.

#### Har Khet ko Pani:

- Creation of new water sources through Minor Irrigation.
- ➤ Repair, restoration and renovation of water bodies; strengthening carrying capacity of traditional water sources, construction rain water harvesting structures.
- Ground water development in the areas where it is abundant, so that sink is created to store runoff/ flood water during peak rainy season.
- Improvement in water management and distribution system for water bodies to take advantage of the available source which is not tapped to its fullest capacity.

#### Per Drop More Crop:

- Programme management, preparation of State/ District Irrigation Plan, approval of annual action plan, Monitoring etc.
- Promoting efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm.
- Secondary storage structures at tail end of canal system to store water when and where available in abundance.
- Water lifting devices like diesel/ electric/ solar pumpsets including water carriage pipes, underground piping system.

#### **Watershed Development:**

Effective management of runoff water and improved soil & moisture conservation activities such as ridge area treatment, drainage line

# National Agriculture Market



# About the Scheme

National Agriculture Market (e-NAM) is a pan-India electronic trading portal which networks the existing **APMC/Mandis to create** a unified national market for agricultural commodities. It was launched to network the existing mandis on a common online market platform as "One Nation One Market" for agricultural commodities in India.

- Launched on: 14th April 2016
- Implementing agency: Small Farmers Agribusiness Consortium (SFAC)

#### Central Assistance Under e-NAM Scheme

- e-NAM software is provided to States / UTs free of cost.
- Department gives grant as one-time fixed cost to the States / UTs up to Rs. 75.00 lakh per mandi, for purchase of hardware, internet connection, assaying equipment and related infrastructure including cleaning, grading and packaging facilities and Bio-compost unit, to make the mandi ready for integration with e-NAM platform.
- There is helpdesk support to enable stakeholders to raise their query.
- Regular training of stakeholders (Farmers, Traders, FPOs, Mandi staff etc.) is conducted to create awareness and handholding regarding e-NAM portal.

#### Objective

- To integrate markets first at the level of the States/ UT and eventually across the Country through a common online market platform, to facilitate pan-India trade in agricultural commodities.
- To streamline marketing / transaction procedures and make them uniform across all markets to promote the efficient functioning of the markets.
- To promote better marketing opportunities for farmers / sellers through
  - » Online access to more buyers and markets.
  - » Removal of information asymmetry between farmer and trader.
  - » Better and real-time price discovery based on actual demand and supply of Agri commodities.
- To establish quality assaying systems for quality assurance, to promote informed bidding by buyers.
- To promote stable prices and availability of quality produce to consumers.

#### Benefits of Trading on e-NAM

- e-NAM portal enables farmers to trade their produce through their nearby e-NAM mandis and facilitates traders to bid online from any location.
- It provides single window services for all Agricultural Produce Market Committee (APMC) related services and information.
- This includes commodity arrivals, quality assaying by Artificial Intelligence based Machines/equipment, e-Bidding, e-payment settlement directly into farmer's account, among other services.

#### How States Can Avail Assistance?

The States / UTs need to undertake mandatory reforms in their APMC Acts in respect of the following 3 areas:

- Single trading license to be valid across the State. Single point levy of market fee across the State and UTs.
- Provision for e-auction/e-trading as a mode of price discovery to be facilitated by the State.
- Agriculture Marketing Department / Board / APMCs / Regulated Market Committees (RMCs), as the case may be.

#### PM SVANidhi



### About the Scheme

This is a microcredit scheme, facilitating a working capital collateral-free loan with a 7% interest subsidy. This scheme aims to empower Street Vendors by not only extending loans to them but also for their holistic development and economic upliftment. The scheme is a Central Sector Scheme, fully funded by the Ministry of Housing and Urban Affairs.

- Launched on: June 1, 2020.
- Implementing Agency: Small Industries Development Bank of India
- Beneficiaries: 50 lakh+

#### Problems in Implementation

- Although the borrowers are verified by the local authorities, there have been defaults leading to the creation of NPAs.
- Since loans under schemes are collateral free there is no recourse for banks in case of default.
- The performance of the private bank too has been dissatisfactory in this regard, due to their limited participation and low disbursement of loans.
- Some banks ask for applications on stamp paper worth Rs 100 and 500 while some ask for documents such as PAN cards for Credit/CIBIL scores which often these small and migrant vendors do not carry.

#### Objective

- Facilitate collateral-free working capital loan up to Rs. 10,000, of 1 year tenure, with an enhanced loan of Rs. 20,000 and Rs. 50,000 in the second and third tranches respectively, on repayments of earlier loans.
- Incentivize regular repayment, through interest subsidy @ 7% per annum.
- Reward digital transactions, by way of cashback up to Rs.1,200 per year.

#### Who Can Take Part?

- Those who took part in a survey of street vendors held in municipalities and those who have identity cards and vendor certificates can apply for the loan under the scheme.
- The street vendors who were not included in the survey and other small entrepreneurs can apply for the scheme with a letter of recommendation from the Municipality.

#### **Budget Allocation**

PM Street Vendors' Atmanirbhar Nidhi (PM SVANidhi) allocation rose from Rs 150 crores to Rs 468 crores.

#### Scheme Benefits

- Vendors can avail a working capital loan of up to Rs. 10,000, which is repayable in monthly instalments in the tenure of one year.
- On timely/ early repayment of the loan, an interest subsidy @ 7% per annum will be credited to the bank accounts of beneficiaries through Direct Benefit Transfer on a quarterly basis.
- There will be no penalty on early repayment of the loan.
- ➤ The scheme promotes digital transactions through cashback up to Rs. 1200/- per annum on undertaking prescribed digital transactions.
- The vendors can avail of the facility of escalation of the credit limit on timely/early repayment of the loan.

#### **Interlinking of Rivers**



### About the Plan

The National Perspective Plan (NPP) was formulated for the interlinking of rivers (ILR) in 1980, to provide storage and transfer of surplus waters to water deficit regions to mitigate the effect of annually recurring floods and minimise droughts. Under the NPP, National Water Development Agency (NWDA) identified 30 links for the preparation of Feasibility Reports (FRs).

#### Challenges before implementing NPP

- Political Challenges: Water is the sign of wealth for a state as its basic need of every kind thus several states do not want to go with national river linking project in fear of losing surplus of water to the other states.
- Economic Challenges: National river linking project has a vast impact on the national economy as the programming cost of this project is very high nearly \$87 billion.
- Environmental Challenges: According to the major group of environmentalist that project will change the geography of the whole country recklessly and will invite several challenges and the worst effect of nature.
- ➤ International Challenges: India's neighbours especially Bangladesh will resist this project because the flow of Ganga in Bangladesh will be reduced which will create a problem in implementing NRLP.

#### **Current Status**

Presently, the Pre-feasibility reports of all the 30 links have been completed and FRs of 24 links and detailed project reports of 8 links have been completed.

#### Structure of National Perspective Plan

The NPP has two components:-

#### **Himalayan Component:**

- Construction of Storage reservoirs on the Ganga and Brahmaputra rivers and their respective tributaries.
- Inter-linking canal system to transfer surplus flows of the eastern tributaries of the Ganga to the West apart from linking of the main Brahmaputra with the Ganga.
- Connecting Brahmaputra and Ganga basins to the Mahanadi basin.

#### **Peninsular Component:**

- Interlinking of Mahanadi-Godavari-Krishna-Cauvery rivers and building storage at potential sites in these basins.
- Interlinking of Ken-Chambal.
- Diversion of other west flowing rivers.

#### **Benefits**

- The large canals linking the rivers are expected to facilitate inland navigation too.
- The projects would give additional benefits of 25 million hectares of irrigation from surface waters.
- ≥ 34,000 MW of hydropower generation.
- Mitigation of Droughts.
- Flood Control.
- Domestic & Industrial Water Supply.
- Employment Generation.
- Fisheries.
- Salinity Control.
- Pollution Control.
- Recreation Facilities.
- Infrastructural Development.
- Socio Economic Development.

#### Disadvantages

- Ecosystem destruction at both terrestrial and aquatic levels along with major threat to existing biodiversity, flora and fauna.
- The projects will require huge capital for basic infrastructural development and rehabilitation of displaced people.
- Social unrest/Psychological damage due to the forced resettlement of local people.

#### PM Vishwakarma



# About the Scheme

The scheme will
be implemented
as a Central
Sector Scheme,
fully funded by
the Government
of India, with an
initial outlay of Rs
13,000 crore. The scheme
was approved by the Cabinet
Committee on Economic Affairs
chaired by PM Modi approved
on August 16, 2023 was
launched on 17 September
2023.

#### **Coverage of Trades**

- Carpenter (Suthar/ Badhai)
- Boat Maker
- Armourer
- Blacksmith (Lohar)
- Hammer and Tool Kit Maker
- Locksmith
- Sculptor (Moortikar, Stone Carver), Stone Breaker
- Goldsmith (Sonar)
- Potter (Kumhaar)
- Cobbler (Charmakar)/ Shoesmith/ Footwear Artisan
- Masons (Rajmistri)
- Basket/ Mat/ Broom Maker/ Coir Weaver
- Doll & Toy Maker (Traditional)
- Barber (Naai)
- Garland Maker (Malakaar)
- Fishing Net Maker

#### Other Info

- ➤ The Scheme will be conjointly implemented by the Ministry of Micro, Small and Medium Enterprises (MoMSME), the Ministry of Skill Development and Entrepreneurship (MSDE) and the Department of Financial Services (DFS), Ministry of Finance (MoF), Government of India.
- The additional Secretary & Development Commissioner (MSME) in the Ministry of MSME will be the focal point for all aspects of implementation and coordination.
- It will be initially implemented for five years up to 2027-28.

#### **Objectives**

- To enable the recognition of artisans and craftspeople as Vishwakarma, making them eligible to avail all the benefits under the Scheme.
- To provide skill up gradation to hone their skills and make relevant and suitable training opportunities available to them.
- To provide support for better and modern tools to enhance their capability, productivity, and quality of products and services.
- To provide the beneficiaries with easy access to collateral-free credit and reduce the cost of credit by providing interest subvention.
- To provide incentives for digital transactions to encourage the digital empowerment of Vishwakarmas.
- To provide a platform for brand promotion and market linkages to help them access new growth opportunities.

#### Benefits

- The scheme will recognise applicants as Vishwakarma by providing them with a PM Vishwakarma certificate and ID card with a unique digital number, in both digital and physical form.
- It will provide skill up gradation through components like Skill assessment, Basic and advanced training and a Training stipend of Rs. 500.
- There will be easy access to subsidized institutional credit for enterprise development. Although, Skill assessment and completed Basic Training are required to be eligible to avail first tranche of credit support of Rs. 1 lakh.
- The scheme will incentivise digital transactions and provide marketing support in the form of branding, quality certification, advertising, publicity and other marketing activities.

# **MCQs Based on Current Affairs**

# 1. Consider the following statements with reference to global innovation index-2023

- 1. India ranked 40th out of 132 economies in global innovation index which was published by World Intellectual Property Organisation.
- 2. The theme of the index is Innovation in the face of uncertainty.
- 3. Barring China (12th place), no other middle or lower-middle-income economy features in the top 30.

How many statements are correct?

A. Only 1

B. Only 2

C. All

D. None

#### 2. Consider the following statements related to vaccine:

- 1. Nobel Prize in medicine 2023 awarded to Katalin Karikó, Drew Weissman for pioneering mRNA vaccine to fight COVID-19
- 2. Vaccines help prevent infection by preparing the body to fight foreign invaders (such as bacteria, viruses, or other pathogens).
- 3. All vaccines inject a harmless piece of a particular bacteria or virus into the body, triggering an immune response.
- 4. mRNA vaccines work by introducing a fragment of mRNA that matches the viral protein, usually a small piece of protein found on the outer membrane of the virus.

Which of the statements given above is/are correct?

How many statements are correct?

A. Only 1

B. Only 2

C. Only 3

D. All

# 3. consider the following statements with reference to Indian Ocean Rim Association (IORA):

- 1. India participated in the 23rd Council of Ministers (COM) meeting and the 25th Committee of Senior Officials of the Indian Ocean Rim Association (IORA) held in Colombo, Sri Lanka under the leadership of External Affairs Minister S Jaishankar.
- 2. In this meeting, India was appointed to the post of Vice President of IORA for the year 2023-25 and it was also decided that India will be the President of IORA in 2025-27.
- 3. The Indian Ocean Rim Association (IORA), formed in 1997, is an inter-governmental organisation aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region through its 23 Member States and 11 Dialogue Partners.

Choose the correct statement with the help of

the above statements:

A. 1 and 2 only

B. 2 and 3 only

C.1, 2 and 3

D. 1 and 3 only

#### 4. Consider the following statements:

- 1. CRISPR-Cas9 is a technology that allows highly specific and rapid modification of the DNA in a genome, which is the complete set of genetic instructions in an organism.
- 2. Recently, Scientists have used a gene-editing technique called CRISPR to create chickens that have some resistance to avian influenza.
- 3. The study suggests that genetic engineering could potentially be a tool to reduce the toll of bird flu, a group of viruses that pose a serious threat to both animals and humans.

Which of the statements mentioned above are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1, 2 and 3

D. 1 and 3 only

## 5. Consider the following statements regarding a19th Asian Games.

- 1. Recently, the 19th Asian Games was held in Hangzhou, China from 23 September 2023 to 8 October 2023, which were originally scheduled to be held in 2022 and were postponed due to the COVID-19 pandemic.
- 2. A total of 40 sports and 61 disciplines was take centre stage across 54 competition venues in Hangzhou and five co-host cities.
- 3. India won 107 medals including 28 gold medals in the Asian Games 2022 making this the best performance in terms of the total number of medals won in the continental multisport event.

How many statements are correct?

A. Only 1

B. Only 2

C. All

D. None

# 6. With reference to the Unlawful Activities Prevention Act (UAPA), consider the following statements:

- 1. The act is applicable even if the offense is committed outside India.
- 2. The Union government has the power to designate an individual or an organization as a terrorist.

Which of the statements given above is/are correct?



A. Only 1 C. Both B. Only 2

D. None

# 7. Consider the following statements with reference to Multimodal Artificial Intelligence.

- 1. Multimodal Artificial Intelligence refers to a type of AI system that can simultaneously understand and process information from multiple modalities or sources, such as text, images, video, audio, and other forms of data.
- 2. It can analyse different types of data and extract insights to gain a more comprehensive understanding of a situation or problem.
- 3. Multimodal AI can provide a richer and more nuanced understanding of data by combining information from different sources.

How many statements are correct?

A. Only 1

B. Only 2

C. All

D. None

# 8. Consider the following statements with reference to tea industry in India:

- 1. India is the second largest producer of tea globally.
- 2. The northern part of India is the largest producer, accounting for about 83% of the country's annual tea production in 2021-22, with the majority of production coming from Assam followed by West Bengal.
- 3. India is one of the top 5 tea exporters in the world, accounting for about 10% of total exports.

How many statements are correct?

A. Only 1

B. Only 2

C. All

D. None

# 9. Consider the following statements with reference to first National Framework for Climate Services (NFCS):

- 1. India is launched its first National Framework for Climate Services (NFCS) towards providing climate services and information.
- 2. It is led by the India Meteorological Department (IMD).
- 3. NFCS is based on the Global Framework for Climate Services (GFCS).

How many statements are correct?

A. Only 1

B. Only 2

C. All

D. None

### 10. Consider the following statements regarding to OMO:

1. Open Market Operations (OMO) is one of

the tools that the Reserve Bank of India (RBI) uses to regulate the money supply and liquidity conditions in the economy.

- 2. OMOs are the sale and purchase of government securities (G-Secs) and treasury bills (T-Bills) by the RBI in the open market.
- 3. When the RBI wants to bring liquidity into the system, it purchases G-Secs and T-Bills from the market, when the RBI wants to absorb excess liquidity from the system, it sells G-secs and T-bills in the market

Which of the options given above is/are correct?

A. Only 1

B. 1 and 3

C. 1, 2 and 3

D. None

### 11. Consider the following statements with reference to conflict between Israel and Palestine:

- 1. The conflict between Israel and Palestine began in the late 19th century.
- 2. in 1917, the 'Balfour Declaration' was made in which it was agreed to establish a Jewish homeland while accepting the demand for the formation of a country for the Jews.
- 3. Oslo Peace Agreement' signed in the year 1993, it was decided that this area would be divided into two parts, one part of which was proposed to be given to Palestine and the other part to Israel.

Which of the statements given above is true?

A. Only 1

B. 1 and 3

C. 1, 2 and 3

D. None

#### 12. Ichamati River situated in which state?

A. West Bengal

B. Uttar Pradesh

C. Punjab

D. Karnataka

# 13. Consider the following statements with reference to India-Japan fund.

- 1. It is launched by India's National Investment and Infrastructure Fund (NIIF) and Japan Bank for International Cooperation (JBIC) for climate and environment projects.
- 2. The Indian government will contribute 49% to the target corpus for the India-Japan fund, remaining 51% will be contributed by JBIC
- 3. The India-Japan fund will be managed by NIIF Limited.

Which of the statements given above is true?

A. Only 1

B. 1 and 3

C. 1, 2 and 3

D. None



# 14. Consider the following statements with reference to Churpi.

- 1. Recently, Arunachal Yak Churpi, has got the Geographical Indication tag
- 2. Churpi is prepared from the milk of Arunachali yak, a unique breed found in West Kameng and Tawang districts of Arunachal Pradesh.
- 3. It is reared by tribal yak pastoralists known as Brokpas.
- 4. Churpi holds deep cultural significance in the daily life and traditions of the people of Arunachal Pradesh.

Which of the above statements is true?

A. Only 1

B. 1 and 3

C. 1, 2 and 3

D. 1,2,3 and 4

# 15. Consider the following statements with reference to the Psyche mission:

- 1. The Psyche mission is a journey to a unique metal asteroid orbiting the Sun between Mars and Jupiter.
- 2. Psyche spacecraft is scheduled to reach its destination in 2029 covering a distance of approximately 2.2 billion miles.
- 3. the spacecraft will orbit the asteroid for 26 months, capturing images, mapping the surface, and gathering crucial data to ascertain the composition of the Psyche asteroid.

Which of the above statements is true?

A. Only 1

B. 1 and 3

C. 1, 2 and 3

D. None

### 16. Consider the following statements with reference to the Joint Dakar Declaration 2023.

- 1. It is released by world 46 least developing countries;
- 2. It outlining their expectations and priorities for the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28).
- 3. COP28 will be held in Dubai, United Arab Emirates from November 30, 2023 to December 12, 2023.
- 4. The Dakar Declaration called for urgent global emissions reductions, increased climate finance, a strong outcome for the operation of the new Loss and Damage Fund, and an ambitious global stocktake to close the gap in global climate action.

How many statements are correct?

A. Only 1 C. Only 3

B. Only 2 D. All

# 17. Consider the following statements with reference to India ageing report.

- 1. UNFPA (United Nations Population Fund) India, in collaboration with the International Institute for Population Sciences (IIPS), released the India Ageing Report 2023."
- 2. This report sheds light on the challenges, opportunities and institutional responses surrounding elderly care in India, as India navigates a demographic shift towards an ageing population.
- 3. Elderly population in India is growing rapidly, with a decadal growth rate of 41%.
- 4. 20% of India's population will be elderly by 2050.

How many statements are correct?

A. Only 1

B. Only 2

C. Only3

D. All

# 18. Consider the following statements with reference to The Zoological Survey of India (ZSI).

- 1. The Zoological Survey of India (ZSI) was established in 1916 to promote survey, exploration and research regarding the flora and fauna of the British Indian Empire.
- 2. It is the apex organization on animal classification in the country.
- 3. ZSI is headquartered in Kolkata and has 16 regional centers across the country.
- 4. It is a designated reserve for the national zoological collection as per section 39 of the National Biodiversity Act, 2002. How many statements are correct?

A. Only 1 C. Only3 B. Only 2

D. All

#### 19. Consider the following statements:

- 1. According to NCRB report, Crimes against children across India increased by 16.2 per cent between 2020 and 2021.
- 2. The total crimes in 2021 against children was 1,49, 404 in all States and UTs.
- 3. MP has reported highest number of cases against children followed by Maharashtra and UP. Among UT, Delhi top the list.
- 4. About 36 per cent crimes against children were POCSO relates cases in 2021.
  - 5. UP has reported highest number of cases under POCSO followed by Maharashtra and Madhya Pradesh.

Which of the above statements is true?

A. Only 2 C. Only 4

B. Only 3 D. All

#### 20. Consider the following statements with reference to the social impact bond (SIB):

- 1. A social impact bond (SIB) is an outcomes based bond where return are pay after desired outcome related to social sector.
- 2. A social impact bond is not a bond, per se, since repayment and return on investment (ROI) are contingent upon the achievement of desired social outcomes.
- 3. Investing in social impact bonds has risen in recent years as a way for investors to give back to the community, as well as a way for companies to expand their social responsibility.
- 4. The first social impact bond was issued in 2010 by Social Finance Ltd.

How many statements are correct?

A. Only 1

B. Only 2

C. Only3

D. All

#### 21. Consider the following statements:

- 1. According to the recent World Bank project, the growth rate in India is expected to be 6.3 percent in 2023-24.
- 2. The agriculture sector is expected to grow by 3.5 percent, industry by 5.7 percent and services by 7.4 percent during 2023-24.
- 3. The report expects public debt to stabilize at 83 percent of GDP in 2023-24.

How many of these statements are correct?

A. Only 1 C. All

B. Only 2 D. No One

#### 22. Consider the following statements:

- 1. According to the recent Central Pollution Control Board (CPCB) report, Delhi remains the most polluted city in India.
- 2. According to the report, Nalbari in Assam, Asansol in Bengal and Gwalior in Madhya Pradesh are the three most polluted cities in the top 10.
- 3. Delhi, Faridabad, Ghaziabad, Noida and Meerut in NCR took the top five positions in the list, followed by Patna and Muzaffarpur in

Bihar.

How many of these statements are correct?

B. Only 2

C. All D. None

#### 23. Consider the following statements:

- 1. Recently REC Limited has launched a mobile application 'Sugam REC' exclusively for REC's 54EC.
- 2. This mobile app will provide investors with complete details of their investments in REC 54EC bonds.
- 3. Section 54EC bonds are a type of fixed income financial instrument that offers investors tax exemption under capital gains under Section 54EC of the Income Tax Act.
- 4. This allows investors to optimize their tax obligations and reduce their overall tax bill. How many of these statements are correct?

A. Only 1

B. Only 2

C. Only 3

D. all

#### 24. Consider the following statements regarding R21/ Matrix-M malaria vaccine.

- 1. Recently the World Health Organization (WHO) has recommended the use of R21/ Matrix-M malaria vaccine co-developed by Oxford University and Serum Institute of India.
- 2. This vaccine is the second malaria vaccine recommended by WHO after the RTS,S/AS01 vaccine.
- 3. The vaccine has been licensed for use in Ghana, Nigeria and Burkina Faso.

How many of these statements are correct?

A. Only 1

B. Only 2

C. All

D. None

#### Answer

1. **C** 

4. C

7. **C** 

10. **C** 

13. **C** 

16. **D** 

19. **D** 

22. **C** 

2. **D** 

5. **C** 

8. **C** 

11. **C** 

14. **D** 

17. **D** 

20. **D** 

9. C

15. C

23. **D** 

# MCQs based on Preliminary Exam

- **1.** "Rapid Financing Instrument" and "Rapid Credit Facility" are related to the provisions of lending by which one of the following?
  - (a) Asian Development Bank
  - (b) International Monetary Fund
  - (c) United Nations Environment Programme Finance Initiative
  - (d) World Bank
- **2.** With reference to the *Indian Economy*, consider the following statements:
  - 1. An increase in Nominal Effective Exchange Rate (NEER) indicates the appreciation of rupee.
  - 2. An increase in the Real Effective Exchange Rate (REER) indicates an improvement in trade competitiveness.
  - 3. An increasing trend in domestic inflation relative to inflation in other countries is likely to cause an increasing divergence between NEER and REER.

Which of the above statements are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3
- **3.** With reference to the "G20 Common Framework", consider the following statements:
  - 1. It is an initiative endorsed by the G20 together with the Paris Club.
  - 2. It is an initiative to support Low Income Countries with unsustainable debt.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **4.** With references to the Indian economy, what are the *advantages* of "Inflation-Indexed Bonds (IIBs)"?
  - 1. Government can reduce the coupon rates on its borrowing by way of IIBs.
  - 2. IIBs provide protection to the investors from uncertainty regarding inflation.
  - 3. The interest received as well as capital gains on IIBs are not taxable.

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
- **5.** Which of the following *activities constitute real sector in the economy?* 
  - 1. Farmers harvesting their crops

- 2. Textile mills converting raw cotton into fabrics
- A commercial bank lending money to a trading company
- 4. A corporate body issuing Rupee Denominated Bonds overseas

Select the correct answer from the code given below:

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4
- Which one of the following situations best reflects "Indirect Transfers" often talked about in media recently with reference to India?
  - (a) An Indian company investing in a foreign enterprise and paying taxes to the foreign country on the profits arising out of its investment
  - (b) A foreign company investing in India and paying taxes to the country of its base on the profits arising out of its investment
  - (c) An Indian company purchases tangible assets in a foreign country and sells such assets after their value increases and transfers the proceeds to India
  - (d) A foreign company transfers shares and such shares derive their substantial value from assets located in India
- **7.** Consider the following statements:
  - A bill amending the Constitution requires a prior recommendation of the President of India.
  - When a Constitution Amendment Bill is presented to the President of India, it is obligatory for the President of India to give his/her assent.
  - 3. A Constitution Amendment Bill must be passed by both the Lok Sabha and the Rajya Sabha by a special majority and there is no provision for joint sitting.

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
- **8.** Consider the following statements:
  - 1. The Constitution of India classifies the ministers into four ranks viz. Cabinet Minister, Minister of State with Independent Charge, Minister of State and Deputy Minister.
  - 2. The total number of ministers in the Union

Government, including the Prime Minister, shall not exceed 15 percent of the total number of members in the Lok Sabha.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **9.** Which of the following is/are the *exclusive* power(s) of Lok Sabha?
  - 1. To ratify the declaration of Emergency
  - 2. To pass a motion of no-confidence against the Council of Ministers
  - 3. To impeach the President of India

Select the correct answer from the code given below:

- (a) 1 and 2
- (b) 2 only
- (c) 1 and 3
- (d) 3 only
- **10.** With reference to Anti-Defection Law in India, consider the following statements:
  - 1. The law specifies that a nominated legislator cannot join any political party within six months of being appointed to the House.
  - 2. The law does not provide any time-frame within which the presiding officer has to decide a defection case.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **11.** With reference to *Deputy Speaker of Lok Sabha*, consider the following statements:
  - As per the Rules of Procedure and Conduct of Business in Lok Sabha, the election of Deputy Speaker shall be held on such date as the Speaker may fix.
  - There is a mandatory provision that the election of a candidate as Deputy Speaker of Lok Sabha shall be from either the principal opposition party or the ruling party.
  - 3. The Deputy Speaker has the same poweras of the Speaker when presiding over the sitting of the House and no appeal lies against his rulings.
  - 4. The well established parliamentary practice regarding the appointment of Deputy Speaker is that the motion is moved by the Speaker and duly seconded by the Prime Minister.

Which of the statements given above are correct?

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

- **12.** Among the following crops, which one is the most important anthropogenic source of both methane and nitrous oxide?
  - (a) Cotton
- (b) Rice
- (c) Sugarcane
- (d) Wheat
- **13.** Which one of the following lakes of West Africa has become dry and turned into a desert?
  - (a) Lake Victoria
  - (b) Lake Faguibine
  - (c) Lake Oguta
  - (d) Lake Volta
- **14.** The term "Levant" often heard in the news roughly corresponds to which of the following regions?
  - (a) Region along the eastern Mediterranean shores
  - (b) Region along North African shores stretching from Egypt to Morocco
  - (c) Region along Persian Gulf and Horn of Africa
  - (d) The entire coastal areas of Mediterranean Sea
- **15.** Consider the following countries:
  - 1. Azerbaijan
  - 2. Kyrgyzstan
  - 3. Tajikistan
  - 4. Turkmenistan
  - 5. Uzbekistan

Which of the above have borders with Afghanistan?

- (a) 1, 2 and 5 only
- (b) 1, 2, 3 and 4 only
- (c) 3, 4 and 5 only
- (d) 1, 2, 3, 4 and 5
- **16.** With reference to India, consider the following statements:
  - 1. Monazite is a source of rare earths.
  - 2. Monazite contains thorium.
  - 3. Monazite occurs naturally in the entire Indian coastal sands in India.
  - 4. In India, Government bodies only can process or export monazite.

Which of the statements given above are correct?

- (a) 1, 2 and 3 only
- (b) 1, 2 and 4 only
- (c) 3 and 4 only
- (d) 1, 2, 3 and 4
- **17.** With reference to *Web 3.0*, consider the following statements:

#### October 2023/Issue-02



- Web 3.0 technology enables people to control their own data.
- 2. In Web 3.0 world, there can be blockchain based social networks.
- 3. Web 3.0 is operated by users collectively rather than a corporation.

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
- **18.** With reference to "Software as a Service (SaaS)", consider the following statements:
  - 1. SaaS buyers can customise the user interface and can change data fields.
  - 2. SaaS users can access their data through their mobile devices.
  - 3. Outlook, Hotmail and Yahoo! Mail are forms of SaaS.

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
- **19.** Which one of the following is the context in which the term "qubit" is mentioned?
  - (a) Cloud Services
  - (b) Quantum Computing
  - (c) Visible Light Communication Technologies
  - (d) Wireless Communication Technologies
- **20.** Consider the following statements:
  - Biofilms can form on medical implants within human tissues.
  - 2. Biofilms can form on food and food processing surfaces.
  - 3. Biofilms can exhibit antibiotic resistance. 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
- **21.** If a major solar storm (solar flare) reaches the Earth, which of the following are the possible effects on the Earth?
  - 1. GPS and navigation system could fail.
  - 2. Tsunamis could occur at equatorial regions.
  - 3. Power grids could be damaged.
  - Intense auroras could occur over much of the Earth.
  - 5. Forest fires could take place over much of the planet.
  - 6. Orbits of the satellites could be disturbed.
  - 7. Shortwave radio communication of the aircraft flying over polar regions could be interrupted.

Select the correct answer from the code given

#### below:

- (a) 1, 2, 4 and 5 only
- (b) 2, 3, 5, 6 and 7 only
- (c) 1, 3, 4, 6 and 7 only
- (d) 1, 2, 3, 4, 5, 6 and 7
- **22.** Consider the following statements:
  - 1. "The Climate Group" is an international non-profit organization that drives climate action by building large networks and runs them.
  - 2. The International Energy Agency in partnership with the Climate Group launched a global initiative "EP100".
  - 3. EP100 brings together leading companies committed to driving innovation in energy efficiency and increasing competitiveness while delivering on emission reduction goals.
  - Some Indian companies are members of EP100.
  - 5. The International Energy Agency is the Secretariat to the "Under2 Coalition".

Which of the statements given above are correct?

- (a) 1, 2, 4 and 5
- (b) 1, 3 and 4 only
- (c) 2, 3 and 5 only
- (d) 1, 2, 3, 4 and 5
- **23.** The "Miyawaki method" is well known for the:
  - (a) Promotion of commercial farming in arid and semi-arid areas
  - (b) Development of gardens using genetically modified flora
  - (c) Creation of mini forests in urban areas
  - (d) Harvesting wind energy on coastal areas and on sea surfaces
- **24.** In medieval India, the term "Fanam" referred to:
  - (a) Clothing
- (b) Coins
- (c) Ornaments
- (d) Weapons
- **25.** With reference to the *proposals of Cripps Mission*, consider the following statements:
  - 1. The Constituent Assembly would have members nominated by the Provincial Assemblies as well as the Princely States.
  - 2. Any Province, which is not prepared to accept the new Constitution would have the right to sign a separate agreement with Britain regarding its future status.

Which of the statements given above is/are correct?

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



- **26.** What is/are the advantage/advantages of implementing the 'National Agriculture Market' scheme?
  - 1. It is a pan-India electronic trading portal for agricultural commodities.
  - 2. It provides the farmers access to nationwide market, with prices commensurate with the quality of their produce.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- **27.** Consider the following statements :
  - 1. The motion to impeach a Judge of the Supreme Court of India cannot be rejected by the Speaker of the Lok Sabha as per the Judges (Inquiry) Act, 1968.
  - The Constitution of India defines and gives details of what constitutes 'incapacity' and 'proved misbehaviour' of the Judges of the Supreme Court of India.
  - 3. The details of the process of impeachment of the Judges of the Supreme Court of India are given in the Judges (Inquiry) Act, 1968.
  - 4. If the motion for the impeachment of a Judge is taken up for voting, the law requires the motion to be backed by each House of the Parliament and supported by a majority of total membership of that House and by not less than two-thirds of total members of that House present and voting.

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

- (a) 1 and 2
- (b) 3 only
- (c) 3 and 4 only
- (d) 1, 3 and 4
- **28.** Consider the following statements:
  - Coal sector was nationalized by the Government of India under Indira Gandhi.
  - 2. Now, coal blocks are allocated on lottery basis.
  - 3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is selfsufficient in coal production.

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

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3
- **29.** Consider the following statements:
  - 1. The Parliament (Prevention of Disqualification) Act, 1959 exempts several posts from disqualification on the grounds of 'Office of Profit'.
  - 2. The above-mentioned Act was amended five

times.

3. The term Office of Profit' is well defined in the Constitution of India.

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

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3
- **30.** Which of the following statements is/are true of the *Fundamental Duties of an Indian citizen*?
  - 1. A legislative process has been provided to enforce these duties.
  - 2. They are correlative to legal duties. Select the correct answer using the code given below:
  - (a) 1 only
- (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- **31.** Consider the following pairs:
  - 1. Radhakanta : First President of the British Indian

Association

- Gazulu : Founder of the Lakshminarasu Madras Mahajana Chetty Sabha
- 3. Surendranath : Founder of the Banerjee Indian Association

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

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3
- **32.** With reference to the Constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following?
  - (a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
  - (b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.
  - (c) In the event of grave financial crisis in the country, the President of India can declare Financial Emergency without the counsel from the Cabinet.
  - (d) State Legislatures cannot make laws on certain matters without the concurrence of Union Legislature.
- **33.** With reference to the *Legislative Assembly* of a State in India, consider the following statements:
  - 1. The Governor makes a customary



- address to Members of the House at the commencement of the first session of the year.
- 2. When a State Legislature does not have a rule on a particular matter, it follows the Lok Sabha rule on that matter.

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

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **34.** Which of the following is a most likely consequence of implementing the 'Unified Payments Interface (UPI)'?
  - (a) Mobile wallets will not be necessary for online payments.
  - (b) Digital currency will totally replace the physical currency in about two decades.
  - (c) FDI inflows will drastically increase.
  - (d) Direct transfer of subsidies to poor people will become very effective.
- **35.** As per the *Solid Waste Management Rules, 2016* in India, which one of the following statements is correct?
  - (a) Waste generator has to segregate waste into five categories.
  - (b) The Rules are applicable to notified urban local bodies, notified towns and all industrial townships only.
  - (c) The Rules provide for exact and elaborate criteria for the identification of sites for landfills and waste processing facilities.
  - (d) It is mandatory on the part of waste generator that the waste generated in one district cannot be moved to another district.
- **36.** The terms Event Horizon', 'Singularity', 'String Theory' and 'Standard Model are sometimes seen in the news in the context of:
  - (a) Observation and understanding of the Universe
  - (b) Study of the solar and the lunar eclipses
  - (c) Placing satellites in the orbit of the Earth
  - (d) Origin and evolution of living organisms on the Earth
- **37.** In the context of India, which of the following factor/s is/are contributor/ contributors to reducing the risk of a currency crisis?
  - The foreign currency earnings of India's IT sector.
  - 2. Increasing the government expenditure.
  - 3. Remittances from Indians abroad. Select the correct answer using the code given below:
  - (a) 1 only
- (b) 1 and 3 only

- (c) 2 only
- (d) 1, 2 and 3
- **38.** If you travel by road from Kohima to Kottayam, what is the minimum number of States within India through which you can travel, including the origin and the destination?
  - (a) 6

(b) 7

(c) 8

- (d) 9
- **39.** The Parliament of India exercises control over the functions of the Council of Ministers through:
  - 1. Adjournment motion
  - 2. Question hour
  - 3. Supplementary questions

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3
- **40.** In India, which of the following review the independent regulators in sectors like telecommunications, insurance, electr-icity, etc.?
  - 1. Ad Hoc Committees set up by the Parliament
  - 2. Parliamentary Department Related Standing Committees
  - 3. Finance Commission
  - 4. Financial Sector Legislative Reforms Commission
  - 5. NITI Aayog

Select the correct answer using the code given below:

- (a) 1 and 2
- (b) 1, 3 and 4
- (c) 3, 4 and 5
- (d) 2 and 5
- **41.** With reference to *India*'s *Five-Year Plans*, which of the following statements is/are correct?
  - 1. From the Second Five-Year Plan, there was a determined thrust towards substitution of basic and capital good industries.
  - 2. The Fourth Five-Year Plan adopted the objective of correcting the earlier trend of increased concentration of wealth and economic power.
  - 3. In the Fifth Five-Year Plan, for the first time, the financial sector was included as an integral part of the plan.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 only
- (c) 3 only
- (d) 1, 2 and 3
- **42.** With reference to the *religious history of India*, consider the following statements:
  - Sautrantika and Sammitiya were the sects of Jainism.

2. Sarvastivadin held that the constituents of phenomena were not wholly momentary, but existed forever in a latent forin.

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

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **43.** With reference to communications technologies, what is/are the difference/differences between LTE (Long-Term Evolution) and VoLTE (Voice over Long-Term Evolution)?
  - LTE is commonly marketed as 3G and VoLTE is commonly marketed as advanced 3G
  - 2. LTE is data-only technology and VOLTE is voice-only technology.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- **44.** In the context of any country, which one of the following would be considered as part of its social capital?
  - (a) The proportion of literates in the population
  - (b) The stock of its buildings, other infrastructure and machines
  - (c) The size of population in the working age group
  - (d) The level of mutual trust and harmony in the society
- **45.** With reference to the Constitution of India, consider the following statements:
  - No High Court shall have the jurisdiction to declare any central law to be constitutionally invalid.
  - 2. An amendment to the Constitution of India cannot be called into question by the Supreme Court of India.

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

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **46.** Which one of the following is **not** the most likely measure the Government/ RBI takes to stop the slide of Indian rupee?
  - (a) Curbing imports of non-essential goods and promoting exports
  - (b) Encouraging Indian borrowers to issue rupee denominated Masala Bonds
  - (c) Easing conditions relating to external commercial borrowing
  - (d) Following an expansionary monetary policy

- **47.** With reference to 'Indian Ocean Dipole (IOD) sometimes mentioned in the news while forecasting Indian monsoon, which of the following statement/s is/are correct?
  - 1. IOD phenomenon is characterised by a difference in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.
  - 2. An IOD phenomenon can influence an El Nino's impact on the monsoon.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2 (d) Neither 1 nor 2
- **48.** In the context of digital technologies for entertainment, consider the following statements:
  - 1. In Augmented Reality (AR), a simulated environment is created and the physical world is completely shut out.
  - 2. In Virtual Reality (VR), images generated from a computer are projected onto real-life objects or surroundings.
  - 3. AR allows individuals to be present in the world and improves the experience using the camera of smart-phone or PC.
  - 4. VR closes the world, and transposes an individual, providing complete immersion experience.

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

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

### **ANSWER**

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

### **Practice Questions for Mains Exam**

- 1. How do you view the advice given by the Education Ministry to all states to create "APAAR Registry" (Automated Permanent Academic Account Registry)? How will this registry prove beneficial for the educational system?
- 2. Explain the main reasons of dispute related to marine fishermen between Sri Lanka and India. What new steps have been taken recently by the governments of both the countries to solve this problem?
- 3. Briefly mention the root causes of the Israel-Palestine war. What is India's view in this context?

  What is the de-hyphenation policy of the Government of India regarding these two nations?
- 4. What are the standards for declaring a state in North-East India as internally disturbed under the provisions of the AFSPA Act? Mention the reasons behind the demand for removal of AFSPA from North-East India.
- 5. Explain the structure and functions of the Indian Ocean Rim Association. Evaluate its role in efforts to build a peaceful, stable, prosperous Indian Ocean region.
- 6. Indian government started paying special attention to national drone policy. Explain its rationale.

  Also mention some of the most effective applications of drones.
- 7. Mention the recent major initiatives taken by the Government of India towards watershed development and management. Explain the potential role of National Remote Sensing Center in watershed development and management.
- 8. Evaluate the role played by regional councils in the Indian polity. What measures will you suggest to make the role of regional councils more effective?
- 9. Differentiate between Old and New Pension scheme. Evaluate the impact of Old Pension Scheme in maintaining fiscal prudence?
- "Aadhaar has emerged as an important mechanism for the delivery of public services". In the light of this statement, explain with examples how Aadhaar has helped in transparent and efficient implementation of governmenty schemes. Also elaborate the issue of data breach and other security concerns associated with Aadhar.
- Discuss the various forms of Green Technology. How Green technology has emerged as a viable solution to the problem of climate change and global warming in the context of India?
- 12. Evaluate the key features of Unlawful Activities (Prevention) Act, 1967. Has it been successful in containing the terrorist activities in India?
- 13. Innovation plays key role in the economy of any country. How R&D alongwith innovation will help India in achieving the goal of \$ 5 Trillion economy by 2024-25?
- What do you understand by "Demographic Dividend". In view of the recent UNFPA's "India Aeging Report, 2023", explain the challenges that will be faced by Indian economy.
- 15. What do you understand by CRISPR Technology. How this technology has revolutionised the field of biotechnology? Give examples.



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