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Monthly Current Affairs May 2023

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Current Affairs, May 2023

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1. Polity and Governance

1.1 YUVA tourism club

Tourism Ministry to undertake special initiative of 100 Episodes of Mann ki Baat-100 days of Action through the Yuva Tourism Clubs

About the club

- The vision of YUVA Tourism Clubs is to nurture and develop young ambassadors of Indian tourism, appreciate our rich cultural heritage and develop an interest and passion for tourism.
- These young ambassadors would be catalysts for promoting tourism in India.
- Participation in Tourism Clubs is also expected to facilitate development of soft skills like teamwork, management, leadership.
- It also encourages adoption of responsible tourism practices and concern for sustainable tourism.
- The establishment of Yuva Tourism Clubs was initiated in schools, colleges and Indian Hotel Management institutions in connection with the Azadi Ka Amrut Mahotsav celebrations.

1.2 Divorce under Article 142

Why in news?

- A five-judge Constitution Bench of the Supreme Court held that it can directly grant divorce to couples on irretrievable breakdown of marriage under Article 142 of the Constitution.

What was the case and its judgement?

- Originally filed in the Supreme Court in 2014, the parties sought a divorce under Article 142.
- Judgement - The SC can exercise its plenary power to do 'complete justice' under Article 142(1) of the Constitution to dissolve a marriage on the ground that it had broken down irretrievably.
- It can grant divorce without referring the parties to a family court for divorce by mutual consent petitions.

What is the current procedure for divorce under the Hindu Marriage Act?

- The Hindu Marriage Act, 1955 lays down the law for divorce which applies to Hindus, Buddhists, Jains, and Sikhs.
- Divorce by mutual consent - provided under Section 13B of the Act.
- Filing - Both parties to the marriage must together file a petition to the district court on the ground that they have been living separately for a period of one year or more and have mutually agreed on divorce.
- The parties must move a second motion before the court between 6-18 months after the date of the presentation of the first petition.
- Six month period - The mandatory six-month wait is intended to give the parties time to withdraw their plea.
- Condition for mutual divorce - A petition for divorce by mutual consent can be moved only after a year of the marriage.
- In case of 'exceptional hardship to the petitioner or of exceptional depravity on the part of the respondent', the petition can be moved earlier under Section 14 of HMA.
- A waiver of the six-month waiting period under Section 13B (2) can be sought in an exemption application filed before the family court.

How does SC grant decree of divorce under Article 142?

- The decision to exercise the power under Article 142(1) to grant divorce should be based on considerations of fundamental general and specific public policy.

- Fundamental general public policy - Fundamental rights, secularism, federalism, and other basic features of the Constitution.
- Specific public policy - Defined by the court to mean some express pre-eminent prohibition in any substantive law, and not stipulations and requirements to a particular statutory scheme.
- What are the factors laid down for the “Irretrievable breakdown” of marriage?
- The court should be fully convinced and satisfied that the marriage is totally unworkable, emotionally dead and beyond salvation and dissolution of marriage is the only way forward.
- Factors - The court laid down the following factors to determine irretrievable breakdown of marriage:
 - The period of time that the parties had cohabited after marriage;
 - When the parties had last cohabited;
 - Nature of allegations made by the parties against each other and their family members;
 - Orders passed in the legal proceedings from time to time;
 - Cumulative impact on the personal relationship;
 - Whether, and how many attempts were made to settle the disputes by a court or through mediation, and when the last attempt was made.
- The period of separation should be sufficiently long (more than 6 years is irrelevant for reconciliation).

Why do we need direct decree of divorce under Article 142?

- The process of obtaining a decree of divorce is often time-consuming and lengthy.
- A large number of similar cases pending before family courts.
- It emphasised the need to evaluate the factors according to the economic and social status of the parties.
- It considers the dependents of the parties; whether they have any children; their age; and whether the spouse and children are dependents.

1.3 India's progress on Sustainable Development Goals (SDGs)

Why in news?

The Prime Minister expressed concern that progress on Sustainable Development Goals (SDG) seems to be slowing down.

What are Sustainable Development Goals?

- The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 with a vision to achieve a better and more sustainable future for all.
- The SDGs, officially known as ‘Transforming our world: the 2030 Agenda for Sustainable Development’ is a set of 17 Global Goals with 169 targets between them.
- India is one of the signatory countries that has committed to achieving these goals by 2030.
- The UN member states use the SDGs to frame their agendas and political policies over the next 15 years.
- The SDGs framework sets targets for 231 unique indicators related to economic development, social welfare and environmental sustainability.

Where does India currently stand in the progress on SDG indicators?

- India is roughly halfway to the deadline to achieve SDGs.
- A recent study assesses India’s progress on 33 welfare indicators, covering 9 SDGs and the results are mixed.
- Positive trends - India is ‘On-Target’ to meeting 14 of the 33 SDGs, including indicators for neonatal and under-five mortality, full vaccination, improved sanitation, and electricity access.
- But, the national ‘On-Target’ designation does not apply equally across all districts.
- Concerning trends - For 19 of the 33 SDG indicators, the current pace of improvement is not enough to meet SDG targets.
- Despite a national policy push for clean fuel for cooking, more than two-thirds (479) of districts remain ‘Off-Target’.
- Heightened concern - No district in India has yet succeeded in eliminating the practice of girl child

marriage before the legal age of 18 years.

- Despite the overall expansion of mobile phone access in India (93% of households), only 56% women report owning a mobile phone.

Why India's SDG progress is important?

- India is expected to surpass China as the world's most populous country in 2023, as per UN projections.
- India will become the third largest economy in the world over the next decade.
- Regardless of the global progress that has been made to date, realising Sustainable Development Goals (SDGs) at a global scale is intrinsically tied to the success of India for the above 2 reasons.

What could be adapted from India's recent mobilisation for COVID-19?

- India adopted an 'optimisation' approach to the COVID-19 pandemic giving the focus and resources necessary to succeed.
- The following lessons from COVID-19 could be adopted in realising SDGs.
- 'Optimisation problem' is the designing and implementing a policy response to a pressing issue relying on political will, responsive administration, adequate resources, and sound data.
- Political-administrative synergy - Strong and sustained political leadership supported by a responsive administrative structure at all levels, from national to the district level.
- This synergy which was willing to learn and undertake course corrections in real-time was critical to the success of vaccination programme and rollout of a comprehensive relief package.
- Public data platform - The existing digital infrastructure, as well as new, indigenous initiatives such as the Co-WIN data platform made India's success with COVID-19 possible.
- India must put in place a coordinated, public data platform for population health management.
- India must consolidate its many platforms into an integrated digital resource for district administrators, as well as State and national policy makers.
- Proactive Programmes - A targeted SDG strategy delivered at scale must be executed with the same timeliness of India's COVID-19 relief package.
- For example, the Pradhan Mantri Garib Kalyan Yojana (March 2020) later augmented Pradhan Mantri Garib Kalyan Anna Yojana (2023) covering 800 million people.
- The relief programme was a mix of spending to provide direct in-kind and economic support, as well as measures aimed at revitalising the economy, small businesses, and agriculture.
- This was critical in blunting the adverse effects of COVID-19, especially for vulnerable and the socio-economically disadvantaged groups.
- It also measurably demonstrated the value of a proactive, government-supported programme specifically aimed at improving people's well-being.

What does India need to do?

- There is no historical precedence on how to deliver development to a billion-plus people in a healthy and sustainable manner.
- India needs to innovate a new policy path in order to meet the aspirations of its people in the decade ahead.
- India has proved that it is possible to deliver at scale in such an ambitious and comprehensive manner, in successfully delivering a real-time response to the COVID-19 pandemic.
- To succeed in meeting its SDG targets, a similar concerted, pioneering, nation-wide effort would be the need of the hour.

1.4 Indian Nuclear Liability Law

Why in news?

A French private company and Nuclear Power Corporation of India (NPCIL) are resolving the issues in building the six nuclear power reactors in Maharashtra's Jaitapur.

What is a nuclear liability law?

- Laws on civil nuclear liability ensure that compensation is available to the victims for nuclear damage caused by a nuclear incident or disaster.
- The international nuclear liability regime consists of multiple treaties and was strengthened after the 1986 Chernobyl nuclear accident.
- Umbrella Convention on Supplementary Compensation (CSC) was adopted in 1997 with the aim of establishing a minimum national compensation amount.
- India was a signatory to CSC but Parliament ratified the convention only in 2016.
- To keep in line with the international convention, India enacted the Civil Liability for Nuclear Damage Act (CLNDA) in 2010.
- The Vienna Convention on Civil Liability for Nuclear Damage aims at establishing some minimum standards to provide financial protection against damage resulting from certain peaceful uses of nuclear energy.

What are the key aspects of CLNDA 2010?

- Speedy compensation to victims - Provides speedy compensation mechanism for victims of a nuclear accident.
- Strict and no-fault liability on the operator - Provides that the operator will be held liable for damage regardless of any fault on its part.
- Right of recourse - The operator of the nuclear plant, after paying their share of compensation for damage shall have the right of recourse where the nuclear incident has resulted as a consequence of an act of supplier or his employee.
- Supplier liability - The act has introduced the concept of supplier liability over the operator liabilities leading to many ambiguities.
- The supplier liability includes supply of equipment or material with patent or latent defects or sub-standard services.
- Rs 1,500 crore as compensation - In case of any damages the operator has to provide the minimum amount of 1500 crore rs to the victims through insurance or other financial security.
- Rs 2,100 to Rs 2,300 crore - As compensation in case of the damages exceeding the 1500 core rupees.
- India currently has 22 nuclear and All operated by the state-owned Nuclear Power Corporation of India Limited (NPCIL).

What are the issues now?

- CLNDA is the only law where suppliers can be asked to pay damages
- Ambiguity over how much insurance to set aside in case of damage claims have been concerns for suppliers
- It allows criminal liability to be pursued where applicable which have made wary scenario to many players to build nuclear reactors in India
- CLNDA lacks the definition on the types of nuclear damages
- Even if the operator the operator damages any equipment while fixing it the, supplier can be sued for the faultiness of the operator.

1.5 Internal Complaints Committees (ICC)

Why in news?

The protest by Indian wrestlers has highlighted the importance of internal complaints committees.

What is internal complaints committees (ICC)?

- First port of call - ICC was designed to be the first port of call for any grievance under the POSH (Prevention of Sexual Harassment Act) Act 2013.
- Section 4 of the POSH Act - Every office of an organization employing 10 or more employees must have an internal committee dedicated to hearing and resolving sexual harassment complaints.

- Members - It needs to have a minimum of 4 members with at least half should be women.
- Among women 1 shall be shall be an external member
- Preferably from an NGO or
- An association that works for women's empowerment or
- A person familiar with issues related to sexual harassment.
- Mandatory for recognitions - A functional ICC is one of the key conditions set up by the Ministry of Sports to grant annual recognition to the sporting federations.
- Court verdict - In Global Health Private Limited & Mr. Arvinder Bagga v. Local Complaints Committee, District Indore and Others (2017), the Court held that there should be a fine imposed under the POSH Act for failing to constitute the ICC.
- Female Presiding Officer - Has been made mandatory and should be an employee at a senior level at work.
- Power of a civil court - Regarding investigation complaints of workplace sexual harassment ICC have the same powers as civil court under the Code of Civil Procedure 1908.
- Tenure - ICC members have a maximum term of 3 years.
- Section 10 of the POSH Act - ICC can resolve a complaint between the parties at the request of the aggrieved woman through conciliation by reaching an amicable settlement.

What are the challenges to ICC?

- The POSH act is not gender neutral so the ICC can conduct investigations only if it is filed by women which excludes men and LGBTQ+ members.
- Lack of awareness about ICC to the workers.
- There is no mandate to form ICC in the informal sectors.
- Even though many association have ICC the structure and functions are not conducive with POSH act.

What is the way forward?

- Strict actions should be taken by government in case of a national sporting body having no ICC.
- The functions and structure of the ICC needs to be reexamined by the government which should be in conducive with current demands.
- Before starting of any tournament the awareness should be made about ICC.

Quick facts

- Athletics Federation of India (AFI) is the body with the largest membership and the highest women participation.

1.6 Law for mandatory recall of substandard drugs

Why in news?

There is rise of substandard drugs in the India due to lack of regulatory standards and no law to recall drugs.

Why the drugs failure in the Indian market is on the rise?

- Fragmented regulatory structure - Since each state have its own regulators and there are totally 38 drug regulators in India, so if a drug is banned from one state it can be sold in another state.
- Jurisdictional issues - Many regulators has led to inconsistent enforcement of the law and jurisdictional issues.
- No focus on process - The Indian system is still oriented towards end products (medicines sold in the market) rather than processes.
- No transparency - There are no transparency requirements or mandatory disclosures of medicinal requirements in the law.
- Drug regulation being complex - Drug regulation section of the union health ministry find it difficult to regulate since the regulation process is complex.
- Lack of expertise - In the drug relation section of the union health ministry.

- Pharmaceutical industry over protecting public health - The government has greater interest in enabling the growth of the pharmaceutical industry than protecting public health.
- No law on drug recall - Even though government has been mulling for a binding a law on drug recall since 1976, there exists guild lines for drug recall.

What are the measures taken for law on drug recall?

- Drugs Consultative Committee (DCC) - In 1976 discussed the issues of recall of bad drugs.
- The meeting resolved to have greater cooperation between various state drug controllers in order to facilitate better coordination to recall and destroy drugs that failed tests.
- Parliamentary Standing Committee on Health & Family Welfare - In 2012 raised the issue of recall of drugs but it didn't materialize.
- Central Drugs Standard Control Organization (CDSCO) - Proposed a set of draft recall guidelines, but the national regulator didn't convert the guild lines into the binding law.
- Drug Controller General of India (DCGI) - Announced that the guild lines proposed by the CDSCO will be converted into the binding law but it didn't materialize.
- Drugs Technical Advisory Board (DTAB) - Also discussed the issues concerning the recall on drugs but there was no resolution taken.

What is the way forward?

- To have comprehensive and clear public health policy that prioritizes public health over profit.
- To create an effective recall mechanism, the responsibility of recalling drugs has to be centralized so as to have legal responsibility over the drug companies.
- All manufacturing facilities should be licensed by a single national regulator so that it can be held accountable.
- The health activist have to work in tandem with the government to remove the substandard drugs in the Indian market.

1.7 Caste-Based Survey

Why in news?

The Patna high court has halted the ongoing caste-based survey in Bihar.

Why is Bihar conducting a caste census?

- To channel welfare policies and implement schemes effectively.
- Since Bihar's coalition government comprises mainly Other Backward Classes (OBCs) and they have been undermined in the current reservation system.
- Potential political benefits that would help identify the true population of the Bihar's OBCs.
- Even though UPA government in 2011 conducted a caste census it was not released due to various reasons.
- Survey would facilitate in preparing state budget tailored for welfare of oppressed classes.

What exactly Patna high court said?

- The court said that the state government had no power to conduct a census as it would infringe on the legislative powers of the parliament.
- Difference between survey and census - Census is a collection of accurate facts and verifiable details.
- Whereas a survey is intended at collection and analysis of opinions and perceptions of the general public, which may be aimed at a specific community.
- So the present exercise by Bihar is a census done in the name of survey.
- Right to privacy - Certain entries in the survey such as conditions of the labor work affects the right to privacy.
- Data security - Certain entries in the survey contains birth and death which may lead to data security.
- Principle of voluntary disclosure - Data should be entered only after each and every individual, who is a

native of Bihar and not resident within the state, at the time of survey and not from the head of the family.

- According to UDISE+ data OBC children comprise 45 per cent students in primary schools, SCs 19 % and STs 11 %.

What is the data are the enumerators collecting?

- The total number of households in the state are being counted in the first phase.
- In the second phase the following data will be collected
- Castes, religions and economic backgrounds and
- The number of family members living in and outside the state.
- The exercise covers an estimated population of 12.7 crore across 38 districts and will only enumerate caste and not sub-caste.

What is meant by caste census?

- Caste census means inclusion of caste-wise tabulation of India's population belonging to all castes, primarily the Other Backward Classes (OBCs), and not just SCs and STs.
- In 1952 census the first separate data on Scheduled Castes (SCs) and Scheduled Tribes (STs) was published.
- The first caste census data was released in 1931.
- The 2011 census even though had caste census the data was not released.

What is the importance of caste census?

- India runs the world's largest affirmative welfare programme based on caste identity.
- Reservation in educational institutes and government jobs are provided on the basis of caste identities.
- The absence of fresh caste census data means that the caste estimates of 1931 are being projected for formulating welfare policies in 2021.
- The highest reservation mandate for the Other Backward Classes (OBCs) at 27 % is caste based as the BP Mandal Commission ascertained the backwardness of the class on the basis of caste.

What is the socio economic and caste census (SECC) 2011?

- A study of socio economic status of rural and urban households.
- Allows ranking of households based on predefined parameters.
- SECC 2011 was conducted by ministry of rural development.
- This is the first time such a comprehensive exercise has been carried out for both rural and urban India.

1.8 Polygamy in India

Why in news?

Assam Chief Minister proposed to enact a legislative law to ban polygamy to address the growing incidents of the child marriages in the state.

What are the provisions that ban polygamy?

- Polygamy is governed both by personal laws and the Indian Penal Code (IPC).
- The Parsi Marriage and Divorce Act 1936 - Prohibited polygamy in the Parsi community.
- The law regulates the marriage and divorce among Parsis.
- Shariat Act 1937 - Governs the marriage in Islam. The act allows Muslim man to have 4 wives.
- The Supreme Court in Sarla Mudgal v Union of India held that religious conversion for the sole purpose of committing bigamy is unconstitutional.
- The Supreme Court in Lily Thomas v Union of India case reiterated the judgment of Sarla Mudgal v Union of India.
- The Special Marriage Act 1954 - A radical legislation that proposed the requirement of monogamy.
- Section 4 of the act states that "at the time of marriage neither party should have a spouse living".

- The Hindu Marriage Act 1955 - Outlawed the concept of having more than one spouse.
- Buddhists, Jains, and Sikhs are also included under the Hindu Marriage act 1955.
- Section 17 of the act states that bigamy is an offence.
- IPC Section 494 - Penalizes bigamy or polygamy. A person wife or husband in any case engages in second marriage should be imprisoned for a period of 7 years and liable to fine.
- This provision does not apply to a marriage which has been declared void by a court
- Section 495 of the IPC - Protects the rights of the second wife in case of a bigamous marriage.
- Article 44 - States that the State shall endeavor to secure for all the citizens a Uniform Civil Code.
- Polygamy is the practice of having more than one married spouse (wife or husband).

What is the status of polygamy in India?

- Kanwal Ram and Ors v The Himachal Pradesh Administration (1965) - The Supreme Court reiterated the legal position that the standard of proof must be of marriage including second marriage should be performed as per customs.
- So the live-in-relationship doesn't come into the ambit of the second marriage.
- Desertion of marriage - IPC Section 494 penalizing polygamy doesn't apply in case of desertion by the spouse that is who has been continuously absent for 7 years.
- Goa - A crucial exception to the bigamy law for Hindus is Goa, which follows its own code for personal laws.
- A Hindu man in the state has the right to bigamy under specific circumstances mentioned in the Codes of Usages and Customs of Gentile Hindus of Goa.
- These specific circumstances include a case where the wife fails to conceive by the age of 25 or if she fails to deliver a male child by the age of 30.
- No uniform civil code - Even now various religions are governed by their respective religion personal laws.
- Tribal population - Since they are governed and protected by special laws and the prevalence of polygamy is high among tribal population.
- Bigamy is the offence of marrying someone while already married to another person.

What is the way forward?

- Any move to outlaw polygamy for Muslims would have to be a special legislation which overrides personal law protections like in the case of triple talaq.
- The tribal population needs to be educated about the consequences of the polygamy.
- Uniform civil code needs to be followed to bring uniformity across India.

1.9 Default Bail

Why in news?

The Supreme Court directed lower courts to decide pending default bail applications without relying on its own judgment of Ritu Chhabaria case.

What is default bail?

- Default bail - The right to statutory bail, often known as default bail or compulsive bail, is granted because of the default of the investigating agency in not completing the investigation within the specified time.
- CrPC - Under Section 167(2) of CrPC, a Magistrate can order an accused person to be detained in the custody of the police for 15 days.
- Beyond 15 days, the Magistrate can authorise the detention of the accused person in judicial custody (jail) if necessary.
- Maximum period of detention - However, the accused cannot be detained for more than
- 90 days (when an authority is investigating an offence punishable with death, life imprisonment or imprisonment for at least 10 years)
- 60 days (when the authority is investigating any other offence)

- Right to bail - After the period of 90/60 days, if the investigation has not been completed and charge-sheet not filed, the accused person has the right to be released on bail.
- Judicial custody - The default bail prevents the misuse of judicial custody by the investigation agency.
- Article 21 - The court in multiple judgments have held that the default bail flows from the Article 21 of the Constitution which guarantees the right to life and personal liberty.
- The Code of Criminal Procedure, 1973 regulates the procedural aspects of criminal law, including arrest, investigation and bail.

What is Ritu Chhabaria case about?

- Supplementary charge sheets - Investigating authorities routinely file incomplete or supplementary charge sheets within the 60/90 day period, to prevent the accused from seeking default bail.
- Ritu Chhabaria Case - The Supreme Court, in Ritu Chhabaria, delegitimised such illegal practices and held that incomplete charge sheets filed by police would not prevent an accused from applying for default bail.
- It held that the right of default bail under Section 167(2) of CrPC is not merely a statutory right, but a fundamental right that flows from Article 21 of the Constitution.

What is the Supreme Court's (SC) interim order about?

- Article 141 of the Constitution provides that the law declared by the Supreme Court shall be binding on all courts within India.
- Arguments of ED - The government, through the Enforcement Directorate (ED), moved an application in SC to recall the Ritu Chhabaria judgment.
- The ED argued that the judgment contradicted the Supreme Court's own past verdicts.
- The ED also argued that the judgment would not apply to special laws like the Prevention of Money Laundering Act (PMLA).
- SC's interim order - The Supreme Court in its interim order directed courts to postpone any decision on default bail pleas filed on the strength of the Ritu Chhabaria judgment.

What are the concerns with the order?

- The Supreme Court's interim order is said to curtail the rights of undertrial prisoners seeking default bail.
- The Court's decision to suspend the rights of defendants in criminal cases would lead to erosion of constitutional rights of the accused and deviate from fundamental principles of criminal procedure.

1.10 Welfare Expenditure

Why in news?

The Union Budget 2023 was criticised over a decline in allocations for welfare schemes in real terms, at a time of post-COVID-19 recovery.

What is welfare expenditure?

- Welfare expenditure is expenditure on social welfare programmes that provide a social safety net to citizens and ensure basic rights, including livelihoods, health, nutrition and education.
- The budget 2023 indicates that it is the first time since 2009, that social sector spending is less than 20% of total government expenditure.
- The reduction in welfare expenditure is mainly due to increased capital expenditure spending.

What is the trend of welfare expenditure?

Hunger and malnutrition

- Saksham Anganwadi and Poshan 2.0 – Aims to address child malnutrition and hunger.
- The expenditure on Saksham Anganwadi and Poshan 2.0 went down from 0.13% of GDP in 2014-15 to 0.07% in 2023-24.
- Mid-day meal (MDM) scheme – For improvement in class attendance, learning as well as nutritional outcomes and reduced stunting in children.

- The Budget allocation for mid-day meal scheme decreased by 50% as a share of GDP compared to 2014-15.
- National Food Security Act (NFSA) - Provides subsidised grains to over 80 crore people.
- For NFSA, expenditure as a share of GDP went to 0.65% this year from 0.94% in 2014-15.
- According to National Family Health Survey (NFHS)-5, the percentage of anaemic is 67%, underweight is 32% and stunted children is 36% in India.

Healthcare

- The share of central health expenditure in GDP went up from 0.25% in 2014-15 to 0.30% this year but it is too little in a post-COVID world.
- PM Matru Vandana Yojana (PMMVY)- Provides maternity benefits as a conditional cash transfer of Rs. 5,000 to women in the unorganised sector
- The PMMVY Budget is yet to cross Rs 3,000 crore against the need of Rs 14,000 crore.
- Out-of-pocket expenditure - India's out-of-pocket expenditure on health remains much higher than the global average, pushing millions into poverty each year.
- According to State of the World's Children report by UNICEF, India has the lowest vaccination rates in South Asia.

Education

- School education - As a share of GDP, central expenditure on school education (primary and secondary) has steadily declined from 0.37% in 2014-15 to 0.23% 2023-24.

Working class

- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) - Guarantees 100 days of employment to every rural household
- Expenditure of MGNREGA as share of GDP went from 0.26% in 2014-15 to 0.20% in 2023-24.
- However, since 2020-21, NFSA and MGNREGA allocations have declined rapidly as a share of GDP.
- National Social Assistance Programme (NSAP)- Provides pensions to elderly, widows, and disabled individuals below the poverty line and monetary assistance to families that have lost a breadwinner.
- Expenditure on NSAP as a share of GDP went down from 0.06% in 2014-15 to 0.03% in 2023-24.
- Real wages - Real wages of casual workers grew at less than 1% per year from 2014-15 to 2021-22 according to RBI data.

What are the impacts of reduced welfare expenditure?

- Major effects of reduced welfare expenditure includes
- Lower economic growth
- Lower rate of people coming out of poverty
- Low human development index
- Reduced economic activities
- Its result can be clearly seen in India's stagnant Human Development Index rank at 132 and rising malnutrition levels.

2. International Relations

2.1 Switzerland's Foreign Policy: Promoting Peace and Collaboration

Switzerland, known for its long-standing commitment to neutrality and diplomacy, has concluded its month-long presidency of the United Nations Security Council. Switzerland's historical experiences and its alignment with the principles of ahimsa (non-violence) make it a natural partner for India, a country rooted in similar values.

Switzerland's Historical Journey

- **Civil Wars (16th to 19th century):** Switzerland experienced a series of civil wars between Catholics and Protestants, lasting for up to 300 years. These conflicts ravaged the country and led to a moment of deep reflection.
- **The Swiss Confederation (1848):** The civil war of 1847 prompted the Swiss people to envision a more peaceful future. In 1848, the Swiss Confederation was established, creating inclusive federal institutions that aimed to build domestic peace.
- **League of Nations (1920):** Switzerland played a significant role in the establishment of the League of Nations, an international organization founded in Geneva after World War I. The League aimed to maintain peace and prevent future conflicts through collective security and diplomacy.
- **United Nations (1945):** Switzerland actively supported the founding of the United Nations, a global organization formed after World War II to promote international cooperation, peace, and security. The UN has since played a vital role in addressing global challenges and conflicts.

Priorities set by Switzerland during its UNSC presidency

- **Building Sustainable Peace:** Switzerland emphasized the importance of building sustainable peace in conflict-affected regions. Switzerland advocated for dialogue, trust-building, and diplomacy as essential tools to address the root causes of conflicts and promote lasting peace.
- **Protection of Civilians:** Recognizing the plight of civilians caught in armed conflicts, Switzerland focused on the protection of civilians as a critical aspect of its foreign policy agenda. This involved raising awareness about the challenges faced by civilians in conflict zones and urging the international community to take concrete measures to safeguard their rights and well-being.
- **Humanitarian Action:** Switzerland placed significant importance on humanitarian action during its UNSC presidency. It sought to mobilize support and resources for humanitarian assistance in areas affected by armed conflict, ensuring the provision of critical aid to vulnerable populations, including access to food, shelter, healthcare, and education.
- **Promotion of Multilateralism:** As a strong advocate for multilateralism, Switzerland prioritized the promotion of international cooperation and collaboration. Switzerland aimed to foster dialogue and consensus-building among Security Council members to effectively address pressing global issues and work towards shared solutions.

Switzerland's Foreign Policy alignment with India's Principles

- **Non-Violence (Ahimsa):** Switzerland and India both emphasize the principle of non-violence (ahimsa) in their foreign policy outlook. Switzerland's commitment to peace promotion and the protection of civilians in zones of armed conflict resonates with India's longstanding belief in non-violence as a means to resolve conflicts and maintain harmonious relations.
- **Shared Historical Legacies:** Switzerland's historical struggles with civil wars and subsequent efforts to establish inclusive federal institutions for domestic peace parallel India's own historical journey toward independence and the construction of an inclusive democratic system.
- **Value of Diplomacy:** Switzerland's role as a neutral and diplomatic hub and India's long-standing commitment to diplomatic engagements underline the significance of dialogue, negotiation, and consensus-building in addressing global challenges and conflicts.
- **International Cooperation:** Switzerland actively engages in international organizations and initiatives, such as the United Nations, while India's active participation in multilateral platforms like the United

Nations and the G20 underscores its commitment to international cooperation. Both countries value multilateralism and collaborative efforts to address shared challenges.

- Promotion of Peace: Switzerland's focus on building sustainable peace and protecting civilians in conflict zones aligns with India's commitment to peace promotion and conflict resolution. Both countries prioritize peaceful means of resolving disputes and work towards creating a peaceful and secure world.

2.2 ASEAN India maritime exercise (AIME-2023)

Indian Naval Ships Satpura and Delhi arrived at Singapore to participate in the Inaugural ASEAN India Maritime Exercise (AIME-2023)

Salient features

- The AIME-2023, scheduled to be held in two phases.
- The Harbor Phase of the exercise is scheduled to be held at Changi Naval Base and the Sea Phase will be conducted in the South China Sea.
- The exercise will provide an opportunity for Indian Navy and ASEAN navies to work closely and conduct seamless operations in the maritime domain.
- The ships, during their port call at Singapore, will also participate in the International Maritime Defence Exhibition (IMDEX-23) and International Maritime Security Conference being hosted by Singapore.
- INS Delhi, India's first indigenously-built guided missile destroyer.
- INS Satpura, an indigenously-built guided missile stealth frigate are a part of Indian Navy's Eastern Fleet based at Visakhapatnam.

2.3 Global Buddhist Summit 2023

Why in news?

The recently concluded global Buddhist summit could leverage India's soft power to connect the Buddhist population around the world.

What are the significance of the summit?

- Shakyamuni Buddha - The prime vision of the Summit is to look into the teachings of the Shakyamuni Buddha.
- Buddhist diplomacy efforts - The summit could be a good push to the foreign soft power diplomacy.
- Buddhist culture and heritage - The Indian government hopes to demonstrate its commitment to preserving and promoting Buddhist culture and heritage by conducting such event.
- Four themes - The discussion during the summit revolves around
 - Buddha Dhamma and Peace,
 - Buddha Dhamma: Environmental Crisis, Health and Sustainability,
 - Preservation of Nalanda Buddhist Tradition,
 - Buddha Dhamma Pilgrimage, Living heritage and Buddha Relics.
- 173 international participants - Comprising 84 Sangha member and 151 Indian delegates comprising 46 Sangha members, 40 nuns and 65 laity from outside Delhi.
- Resolve Buddhist issues - India is well-positioned to play a leading role in shaping the discourse around Buddhist issues on the global stage.
- Foreign policy - The Pancharit principles includes Sanskriti Evam Sabhyata which means cultural and civilizational links, which were heightened in the summit.

What are the recent efforts taken?

- Buddhist tourist circuit - Promotes Buddhism via tourism.
- The circuit includes places such as Kapilvastu, Kaushambi, Sarnath, Sankisa, Sravasti, and Kushinagar.
- Buddhist culture and heritage - Global Buddhist summit promotes the Buddhist culture and heritage in

India.

- Shared Buddhist Heritage - An international conference of Shanghai Cooperation Organization (SCO) with focus on India's civilizational connect with the SCO nations.
- Press Information Bureau - Released a digital compilation of 20 speeches made by Modi that were important in understanding the rich connection between Prime Minister and Lord Buddha.
- The Buddhist summit's theme is Responses to Contemporary Challenges: Philosophy to Praxis.

What is the way forward?

- The Indian Council for Cultural Relations (ICCR) could play a significant role in promoting such summit.
- Like china, India must use Buddhist diplomacy to engage with its neighboring countries effectively.
- India must use the Bollywood to promote the Buddhist heritage.
- India's G-20 presidency this year could be used to promote Buddhist diplomacy on a bigger scale.

2.4 WHO Report on Preterm Births

Why in news?

World Health Organization (WHO) has released the "Born Too Soon: Decade of Action on Preterm Birth" report highlighting the urgent need to address the preterm births.

What is preterm birth?

- Preterm babies - Babies born alive before 37 weeks of pregnancy are completed.
- Subcategories of preterm births
- Extremely preterm - less than 28 weeks
- Very preterm - 28 to less than 32 weeks
- Moderate to late preterm - 32 to 37 weeks

Reasons for preterm births

- Spontaneously
- Medical reasons – Infection, chronic conditions such as diabetes and high blood pressure, pregnancy complications that require early induction of labour or caesarean birth
- Other reasons - Multiple pregnancies
- There could also be a genetic influence
- Preterm birth is the 4th leading cause of loss of human capital worldwide, at all ages.

What are the key findings of the report?

- Preterm birth – It is the single largest killer of children under five years of age.
- Worldwide, 1 in 10 babies is born preterm (<37 weeks gestation).
- The global preterm birth rate was 9.9% in 2020, compared to 9.8% in 2010.
- Neonatal disorders- They are the leading cause of burden of disease.
- Inequalities - 9 in 10 extremely preterm babies survive in high-income countries but less than 1 in 10 survive in low-income countries.
- Regional disparity - Preterm birth rates vary between regions, the highest occurring in Southern Asia (13.2%) and sub-Saharan Africa (10.1%).
- In 2020, Bangladesh had the highest estimated preterm birth rate (16.2%), while India ranks first in terms of preterm birth numbers.
- Threat for vulnerable women and babies - The "4 Cs" – Conflict, Climate change, COVID-19 and the Cost-of-living crisis.
- Covid19 pandemic - Maternal Covid-19 infection may directly affect the foetus through pathways of viral transmission from mother to baby.

What are the impacts of the preterm births?

- Child mortality - It is the leading cause of child mortality worldwide, accounting for nearly 1 in 5 deaths of children under five years of age.
- Loss of human capital - Preterm birth is the 4th leading cause of loss of human capital worldwide, at all ages, behind ischemic heart disease, pneumonia and diarrheal disease.
- Health concern - Preterm birth damages respiratory and cardiac systems in long term for many survivors.
- Neurodevelopmental problems - Babies born between 37 and 39.9 weeks are at a slightly higher risk of adverse neurodevelopmental outcomes.
- Learning and behavioral disorders - Even a few weeks preterm can cause learning and behavioral disorders.
- Adult survivors - Adult survivors of preterm births face increased risks of chronic disorders, including psychiatric and cardiovascular disorders.
- SDG Target 3.2 aims to end preventable deaths of newborns and children under 5 years of age by 2030

What is the way forward?

- The quality care of the babies should be ensured to improve child health and reduce the preterm births.
- Every women should have access to quality health care.
- WHO's antenatal care guidelines should to made aware to everyone.

2.5 Global Credit Rating Agencies

Why in news?

Recently Fitch, a global rating agency accorded "BBB" ratings to India's sovereign rating.

What is credit rating agency?

- A credit rating agency is an agency that assess the creditworthiness of organisation, individual or entity and assign ratings to it.
- In India, CRAs are regulated by SEBI (Credit Rating Agencies) Regulations, 1999 of the Securities and Exchange Board of India Act, 1992.
- The global credit rating industry is highly concentrated, with 3 agencies - Moody's, Standard & Poor's, and Fitch.

What is sovereign credit rating?

- A sovereign credit rating is an independent assessment of the creditworthiness of a country or sovereign entity.
- By allowing external credit rating agencies to review its economy, a country shows that it is willing to make its financial information public to investors.

The factors that determine the sovereign credit rating of a country include:

- Per capita income
- GDP growth
- Rate of inflation
- External debt
- Economic development
- History of defaults
- A country with high credit ratings can access funds easily from the international bond market and also secure foreign direct investment.
- credit-rating-agencies

What is the sovereign credit rating of India?

- India's Rating - All three global rating agencies accorded lowest investment grade rating in India.
- Rating agency Fitch affirmed India's sovereign rating at "BBB-" with a stable outlook on robust growth

and resilient external finances.

- BBB ratings – It indicates that expectations of default risk are currently low.
- The capacity for payment of financial commitments is considered adequate, but adverse business or economic conditions are more likely to impair this capacity.
- Reasons for low rating - India is expected to face headwinds from elevated inflation, high-interest rates and subdued global demand.
- Other concerns include low labour force participation rates and an uneven reform implementation.
- The fiscal consolidation path, under which the fiscal deficit is to be brought down to 4.5 % of GDP by 2025-26, remains challenging.
- Public finance remains weak while structural indicators are lagging.

What are the positive signs of growth in India?

- Low forex risk - Since all debt is exclusively in rupees and even participation of FPIs is in rupee bonds the forex risk is very low.
- So forex situation in India remains strong.
- Financial growth - The projected financial growth is 7% for the year 2023 which is quite impressive compared with rest of the countries.
- India's response during COVID - The approach was more through the reform and policy route than fiscal deficits in the form of payouts, which was followed by developed countries.
- Banking system – It has as rebounded well to pandemic period levels indicating it can provide funds that enable the economy to move on to a higher growth path.
- RBI - Ensured a smoother path to normalcy compared with central banks of other nations in after math of the COVID (RBI moved the interest rates without any significant impact on growth)
- Rupee-Dollar - Even though the dollar appreciated, the rupee always remained at the median level of depreciation compared with dollar and other currencies.
- Quality of government spending - Budget has increased the share of capital expenditure from around 12-13 % pre-pandemic to 22 % for FY24.
- Rupee trade agreement with Russia - The strategy to go-domestic is a unique model even though may be slow and time taking.
- Digitization - The digitization drive has brought about structural changes in the economy making systems more efficient.

What lies ahead?

- The rating methodologies need to adapt with the changing times.
- Global credit rating agencies have to do away with the fixed mindset policy where it is believed that emerging markets can never really move up the scale.

2.6 Indo-Pacific Economic Framework for Prosperity (IPEF)

Why in news?

There are apprehensions that the U.S.-driven Indo-Pacific Economic Framework for Prosperity (IPEF) would result in a complete stranglehold over the economic systems of the participating countries.

What is IPEF?

- The 14 IPEF partners represent 40 % of global GDP and 28 % of global goods and services trade.
- Launch - IPEF is launched by by USA in 2022 to reassert U.S. economic engagement and to provide a U.S.-led alternative to China's economic statecraft in the region.
- Member countries – 14 – USA, Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, and Vietnam excluding China.
- Aim - To contribute to cooperation, stability, prosperity, development, and peace within the region.
- No tariffs - IPEF proposal completely removes the tariff element of typical trade deals.

Four pillars

- Trade
- Supply chains
- Clean energy, decarbonization, and infrastructure
- Tax and anti-corruption

The IPEF is flexible as IPEF partners are not required to join all four pillars.

What is the India's position in IPEF?

- India has joined 3 pillars except the trade pillar.
- Since India is in the process of firming up its own digital framework and laws, regarding privacy and data, India will wait for the final outlines to emerge.
- India expects that certain responsibilities of the developed world should also be an integral part of any such agreement.
- India has also few concerns about environment, labor, digital trade and public procurement.
- In 2019, India walked out from the Regional Comprehensive Economic Partnership (RCEP) involving China, Japan, South Korea, Australia, New Zealand and the 10-state Association of Southeast Asian Nations (ASEAN) grouping.

What are the concerns in joining the IPEF?

- There is great pressure on India to join the trade pillar, but the other pillars also contribute to developing hard new economic architectures and structures that are not tariff-based.
- In the long run, it could have a stronger effect on economic and trade flows than tariffs.
- In an increasingly digitalising world, fixed supply chains and giving up policy spaces in key areas would lead to an irreversible economic dependency.
- The IPEF can already be seen to have deep implications in
- Agriculture, in terms of genetically modified seeds and food,
- Surrendering policy space for regulating Big Tech,
- Compromising a comparative advantage in manufacturing because of unfair labour and environment standards.
- It will also seriously affect India's ability to create a vibrant domestic ecosystem in emerging areas such as a digital economy and green products.

Quick facts

- Regional Comprehensive Economic Partnership (RCEP)
- RCEP is a comprehensive free trade agreement being negotiated between the 10 ASEAN Member States and ASEAN's free trade agreement (FTA) partners.
- The ASEAN's FTA partners include Australia, China, India, Japan, Korea and New Zealand.
- The 15 member countries account for about 30% of the world's population and 30% of global GDP, making it the largest trade bloc in history.
- RCEP is the first free trade agreement among the largest economies in Asia, including China, Indonesia, Japan, and South Korea.

2.7 The Internationalization of the Rupee

Why in news?

The Reserve Bank of India (RBI) has put in place the mechanism for rupee trade settlement with as many as 18 countries.

What is internationalization of Rupee?

- Internationalization of the Rupee – It is the process of increased cross-border transactions involving the Indian currency.
- It corresponds to trade especially in import-export, current account transactions, and capital account

transactions.

- International settlement - This would enable the international settlement of trade in Indian rupees in foreign trades, as opposed to other currency including US dollars.
- The goal of internationalizing the rupee is to make it a more widely accepted currency in international trade and investment.

What are the benefits of internationalizing rupee?

- Mitigate exchange rate risk - Internationalization of the INR can lower transaction costs of cross-border trade and investment operations by mitigating exchange rate risk.
- Reduce risk – Eliminates the risk of exposure to currency volatility faced by Indian businesses.
- Exports becoming competitive - Reducing currency risk can reduce the cost of doing business and can hence help in making exports more competitive in the global market.
- Increased financial integration - Help to integrate the Indian financial system with the global financial system.
- This could lead to increased investment and economic growth.
- Reduced need for foreign exchange reserves - The need to maintain foreign exchange reserves can reduce if a sizeable share of India's trade can be settled in terms of the domestic currency.

What are the challenges to internationalize rupee?

- Process being complex - Rupee-trade arrangements have not been easy to implement.
- Tarde arrangement with Russia is not yet fully operational even after a year-long engagement between the two partner countries.
- Large trade deficit - With Russia would saddle Russia since with large rupee balances, it would have to find a way to use or invest.
- Small market - The Indian economy is not as large as some other economies, so there is less demand for the rupee in the global financial markets.
- Too much regulation - The Indian government has a number of controls on the rupee and these controls make it difficult for the rupee to be used as a global currency.
- Lack of liquidity - The Indian rupee is not as liquid as some other currencies, so it can be difficult to buy and sell large amounts of rupees.

What is the way forward?

- India should learn from China's Experience of China's success in internationalizing the renminbi (RMB) and it also had trade surplus across the world.
- Currency swap agreements and creation of offshore market should be enhanced.
- Considerable thinking and planning would be required to make it function in a manner that does not adversely affect the economy's fundamentals.
- Allow the settlement of foreign trade in rupees.
- Create special rupee-denominated bonds.
- Promote the use of the rupee in international payments.

2.8 Outcomes of G7 Summit

Why in news?

The recent G-7 summit in Hiroshima, Japan, aimed to send a message of global solidarity for peace discussing various key issues which was attended by Indian PM.

What is the G7 Summit?

- The Group of Seven (G7) is an informal group of leading industrialized nations.
- G7 consists of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
- This year is Japan's turn to host, but the presidency of G-7 summits revolves among the seven members.
- As is customary in recent years, leaders from some non-G-7 countries and international organizations will

also participate in some sessions as India did in this year.

- The first summit was in 1975, hosted by France what was then a Group of Six meeting to discuss tackling a recession that followed an Arab oil crisis of 1973.
- Canada became the 7th member.
- Russia joined to form the G8 in 1998 but was expelled after Moscow's 2014 annexation of Crimea.
- The leaders discuss a wide range of issues, including economic policy, security, climate change, energy and gender.

What are the outcomes of the G7 summit?

- Hiroshima Vision Statement on Nuclear Disarmament - Commitment to achieving a world without nuclear weapons with undiminished security for all through taking a realistic, pragmatic, and responsible approach.
- They are also expected to discuss ways to strengthen international cooperation to prevent the spread of nuclear weapons.
- Support for Ukraine - G7 leaders reaffirmed their commitment to supporting Ukraine by providing additional military and financial assistance in its war against Russia.
- Announced new sanctions against Russia, including a ban on the import of Russian gold.
- De-risking not decoupling from China - Countering China's economic coercion. Pledged to work together to promote fair and open trade.
- Addressing the global food crisis - New initiative to provide \$5 billion in food assistance to countries that are most affected by the crisis.
- To increase food production and to reduce food waste.
- Investing in clean energy and infrastructure - Invest USD 600 billion in clean energy and infrastructure over the next five years.
- To make clean energy more affordable and accessible.
- Compensating for the developed world's contribution to global warming and greenhouse gas emissions.
- Protecting human rights and democracy - Reaffirmed their commitment to protecting human rights and democracy around the world.
- To provide humanitarian assistance to the Afghan people.
- Condemned the human rights abuses in China, Russia, and other countries.
- The global health crisis - Discussed about the global health crisis and to discuss ways to strengthen the global health system.

What is De-risking vs decoupling strategy against China?

- De-risking is the phenomenon of financial institutions terminating or restricting business relationships with clients or categories of clients to avoid, rather than manage, risk.
- De-risking is to move business away from areas that are considered risky in terms of the returns they could generate.
- Back in 2016, the World Bank had said that global financial institutions were increasingly terminating or restricting business relationships with smaller local banks in some regions in order to de-risk, as it is often perceived that such banks would not be able to pay back loans.
- In the context of China, de-risking can be interpreted as a reduction of the reliance on China in the economic sphere.

What is the 10-point action plan PM Modi gave at G7?

- While addressing an outreach session in the presence of G7 leaders, PM Modi gave a 10-point action plan to address food, health, and development-related problems currently facing the world.
- Inclusive food systems that protect the most vulnerable - The need for developing an inclusive food system that targets the most vulnerable population across the globe, especially marginal farmers.
- Depoliticise global fertiliser supply chains - Without naming any country, PM Modi called for checking the expansionist mentality surrounding fertiliser resources.
- He further said that there is a need to remove political obstacles in strengthening the global fertilizer

supply chains.

- Develop an alternative model to fertilizers - Highlighting the importance of natural farming, PM Modi gave a call to reduce reliance on fertilizers.
- Stop food wastage to strengthen food security - The need to prevent the wastage of food should be our collective responsibility to check wastage for a sustainable global food security.
- Development models inspired by the needs of Global South - PM Modi also pitched for democratizing technology to bridge the gap between development and democracy.
- He pitched for a development model that facilitates developing countries rather than creating hindrances for them.
- Promote holistic healthcare - PM Modi in his 10-points included the need to adopt a holistic approach towards healthcare that includes the traditional systems of medicine.
- Adopting Millet - PM Modi discussed how millets simultaneously address the challenges of nutrition, climate change, water conservation and food security.
- He made a case for promoting more awareness around the benefits of adopting millets.
- Resilient healthcare systems - PM Modi also raised the importance of developing a resilient healthcare system globally in his 10-point action plan.
- Promote digital healthcare - PM Modi also emphasised on the need to promote and facilitate digital healthcare to ensure universal health coverage globally.
- Ensure mobility of healthcare professionals - Along with holistic healthcare development and the need for digital healthcare, PM Modi also pitched for better mobility for healthcare professionals to improve access to healthcare globally.

What is the way forward?

- If the G7 grouping wishes to broaden its prism and it must recognize that it is grossly unrepresentative of the world today.
- The G7 summit must propose concrete measures to help defray these responsibilities.
- The G7 grouping should work towards a more inclusive outlook and help in building a more comprehensive global consensus on some of the bigger challenges the world faces today.

2.9 Forum for India-Pacific Islands Cooperation (FIPIC)

Why in news?

The Prime Minister attended the 3rd summit of Forum for India-Pacific Islands Cooperation (FIPIC) was held in Papua New Guinea.

What is forum for India-Pacific Islands Cooperation (FIPIC)?

- Multinational grouping - Forum for India-Pacific Islands cooperation (FIPIC) is a multinational grouping developed in 2014 for cooperation between India and 14 Pacific Islands.
- 14 Pacific Islands nations - Include Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Samoa, Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu and Vanuatu.
- Fiji - All Head of state/head of government of the above countries met in Suva, Fiji in November 2014 for the first time where the annual summit was conceptualized.
- Exclusive economic zones (EEZs) - Since many have large exclusive economic zones (EEZs) it offers promising possibilities for fruitful cooperation with India.
- Strategic and commercial interests in Indian Ocean - India's focus has largely been on the Indian Ocean where it has sought to play a major role and protect its strategic and commercial interests.
- Business Accelerator for Forum for India - Pacific Islands cooperation (FIPIC) - An initiative to strengthen the India ties with pacific nation countries.
- Free and open Indo-Pacific - PM Modi underlines importance of free and open Indo-Pacific at FIPIC summit in Papua New Guinea.

What is Oceania?

- Oceania is a region made up of thousands of islands throughout the Central and South Pacific Ocean.
- It includes Australia, the smallest continent in terms of total land area.
- Oceania has traditionally been divided into four parts which are Australasia (Australia and New Zealand), Melanesia, Micronesia, and Polynesia.
- The marine environment is an important and influential physical region in Australia and Oceania.

FIPIC 2023

What is Free and Open Indo-Pacific (FOIP)?

- Freedom of navigation - It is a vision for the region that is based on the principles of freedom of navigation, the rule of law, and respect for sovereignty.
- China's rise - The FOIP is seen by many as a way to counter China's growing assertiveness in the region.
- Supporting countries - The FOIP is supported by a number of countries, including the United States, Japan, Australia and India.
- Maintaining peace and stability - The supporting countries believe that the FOIP will help to promote economic growth, prosperity, maintain peace and stability in the region.
- China's opposition - China has been critical of the FOIP, arguing that it is a thinly veiled attempt to contain China's rise.

What are the significance of India-Papu New Guinea relations?

- Modi is the first Indian prime minister to visit the country.
- Can strengthen India stands in the forum for India-Pacific Islands Cooperation.
- Can be vital to counter the china's growing presence in the region.
- Launch of Tamil classic 'Thirukkural' to the Tok Pisin language of Papua New Guinea give impetus to cultural exchange relationship.

2.10 India & South Pacific

Why in news?

The visit of the Indian PM to south pacific region, reflects India's global status, and its significance of its engagement with Pacific Island Countries (PICs) and the Forum for India-Pacific Islands Cooperation (FIPIC).

What are the PICs?

- PICs is a cluster of 14 island nations dotting the Southwestern Pacific: the Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Nauru, Niue, Samoa, the Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu, and Vanuatu.
- All these islands are located at the crossroads of strategically important maritime trade corridors.
- Of the 14 PICs, Fiji and Papua New Guinea (PNG) are the ones with the biggest populations and the most heft.

What is the relationship between India with Fiji and PNG?

- India's interaction with the PICs has traditionally focused on its engagement with Fiji and PNG, mainly due to the presence of a large diaspora.
- About 37% of Fiji's 849,000 population (2009 estimates) is of Indian origin, and about 3,000 Indians live in PNG.

What is the relationship between India and Pacific Island Countries (PICs)?

- Fiji and Papua New Guinea - India's interaction with the PICs has traditionally focused on its engagement with Fiji and PNG, mainly due to the presence of a large diaspora.
- India's Act East Policy - Indian officials say the engagement with the 14 PICs is part of India's Act East Policy.
- Strengthen India's engagement - The visit aimed to strengthen India's engagement with the Pacific Island

Countries (PICs) and the Forum for India-Pacific Islands Cooperation (FIPIC).

- Reassuring presence - India aimed to establish a reassuring presence in the region that is not solely based on financial assistance.
- Global South - India to amplify the voice of global south in international forums.
- South-South cooperation - India's engagement with the PICs includes development assistance through South-South Cooperation.
- This assistance takes the form of capacity building, training, scholarships, grants, and loans.
- Community development projects, such as solar electrification, supply of agricultural equipment, and infrastructure development, are also part of India's engagement.
- Climate Change and Resilience - India's initiatives such as International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI) complement its relationship with the PICs.
- Reliable Partner - Recent visit by Prime Minister Modi has emphasized India's role as a reliable partner to the PICs.
- FIPIC - Prime Minister Modi attended FIPIC which was held at Papua New Guinea.
- Humanitarian Assistance and Disaster Relief (HADR) - Provided by India to PICs during critical times which includes supply of covid-19 vaccines.
- India aims to be a development partner based on mutual respect and aligned with the priorities of the PICs.

What is the status of China in Pacific Island Countries (PICs)?

- China has made forays into the Pacific Islands through economic incentives and has sought to boost its security relationship with the island states.
- There is an increasing rivalry between China and the US and its allies in the region.
- China's increasing presence in the region has unnerved the US and has caused alarm in Australia and New Zealand.
- China's development support peaked in 2016, and its loans and grants amounted to 8% of all foreign aid to the area between 2011 and 2017, surpassing the US's 0.3% over the same period.

3. Economy

3.1 Global Benchmark Interest Rates

Why in news?

Financial institutions are yet to facilitate an absolute transition away from the London Interbank Offered Rate (LIBOR) benchmark.

What is London Interbank Offered Rate (LIBOR) benchmark?

- Transparency - LIBOR was created in the 1970s as a way to provide a more transparent and efficient way to set interest rates.
- Global benchmark interest rate - LIBOR or London Interbank Offered Rate is a global benchmark interest rate.
- Estimated interest rate - LIBOR is calculated daily based on the estimated interest rates at which banks can borrow unsecured funds from other banks in the London wholesale or interbank market.
- Reference rate - LIBOR is used as a reference rate for a wide range of financial products including floating-rate loans, derivatives, and securities.

What are the issues associated with LIBOR?

- Central flaw - LIBOR relies heavily on banks to be honest with their reporting disregarding their commercial interests.
- Manipulation by banks - The manipulation was particularly on display during the 2008 financial crisis when submissions were artificially lowered.
- In 2012 it was also revealed that some banks had been manipulating LIBOR rates in order to profit from their own trading positions.
- Phase out - In 2021 the UK's Financial Conduct Authority (FCA) announced that it would be phasing out LIBOR by the end of 2023.
- Concerns in India - RBI stated that both LIBOR and MIFOR would cease to be a representative benchmark from June 30 2023.
- The interbank market is an informal market where banks borrow from and lend to each other with established internal limits based on an institution's risk appetite.

What are the alternates to LIBOR?

- Secured Overnight Financing Rate (SOFR) - Is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities.
- In 2017 the U.S. Federal Reserve that SOFR as a preferred alternative to LIBOR.
- Mumbai Interbank Forward Offer Rate (MIFOR) - Is the rate that Indian banks use as a benchmark for setting prices on forward-rate agreements and derivatives.
- MIFOR is a mix of the London Interbank Offered Rate and a forward premium derived from Indian forex markets.
- RBI issued an advisory in mid-2021 encouraging all national banks to stop using MIFOR for new contracts by the end of 2021 as a result of the plan to phase out LIBOR.
- Modified Mumbai Interbank Forward Outright Rate (MMIFOR) – It would be used to adjust SOFR among other components.
- SOFR and MMIFOR - In India new transactions were to be undertaken using the SOFR and the Modified Mumbai Interbank Forward Outright Rate (MMIFOR), replacing MIFOR.
- It is based on observable repo rates, or the cost of borrowing cash overnight, which is collateralized by U.S. Treasury securities.
- This would make it potentially less prone to market manipulation.

What are the challenges faced by the banks?

- Indian Banks' Association said that there were many products linked to LIBOR which had to be redesigned

with an alternate reference rate (ARR) as the base.

- Challenges related to technology and legal aspects (such as handling of legacy contracts, modification of contracts with the counter parties/interbank as well as borrowers).
- Banks have to intimate the customers about the transition, insertion of fallback clause in the contracts, assessment of the impact on their P&L, changes in the technology platform and so on.
- Some banks and financial institutions were yet to facilitate an absolute transition away from the London Interbank Offered Rate (LIBOR) benchmark due to fallback clauses.

Quick facts

International Finance Corporation (IFC)

- IFC was founded in 1956 with a key objective that the private sector has the potential to transform developing countries.
- IFC is a member of the World Bank Group, advances economic development and improves the lives of people by encouraging the growth of the private sector in developing countries.
- IFC is the largest global development institution focused on the private sector in developing countries.

3.2 India's Toy Industry: Unravelling the Recent Export Surge

India's toy industry has witnessed a remarkable turnaround in recent years, transitioning from being a net importer to becoming a net exporter during 2020-21 and 2021-22. The credit for this achievement is often attributed to the Make in India initiative launched in 2014 and related policies. However, it is crucial to examine whether this surge represents sustained industrial growth or is a temporary outcome of protectionist measures.

- The import-export dynamic of India's toy industry
- Historical Imbalance: Historically, India's toy industry has been characterized by a significant imbalance, with imports dominating the market. Imports accounted for a substantial share of domestic toy sales, often reaching up to 80% of the market.
- Recent Shift: In recent years, there has been a notable shift in the import-export dynamic. Between 2018-19 and 2021-22, toy exports from India have seen significant growth, increasing from \$109 million (₹812 crore) to \$177 million (₹1,237 crore). At the same time, toy imports have declined from \$371 million (₹2,593 crore) to \$110 million (₹819 crore), according to official data.
- Factors Driving the Shift: Several factors have contributed to this shift. The "Make in India" initiative launched in 2014, aimed at promoting domestic manufacturing and boosting exports, has played a crucial role. Additionally, policy measures such as higher import duties and non-tariff barriers have influenced the decline in toy imports.
- Positive Transformation: The shift in the import-export dynamic represents a positive transformation for the Indian toy industry. It signifies improved manufacturing capabilities, enhanced competitiveness, and the ability to meet domestic and international demand through domestic production and exports.
- Small Global Share: Despite the positive shift, India's share in the global toy trade remains relatively small, representing only a fraction of the overall market. There is still room for further growth and expansion to increase market share and global competitiveness.
- Key Considerations: Monitoring and nurturing the import-export dynamic is crucial for sustaining this positive trend. Factors such as policy support, investment in research and development, innovation, quality improvement, and adherence to international standards will play essential roles in strengthening India's position as an exporter of toys.
- Opportunities and Challenges: The evolving import-export dynamic of the toy industry presents both opportunities and challenges. Continued efforts to foster domestic manufacturing, promote innovation, enhance product quality, and implement export-oriented policies will be critical for sustained growth and competitiveness in the global market
- The impact of reforms and the 'Make in India' initiative on India's toy industry
- Increased Focus on Domestic Manufacturing: 'Make in India' aimed to promote domestic manufacturing and reduce dependence on imports. It led to a renewed focus on developing and enhancing the manufacturing capabilities of the toy industry in India.

- **Policy Reforms:** Reforms such as the abolition of the reservation policy and the introduction of ease of doing business measures created a more favorable environment for businesses, including toy manufacturers, to operate and invest in India.
- **Boost to Organized Sector:** The entry of new firms into the organized sector following the abolition of the reservation policy contributed to improved productivity growth. It allowed for the formalization of the industry and attracted investments.
- **Increased Customs Duties:** As part of the protectionist measures, the basic custom duty on toys was tripled from 20% to 60% in February 2020. This increase in import duties aimed to discourage toy imports and promote domestic production.
- **Non-tariff Barriers:** Along with higher import duties, the imposition of non-tariff barriers such as production registration orders and safety regulation codes contributed to a contraction in toy imports, further supporting the domestic toy industry.
- **Critique on Sustainable Improvements or Protectionist Measures**
- **Lack of Long-term Evidence:** The shift from being a net importer to a net exporter has occurred in just a few years, and it may be premature to conclude that these improvements are sustainable in the long run. A more extended period of consistent growth and performance would provide a stronger basis for claiming sustainable improvements.
- **Dependency on Protectionist Measures:** Relying solely on protectionism can create artificial market conditions and hinder the industry's ability to compete globally on its merits. Sustainable improvements should be based on factors like innovation, productivity, and competitiveness rather than protectionism.
- **Short-term Solution:** Protectionist measures, such as higher import duties and non-tariff barriers, may provide temporary relief to domestic industries by limiting imports. However, they often fail to address the underlying challenges and structural issues within the industry.

Way ahead

- **Comprehensive Policy Framework:** Develop a comprehensive policy framework specifically tailored to the needs of the toy industry. This framework should address issues related to infrastructure development, access to finance, technology upgradation, skill development, and innovation support.
- **Encouraging Investment:** Encourage both domestic and foreign investment in the toy industry by providing incentives, tax breaks, and streamlined procedures for setting up manufacturing units.
- **Enhancing Competitiveness:** Focus on improving the competitiveness of Indian toy manufacturers through measures such as improving quality standards, promoting design capabilities, and fostering innovation.
- **Skill Development and Training:** Implement skill development programs to enhance the capabilities of the workforce engaged in the toy industry.
- **Strengthening Industry-Academia Collaboration:** Foster collaboration between industry players and academic institutions to promote research and development activities, knowledge exchange, and skill development.
- **Export Promotion:** Actively promote Indian-made toys in international markets through trade fairs, exhibitions, and targeted marketing campaigns. Develop export-oriented strategies to tap into global demand and establish India as a reliable and competitive toy manufacturing hub.
- **Supporting MSMEs:** Provide specific support and incentives to micro, small, and medium-sized enterprises (MSMEs) in the toy industry. This can include access to finance, technology support, marketing assistance, and capacity-building programs to enhance their competitiveness and contribute to the growth of the sector.

3.3 Open Network for Digital Commerce (ONDC)

Why in news?

After the revolution of Unified Payments Interface (UPI), the Open Network for Digital Commerce (ONDC) is set to break new ground in India's digital commerce ecosystem.

What is Open Network for Digital Commerce (ONDC)?

- ONDC – It is a network based on open protocol and will enable local commerce across segments (mobility, grocery, food order, hotel booking, etc.) to be engaged by any network-enabled application.
- Initiative of - It is an initiative of Department for Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry.
- ONDC entity – It is a not-for-profit company incorporated under Section 8 of the Companies Act 2013 that manages and operates the ONDC Network.
- Founding members - Quality Council of India and Protean eGov Technologies Limited.
- Funding - Multiple investors includes private and public sector banks, depositories, development banks, and other financial institutions.
- Aim - To dramatically increase e-commerce penetration in the country by enabling inclusion of all types and sizes of sellers.
- ONDC goes beyond the current platform-centric digital commerce model where the buyer and seller have to use the same platform or application to be digitally visible and do a business transaction.
- The government has set up a 9-member advisory council, including Nandan Nilekani and National Health Authority CEO R S Sharma, on measures needed to design and accelerate the adoption of ONDC.

What are the key features of ONDC?

- Backed by government - It is backed by government to create a more open and inclusive digital commerce ecosystem in India.
- Data storage - Through ONDC, merchants will be able to save their data to build credit history and reach consumers.
- Compliance - The platform will be compliant with the Information Technology Act, 2000 and the emerging Personal Data Protection Bill.
- Independence - It aims at promoting open networks developed on open-sourced methodology, using open specifications and open network protocols independent of any specific platform.
- Privacy - ONDC shall take all measures to ensure confidentiality and privacy of data in the network.
- Confidentiality - It shall not mandate sharing of any transaction-level data by participants with ONDC.
- User Council - A User Council will be established, comprising representatives from Network Participants and civil society.
- It will provide regular guidance on various aspects of the network's functioning and governance, serving as a link between Network Participants, Consumers, and the network.

What are the advantages of ONDC?

For businesses

- Level playing field – It aims to curb digital monopolies of few e-commerce platforms and create a more level playing field for businesses of all sizes.
- Benefits to small businesses – It will support micro, small and medium enterprises and small traders in getting on online platforms.
- Innovation - It will empower merchants and consumers by breaking silos to form a single network to drive innovation.
- Sellers - The network-centric approach of ONDC reduces the skewed bargaining power in favour of the platforms, which often results in higher entry barriers and lower margins for sellers.
- Economic development – It will help to boost the Indian economy by creating new jobs and businesses.

For consumers

- Inclusive - ONDC is expected to make e-Commerce more inclusive and accessible for consumers.
- Freedom of choice - Consumers can discover any seller, product or service by using any compatible application or platform, thus increasing freedom of choice for consumers.
- Greater transparency – It requires all sellers to publish their prices and other information, which would make it easier for buyers to compare offers.
- Lower costs – It would streamline the process of buying and selling goods online, which could lead to faster delivery times and lower costs.

- Preferring local business - It will enable the consumers to match demand with the nearest available supply and gives consumers the liberty to choose their preferred local businesses.
- Value enhancement - ONDC would standardize operations, promote inclusion of local suppliers, drive efficiencies in logistics and lead to enhancement of value for consumers.

What are the challenges of ONDC?

- Lack of awareness
- Technical challenges
- Regulatory challenges
- Lack of consensus among e-commerce companies
- It is still in a nascent stage

3.4 New PMLA Rules

Why in news?

Finance Ministry brought chartered accountants, company secretaries, and cost and works accountants under the ambit of the money laundering law.

What were the changes made to prevention of money laundering act 2002?

- Section 2(1) (sa) of PMLA, 2002 - The recent changes are made under this section of PMLA.
- This section already includes Gaming activity, Registration Authority, Real Estate Agents, Dealer in precious metals and stones.
- Politically exposed persons (PEPs) - Defined PEPs under PMLA as individuals who have been “entrusted with prominent public functions by a foreign country.
- It also includes heads of States or Governments, senior politicians, senior government or judicial or military officers, senior executives of state-owned corporations and important political party officials.
- Increased the ambit - Finance Ministry brought in practicing chartered accountants, company secretaries, and cost and works accountants carrying out financial transactions on behalf of their clients into the ambit of the money laundering law.

Financial transaction - Included are

- Buying and selling of any immovable property,
- Managing of client money, securities or other assets,
- Management of bank, savings or securities accounts,
- Organization of contributions for the creation, operation or management of companies,
- Creation, operation or management of companies, limited liability partnerships or trusts, and
- Buying and selling of business entities.
- Non-banking reporting entities - Are widened to allow 22 financial entities to verify the identity of their customers via Aadhaar under the ambit of the money laundering law.
- PMLA states that both the Adjudicating Authority and the Appellate Tribunal shall not be bound by the Code of Criminal Procedure, 1908 but by the principles of natural justice.

What is the need for the changes?

- Plug loopholes ahead of India’s proposed assessment later this year under the Financial Action Task Force (FATF).
- To bring uniformity in the definition of PEPs.
- To aid investigative agencies further in their probe against dubious transactions involving shell companies and money laundering.
- To address the Chinese loan app scams, in which professionals were actively involved in assisting to set up shell companies to act as a foil for the apps.

What is the way forward?

- Institute of Chartered Accountants of India (ICAI) will work with authorities and will conduct an awareness programme amongst its members for the implementation of the changes in PMLA 2002.
- Lawyers and legal consultants needs to be included in the PMLA act.
- Encompassing professionals under PMLA could also be a pre-cursor to India becoming a part of the Financial Action Task Force (FATF).

3.5 Lightweight Payment and Settlement System (LPSS)

RBI is planning to use the lightweight payment system for emergencies and as an alternative to UPI, NEFT, and RTGS.

- In its annual report 2023-23, RBI has mentioned conceptualising this new lightweight and portable payment system.
- The RBI has conceptualised a lightweight payment and settlements system, which it is calling a bunker.
- The bunker is an equivalent of digital payments, which can be operated from anywhere by a bare minimum staff in exigencies such as natural calamities or war.
- The lightweight and portable payment system is expected to operate on minimalistic hardware and software, and would be made active only on a need basis.
- The infrastructure for this system will be independent of the technologies that underlie the existing systems of payments such as UPI, NEFT, and RTGS.
- The system is expected to process transactions that are critical to ensure the stability of the economy, including government and market related transactions.
- The central bank has not offered a timeline for the launch of this payments system yet.
- The difference – Existing conventional payments systems such as RTGS, NEFT, and UPI are designed to handle large volumes of transactions while ensuring sustained availability.
- As a result, they are dependent on complex wired networks backed by advanced IT infrastructure.

3.6 US banking crisis, global slowdown and its impact on India

Why in news?

Sajjid Chinoy, Chief India Economist, JP Morgan, and part-time member, PMEAC spoke about the US banking crisis, global slowdown and its impact on India.

What are the differences between 2008 economic crisis and 2023 bank stress?

- The Economist pointed out few differences between the banking stress witnessed in March (2023) and that in 2008.
- The mid-sized US banks primarily faced a liquidity crisis in March 2023 whereas in 2008 the banks faced solvency concerned.
- The second difference between 2023 and 2008 is the sheer resilience of the global economy in 2023.

What is the US banking crisis?

- US Banks - The massive fiscal and monetary stimulus after COVID led to a huge surge in bank deposits.
- Banks invested much of these in government bonds to avoid credit risks.
- Meanwhile, the fiscal and monetary stimulus interacted with adverse supply shocks led to the highest global inflation in 50 years.
- To control inflation Central banks followed aggressive monetary tightening cycle.
- Consequently, the bond prices fell sharply and the US banks were left with 'unrealised bond losses'.
- Silicon Valley Bank - Wholesale depositors began to rapidly withdraw deposits to avoid losses, forcing the bank to realise the losses.
- The bank created a self-fulfilling deposit run and the central bank came to rescue.
- The central bank created expansive liquidity facilities and de facto insured all deposits creating moral

hazard for the medium term.

How resilient is the present economy?

- The global economy likely grew at 4% last quarter (2023).
- The pace at which global economy is accelerating in 2023 reflects the resilience of private sector balance sheets in advanced economies.
- Globally, banks are much better regulated and capitalised than they were in 2008.
- The central banks will now have to pursue two objectives to avoid any recession:
 - Contain inflation using interest rate policy while managing financial stability.

What are the impacts of US bank stress on India?

- Soft-landing - A soft landing is a cyclical slowdown in economic growth that avoids recession.
- Soft landing is unlikely in the US because it will necessitate sharp increase in wage inflation without noticeable rise in the unemployment rate.
- At some point the global economy will be forced to slow, to generate the needed disinflation, and that will impact India.
- There are multiple transmission channels from current global events to impact India.
- The channels are exports, commodity prices, capital flows, US bond yields on Indian bond yields, etc.

What is the impact of global slowdown on the Indian exports?

- Indian Exports - Software services and other IT-enabled services have shown dynamism.
- Increased digitalisation and work-from-home during the pandemic has increased offshoring and made services previously deemed non-tradeable into tradeable.
- The surge in service exports and the softening of commodity prices has also contributed to the dramatic compression of the current account deficit.
- Thus, exports have been key to India's recovery and a sharp global slowdown will slow down its recovery.

What are the natural hedges that India has?

- A natural hedge is a strategy that seeks to mitigate risk by investing in assets whose performance is negatively correlated through some intrinsic or natural mechanism.
- As a commodity importer, India benefits from several natural hedges
 - Oil prices - Oil prices are typically inversely correlated with the US dollar Index
 - When the dollar index strengthens, oil prices typically soften.
 - Due to this natural hedge, India gets adversely impacted on the capital account but favourably impacted on the current account.
- Imports-Exports - If there's a demand shock in the world and global growth slows, India's exports will be hit.
- As a commodity importer, India can benefit from improving 'terms of trade' when the commodity prices depress due to slow in global growth.
- Bond Yields - Decline in US bond yields in response to the banking crisis, pushed down bond yields around the world, including India.
- In India, and other emerging markets, financial conditions eased due to the fears of weaker US growth.

What are policy changes prescribed for India?

- Public investment should be pushed to mitigate slowing exports.
- Crowding in of states and PSU capital expenditures (capex).
- Keeping inflation under control, continuing with fiscal consolidation and building buffers.
- India should keep a very close eye on financial stability.

3.7 Legal remedies available to Gig Workers

Why in news?

The strikes by Blinkit workers has once again brought to the forefront the issues plaguing the gig economy in the country.

Who is a gig worker and what is platform work?

- Gig workers – It refers to workers outside the traditional employer-employee relationship.
- Gig economy – It falls outside the scope of traditional, full-time employment.
- There are two groups of gig workers, platform workers and non-platform workers.
- Platform workers – Those working for an organisation that provides specific services using an online platform directly to individuals/organisations.
- Non-platform workers – These include the construction workers and non-technology based temporary workers.
- Status of India – In India, employees are entitled to a host of benefits under statutes such as the:
- Minimum Wages Act, 1948
- Employees' Provident Fund and Miscellaneous Provisions Act, 1952 (EPFA)
- Payment of Bonus Act, 1965
- Contract Labourers – They are governed under the Contract Labour (Regulation and Abolition) Act, 1970 and are also entitled to benefits such as provident funds in accordance with the EPFA.

What is the proposed law for gig workers?

- National Commission on Labour – It recommended to consolidate central labour laws.
- Hence, the Ministry of Labour and Employment introduced the Code on Social Security, 2020 which brings workers within the ambit of labour laws for the first time.
- Social Security Schemes – The Code stipulates that Central and State Governments must frame suitable social security schemes for gig workers.
- The Code also mandates the compulsory registration of all gig workers to avail of benefits under these schemes.
- National Social Security Board – The Code also envisages the constitution of a National Social Security Board by the Central government to monitor the implementation of such schemes.

What are the concerns of the gig workers?

- Mixed nature – The unique nature of gig work display characteristics of both employees and independent contractors and thus do not squarely fit into any rigid categorisation.
- Little recognition – Out of the four new labour codes proposed, gig work finds reference only in the Code on Social Security.
- Excluded – Gig workers remain excluded from vital benefits and protections offered by other Codes such as minimum wages, occupational safety and health benefits, and overtime pay.
- No unions – They cannot create legally recognised unions and access a national minimum wage that applies to all forms of employment.
- No minimum wage – Even the proposed law does not guarantee minimum wages for gig workers.
- Redundancy – Minimum wages, which is presently governed by the Minimum Wages Act, will be subsumed under the Wages Code.
- The Wages Code again is only looking to protect those who fall under the traditional employer-employee relationship.
- No redressal mechanism – Gig workers are excluded from accessing the redressal mechanism under the Industrial Disputes Act, 1947.

Can judicial intervention be expected?

- Fundamental Rights – The exclusion of gig workers from the category of unorganised workers is violative of their fundamental rights under Articles 14 and 21 of the Constitution.
- Forced labour – Denial of social benefits amounts to exploitation through forced labour, within the

meaning of Article 23.

What have international courts held?

- UK – The UK Supreme Court classified Uber drivers as workers under the UK Employment Rights Act 1996, thus entitling them to various benefits like paid holidays and minimum wages.
- Netherland – The Dutch High Court also handed down a similar ruling, stating that the legal relationship between Uber and the drivers meets all the characteristics of an employment contract.
- Germany – Germany's Temporary Employment Act provides for equal pay and equal treatment of gig workers.
- Singapore – It has also proposed legislative changes to extend work injury insurance and pension coverage to such workers.

What is the way forward?

- Statutory affirmation – The deplorable working conditions of the employees of digital labour platforms in India and the need for statutory affirmation of the rights of gig workers.
- Legislations – With the gig industry gaining prominence across the world it is necessary that legislations are being passed to that effect, over and above social security benefits.

3.8 Co-Lending Model of Loan

Why in news?

The RBI tightened the norms for co-lending models since borrower's misuse the provision.

What is Co-lending?

- Co-lending is an arrangement where the loan origination is by one entity usually non-banking financial company (NBFC) but the risk is shared by two entities (NBFC and banks).
- NBFC is the originator while a bank is where the major portion of the loan rests.
- Co-lending model is developed by RBI to address the flow to credit to un served sectors of the economy.

What are the advantages of co-lending?

- Multiple partners - An NBFC can partner with multiple banks and a bank can partner with multiple NBFCs.
- Wide range of loans - It includes wide range of loans such as housing, affordable housing, gold, commercial vehicles, passenger vehicles or even microfinance loans.
- Basically it includes everything in retail.
- Formulate its own policy - The NBFC and banks can formulate their own policy on internal practices and risk management framework.
- Risk sharing - 80% of the loan risk is borne by the bank and the rest 20% by the NBFC.
- This ensures accountability on NBFC.
- Financial inclusion - This model allows banks to penetrate outside the urban and semi urban areas.
- It also accepts loans starting from Rs 3 to 5 lakhs and go up to Rs 1 crore.
- Flow of credit - This model improves the flow of credit to the un served and underserved sector of the economy.
- Higher growth for NBFCs - This model has helped the NBFCs to grow substantially during recent years.
- What are the impacts of tighter regulations by RBI?
- Borrowers with not-so-good credit record may find it more difficult to get loans.
- The penetration of loans to areas outside metro zones may be reduced.
- The borrower gets a loan from a particular bank and under stress pulls out and gets a new loan from different bank is addressed by RBI's tighter norms.

Quick facts

Non-Banking Financial Company (NBFC)

- NBFC is a company registered under the Companies Act, 1956 engaged in the business of loans and

advances, acquisition of shares/stocks/bonds/debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, and chit business.

- NBFC does not include any institution whose principal business is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property.
- NBFC cannot accept demand deposits.
- NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself.
- Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs.

3.9 A Digitally Unprepared Workforce

Why in news?

The need for the digital jobs is in high demand and India's demographic dividend could be a leverage if the youth are equipped with adequate digital skills.

What are the challenges to digital workforce?

- Pace of technological change - Continues to accelerate and demand for such skills doesn't meet the skill supply.
- Availability of training is not available in wide range - The training provided by the government is available only in the few areas within the digital space.
- Artificial intelligence - According to World Economic Forum the AI will replace the jobs of the digital workforce but also create new jobs in different fields.
- Lack of skills in Data-driven field - The jobs of the future are expected to rely more on data-driven and machine-powered processes.
- Disproportionate enrolment - Youth enroll in IT-ITeS vocational or technical courses, with a significantly high percentage of 34.7%, in comparison to other courses.
- Inadequate training - 29% of the 30% trained workforce are unemployed due to inadequate training content or poor training quality.

What can be done to address the digital skills crisis?

- Revamping skills - To adapt to the changing job market the entire skill development system needs to be restructured.
- Upskilling - To upskill the workforce in line with the emerging technologies.
- Strategic investment - Particularly in the reskilling of the workforce to keep up with the digital transformation.
- Skill India Mission and Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 4.0. - Needs to be implemented efficiently to provide digital skills on emerging technologies like artificial intelligence, mechatronics and robotics.

Quick facts

World Economic Forum (WEF)

- The World Economic Forum is the International Organization for Public-Private Cooperation.
- WEF was established in 1971 as a not-for-profit foundation and is headquartered in Geneva, Switzerland.
- The reports released by WEF includes
- The Future of Jobs Report 2023,
- Global Risks Report 2023,
- The Net-Zero Industry Tracker,
- Transitioning Industrial Clusters towards Net Zero,
- Education 4.0 India,
- Global Cybersecurity Outlook 2023 and

- ASEAN Digital Generation Report: Digital Financial Inclusion.

3.10 Gold Rush by Central Banks

Why in news?

The RBI has been increasing its gold reserve as part of the diversification process and a precaution to growing global financial uncertainty.

What is the status of RBI gold reserve?

- As of financial year 2023 the RBI have 794.64 metric tons of gold an increase of nearly 5 % financial year 2022.
- Of total 794.64 metric tons of gold, 437.22 tons of gold is held overseas in safe custody with the Bank of England and the Bank of International Settlements (BIS) and 301.10 tons of gold is held domestically.
- As on March 31, 2023 the country's total foreign exchange reserves stood at USD 578.449 billion, and gold reserves were pegged at USD 45.2 billion.
- Central banks across the world are increasing its gold reserve due to the increasing global uncertainty.

Why RBI is increasing the gold in foreign exchange reserve?

- Long term benefits - Since gold is safe and secure and liquid assets it has long term benefits.
- Diversification - RBI is diversifying its foreign exchange reserve because of the growing global uncertainty.
- Negative rates - To overcome the negative rates in the past.
- Dollar - Since dollar has been weakening gold can be good alternate.
- Transparency - Since gold have standard international price which is transparent.
- Low confidence in Swiss financial centers - Because of the demise of Credit Suisse and the total loss of its AT1 bonds.

Why gold is an important component in foreign exchange reserve?

- Commodity-linked currencies - Gold has performed even better when expressed in terms of commodity-linked currencies.
- Increasing value of gold - The rate of the gold has been increasing more than the US dollar.
- Weak global financial system - The financial system is expected to face several crisis because of more volatility.
- Foundation for the rupee - Gold reserves coupled with a strong economy, balanced current account deficit and good balance of payment lay the foundation for the rupee in long term.

3.11 World Trade Organization's Information Technology Agreement (ITA)

Why in news?

India lost the WTO dispute on customs duties on mobile phones and other IT products due to the IT Pact.

What is WTO's IT agreement (ITA)?

- ITA was concluded by 29 participants at the Singapore ministerial conference in December 1996 by WTO.
- The main proponents of the ITA included the European Union (EU), Hong Kong, Japan, Korea, Singapore, Thailand and the US.
- Number of participants increased to 82 including India which represents 97% of the world trade in IT products.
- The participants are committed to completely eliminating tariffs on IT products.
- At the Nairobi ministerial conference (2015) over 50 members concluded the expansion of the agreement which now covers an additional 201 products valued at USD 1.3 trillion per year.

What are the Pros of India's membership in ITA?

- Reduced customs duties for the IT products produced by Indian producers.

- Strengthening of the global information technology infrastructure would be generally beneficial and therefore safeguards the interests of Indian domestic producers.
- The competitiveness of the IT hardware manufacturers have increased.

What are the Cons of India's membership in ITA?

- China - The real gainer from that agreement has been China which raised its global market share from 2% to 14% between 2000-2011.
- Benefited countries - Countries with strong technology and manufacturing base stood to benefit from the IT agreement which India did not.
- IT hardware - Took a massive hit and Trade in Value Added (TiVA) was declined.
- India's domestic producers of computer, electronics and optical products - Their share in total demand of these products in the country decreased from 70% in 1995 to around 45% in 2011.
- IT industry - India's experience with the ITA has been most discouraging, which almost wiped out the IT industry from India.

What is the way forward?

- India in the future talks with the free trade agreements should be to choose an option that preserves the policy flexibility of the government to support its domestic producers to the maximum possible extent.
- India negotiators should demand the necessary information to take a correct decision to avoid any mistakes.
- Indian negotiators should demand necessary policy tools through trade agreements for supporting domestic producers, especially in new and emerging areas.

3.12 Medical Value Travel

Why in news?

India hosted 'One Earth One Health - Advantage Health Care-India 2023' summit at New Delhi to promote Medical value travel in India.

What is 'One Earth One Health - Advantage Healthcare India 2023' program?

- The Ministry of Health and Family Welfare in association with the Federation of Indian Chambers of Commerce & Industry has co-branded the 6th edition of One Earth One Health - Advantage Healthcare India 2023 with India's G20 Presidency.
- The event will emphasize the importance of global collaborations and partnerships for building resilient global health architecture.
- It is a two-day event is to showcase India as the new hub of Medical Value Travel and its emergence as a major hub for world-class healthcare, wellness services and medical tourism.
- It also aims to highlight India's significance in medical potential and create and explore opportunities for healthcare collaborations between the participating countries.

What is medical tourism?

- Medical tourism also known as medical value travel (MVT) is the practice of travelling across international borders seeking medical services, mainly elective or complex surgeries.
- Stakeholders in medical tourism include airlines, hospitals, wellness centers and hotels among others.
- Currently, the most sought-after destination for medical value travel is Canada.
- NITI Aayog estimates that the Indian economy could earn an additional USD 9 billion by 2026 from MVT and wellness tourism.

Why is India a preferred MVT destination?

- Trained and experienced doctors - The doctors in India are more experienced compared to rest of the world.
- Well trained nurses - According to Ministry of Tourism website, India has 1000 recognized nurses-training

centers with 10,000 nurses graduating annually.

- India's traditional medical - Such as ayurveda, yoga & naturopathy and other traditional systems of medicine are considered best for the treatment of various ailments, promoting wellness tourism.
- Low cost of treatment - The treatment in India is very low compared with the other countries.
- The cancer treatments are 65-90% cheaper rates when compared to US, Europe, Australia or even Singapore.
- 200 types of medical services - India offers over 200 types of medical services ranging from fertility treatments to skincare.
- Others - Cost-effective healthcare services, quality diagnostic equipment and trained doctors, with many of them fluent in English.
- India ranked tenth globally for medical tourism with a score of 69.80 on Medical Tourism Index 2020-2021 (MTI).

What are the initiatives to promote MVT?

- National Strategy and Roadmap for Medical and Wellness Tourism - Was rolled out by union government in January 2022 to provide health services to the world at large.
- Heal in India campaign - Launched by union government to market the nation as a wellness and medical tourism destination.
- 37 hospitals including 30 private hospitals across 17 cities have been identified to cater to MVT.
- E-visas - India has launched e-visas for MVT travelers from 156 nations.
- Online MVT portal - The union government plans to launch a one-stop online MVT portal.
- The portal will include mapping of all medical facilitators including government and private hospitals, booking of services, payments and post-operative services.

What are the challenges to MVT sector?

- Lacks government regulations and monitoring.
- Lacks a separate body to head MVT and coordinate between various stakeholders.
- No standard prices for treatments across India.
- The lack of a price range leaves tourists susceptible to cheating.
- No medical insurance portability for MVT travelers.
- Lack of awareness about National Accreditation Board for Hospitals and Healthcare Providers, India's national medical accreditation.

3.13 Ways and Means Advances

Why in news?

RBI capped the limit of ways and means advances to Rs 1,50,000 crore for the first half of the financial year to address the poor cash management.

What are Ways and Means Advances (WMA)?

- Ways and means advances are special features of the Indian economy.
- WMA are temporary advances given by the RBI to the Centre and state governments to tide over any mismatch in receipts and payments.
- It was introduced in 1997 and comes under Section 17(5) of the RBI Act of 1934.
- It was introduced to end the four-decade-old system of ad-hoc treasury bills to finance the central government deficit.
- States and Centre pay interest linked to the repo rate on WMA withdrawals.
- The government can avail of immediate cash from the RBI is required.
- But it has to return the amount within 90 days.
- Interest is charged at the existing repo rate.
- If the WMA exceeds 90 days, it would be treated as an overdraft (the interest rate on overdrafts is 2 percentage points more than the repo rate).

- WMA is not part of the Fiscal Responsibility and Budget Management Act (FRBM) because they get paid within the year itself.

What are the features of ways and means advances (WMA)?

- Short-term credit - Provided by the RBI to both Central and State governments to bridge a temporary mismatch in their cash flows.
- The short term credit is a duration of 3 months.
- Section 17(5) of the RBI Act 1934 - Contains provisions about the ways and means advances (WMA).
- Not a resource - WMA is not a resource to finance government expenditure.
- WMA limits - Currently fixed at Rs 1,50,000 crore for the first half of financial year 2024.
- Repo rate - The interest rate on WMA is repo rate which is 6.5%.
- Overdraft (OD) - When the WMA limit is crossed, the Central government enters into an overdraft (OD) which has to be cleared within 10 consecutive working days.
- The interest rate on OD is currently the repo rate plus 2%.
- Formula-based with a committee approach - Being followed for state government since 1999.
- Periodically an expert committee fixes the WMA limits and overdraft regulations for state governments.
- Arbitrarily fixed - WMA to the Central government is arbitrarily fixed in a non-transparent manner by the Centre and the RBI.
- There is no defined process in the fixation of WMA limits to union government.

What are the impacts of arbitrarily fixing the WMA?

- Lack of transparency.
- Lacks integrity of the interface between the monetary authority and the fiscal authority.
- Government's poor cash management.
- Mismatch in WMA (actuals) and Budget Estimates. In 2019-20, receipts for WMA (actuals) were Rs 11,79,582 crore as against Budget Estimates of Rs 5,00,000 crore.
- Weakens the integrity of the union budget.

What is the need of the hour?

- A new model - Should be formulated which considers the actual data for the past three years of actual budgetary transactions in receipts and expenditure before fixing WMA limits.
- Revenue deficit - WMA should not be used as a resource to meet the revenue deficit.
- Expert committee - On the similar line of the State governments should be formed for fixing WMA limits and overdrafts.
- Monetary limit - On the overdraft facility should be fixed to address the poor cash management.
- RBI press release - Should explicitly provide the current position of availment of the overdraft.
- Ensure data transparency - The RBI and the government should consider publishing the WMA data along with the overdraft position in the RBI bulletin to ensure data transparency.

3.14 Fundraising Issues in Indian Startup Ecosystem

Why in news?

Due to interest rate hikes of global central banks and the ongoing banking crisis in the US, startups are facing difficulties in fund-raising.

What is a startup?

- India had become the 3rd largest startup environment in the world as of August, 2022.
- India has the 3rd highest number of unicorns in the world next to US and China.
- Startup - A startup is defined as an entity that is headquartered in India which
- Was opened less than 10 years ago and
- Has an annual turnover less than Rs 100 crore
- It is an entrepreneurial venture in the early stages of operations, typically created for resolving real-life

problems.

- Unicorn – It is a term given only to startups who have a valuation of over \$1 billion.
- Decacorn - The startups that exceed the valuation of \$10 billion are grouped under the term called decacorn (a super unicorn).

What is the role of startups in the growth of the Indian economy?

- Employment creation – The startups are enabling more jobs than large companies or enterprises thus curbing the unemployment problems.
- New investments - Many multinational corporations are now outsourcing their tasks to small businesses in order to focus on their core competencies.
- Research and Development (R&D) - Start-ups heavily subsidise R&D as they frequently have to deal with high-tech and knowledge-based services.
- Better GDP - It is feasible to increase revenue domestically by promoting and supporting more start-up initiatives.
- Democratizing the technology benefits - Fintech startups are reaching out to remote areas with their solutions and making financial solutions easily accessible in tier 2 and tier 3 cities.
- startups

Why there is shortages in fund-raising?

- Interest rate hikes of global central banks
- Steep correction in valuation of technology stocks
- Increased risk aversion
- Ongoing banking crisis in the US and Europe
- Failure to deliver on their exaggerated growth promises due to Covid-19 pandemic
- Excessive liquidity created during the pandemic
- Change in consumption habits post-Covid
- High borrowing cost impacting profitability, leading to massive lay-offs in this segment
- Global venture capital investors who have suffered large losses in their portfolio are unlikely to provide much funding support.

What could be done to address fund-raising?

- Policy support - The high net worth investors, investment funds and companies who have displayed a willingness to invest in fledgling companies should be channelized.
- Fiscal and regulatory policies - Investors need to be encouraged with suitable fiscal and regulatory policies to support the segment in periods when global funding dries up.
- Abolition of angle tax - Angel tax, which requires start-ups to pay income tax on capital received at a premium to their fair valuation should be abolished, since it deters fund raising from angel investors.
- Alternate Investment Funds - Investment into Alternate Investment Funds which invest in start-ups could be incentivized through a tax concession.
- Capital gains tax rate - Paid by resident individual investors on their start-up investment can be lowered.
- Overseas exchanges - Indian startups should be allowed to list on overseas exchanges.

3.15 Economic Viability of Agriculture

Why in news?

Policymakers have been striving hard to make Indian agriculture economically viable as majority of the farmers want to quit agriculture.

What is the status of agriculture sector in India?

- Contribution to India's GVA -18.3% (2022-23)
- Population involved - 54.6% of the total workforce (Census 2011)
- Growth - 3% in 2021-22 compared to 3.3% in 2020-21

- In recent years, India has also rapidly emerged as the net exporter of agricultural products.
- During 2021-22, agricultural exports reached an all-time high of US\$ 50.2 billion.

What are the major issues faced by the farmers?

- Lack of infrastructure
- Lack of access to credit
- Lack of insurance
- Uncertain water rights and supply
- Lack of remunerative income
- Poor price discovery
- Land fragmentation
- Erratic monsoon
- Uncertain nature

What can be done to make agriculture an economically viable one?

- Digitalization of agriculture - Agri start-ups have been helping in putting the 'farmer first' in supplying inputs directly through apps/call centres/channel partners.
- Farmers with smart phone can access digitalized agri-services for agri-inputs, farm advisory, and marketing of agri-produce.
- Integrated farming - Integrated farming system (IFS) is a sustainable agricultural system that integrates different components such as crop production, livestock, fish, poultry, tree, etc. that benefit each other.
- It is based on the concept that 'there is no waste' and 'waste'.
- Family labour is the most important component of IFS, which makes it commercially viable and environmentally sustainable.
- Climate smart agriculture – Soil position in Punjab is unhealthy as 246 kg of fertilisers are used per hectare compared to the national average of 135 kg.
- It is imperative to shift to eco-friendly agri-inputs such as Nano Urea which is cost-effective, ease in logistics and enhances crop yields substantially.
- Adopting best farm practices – Though Israel does not have conducive climate for agriculture, water resources and land area, it is a major exporter of farm-produce and a global leader in agricultural technologies.
- Co-operative principles based on social equality, co-operation and mutual aid in generating agricultural output can be adopted from Israel.
- Discouraging informal credit - Besides easing access to formal credit, farmers need to be counselled on financial prudence to prevent borrowing from informal sources such as money lenders, traders and landlords.
- Leveraging Collectives - Convergence of SHGs, Farmers Producer Organisations (FPOs) and Co-operatives will lead to better bargaining power of farmers.
- Development of agri-value chains - Development of agri-export clusters may be encouraged besides managing the risks of monsoon and market.

3.16 Agriculture Commodity Value Chains

Why in news?

Since agricultural commodity value chains has global significance, the sector is need of government inventions to make it sustainable.

What is an agricultural commodity of global significance?

- Agricultural commodity of global significance – They are the commodity crops that are primarily grown to be sold on international markets.
- They are defined based on the level of their orientation towards international demand and supply in the form of exports.

- Example - Soybean, cocoa, coffee, tea, rubber, palm oil, and cotton
- India is one of the leaders of global agricultural commodity trade both as major consumer and producer.
- Agricultural commodity value chain - It refers to the entire process involved in the production, processing, distribution and consumption of agricultural commodities.
- It encompasses all the stages and actors involved in bringing agricultural products from the farm to the end consumer.
- Agricultural and Processed Food Products Export Development Authority (APEDA) is the apex body responsible for export trade promotion.

What impact does it have on global sustainability?

- Deforestation - Agricultural production can lead to deforestation, as trees are cleared to make way for crops and livestock.
- Biodiversity loss – Conversion of forests to cultivable farms can have a number of negative environmental impacts, including climate change and biodiversity loss.
- Water pollution - Agricultural production can lead to freshwater depletion and water pollution, as fertilizers and pesticides run off into waterways.
- Soil degradation - Agricultural production can also lead to soil degradation as the soil is depleted of nutrients and organic matter.

How agriculture commodity value chains can be sustainable?

- Considering the producer attributes - For commodity production led by agri-businesses with a global footprint, sector-wide sustainability commitments and standards are needed.
- Low-cost certification - Effective and low-cost certification could improve practices throughout the value chain, simultaneously delivering price premiums to producers.
- Regional efforts - Regionally, some efforts have led to climate, biodiversity, and livelihood benefits while preserving the ecological heritage in production landscapes.
- For example, evidence suggests that the introduction of biodiversity-friendly coffee in Karnataka has mitigated human-animal conflicts in the region to a significant extent.
- Government policies - Strong governance mechanisms and policies can support the value chains, either by providing subsidies, market access, and infrastructural support.
- Targeted regulation may be used to incentivise agri-businesses to report and reduce the environmental consequences of their supply chain.
- Working conditions and labour rights - The marginalized labors must be provided with adequate safety nets in the form of rewards, farm-level flexibility, and robust insurance mechanisms.
- Understanding the global demand - India needs to expand its understanding to include commodities that are actively imported, such as oilseeds, whose production is both for domestic and international markets.
- Food and Agriculture Organization (FAO) releases “The State of Agricultural Commodity Markets” report.

3.17 Tax Collected At Source on Overseas Credit Card Spends

Why in news?

The Centre has amended rules under the Foreign Exchange Management Act (FEMA), bringing international credit card spends outside India under the Liberalised Remittance Scheme (LRS).

What are the recent proposals?

- Changes - The Finance Ministry notified the Foreign Exchange Management (Current Account Transactions) (Amendment) Rules, 2023, to bring all credit card spends abroad under the remit of the LRS.
- The new notification, drafted in consultation with the RBI, omitted the Rule 7 of FEM (CAT) Rules, 2000 which had kept credit cards out of the \$2.5 lakh annual LRS limit.
- A Tax Collected at Source (TCS) of 20% will be applicable from July 1, 2023.
- (Before this proposal, a TCS of 5% was applicable on foreign outward remittances above Rs 7 lakh, and

5% without any threshold for overseas tour packages).

- Exemptions - The international transactions up to Rs 7 lakh through debit cards or credit cards will not be taxed.
- The changes will not apply to payments for the purchase of foreign goods/ services from India, such as subscriptions to newspapers, magazines, or online streaming services.
- A 20% TCS was proposed for all remittances under the LRS except for education or medical expenses abroad.
- Need for the change - The tweak in these rules is said to bring parity between the international usage of credit and debit cards, which were already part of LRS.
- In 2020, the government in the Budget announced the levy of 5% TCS on overseas remittances and for sale of overseas tour packages.

What is Liberalized Remittance Scheme (LRS)?

- Purpose - LRS is a scheme introduced by the Reserve Bank of India (RBI) that allows resident individuals to freely remit a certain amount of money abroad for various purposes.
- Annual Limit - Individuals are allowed to remit up to a specified amount in a financial year.
- The limit is set by the RBI and is subject to periodic revisions.
- Eligible Transactions - Covers a wide range of transactions, including travel-related expenses, education, medical treatment, investment in foreign stocks or real estate, gifting, donations, and more.
- However, there are certain restrictions and prohibited transactions under the scheme.
- Tax Implications - Initially, the LRS remittances were subject to a tax collection at source (TCS) of 5% on amounts exceeding a certain threshold.
- However, recent proposals have increased the TCS rate to 20% for certain transactions, leading to concerns and discussions regarding the tax implications.
- Prohibited Transactions - The LRS does not permit remittances for speculative or margin trading purposes, lotteries, gambling, prohibited investments and remittances to countries identified by Financial Action Task Force (FATF) as non-cooperative countries.
- Monitoring and Compliance - The RBI closely monitors LRS transactions to ensure compliance with the regulations.
- Authorized dealers (banks) are responsible for reporting and monitoring the remittances made by individuals under the LRS.

What are the possible impacts?

- High tax rate – Proposal to levy a 20% TCS on credit card spends abroad has been met with widespread criticism.
- Burden to foreign travelers – It will increase the cost of travel for Indians and that it will make it more difficult for businesses to operate overseas.
- Tacking spending - Even though the government said that it need to track the spending of credit card users but already there exists 2% and 5% charges on them.
- Increased cost of business – It will increase the cost of doing business for the business that operate abroad.
- Broad scope - The proposal is very broad and could catch people who are not trying to evade taxes.
- Students studying abroad - Will increase the cost of education for Indians who study abroad.
- IT refunds - For IT refunds, tax payers may end up waiting as long as 15 months, as each assessment year's taxes are filed in the following financial year.
- Compliance burden - Expected to increase the compliance burden of banks and financial institutions.

3.18 Withdrawal of 2000 Rupee Currency Notes and it implications

Why in news?

The RBI has decided to withdraw 2000 rupees currency notes in circulation due to increasing digital payments and in pursuance of the clean note policy.

Why did RBI introduce 2000 rupee notes?

- The Rs 2000 note was introduced in November 2016 under Section 24(1) of The RBI Act 1934.
- Introduced primarily with the objective of meeting the currency requirement of the economy expeditiously after the legal tender status of Rs 500 and Rs 1000 notes was withdrawn.
- With the fulfilment of that objective, and once notes of other denominations were available in adequate quantities, the printing of Rs 2000 notes was stopped in 2018-19.
- This denomination is no longer commonly used for transactions besides, there is adequate stock of banknotes in other denominations to meet currency requirements.

Why did RBI decide to withdraw 2000 rupee currency notes?

- Since they were intended to replenish the Indian economy's currency in circulation quickly after demonetization and has achieved its objective.
- Some experts feel the upcoming state and general elections also may be the reasons since the usage of cash spike these times.
- In pursuance of the 'Clean Note Policy' of the Reserve Bank of India, it has been decided to withdraw the Rs 2000 denomination banknotes from circulation.
- Increasing digital payments.
- The majority of the Rs 2000 denomination notes were issued prior to March 2017 and they have an estimated lifespan of 4-5 years.

What is the clean note policy?

- The Clean Note Policy seeks to give the public good-quality currency notes and coins with better security features, while soiled notes are withdrawn out of circulation.
- The RBI had earlier decided to withdraw from circulation all banknotes issued prior to 2005 as they have fewer security features as compared to banknotes printed after 2005.
- However, the notes issued before 2005 continue to be legal tender.
- They have only been withdrawn from circulation in conformity with the standard international practice of not having notes of multiple series in circulation at the same time.

What are the implications of the withdrawal?

- Slowdown economic growth in the short term - Since withdrawal could lead to a slowdown in cash based transactions.
- Long term benefits - Even though in short term the economy may down in long term it will lead to increased transparency and efficiency in the economy.
- Banks - Ease the pressure on deposit rate hikes.
- There will be reduction in cash in circulation and that will in turn help improve banking system liquidity.
- Shorter term government securities - Improved banking system liquidity and an inflow of deposits into banks could mean that short term interest rates in the market drop as these funds get invested in shorter-term government securities.
- Clean Notes - To provide good quality currency notes with better security features to the public.

Quick facts

Indian currency system

- As per Section 22 of the RBI Act 1934, RBI has the sole authority to issue banknotes in India.
- RBI Act 1934 empowers RBI to issue all the banknotes except 1 Rs. note.
- Every currency note, other than Rs. 1 rupee note, bears on its face a promise from the Governor of RBI.
- The one rupee note, carries the name of India's Finance Secretary.
- Coins and 1 Rs. notes are issued by the Government of India under the coinage act 1909.
- One Rupee note is considered as coins as per the definition of coins given under Coinage Act.
- One Rupee note is issued by the Ministry of Finance and it bears the signatures of the Finance Secretary.

3.19 U.S. Debt Ceiling Crisis

Why in news?

The US government could default on its borrowings, an unprecedented situation that could potentially hit economies worldwide, if Congress doesn't raise the nation's debt ceiling.

What is Debit ceiling?

- The debt ceiling, or debt limit, is the total amount the US government is allowed to borrow to finance its expenditure, such as paying salaries and welfare allowances.
- The debt limit was introduced in 1917, when the US entered World War I.
- The debt ceiling was introduced in order to make it easier for the executive to operate without having to turn to Congress every time it wanted to spend.
- The debt ceiling allows the government to borrow as required as long as it kept under the debt limit approved by Congress.
- The debt ceiling has been raised 78 times (49 times under Republicans and 29 times under Democrats) since 1960, with the most recent raising was in 2021.

What is the issue?

- Constitutionally, Congress controls the government's purse strings.
- Currently the limit of debt ceiling is at \$31.4 trillion.
- The Republicans, who have a majority in the House, are refusing to raise it unless the Democrat-run government agrees to their demands, which include a significant cut in spending.
- If the debt ceiling is not raised, the government will be unable to pay its bills and will default on its debt.
- us debt crisis 2023-1

What are the demands of Republicans?

- The Republicans are ideologically fiscal conservatives, while Democrats believe the government should spend more on social welfare schemes.
- To agree to raise the debt ceiling, the Republicans have demanded that spending be kept at 2022 levels in the next financial year, and subsequent increases capped at 1% for some years.
- The Democrats say the spending should be kept at 2023 levels.

What happens if the government defaults?

- The US government has never defaulted, and hence there is no exact answer, however, the consequences could be catastrophic.
- The government would no longer have the money to function, and would have to decide who gets salaries, and how much.
- The dollar would weaken, the stock markets would collapse, and millions might lose their jobs.
- Also, the US's credit rating would be downgraded, making future borrowing more expensive.
- The crisis in the US will have wider repercussions.

Has anything similar happened earlier and is there a way out?

- The crisis is similar to what happened in 2011 when Barack Obama was President but the House of Representatives was controlled by Republicans.
- Back then, the crisis ended just hours before the deadline, only after the Obama administration agreed to spending cuts worth more than \$ 900 billion.
- Technically, the US President can sidestep Congress by invoking the 14th Amendment, whose Section Four states that the "validity of the public debt of the United States ... shall not be questioned."
- But if Biden were to use this option, it could trigger lawsuits, and he has seemed to prefer the Congressional route.

What is the way forward?

- The debt ceiling is a terrible way to try to impose fiscal responsibility.

- However, the US government needs to find ways to reduce the deficit and the national debt.
- The two parties in the congress should arrive at an agreement at the earliest.

3.20 Copyrights and Intellectual Property

Why in news?

The Bombay high court ruled that FM radio channels must pay royalties to composers and lyricists for the copyrighted music that they use in the channel.

What is radio royalties?

- Although 'royalty' has not been defined under the Copyright Act 1957, the Income Tax Act 1961 defines royalty.
- Income tax act 1961 defines royalty as royalties are payments to the copyright owners made by the user in exchange for the right to use, broadcast, or communicate their music to the public.
- These royalties are administered by numerous copyright societies like the IPRS, the Indian Singer Rights Association (ISRA), Novex, and Phonographic Performance Limited (PPL).
- Copyright is a type of intellectual property right and Authors who have original works such as works of literature dramatic, musical, and artistic works, cinematographic films, and audio recordings are all awarded copyright safeguards under Indian law.

What is the status of copyrights protection in India?

- Copyrights act 1957 - Governs the law pertaining to copyright in India.
- The original authors were not entitled to claim royalty once their original works became part of a film.
- India's first copyright law and six amendments have been made since then.
- Indian Performing Right Society Limited (IPRS) - A society registered under the Copyright Act 1957.
- IPRS v Eastern India Motion Pictures - The court held that, once the underlying original works of the authors became part of a cinematograph film, the producer enjoys the exclusive right of the said work.
- 2012 amendment of copyright act 1957 - Recognized performers' rights under the copyright framework.
- Performers' rights cannot be transferred or sold through an agreement.
- The 2012 amendment ensured that the rights of the original authors could not be overridden.
- The amendments also mentions that if an author's work is used for new formats he should be compensated for it.
- WIPO Copyright Treaty (WCT) - The 2012 amendment of copyrights act 1957 is in line with WCT.
- Intellectual Property Appellate Board (IPAB) - In December 2022 IPAB fixed royalties for radio broadcasts at 2% of the Net Advertisement Revenues.
- Delhi high court - In the case IPRS vs Entertainment Network India Ltd (ENIL) held that there is no need of separate license to be obtained or royalties paid to the IPRS.
- Intellectual Property Appellate Board is a statutory body under Department for Promotion of Industry and Internal Trade (DIPP).

What is the recent verdict by Bombay high court?

- The Bombay high court recently pronounced the verdict of cases IPRS vs Rajasthan Patrika Pvt. Ltd and IPRS vs Music Broadcast Limited.
- The Bombay High Court has upheld the rights of IPRS to collect music royalties from FM radio broadcasters.
- World Radio Day is formally celebrated on 13 February by the United Nations General Assembly.

4. Science & Technology

4.1 India's Science and Technology Sector

Why in news?

The year 2022 marks the 25 years since we started celebrating the National Technology Day (May 11).

What is so special about May 11?

- On May 11, 1998 3 special technologies were launched which includes
- Operation Shakti (Pokhran-II nuclear tests)
- Successful test firing of Trishul missile
- First test flight of the indigenously developed aircraft Hansa
- The achievements of May 11, 1998 contributes significantly to the economy.
- TRISHUL - Short range low-level surface-to-air missile
- HANSA-New Generation (HANSA-NG) - India's first indigenous Flying Trainer. It is the revamped version of the original HANSA developed in 1993.

What is the journey of India's nuclear program?

- Homi Bhabha - India's nuclear programme can be traced to the work of physicist Homi J Bhabha.
- In 1945, Tata Institute of Fundamental Research, India's first research institution dedicated to the study of nuclear physics was opened in Bombay.
- DAE - In 1954, the Department of Atomic Energy (DAE) was founded, with Bhabha as director.
- NPT - In 1968, the Non-Proliferation Treaty (NPT) came into existence.
- The treaty defines nuclear-weapon states as those that have built and tested a nuclear explosive device before January 1, 1967 (The US, USSR, the UK, France and China) and effectively disallows any other state from acquiring nuclear weapons.
- India is one of the few non-signatories of NPT.
- Vikram Sarabhai - Bhabha's successor at the DAE, Vikram Sarabhai, had worked to significantly broaden India's nuclear technology
- Pokhran-I - On May 18, 1974, India carried out its first nuclear test at the Pokhran test site.
- Pokhran-I, codenamed Operation Smiling Buddha, would be billed as a "peaceful nuclear explosion", with "few military implications".
- Missile development - In 1983, the Defence Research and Development Organisation's (DRDO) funding was increased and Dr APJ Abdul Kalam was put in charge of India's missile programme.
- CTBT - India also did not sign the Comprehensive Test Ban Treaty (CTBT) that was finalised in 1996.
- Pokhran-II - In 1998, India responded to Pakistan's launch of Ghauri missile with Operation Shakti (Pokhran-II).
- Indian Government declared itself as a state possessing nuclear weapons following Pokhran-II.

What are the other major initiatives in S&T sector?

Atal Innovation Mission (AIM) - Established by NITI Aayog, it fosters a robust entrepreneurial landscape in India.

Various programs of AIM are

- Atal Tinkering Labs (ATLs) for schools, Atal Incubation Centers (AICs) for start-ups and entrepreneurs,
- Atal Community Innovation Centers (ACICs) for grassroots innovation,
- Atal New India Challenges (ANICs) for national-impact innovations and
- Council of Scientific & Industrial Research (CSIR) - Plays a crucial role in supporting not only industrial R&D for established industries but also startups and MSMEs.
- The National Institute of Ocean Technology (NIOT) - An autonomous body under the Ministry of Earth Sciences.
- Design, develop, and demonstrates technologies for the sustainable utilization of ocean resources

(Example - Matsya 6000).

- The Department of Atomic Energy (DAE) - Committed to deploying atomic power for improving life quality and fostering national development.
- Has developed indigenous production methods for rare earth permanent magnets.
- Laid the foundation for a TIFRI campus in Hyderabad and the Laser Interferometer Gravitational Wave Observatory-India (LIGO-India) project.
- The Indian Space Research Organization (ISRO) - Space science data from missions like Chandrayaan and Mangalyaan is used for hackathons and workshops.
- The virtual space park, SPARK, offers students exposure to space programmes, while ISRO's STEM portal, Jigyasa, encourages online education and innovation.
- The Space on Wheels programme consists of mobile space museums aimed at promoting awareness and education for rural students.

What are the notable achievements of India?

- India as a pharmaceutical hub of the world
- Indian IT industry gearing up to drive the world's IT enabled services
- Democratisation of financial transactions by digital payment gateways
- Making of indigenous BioJet fuels
- Mapping of subsurface water channels for sustainable use of water
- Making of indigenous light combat aircraft
- Digitisation of many aspects of trade
- Moving firmly towards a hydrogen economy

What are the challenges?

- Lack of urban infrastructure and planning
- Low diversification of agricultural produce
- Lack of promotion of artificial intelligence technologies in all industrial segments
- Inadequate investments in research and development

What is the way ahead?

- Scientists, innovators, and entrepreneurs should be encouraged to pursue their endeavors to create a brighter future for India.
- There is a need to unleash the immense potential India holds in various fields, from atomic energy to space exploration and biotechnology.

4.2 Sonorous submarine

Researchers have recorded the bustling sounds of marine organisms in coral reefs off the coast of south Goa to understand their behavior.

- The researchers from the Indian Council of Scientific and Industrial Research's National Institute of Oceanography (NIO) used hydrophones to eavesdrop on underwater organisms in a reef in the Arabian Sea.
- Hydrophones are a low-cost means of monitoring species.
- If the coral reef system is healthy, fish will be there and the presence of soniferous (sound-producing) fish will generate sound.
- The technology can help researchers to study the abundance, diversity and behaviour of organisms.
- It can also reveal how they respond to climate change and anthropogenic disturbances.
- Soniferous fish represent a group of vocal vertebrates that produce sounds during various social interactions.
- Hydrophones also pick up the sounds of wind (50-20,000 Hz) and oceanic traffic (10-10,000 Hz).
- The technology compares the recorded sounds with archival information to distinguish calls coming from fish species or families.

- Fish communication is more active in the pre-monsoon than in the post-monsoon season.
- Hydrophones help in examining how marine life responds to climate change and anthropogenic activities.

4.3 Shenzhou-16

- China launches Shenzhou-16 mission to Chinese space station.
- The spacecraft, Shenzhou-16, or Divine Vessel, and its three passengers lifted off atop a Long March-2F rocket from the Jiuquan Satellite Launch Centre in the Gobi Desert in northwest China.
- China has already announced plans to expand its permanently inhabited space outpost, with the next module slated to dock with the current T-shaped space station to create a cross-shaped structure.
- Beijing is expected to launch one more crewed mission to the orbiting outpost this year.
- Xuntian – By the end of 2023, China is due to launch space telescope the size of a large bus.
- Known as Xuntian, or Surveying the Heavens in Chinese, the orbital telescope will boast a field of view 350 times wider than that of the Hubble Space Telescope, which was launched 33 years ago.
- Tiangong – Tiangong is China's permanent space station that will operate in low-Earth orbit at an altitude from 340 km to 450 km.
- Tiangong Space Station is named after the Chinese word for 'heavenly palace' or 'celestial palace'.
- The station has a designed lifespan of at least 10 years.

4.4 Solar Power Plant in Space

- Japan is aiming to launch solar panels into orbit and transmit electricity to the ground using microwaves.
- Countries around the world are in a race to set up solar power plants in space and beam energy back to Earth.
- The United Kingdom and China have already displayed interest in building such a technology and now, Japan seems to be the latest member to join the bandwagon.
- Space Energy Initiative – The UK-based Space Energy Initiative proposed building such a plan to beam back energy from space.
- Its reasoning was that a space-based plant would produce so much more electricity than one of a similar size on Earth.
- According to the organisation, if there were two plants with the exact same size, one on Earth in the UK and one in space, the one in space would be able to generate over 13 times the energy.
- Space-based power plant will not face any intermittence problems.
- The Sun will always be shining on it in space.
- On Earth, the Sun will not always shine on a solar plant.
- Due to this, solar energy plants will have to be complemented with battery storage systems to prevent power loss during unfavourable weather.

Japan's plans to build a solar power plant in space

- A Japanese public-private partnership aims to launch solar panels into space at an altitude of 36,000 kilometres above our planet.
- The power generated by the solar facility will be converted into microwave radiation and sent down to ground-based receiving stations.
- U.K. – In UK over 50 British organisations, including Airbus, Cambridge University and satellite maker SSTL have joined the UK Space Energy Initiative to work towards such a technology.
- The initiative has a plan to have a demonstrator plant in orbit as early as 2035.
- China – The country plans to launch a solar power plant in space by the year 2028.
- However, the Chinese satellite will be launched to an altitude of 400 kilometres.

4.5 Can psychedelics treat depression?

Psychedelic substances has given strength to clinical/research interests, and have added to psychiatry's ever-expanding therapeutic techniques.

What are Psychedelics?

- Psychedelics – They are a group of drugs that alter perception, mood, and thought processing while a person is still clearly conscious.
- Not toxic – Psychedelics are non-addictive and non-toxic and the person's insight also remains unimpaired.
- Two types – The two most commonly used psychedelics are d-lysergic acid diethylamide (LSD) and psilocybin.

What is the status of psychedelics in India?

- Prohibited – In India, the Narcotic Drugs and Psychotropic Substances Act, 1985, prohibits the use of psychedelic substances.
- Ketamine – It is a dissociative anaesthetic with psychedelic properties, is used under strict medical supervision, for anaesthesia and to treat treatment-resistant depression.

What is the history of psychedelics?

- Humphrey Osmond – A psychiatrist named Humphrey Osmond first used the term psychedelic in 1957, to denote the therapeutic tendency of these drugs.
- The word is derived from the Greek words psyche, meaning mind, and deloun, meaning to manifest.
- Arthur Heffter – The modern-day use of psychedelics is commonly associated with the German chemist Arthur Heffter isolating mescaline from the peyote cactus in 1897.
- Albert Hofmann – In 1938, while investigating compounds related to ergotamine, the Swiss chemist Albert Hofmann first synthesised LSD.
- Ergotamine is present in ergot, an alkaloid that causes constriction of blood vessels and is used in the treatment of migraine, and it is produced by the parasitic rye fungus *Claviceps purpurea*.

What is the experience of using psychedelic substances?

- Changes – Users of psychedelic substances report changes in perception, somatic experience, mood, thought-processing, and entheogenic experiences.
- Somatic experiencing is a form of an alternative therapy aimed at treating trauma and stressor-related disorders like PTSD, with the primary goal of modifying the trauma related stress response.
- Perceptual distortions – They most commonly include the visual domain.
- Entheogens are psychoactive substances that induce alterations in perception, mood, consciousness, and cognition for the purpose of spiritual development or in sacred contexts.
- Synaesthesia – An intriguing phenomenon called synaesthesia may occur, where the sensory modalities cross and the user may 'hear colour' or 'see sounds'.
- Synaesthesia is the production of a sense impression relating to one sense or part of the body by stimulation of another sense or part of the body.

How do psychedelic substances work inside the body?

- Serotonin – Classical psychedelics boost brain serotonin levels.
- Serotonin is the substance that is found mostly in the digestive tract, central nervous system and platelets.
- Psilocybin – Psilocybin's therapeutic effects requires activation of serotonin receptors.
- About half of the ingested psilocybin is absorbed via the digestive tract.
- Psilocin – In the body, psilocybin is converted to psilocin, which is then metabolised in the liver.
- LSD is completely absorbed in the digestive tract and then metabolised in the liver.

Can psychedelic substances cause harm?

- No deaths – Death due to direct toxicity of LSD, psilocybin or mescaline has not been reported in the 50+ years of recreational use.
- Synthetic psychedelics – They have been associated with acute cardiac, central nervous system, and limb ischaemia, as well as serotonin syndrome.
- The psychological effects of psychedelics depend on the interaction between the drug and the user's mindset (together called a set), and the environmental setting.

What is psychedelic-assisted psychotherapy?

Psychedelic-assisted psychotherapy – It has three types of sessions:

- Preparatory
- Medication (1-3 sessions with moderate/high doses of psychedelic)
- Integration

Can psychedelics be really used to treat depression?

- Psychedelic substances provide an intriguing avenue through which to probe the broader constructs of creativity, spirituality, and consciousness, aside from their therapeutic effects.
- If larger trials establish their safety and therapeutic efficacy, the FDA and other regulatory bodies may clear these agents for routine clinical use.

4.6 Clean Cooking Fuel in India

Why in news?

In the recently conducted India Energy Week exhibition the Indian oil has launched Surya Nutan which could be the sustainable solution for clean cooking fuel.

What is clean cooking fuel?

- Clean fuels and technologies are those that attain the fine particulate matter (PM2.5) and carbon monoxide (CO) levels recommended in the WHO global air quality guidelines (2021).
- Modern and clean cooking fuels are fuels with very low levels of polluting emissions when burned. Examples include biogas, LPG, electricity, ethanol, natural gas, and solar power (BLEENS).
- Pellets used in specialised biomass stoves can also be a clean fuel.

What is the need for clean cooking fuel?

- Provides energy access to poor people of the country.
- Reduces health issues and premature deaths.
- Helps India achieve its net zero targets by reducing carbon emissions.
- Boost GDP by reducing the economic burden resulting from the use of unsustainable fuels.

What are the challenges to India's clean cooking transition?

- Cylinder refill being costly - Over 50 % of the households that received new LPG cylinders did not choose to refill due to high costs of refill.
- Cylinder distribution networks - Lack of access to the cylinder distribution networks especially in rural India.
- Lack of choice - The government only promotes LPG cylinder leaving out the alternatives such as electric cooking (e-cooking), especially solar photovoltaic (PV) connected e-cooking.

What are the measures taken for clean cooking fuel?

- Rajiv Gandhi Gram LPG Vitruk Yojana (RGGLV scheme) - Was launched in 2009 to provide clean cooking fuel.
- Pradhan Mantri Ujjwala Yojana (PMUY) - It aimed to replace solid and other biomass-based polluting cooking fuels used in urban and rural households in India with Liquefied Petroleum Gas (LPG).

- Launched in 2016 and replaced the RGGLV scheme.
- Piped natural gas (PNG) - The government has been actively promoting PNG, which is a more economically viable fuel than LNG.
- Go Electric campaign – It encourages the use of electric vehicles and electric cooking.
- Energy Efficiency Services Limited - Working towards better utilization of renewable energy in cooking sector.
- Surya Nutan - It is an indigenous, stationary, rechargeable and kitchen-based indoor solar cooking platform.
- Developed by Indian Oil Corporation and Union Ministry of Petroleum and Natural Gas.
- Works in hybrid mode, using both solar energy as well as an auxiliary energy source.
- The Energy Sector Management Assistance Programme (ESMAP) - It announced clean cooking fund for assistance through technical support and investments in developing nations.
- The programme is by World Bank.
- In India, this programme is being developed through the Modern Energy Cooking Services programme.

What are the impacts of unclean fuels?

- The air quality index will further be worsen.
- Cause adverse long-term health impacts.
- Impact GDP due to sickness and loss of productivity.
- Wooden fuel leads to deforestation.

4.7 Total Ban on Diesel Vehicles in India

Why in news?

A government panel has recommended to ban all the diesel four wheelers by 2027.

Why did the panel recommend to ban diesel vehicles?

- Greenhouse gas emissions - To achieve the stated aim to reduce the greenhouse gas emissions by 40% to mitigate climate change.
- Net zero goal - To produce 40% of its electricity from renewables as part of its 2070 net zero goal.
- Oxides of nitrogen (NOx) - The higher compression ratio of diesel engines increase emissions of oxides of nitrogen (NOx).
- Volkswagen emissions scandal - Led to an increase in the negative perception against diesel across markets, including India.
- A panel formed by the Ministry of Petroleum and Natural Gas has recommended a ban on the use of diesel-powered four-wheel vehicles by 2027 in cities with a population of more than 1 million.

What is the importance of the diesel vehicles?

- Diesel engines have higher fuel economy than petro engine.
- Diesel engines do not use high-voltage spark ignition (spark plugs), and thus use less fuel per kilometer.
- Diesel engines have higher compression ratios, making it the fuel of choice for heavy vehicles.
- Diesel engines offer more torque (rotational or turning force) and are less likely to get stalled.
- Diesel currently accounts for about 40% of India's petroleum products consumption.

4.8 Mitochondrial Donation Treatment

Why in news?

An announcement was made recently that a baby was born using three persons' DNA in the UK.

What is mitochondria?

- Mitochondria - They are membrane-bound cell organelles that are the powerhouses of the cells as they

generate the energy needed to power the cell's biochemical reactions.

- Chemical energy produced by the mitochondria is stored in a small molecule called adenosine triphosphate (ATP).
- Mitochondria contain their own small chromosomes.
- Generally, mitochondria, and mitochondrial DNA, are inherited only from the mother.
- Mitochondrial diseases - When the mitochondria are impaired and do not produce sufficient energy, it affects the functioning of organs.
- The diseases that arise out of mitochondrial mutations are called mitochondrial diseases.
- Mitochondrial diseases are only passed on by the mother.
- It has no cure, but can be treated.
- In order to prevent the child from inheriting the mother's mitochondrial disease, the three parent technology was used.

What is Mitochondrial Donation Treatment?

- Mitochondrial donation treatment is also known as mitochondrial replacement therapy (MRT).
- Advanced in-vitro fertilization technique is used for mitochondrial donation treatment.
- The baby's biological father's sperm was used to fertilise the eggs from the biological mother, who has a mitochondrial disease, and a third, female donor with clear mitochondria, separately.
- Then, the nuclear genetic material from the donor's egg is removed and replaced with the genetic material from the biological parents'.
- The final product (the egg) which has the genetic material from the parents, and the mitochondria from the female donor, is implanted in the uterus.
- This baby (three-parent baby) will be free from the mother's mitochondrial disease.

What are the short falls of mitochondrial donation treatment?

- Sometimes it is possible that a small amount of the maternal mitochondria with errors may get passed on during the procedure.
- So-called reversion or reversal could lead to a disease in the child.
- The UK is not the first country to create babies from MDT. In 2016, a US doctor announced the world's first MDT birth after treating a woman who carried mitochondrial mutations that cause Leigh syndrome.

4.9 Fermi Energy and Fermi Level

Why in news?

More research in quantum physics in recent times have shown that the fermi energy are significant and produce high energy.

What is fermi energy?

- Fermi energy is defined as the highest occupied energy level of a material at absolute zero temperature (-273° C or 0K).
- In other words, all electrons in a body occupy energy states at or below that body's Fermi energy at 0K.
- It is an energy difference of the kinetic energy of a system containing fermions.
- Fermi energy is constant for each solid.

What are fermions?

- Fermion is any member of a group of subatomic particles having odd half-integral angular momentum (spin 1/2, 3/2).
- Fermions mainly include quarks and leptons along with electrons, protons, and neutrons.
- Fermions obey Fermi-Dirac statistics, which means that when one swaps two fermions, the wave function of the system changes sign.
- Fermions obey the Pauli exclusion principle - no two fermions can exist in the same quantum state at the same time.

What is fermi level?

- Fermi level is the measure of the energy of the least tightly held electrons within a solid.
- It is the surface of that sea at absolute zero where no electrons will have enough energy to rise above the surface.
- The fermi energy levels enable us to
- Calculate the density of electrons
- Number of holes in the material
- Relative proportion of holes and density with respect to temperature

What are the applications of fermi energy?

- Fermi energy is
- Applied to Determine the electrical and thermal characteristics of solids
- Important in nuclear physics to understand the stability of white dwarfs
- Used in semiconductors and insulators
- Used to describe insulators, metals, and semiconductors

4.10 Role of Calcium-41 in Radiometric Dating

Why in news?

Recent study shows that Calcium-41 can be used the same way as Carbon-14 in carbon dating, but with several advantages.

What is radio carbon dating?

- Carbon-14 - Radiocarbon (Carbon 14) is an isotope of the element carbon that is unstable and weakly radioactive [The stable isotopes are carbon 12 and carbon 13]
- It has a half-life of 5,700 years, so the technique can't determine the age of objects older than around 50,000 years.
- Radiocarbon dating – It is a method that provides objective age estimates for carbon-based materials that originated from living organisms.
- Plants and animals assimilate Carbon 14 from carbon dioxide throughout their lifetimes.
- When they die, they stop exchanging carbon with the biosphere and their carbon 14 content then starts to decrease at a rate determined by the law of radioactive decay.
- An age could be estimated by measuring the amount of carbon-14 present in the sample.

There are 3 principal techniques used to measure carbon 14 content of any given sample.

- Gas proportional counting
- Liquid scintillation counting
- Accelerator mass spectrometry (Advanced method)
- The method was developed 1940s by Willard Libby, who received the Nobel Prize in Chemistry to this work in 1960.
- The issue with carbon dating was to detect carbon-14 atoms, which occur once in around 10¹² carbon atoms.

What is Calcium-41?

- Calcium-41 is a rare long-lived radio-isotope of Calcium that has a half-life of 99,400 years.
- Calcium-41 is called a cosmogenic nuclide, because it is produced when cosmic rays from space smash into calcium atoms in the soil in a fission reaction, called spallation.
- It is found in the earth's crust, opening the door to dating fossilized bones and rock.
- The issue is Calcium-41 is rarer, occurring once in around 10¹⁵ Calcium atoms.

How can the issue of detecting C-14 and CA-41 be resolved?

- Atom Trap Trace Analysis (ATTA) - Researchers at the University of Science and Technology of China

pitched a technique called atom-trap trace analysis (ATTA) to spot these atoms.

- ATTA is both extremely sensitive and selective, and is based on the laser manipulation and detection of neutral atoms.
- Procedure - A sample is vaporised in an oven.
- The atoms in the vapour are laser-cooled and loaded into a cage made of light and magnetic fields.
- In ATTA, a laser's frequency is tuned such that it imparts the same energy as required for an electron transition in Calcium-41.
- The electrons absorb and release this energy, revealing the presence of their atoms.
- Significance - It can spot one calcium-41 atom in every 10¹⁶ calcium atoms with 12% precision in seawater.
- ATTA also avoids potassium-41 atoms, which are similar to calcium-41 atoms but lack the same electron transition.
- It can also be modified to study isotopes of some noble gases that have defied techniques developed for carbon-14, such as argon-39, krypton-81, and krypton-85.

What are the applications of ATTA and Calcium-41?

- Opens the possibility of extension to other metal isotopes
- To study how long rocks has been covered by ice
- Open avenues for exploring Earth-science applications

5. Environment & Ecology

5.1 Green Deposits

Why in news?

RBI has unveiled a framework for banks and NBFCs to accept green deposits that are meant for investing in eco-friendly climate projects.

What are green deposits?

- A green deposit is a fixed-term deposit for investors looking to invest their surplus cash reserves in environmentally friendly projects.
- It indicates the increased awareness of the importance of ESG (Environmental, social and governance) and sustainable investing.
- Many lenders like HSBC and HDFC have launched green deposits in India for corporates as well as individuals.
- Common themes for green deposits are renewable energy, clean transportation, pollution prevention and control, green building, sustainable water, wastewater management, and others.

What is the RBI framework about?

- Aim - To prevent greenwashing, which refers to making misleading claims about the positive environmental impact of an activity.
- Deposits - As per the RBI framework, banks will offer the deposits as cumulative/ non-cumulative deposits.
- On maturity, the green deposits would be renewed or withdrawn at the choice of the depositor.
- The green deposits shall be denominated in rupees only.
- Application - The framework applies to all scheduled commercial banks and small finance banks (except for regional rural banks and local area banks) and non-banking finance companies (including housing finance companies).
- Investors - Both corporate and individual customers can invest in green deposits.
- Banks and NBFCs shall put in place a comprehensive board-approved policy on green deposits, and a copy of the policy shall also be made available on their websites.
- Sectors eligible to receive green deposits – The sustainable and eligible sectors include renewable energy, waste management, clean transportation, energy efficiency, and afforestation.
- Banks will be barred from investing green deposits in business projects involving fossil fuels, nuclear power, tobacco, etc.
- Review - The allocation of funds raised through green deposits during a financial year shall be subject to an independent Third-Party Verification (TPV) on an annual basis.
- Impact assessment by lenders - Lenders must annually assess the impact associated with the funds lent for or invested in green finance activities and submit a review report before their Board.
- Penalty - There are no penal provisions when the bank doesn't utilise the deposits.

How are green deposits different from normal deposits?

- Projects - Normal deposits cannot be allocated for specific projects, whereas green deposits are carved out specifically towards green financing.
- Interest rate on green deposits – It is at the prerogative of the lender and currently the rates on these deposits aren't significantly different from regular deposits.

What are the challenges of green deposit?

- Flaws in design - Flaws in design leads to limitation of the range in the green projects that the banks can invest.
- Reality being different - Green investment products are often just a way to make investors feel good about themselves and that these investments don't really do much good to the environment.

- Project sustainability - It is not sure whether the banks invested in the green projects will be sustainable.
- Lack of awareness - Lack of awareness among the bank staffs leads to delay in the process of obtaining green deposits.
- Lower interest rate - The investor seeks only for high return deposits and doesn't care about being green.

5.2 European Union's Carbon Border Tax Mechanism

Why in news?

The European Union (EU) introduced Carbon Border Tax Mechanism which will impose a levy on imported carbon-intensive goods from countries (including India) where climate rules are less strict.

What is carbon border tax mechanism (CBAM)?

- Level playing field - CBAM aims to create a level playing field for EU and non EU manufacturers to reduce carbon footprints.
- Carbon leakage - CBAM was introduced to address the carbon leakage.
- Tariff on carbon intensive import products - CBAM plans to impose a tariff on a set of carbon-intensive imports, which will have to be paid by EU importers and companies who export such goods to EU countries.
- Carbon intensive import products - Includes iron and steel, cement, fertilizers, aluminum and electricity.
- High tax on developing countries - The highest tax under CBAM is on developing countries like India.
- Green hydrogen - The tax is zero if steel is made using green hydrogen as fuel and a reducing agent.
- Carbon leakage is when companies, in order to meet climate policy requirements or to avoid restrictions on carbon emissions in their home country, relocate the production or manufacturing of carbon-intensive materials to countries with less stringent climate rules.

What are the impacts on India?

- High CBAM - The share for many Indian exports covered under CBAM going to the EU is high.
- Less market share - Indian firms risk losing market share to EU-based producers or those in other more carbon-efficient nations.
- Affects exports - CBT will affect substantial exports as the EU is an important trade partner for India.
- Expensive - Even though a product from India may be cheaper than an American product tax plus product price will make Indian products more expensive.
- Trade divisions - CBT will lead to sharper trade diversion and more trade among developed countries.

What is the way forward?

- Many Indian steel firms use electric furnace, a more carbon-efficient process, so India must use its strength to avoid the carbon tax.
- CBTM may force many European steel firms to shut down will provide an opportunity for Indian steel firms to increase its market share.
- The manufacturing process needs to be transformed to sustainable being climate friendly.
- The government provide low carbon technologies for production of carbon intensive products to combat climate change.

5.3 Cyclone Systems

Why in news?

Due to rapid intensification of cyclones there is a need for change in forecasting the cyclones.

What is cyclone?

- Atmospheric disturbances - Cyclones are caused by atmospheric disturbances around a low-pressure area distinguished by swift and often destructive air circulation.

- Eye of the cyclone - The low-pressure center of the cyclone is called the eye.
- Eye provides energy to the cyclones.
- The lower the pressure in the eye, the more intense is the cyclone.
- Eye-wall - Surrounds the eye with the strongest winds and heaviest rain and is the most destructive part of the cyclone.
- The Cyclone Genesis Potential (GPI) to estimate the number of cyclones that may be born in a season is defined based on the variables that occur during the birth of cyclones

What is seedling of a cyclone?

- Rotating low-pressure system - It is the seed of the cyclone.
- It is the moisture converging near the surface when warm light air rises and takes the evaporated water with it.
- Rising air expands, cools and condenses to release energy in the middle atmosphere.
- Madden-Julian Oscillations (MJO) - Throw seeds of rotational low-pressure systems over the Indian and the Pacific Oceans.
- MJOs show a strong association with cyclogenesis, especially for the post-monsoon season.
- El Niño and La Niña - Influence the number of cyclone seeds and also the location and the expanse of warm water.
- Easterly waves - Produced by West Africa propagate cyclones from west from land onto the tropical Atlantic Ocean and sow the seeds for most hurricanes.
- Tropics have all the critical environmental ingredients for cyclogenesis: Warm Ocean, atmospheric convection, vertical motion and mid-level humidity.

What is the environmental factors involved in cyclogenesis?

- Rotation or vorticity of a low-pressure system at the surface
- Sea surface temperatures or the volume of warm water available.
- The vertical motion of air in this low-pressure system.
- The amount of humidity available in the middle atmosphere.
- The vertical shear or the change in winds from the surface to the upper atmosphere.

Quick facts

National Disaster Management Authority (NDMA)

- NDMA is created by NDMA act 2005.
- NDMA is headed by prime minister.
- NDMA is the apex body for Disaster Management in India.
- NDMA is mandated to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters.

5.4 Drip irrigation needs further push

Why in news?

Israel has presented a drip irrigation system for Children's Park near India Gate for conservation of water and electricity.

What is drip irrigation?

- Water at slow rate - Drip irrigation involves dripping water onto the soil at very low rates (2-20 liters/hour) from a system of small diameter plastic pipes fitted with outlets called emitters or drippers.
- Directly to root zone - Drip irrigation provides water directly to the root zone of the crop through a network of pipes/emitters.
- Different from traditional methods - Drip irrigation unlike surface and sprinkler irrigation, which involves wetting the whole soil profile.
- Crops suitable - The crop suitable for drip irrigation system are Orchard crops such as grapes, banana,

pomegranate and orange.

- Vegetables such as tomato, chilly, capsicum, cabbage, cauliflower and onion.
- Cash crops such as sugarcane, cotton, arecanut and strawberry.
- Flowers such as rose, carnation, gerbera, anthurium, orchids and jasmine.
- Plantation crops such as tea, rubber, coffee and coconut.
- Spices such as turmeric, cloves and mint.
- Oil seed such as sunflower, oil palm and groundnut.
- Forest crops such as teakwood and bamboo.

What are the advantages of drip irrigation?

- Water loss is completely prevented
- Conserve electricity, time and ground water
- Ground water is the largest fresh water resources on the earth.
- Minimize crop failure during summer
- The profit margin of the farmers can be increased
- The crop yield can be increased up to 230%
- Fertilizer use efficiency increases by 30%
- Crop grows consistently, healthier and matures fast
- Helps crops growth during even in periods of water scarcity and load-shedding
- World Water Day is an annual United Nations observance day held on 22 March.

What is the need of the hour?

- The lands suitable for drip irrigation which is around 270 lakh is applicable needs to be brought into the ambit.
- Drip irrigation should be made mandatory for water intensive crops to reduce the risk of ground water crisis.
- Measures should be taken to gradually bring sugarcane cultivation entirely under drip with the support of sugarcane mills.
- The government should guarantee interest-free bank loans and immediate electricity connection for pump sets to farmers who agree to cultivate only through drip irrigation.
- To achieve the goal of 'more crop per drop' the Pradhan Mantri Sinchayee Yojana was launched in 2015 to promote drip irrigation

Quick facts

Central Ground Water Board (CGWB)

- CGWB is a subordinate office of the Ministry of Water Resources.
- CGWB was established in 1970 by renaming the exploratory tube wells organization under the Ministry of Agriculture.
- CGWB was merged with the Ground Water Wing of the Geological Survey of India during 1972.
- CGWB is head quartered in Haryana.
- Commission for Agricultural Costs & Prices (CACP)
- CACP is an attached office of the Ministry of Agriculture and Farmers Welfare.
- CACP comprises a Chairman, Member Secretary, one Member (Official) and two Members (Non-Official).
- The non-official members are representatives of the farming community and usually have an active association with the farming community.
- CACP is mandated to recommend minimum support prices (MSPs).
- CACP submits its recommendations to the government in the form of Price Policy Reports every year.

5.5 Land Restoration

Why in news?

The United Nations Convention to Combat Desertification (UNCCD) has released the Global Land Outlook report highlighting the depletion of finite land resources and the need to urgently restore the world's land.

Why land restoration is important?

- Land restoration - Defined as the continuum of activities that avoid, reduce, and reverse land degradation with the explicit objective of meeting human needs and improving biodiversity.
- Solves interconnected crisis - Land acts as an operative link between biodiversity loss and climate change which can solve various interconnected climate crisis.
- Equitable and sustainable future - Effective land restoration, coupled with efforts to meet future needs is essential to recover from the current crises.
- It is also essential to move towards an equitable and sustainable future.
- Economic benefits - Each dollar invested in land restoration activities has also been estimated to return between \$7 and \$30 in economic benefits in future.
- Sustainable Development Goals - According to U.N. General Assembly, achieving 'land degradation neutrality' is an effective way to accelerate progress towards achieving Sustainable Development Goals by 2030.
- Sustainable food production - Sustainable land use planning and productivity within our agricultural practices will be the key to switch to sustainability in global food systems.
- Global warming - Land and ecosystem restoration will help slow global warming.
- Reduce disaster - Land and ecosystem restoration will reduce the scale and frequency of disasters like droughts, floods and so on.
- Planetary boundaries - Restoration of lands can stop the breach of planetary boundaries.
- UNCCD defines 'land degradation neutrality' as "a state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems".

What are the impacts of land degradation?

- Global warming and environmental degradation.
- Rise in poverty, hunger, inequality and zoonotic disease transmission.
- Loss of forest land.
- Soil and water degradation.
- Fractures the supply chains that connects the suppliers and producers.
- Great risk to global food security.

What are the ways to restore land?

- Sustainable management - Adopting sustainable land and water management practices.
- Livelihoods - Improving livelihoods and preparing for future challenges with the eventual goal of sustaining all life forms on the planet.
- Integrated land use planning - Identifying the best combination of land uses which is both sustainable to meet the needs of the stakeholders as well as preserve the land resources is an efficient way to address land degradation.
- Regenerative agricultural practices - Like terrace farming and rainwater harvesting should be followed.
- Inclusive and responsible governance - Is crucial to facilitate the shift to sustainable land use and management practices.
- Cost-effective approach - A best way to restore the lands and global hotspots which can maximize the economic benefits of the land.
- Others - Revitalizing soil, watersheds, and other elements of natural ecosystems.
- The drought conditions needs to be addressed.
- The health of the soil needs to be restored.

5.6 Delayed Arrival of the Southwest Monsoon

Why in news?

India Meteorological Department (IMD) has predicted that the monsoon will be delayed this year.

What is southwest monsoon system?

- Southwest monsoon - It is a sea-breeze from the Arabian Sea and the Bay of Bengal that officially onsets over Kerala on June 1 and retreats from Rajasthan by the end of September.
- Northeast monsoon - It is the retreating monsoon, which is the key source of rainfall for several parts of Tamil Nadu, Andhra Pradesh and north interior Karnataka.
- Rainfall - Southwest monsoon brings more than 75% of India's annual rainfall.
- Interdependent - An early or delayed onset of southwest monsoon over Kerala does not in any way dictate monsoon performance over the rest of the season.
- Movement - The monsoon then moves northwards, the speed of its movement dictated by local atmospheric conditions and the development of low-pressure areas.
- The Andaman and Nicobar Islands - Start getting the rains at least two weeks before Kerala does.
- No correlation - There is no correlation between the date of arrival and intensity of the monsoon.

What are the reasons for the delayed onset of southwest monsoon?

- Cyclone Mocha - Have weakened the conditions for the arrival of southwest monsoon over the Bay of Bengal region.
- Cyclone Fabien - The twin cyclone of Mocha just below the Equator is disrupting the incoming monsoon flows.
- Strong positive Indian Ocean Dipole (IOD) - For the past 5 years the strong positive IOD haven been delaying the monsoon.
- The Indian Ocean dipole (IOD) is the difference in temperature between the Eastern (Bay of Bengal) and western Indian oceans (Arabian Sea).
- El Nino - The warming of the equatorial Pacific Ocean that impacts weather events worldwide, is likely to develop earlier than expected.
- El Nino has the effect of suppressing the Indian monsoon rainfall.
- An El Nino event can increase the risk of a delayed monsoon in India.
- The interplay of the wind and the monsoon system combined with the Earth system produces twin synchronous cyclones and the twin tropical cyclones are caused by what are called equatorial Rossby waves.

What are the implications of delayed southwest monsoon?

- The delayed monsoon doesn't affect any crops.
- The follow up showers after the southwest monsoon may be delayed as a result and it could delay sowing of oilseeds such as soybean.
- A prolonged dry period could result in the Government asking farmers to switch over to crops sowing to nutri-cereals, which consume less water unlike paddy.

How to overcome the challenges of delayed monsoon?

- Farmers can adopt drought-resistant crops.
- The government can provide subsidies for irrigation and other water-saving measures.
- The government can also provide food assistance to people who are affected by drought.

Quick facts

India Meteorological Department (IMD)

- IMD is the national meteorological agency of India.
- IMD was established in 1875 as the Meteorological Office of India.
- It was renamed the India Meteorological Department in 1901.
- IMD has a network of over 1,000 weather stations across India.

- It is a scientific department under the Ministry of Earth Sciences of the Government of India.
- The IMD is responsible for providing weather forecasts, warnings, and other meteorological services to the Indian public.
- IMD is a member of the World Meteorological Organization (WMO).

Edge IAS

6. Security issues

6.1 Increasing Maoist Activities

Why in news?

The Maoists conducted an IED attack in Jharkhand killing 10 personnel.

Why the Maoist activities in the Jharkhand are on the rise?

- The special units local police force was formed late in the state which lead to the state becoming the Maoist zone.
- The absence of roads in the interiors in the interior places
- Minimal presence of the administration in the interiors in the Maoist area
- Local support from the people
- The state geographical (jungle) provides a perfect condition for Tactical Counter Offensive Campaigns (TCOCs)

What is Tactical Counter Offensive Campaigns (TCOCs)?

- It is a campaign carried out by the CPI Maoist between February and June every year.
- This period is chosen because with the onset of the monsoon in July.
- During this period the over flowing rivers cannot be crossed.
- The tall grass and shrubs everywhere reduce visibility.
- The TCOC period this year has been characterised by increasing IED attacks.
- Almost all major attacks by Maoists on security forces, including the 2010 Chintalnar massacre of 76 CRPF personnel, have taken place during the TCOC period.

What are the measures taken so far?

- Security related expenditure (SRE) - Constituted by central government to provide financial support to the states affected by left wing extremisms (LWE).
- Special infrastructure scheme (SIS) - To strengthen local police and intelligence.
- Special central assistance - To build infrastructure such as roads in LWE districts.
- Central Reserve Police Force (CRPF) - Has been consistently enlarging its footprint by opening new camps deeper in the jungles of Jharkhand.
- Bastariya Battalion - By CRPF to recruit the local people to gain the local intelligence about the Maoist.
- Counter-terrorism National Investigation Agency (NIA) and the Enforcement Directorate - Have been directed to track CPI (Maoist) cadres, leaders and sympathizers with the aim to choke their funding.
- District Reserve Guard (DRG) - Have been constituted to include the local police in neutralizing the Maoists.

Quick facts

- Maoist violence in the country has gone down by 77% since 2010.
- The number of resultant deaths (security forces + civilians) has come down by 90 % from the all-time high of 1,005 in 2010 to 98 in 2022.
- The number of districts declared to be Naxal-affected has reduced from over 200 in the early 2000s to just 90 now.
- The presence of Naxals is said to be minimal to zero in Andhra Pradesh, Telangana, Odisha, Jharkhand, and Bihar, which were at one time their strongholds.

6.2 Pakistan's State-Sponsored Terrorism Threatens SCO's Regional Security Efforts

The Council of Foreign Ministers (CFM) of the Shanghai Cooperation Organisation (SCO) recently convened in Goa to address pressing regional issues. Unfortunately, on the same day, the People's Anti-Fascists Front (PAF), an offshoot of Pakistan-sponsored Jaish-e-Muhammad (JeM), claimed the lives of five Indian army personnel in Jammu and Kashmir's Rajouri district.

Background: SCO's Anti-Terrorism Agenda

- The SCO's origins trace back to the establishment of the Shanghai Five in 1996, consisting of Russia, China, Kazakhstan, Kyrgyzstan, and Tajikistan.
- In 1998, the group recognized the joint fight against separatism, extremism, and terrorism originating from the Af-Pak region as a top priority. The inclusion of Uzbekistan in 2001 led to the organization's renaming as the SCO.
- Subsequently, the Regional Anti-Terrorists Structure (RATS) was formed in Tashkent, Uzbekistan, to institutionalize and consolidate anti-terrorism efforts within the SCO.
- RATS facilitated joint counterterrorism exercises, training, and the preparation of countermeasures.

Pakistan's Role in State-Sponsored Terrorism

- **Safe Haven for Terrorist Groups:** Pakistan has served as a safe haven and provided sanctuary for various terrorist groups. These groups, such as the Taliban, Haqqani Network, Lashkar-e-Taiba (LeT), and Jaish-e-Mohammed (JeM), operate from Pakistani soil, carry out attacks in neighboring countries, and then seek refuge in Pakistan.
- **Training and Recruitment:** Pakistan has been involved in training and recruiting terrorists. Extremist organizations have established training camps within Pakistan where individuals are indoctrinated, radicalized, and trained in various aspects of terrorism, including bomb-making, guerrilla warfare, and ideological indoctrination.
- **Financial and Logistical Support:** Pakistan has been accused of providing financial and logistical support to terrorist groups. This support includes funding, weapons, ammunition, and intelligence assistance, enabling these groups to carry out their activities with impunity.
- **Proxy Warfare:** Pakistan has used terrorism as a proxy warfare strategy to achieve its geopolitical objectives. By sponsoring terrorist groups, Pakistan seeks to influence and destabilize neighboring countries, particularly India and Afghanistan, with the aim of furthering its own interests in the region.
- **Infiltration of Terrorists:** Pakistan has facilitated the infiltration of terrorists across its borders into neighboring countries. This includes providing safe passage, forged documents, and logistical support to terrorists to carry out attacks or join insurgencies in other regions.
- **State-Sponsored Radicalization:** Pakistan has promoted and facilitated the radicalization of individuals, both within its own territory and abroad. Madrasas (religious schools) in Pakistan have been accused of spreading extremist ideologies, fueling hatred, and recruiting individuals for terrorist activities.
- **Instrument of Influence:** Pakistan has used terrorism as a tool to exert influence and control over regions and communities. By supporting and sponsoring terrorist groups, Pakistan seeks to manipulate political dynamics, create instability, and maintain a degree of control over areas of strategic importance.
- **Impact of Pakistan-Sponsored Terrorism in Jammu and Kashmir**
- **Loss of Lives:** Pakistan-sponsored terrorism in Jammu and Kashmir has resulted in the loss of countless innocent lives, including civilians, security forces, and terrorists themselves. The region has witnessed numerous terror attacks, suicide bombings, and armed encounters, leading to a tragic loss of human lives.
- **Destabilization and Conflict:** The continuous infiltration of terrorists from Pakistan into Jammu and Kashmir has fueled instability and prolonged the conflict in the region. The presence of terrorist groups has created an atmosphere of fear and insecurity, hindering the social and economic development of the region.
- **Human Rights Violations:** The activities of Pakistan-sponsored terrorist groups have been accompanied by human rights violations in Jammu and Kashmir. These violations include targeted killings, forced disappearances, torture, and intimidation of civilians, leading to a climate of fear and repression.

- **Disruption of Normalcy:** The persistent threat of terrorism has disrupted normal life in Jammu and Kashmir. Educational institutions, businesses, and daily activities have been severely affected as people live under constant fear and uncertainty.
- **Obstruction of Peace Processes:** Pakistan-sponsored terrorism acts as a major obstacle to the peace process between India and Pakistan. The violence and unrest created by these terrorist groups hinder any meaningful dialogue and diplomatic efforts aimed at resolving the Kashmir issue.
- **Economic Impact:** The sustained presence of terrorist activities has had a detrimental impact on the economy of Jammu and Kashmir. Tourism, a significant source of revenue for the region, has suffered due to the prevailing security concerns, leading to job losses and economic downturn.
- **Psychological Impact:** The ongoing terrorism has taken a toll on the mental health and well-being of the people of Jammu and Kashmir. The constant threat of violence, loss of loved ones, and living under a state of fear have resulted in psychological trauma for individuals and communities.
- **Consequences of Pakistan-sponsored terrorism on internal peace in Pakistan**
- **Increased Violence and Insecurity:** Pakistan-sponsored terrorism has led to a rise in violence and insecurity within the country. Terrorist attacks carried out by extremist groups have resulted in the loss of numerous lives and widespread fear among the population.
- **Loss of Civilian Lives:** Innocent civilians have been the primary victims of terrorist attacks sponsored by Pakistan. These attacks have targeted public places, religious institutions, markets, and educational institutions, causing significant casualties among the civilian population.
- **Sectarian and Ethnic Tensions:** Pakistan has witnessed an escalation in sectarian and ethnic tensions as a result of state-sponsored terrorism. Extremist groups have targeted specific religious and ethnic communities, exacerbating divisions and leading to a breakdown of social harmony.
- **Internal Displacement:** The violence and insecurity caused by Pakistan-sponsored terrorism have resulted in internal displacement of populations within Pakistan. People are forced to leave their homes and seek refuge in safer areas, leading to the displacement crisis and additional socio-economic burdens.
- **SCO's Limited Authority and Implications**
- **Lack of Enforcement Power:** The SCO does not possess strong enforcement power or mechanisms to compel member states to adhere to its mandates or take action against state-sponsored terrorism. It heavily relies on voluntary cooperation among member states, making it challenging to address non-compliance effectively.
- **Ineffectiveness in Holding States Accountable:** The absence of robust mechanisms for accountability limits the SCO's ability to hold member states accountable for their actions, including Pakistan's involvement in state-sponsored terrorism. This undermines the credibility and effectiveness of the organization in addressing terrorism-related issues.
- **Risk of Becoming a Platform for Political Maneuvering:** The limited authority of the SCO creates a risk that member states, including Pakistan, may use the organization as a platform for political maneuvering rather than genuinely addressing the issue of terrorism. Geopolitical rivalries and divergent interests among member states can impede the organization's ability to effectively combat terrorism.
- **Compromised Regional Security:** The limited authority of the SCO in dealing with state-sponsored terrorism hampers its ability to effectively address security threats in the region. This compromises the overall regional security and stability, as terrorist groups continue to exploit the gaps and operate with impunity.

7. Social issues

7.1 India's First National Water-Body Census

Why in news?

The Jal Shakti ministry has released the report of India's first water-body census, which provides a comprehensive database of ponds, tanks, lakes and reservoirs in the country.

What is the need for water-body census?

- To get a more accurate picture of the status of India's water.
- To formulate policies to address ground water crisis and biodiversity loss.
- Water bodies contribute to food and water security and livelihoods by recharging ground water.
- Water bodies are the sources of irrigation and livestock.
- Water bodies have an important role in supporting biodiversity.
- Water bodies are increasingly under threat from pollution, encroachment, urbanization, and drying up.
- The country's water resources have become extremely polluted, with 70% of surface water found to be "unfit" for human consumption.

What are the salient features of the census?

- Objective - To develop a national database for all water bodies by collecting information on all important aspects of the subject including their size, condition, status of encroachments, use, storage capacity, status of filling up of storage.
- Water bodies - Are structures where water from ice-melts, streams, springs, rain or drainage from residential or other areas is accumulated.
- Storage of water diverted from a stream, river is also included.
- The definition excludes oceans, rivers, waterfalls, and swimming pools, covered water tanks made by individuals, factories and temporary water bodies.
- Water bodies - India has 2.42 million water bodies, out of which 97.1% are in rural areas and 2.9% in urban areas.
- Non-functional - 83.7% are 'in use' and the remaining 16.3% are non-functional on account of drying up, silting and construction activities and so on.
- Private entities - 55.2% are owned by private entities and 44.8% are under public ownership.
- In the wetter states like Kerala, West Bengal and North Eastern states more than three-quarters of the water bodies are privately owned.
- Encroachment - Only 1.6% water bodies out of all the enumerated bodies have been encroached out of which 95.4% are in rural areas and remaining 4.6% in urban areas.
- Water conservation - Maharashtra State is the leading state for water conservation schemes.
- Others - West Bengal has highest number of ponds and reservoirs.
- Andhra Pradesh has highest number of tanks.
- Tamil Nadu has highest number of lakes.
- Mid-sized water bodies are largely panchayat-owned.
- In drier states, the water bodies are primarily used for irrigation and groundwater recharge.
- More than 80% of water in the country is consumed in agriculture while the rest is used for domestic and industrial purposes.

What are the shortcoming of the census?

- Lack of categorization - The water bodies which were abandoned were had no categories such as industrial pollution, construction, and salinity.
- Lack of focus - No focus to conserve water bodies instead focuses on human use.
- Lack of clarity in definition - Glossary of the census defines a pond as a smaller water body than a tank, while "water conservation structures" might include check dams and percolation tanks.

- Lack of standardization across states - Some states like Gujarat don't show any water bodies not being in use, whereas Karnataka reports almost 80% of its water bodies as being in a state of disuse.
- India accounts for 18% of the world's population, but has only 4% of its fresh water resources.

7.2 Kerala's Kudumbashree Programme

Why in news?

Kerala's Kudumbashree programme is at a crossroads after 25 years since its inception.

What is the programme about?

- Kudumbashree is the poverty eradication and women empowerment programme launched in 1998.
- It is implemented by the State Poverty Eradication Mission (SPEM) of the Government of Kerala.
- It was renamed Kudumbashree Mission in 1999 and began to function under the local self-government department.
- The name Kudumbashree in Malayalam language means 'prosperity of the family'.

What is the organisational structure of Kudumbashree?

- The community structure of Kudumbashree evolved from the experiments conducted in Alappuzha Municipality and Malappuram in early 1990s.
- Kudumbashree has a three-tier structure for its women community network.

What are the functions of Kudumbashree?

- The Mission converges the community network with local self-government institutions.
- It provides financial and technical assistance to economic and social empowerment programmes.
- It monitors the overall implementation of the poverty eradication and women empowerment programme across the State. For example - DDU-GKY.
- It also works as the platform for partnerships with government departments at the district and State levels.
- Lending - Thrift and credit programme is the first level entry point for Kudumbashree.
- NHGs start lending to members using the group's savings.
- The qualified NHGs are eligible for bank linkage and loans are availed thereafter.

What are the impacts of the programme?

- Kudumbashree became a multifaceted entity with footprints in all spheres of society apart from being a credit programme.
- Community restaurants, branded products in stores and on e-commerce platforms, micro and small scale industries, e-service centres, all-women construction sites

Few notable impacts of Kudumbashree -

- Haritha Karma Sena volunteers who collect non-biodegradable waste from households for disposal.
- Snehitha gender helpdesk and gender resource centres.
- The workforce for the animal birth control programme for regulating the population of community dogs.
- DDU-GKY - Kudumbashree is the implementing agency for the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY).
- Under DDU-GKY, it gave vocational training to some 62,000 people and placement for over 44,000.
- LSG - Kudumbashree pushed the representation for women in local bodies.
- Women constitute 54% of Kerala's 21,900 local body members and about 70% of these women are from Kudumbashree.

What are the new challenges faced by the programme?

- After 25 years, Kudumbashree has to address the aspirations of the new generation in a tech-driven world.

- Majority of the micro enterprises facilitated by Kudumbashree stick to the gendered vocations of women.
- Only 0.64% of the population in Kerala is categorised under extreme poverty, hence it is now focusing on skilling educated members of the auxiliary groups.
- This skilling enables the educated members to take up employment or start enterprises.
- While over 26,000 enterprises under the Start-up Village Entrepreneurship Programme have been launched, just few are noteworthy.

What is the Way forward?

- To improve productivity of women, they should have more time for themselves.
- Ward-level day care centres and day homes for the elderly has to be set up to give women adequate productive time.

7.3 Menstrual Health and Hygiene

Why in news?

Menstrual Hygiene Day is observed on May 28th to highlight the critical importance of proper menstrual hygiene management and break stigma around it.

What is Menstrual Health and Hygiene?

- Menstrual health and hygiene (MHH) means the ability to access menstrual products, privacy to change the pads/menstrual cups etc, and access to facilities to dispose of used product.
- Menstrual products - Pads (or sanitary napkins), cloth napkins, tampons, menstrual cups, etc.

What are India's efforts towards MHH?

- India has been a front runner for action on menstrual hygiene but often the focus has often been on India's rural population.
- The National Health Mission 2011 promoted a menstrual hygiene scheme among adolescent girls in rural areas.
- Menstrual hygiene management (MHM) is an integral part of the 'Swachh Bharat Mission' guidelines.
- The Union Ministry of Drinking Water and Sanitation also issued MHM guidelines for schools in 2015.
- Free Napkins - Different states have their own schemes, but the primary focus of service delivery remains on the distribution of sanitary napkins.
- Kerala and Karnataka governments have been distributing menstrual cups as a sustainable alternative to sanitary napkins.

What are India's challenges in MHH?

- Urban India - India's rapidly growing urban areas lack accessibility to toilets in many public spaces.
- Educating Men - Menstrual health is not a 'women's subject' and it is important to educate boys and men about menstruation.
- Comprehensive and meaningful education on menstrual processes, supportive environments, encouraging participation, and honest conversations make them better understand.
- Social Taboos - The social taboos about menstruation limit girls' and women's lives and restricts them at different levels.
- The practice of segregating menstruating girls and women to 'kurmaghars' (period huts) are still found in places like Maharashtra.
- Accessibility - Women in informal work (e.g. construction work) often have no access to washrooms, clean water, and to cost-effective hygiene products or their safe disposal.
- Menstrual Leave - The 2022 'Right of Women to Menstrual Leave and Free Access to Menstrual Health Products Bill' specified three days of paid leave for women.
- Only Kerala and Bihar currently have menstrual leave policies for women.

What are the other issues around Menstruation?

- Inclusivity - The menstrual needs of the differently abled, transgender men, and people with other gender identities who menstruate like intersex has to be addressed.
- Disposal - Safe disposal of sanitary napkins is often overlooked and has misconceptions around it.
- Quality - The quality issues in sanitary napkins distributed could possibly undermine the goal of providing it.
- Alternatives - Menstrual cups are a cheap, sustainable, and eco-friendly alternative to sanitary napkins but still women are sceptical.
- Socio-economic Factors - these factors limits their choice of menstrual products and disposal mechanisms.

What need to be done to improve MHH?

- Awareness about periods along with efforts to address harmful social and gender norms.
- Menstrual products, both reusable and disposable, must be more available through various access channels.
- Female-friendly community and public toilets to be built more to provide safe, private, clean facilities to manage periods.
- The provision of dustbins and incinerators in female toilets for waste disposal and management.
- Addressing the needs of menstruating people in urban slums and refugee camps.
- Catering the menstrual needs of formal and informal women workforce and workspaces.

Quick Facts

Menstrual Hygiene Day

- Menstrual Hygiene Day is observed every year on the 28th day of the fifth month.
- It is because menstrual cycle averages 28 days in length and people on an average menstruate for five days each month.
- Menstrual Hygiene Day was started by Germany-based NGO WASH United and it was observed for the first time on May 28, 2014.

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