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By CivilsTap Himachal

FOR HPAS &
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Prelims

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1. POLITY6	
1.1. Justice Siddharth Mridul is CJ Manipur HC ...	
1.2. Electoral Bonds	
1.3. SC declines to legalise same-sex marriage	
1.4. Ethics Committees of Parliament	
1.5. Mission Mahila Sarathi	
2. ECONOMY.....8	
2.1. Project Mariana	
2.2. Index of Industrial Production	
2.3. Financial Stability Board.....	
2.4. first IEA Critical Minerals and Clean Energy Summit held.....	
2.5. AP assembly passes Guaranteed Pension System Bill.....	
2.6. The Insolvency And Bankruptcy Board Of India	
2.7. National Turmeric Board.....	
2.8. National Investment and Infrastructure Fund	
2.9. Yak Churpi' from Arunachal Pradesh gets GI Tag	
2.10. PUSA-44	
2.11. 52 nd GST Council meeting	
2.12. Periodic Labour Force Survey	
2.13. Udangudi 'Panangkarupatti' gets GI tag.....	
2.14. Goan cashew gets GI tag.....	
2.15. Intelligent Transportation Systems.....	
2.16. Dhordo Awarded UNWTO's Best Tourism Village 2023.....	
2.17. Kannauj Attar	
2.18. 'Namoo Bharat'	
2.19. Kasturi Cotton	
2.20. National Cooperative Exports Limited	
2.23. Reference fuels	
2.24. Cardamom cultivation	
2.25. Kerala achieves hallmarking feat	
3. GEOGRAPHY18	
3.1. Sela Tunnel.....	
3.2. Pontus Tectonic Plate	
3.3. Mount Vesuvius.....	
3.4. Cyclone Tej.....	
3.5. Swarm Earthquakes.....	
4. ART AND CULTURE 20	
4.1. Sammakka Sarakka	
4.2. Mewari miniature painting.....	
4.3. Verangana Rani Durgavati	
4.4. Hakki Pikkis tribe.....	
4.5. Jageshwar Temple and Parvati Kund.....	
4.6. Kati Bihu.....	
4.7. Muthuvan tribe.....	
4.8. Someshwara Inscription	
4.9. Yuva Sangam.....	
4.10. Meri Maati, Mera Desh campaign.....	
4.11. Mehrauli Archaeological Park.....	
4.12. Dogra Architecture	
4.13. Vajra mushti kalaga	
4.14. Banni festival	
4.15. Pichwai Paintings	
4.16. Panamalai Paintings.....	
5. SCIENCE AND TECHNOLOGY 27	
5.1. National Mission on Inter disciplinary Cyber-physical Systems (NM-ICPS).....	
5.2. Continuously Operating Reference Stations (CORS)	
5.3. Robotic Process Automation lab	
5.4. Thallium	
5.5. Optoelectronics	
5.6. DANGER analysis.....	
5.7. SIM card working	
5.8. Dark Patterns Buster Hackathon 2023	
5.9. Science and technology clusters.....	
6. DEFENCE..... 30	
6.1. Project Udbhav	30
6.2. Military Nursing Service.....	
6.3. Exercise SAMPRITI XI	

6.4.	Territorial Army.....	8.11.	Graded Response Action Plan
6.5.	Exercise Chakravat joint Exercise.....	8.12.	Children Displaced in a Changing Climate
6.6.	Exercise Chakravat joint Exercise.....	8.13.	Watemeal
6.7.	Iron Dome	8.14.	Reticulated Python
6.8.	Operation Ajay	8.15.	International Big Cat Alliance
6.9.	White Phosphorous	8.16.	Dancing frogs.....
6.10.	David Sling air defence system	8.17.	Chilika lake
6.11.	Jus ad bellum versus jus in bello.....	8.18.	One CGIAR
6.12.	Iron Beam defence system	8.19.	Pet coke
6.13.	Cheetah & Chetak helicopters	8.20.	Nilgiri Tahr
6.14.	MULTILATERAL NAVAL EXERCISE (MILAN)	8.21.	New frog species in Dampa T.R.
6.15.	Project Udbhav	8.22.	GCP and Ecomark scheme
6.16.	THAAD and Patriot Air defence system	8.23.	Similipal Tiger Reserve.....
6.17.	Exercise Harimou Shakti	8.24.	Pobitora Wildlife Sanctuary.....
6.18.	ITBP	8.25.	Bannerghata National park.....
6.19.	Intelligence Bureau	8.26.	UNCCD
6.20.	Meteor Missile	8.27.	Anamalai Tiger Reserve
6.21.	Exercise Kazind-2023	8.28.	Global Declaration for River Dolphins
7.	SPACE	9.	POLICY AND PROGRAMME.....
	38		54
7.1.	CALIPSO satellite	9.1.	Intelligent Grievance Monitoring System (IGMS) 2.0.....
7.2.	World Space Week.....	9.2.	PM SVANidhi scheme
7.3.	Psyche mission	9.3.	Pradhan Mantri Ujjwala Yojana.....
7.4.	TV-D1	9.4.	PIDF Scheme and PM Vishwakarma scheme
7.5.	Betelgeuse star	9.5.	'Scheme for Residential Education for Students in High Schools in Targeted Areas' (SHRESHTA).....
7.6.	Ejecta Halo	9.6.	Accredited Agent for Expansion of Health and Livestock Production) programme
7.7.	SWIM project	9.7.	Passport to Earning (P2E) programme
8.	ENVIRONMENT	9.8.	Data Analytics Dashboard and Poorvottar Sampark Setu Portal
	41	9.9.	National Mission for Clean Ganga
8.1.	Pink bollworm	9.10.	Right to Information
8.2.	Armageddon Reedtail	9.11.	PM Gati Shakti completes 2 years
8.3.	Pygmy hogs released in Manas National Park	9.12.	International Institute for Population Sciences (IIPS)
8.4.	Badis Limmakumi	9.13.	Intensified Mission Indradhanush
8.5.	Operation "Kachchhap"	9.14.	APAAR.....
8.6.	Coral Reef Breakthrough launched.....		
8.7.	Staghorn coral.....		
8.8.	Glacial Lake Outburst Flood in Sikkim.....		
8.9.	Dhole.....		
8.10.	Kolleru lake		

9.15. 'Chakra-II' operation	11.16. International Atomic Energy Agency
9.16. Pradhan Mantri Anusuchit Jaati Abhuyday Yojana	11.17. Asian Development Bank.....
9.17. Aadi Mahotsav	11.18. Summit of the Three Basins.....
9.18. Indian porcupine.....	11.19. Robert Fico to be Slovakia's new PM
10. INDEX AND REPORTS..... 62	11.20. International Competition Network.....
10.1. Trade and Development Report 2023	11.21. International Labour Organisation
10.2. Capturing the Resilience Dividend report.....	12. DAYS TO REMEMBER 79
10.3. Sustainable Finance: Bridging The Gap In Asia And The Pacific Report	12.1. World Nature Day 2023- October 3 rd
10.4. Global Hunger Index (GHI) 2023	12.2. World Teachers' Day 2023- October 5 th
10.5. State of Global Water Resources 2022.....	12.3. World animal day- October 4 th
10.6. FAO releases "The impact of disasters on agriculture and food security" report.....	12.4. World Cotton Day
10.7. Global Survey Report on Persons with Disabilities and Disasters 2023	12.5. World Post Day 2023- October 9 th
10.8. 'The High Cost of Cheap Water' report	12.6. International Day of the Girl Child 2023.....
10.9. Global Tax Evasion Report 2024	12.7. World Mental Health Day- October 10 th
10.10. World Energy Outlook 2023	12.8. International Day for Disaster Risk Reduction 2023- October 13 th
10.11. International Migration Outlook 2023	12.9. World Students Day- October 15 th
10.12. Interconnected Disaster Risks Report 2023..	12.10. World Food Day- October 16 th
11. INTERNATIONAL, SUMMITS 70	12.11. National Space Day.....
11.1. UN Convention against Transnational Organised Crime	12.12. International Day for the Eradication of Poverty – October 17 th
11.2. Asian Development Bank.....	12.13. World Trauma Day 2023- October 17 th
11.3. International Criminal Court	12.14. World Osteoporosis Day 2023- October 20 th
11.4. Cape town Treaty.....	12.15. World Statistics Day- October 20 th
11.5. Nagorno-Karabakh and OSCE	12.16. International Chefs Day- October 20 th
11.6. Asia-Pacific Institute for Broadcasting Development	12.17. United Nations Day- October 24 th
11.7. Israel Palestine conflict	12.18. World Development Information Day- October 24 th
11.8. International Council on Archives.....	12.19. World Polio Day- October 24 th
11.9. UNHRC	12.20. World Day for Audiovisual Heritage 2023- October 27 th
11.10. Inter Parliamentary Union	12.21. World Stroke Day 2023- October 29 th
11.11. IORA- Indian Ocean Rim Association	12.22. World Cities Day- October 31 st
11.12. India- UK 2+2 dialogue.....	13. APPOINTMENTS 84
11.13. World Health Summit	13.1. Lt General Raghu Srinivasan is New BRO DG
11.14. Montreux Convention.....	13.2. Arindam Bagchi is India's UN Ambassador ...
11.15. Vienna Convention.....	13.3. President Murmu appoints new governors of Odisha, Tripura
	13.4. Sanjay Kumar Jain appointed CMD of IRCTC

14. PERSON IN NEWS85

- 14.1. Shyamji Krishna Varma
- 14.2. Nanaji Deshmukh.....
- 14.3. Homi Jehangir Bhabha
- 14.4. Sardar Patel.....
- 14.5. Norman Pritchard

15. AWARDS AND HONOURS87

- 15.1. 2023 SASTRA Ramanujan Prize
- 15.2. Nobel Prize in Physics
- 15.3. Nobel Prize In Physiology Or Medicine 2023
- 15.4. Kongthong village
- 15.5. 2023 Nobel Prize In Chemistry.....
- 15.6. Nobel Prize in Literature
- 15.7. Nobel Peace Prize
- 15.8. Asia-Pacific Institute for Broadcasting

Development

16. SPORTS.....90

- 16.1. India’s first high-tech sports training centre for Divyangjan inaugurated
- 16.2. 19th Asian games concluded
- 16.3. Raunak Sidhwani wins junior championship
- 16.4. Asian Para Games 2023
- 16.5. Shubman Gill fastest batsman to score 2000 runs
- 16.6. 37th National games

17. PLACES IN NEWS92

- 17.1. Rafah crossing.....

18. SOCIAL ISSUES, HEALTH, EDUCATION.... 92

- 18.1. R21/Matrix-M (Malaria vaccine).....
- 18.2. Protein Binders
- 18.3. Hemochromatosis or ‘bronze diabetes’

- 18.4. Chimeric Antigen Receptor (CAR)-T cell therapy
- 18.5. Highly Pathogenic Avian Influenza
- 18.6. Hepatitis C
- 18.7. Tilapia parvovirus
- 18.8. Ayushman Bhav campaign.....
- 18.9. Lymphatic Filariasis.....
- 18.10. Niemann-Pick disease.....
- 18.11. CBSE Merit Scholarship Scheme for Single Girl Child, 2023
- 18.12. PM- Schools for Rising India (SHRI)
- 18.13. 25 X 25 initiative

19. HIMACHAL NEWS 99

- 19.1. Shimla Kalka railway track resumes
- 19.2. HP Wool fed office to be shifted
- 19.3. paddy procurement centres opened in Kangra
- 19.4. CM announces Rs 2 lakh incentive to parents of single girl child.....
- 19.5. Israeli from Dharamkot long to return home
- 19.6. District Good Governance Index released....
- 19.7. SJVN gets nod for 100-MW solar project
- 19.8. Bhoothnath Bridge reopens
- 19.9. 11 sites identified to promote eco-tourism
- 19.10. first digital library of the state
- 19.11. paintbrush swift butterfly.....
- 19.12. Horticulture university, Nauni, bags CeRA award
- 19.13. Pre-World Cup Paragliding Event
- 19.14. Indian Army’s First wind tunnel.....

1. POLITY

1.1 JUSTICE SIDDHARTH MRIDUL IS CJ MANIPUR HC

- ❖ Justice **Siddharth Mridul** was **recently appointed** as the **chief justice of Manipur High Court** three months after the **Supreme Court Collegium** recommendation.

1.2 ELECTORAL BONDS

- ❖ Chief Justice of India referred the **challenge to the validity of the electoral bonds scheme**, which **facilitates anonymous donations to political parties**, to a **Constitution Bench of five judges**.
- ❖ The petitioners' are **urging to focus primarily on two issues concerning the electoral bonds scheme**, that is, the **legalisation of anonymous donations to political parties** and the **violation of citizens' right to information about the funding of political parties**, promoting corruption.
- ❖ The **two issues concern violation of Articles 19, 14 and 21 of the Constitution**.
- ❖ The **electoral bonds scheme** was passed as a **Money Bill**, circumventing the Rajya Sabha.

ABOUT ELECTORAL BONDS

- ❖ It is a **bearer instrument**, like a **promissory note** that can be **bought by any Indian citizen or company incorporated in India**.
- ❖ These can be **bought individually or jointly with other individuals**.
- ❖ It is **payable to the bearer on demand** and **interest-free**.
- ❖ Electoral Bonds can be **purchased digitally or through cheques**.
- ❖ The electoral bonds are **available for purchase for 10 days at the beginning of every quarter**.
- ❖ **State Bank of India (SBI)** branches can issue the bonds in denominations of **Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore**.
- ❖ The **citizen or corporate** can then **donate the same to any eligible political party of his/her choice**.
 - ✓ Only the **political parties registered under Section 29A of the Representation of the People Act, 1951** and have **secured not less than 1% of the votes polled** in the last general election to the **House of the People or the Legislative Assembly**, are **eligible to receive electoral bonds**.
 - ✓ The political parties can **encash such bonds within 15 days of receiving them**.
- ❖ If a **party hasn't encashed any bonds** within 15 days, **SBI deposits these into the Prime Minister's Relief Fund**.
- ❖ **Anonymous cash donations** have been **capped at Rs 2,000**.

1.3 SC DECLINES TO LEGALISE SAME-SEX MARRIAGE

- ❖ A **five-judge Bench of the Supreme Court** declined to **legalise same-sex marriage**, placing it **upon the Parliament and State governments** to decide if **non-heterosexual unions** can be **legally recognised**.

IMPORTANT POINTS

- ❖ The judgment has **refused to recognise queer marriages or civil unions**.
- ❖ Marriage, according to the court, is an **institution set up under law** — and **same-sex couples do not have a right to participate in it unless the law permits them to do so**. The fact that it does not permit them at this moment, according to the court, is **not unconstitutional**.
- ❖ The **Special Marriage Act, 1954** — a **legislation** that was enacted to **enable inter-faith marriages**, and the **challenge against which formed the foundation of the hearings** — was **upheld in its current form**, i.e., permitting **marriages only between a 'man' and a 'woman'**.
- ❖ The verdict poses the **marriage equality question for the legislature**. In the **absence of any central law**, the judgment holds that **State legislatures can enact laws recognising and regulating same-sex marriages**; the

Constitution under Articles 245 and 246 empowers both the Parliament and the State to enact marriage regulations.

- ❖ Court cannot mandate the state to recognize a civil union.
 - ✓ A “civil union” refers to legal status that allows same sex couples specific rights and responsibilities normally conferred upon married couples.
- ❖ Since a same-sex couple cannot marry under Indian law, it follows that they cannot also adopt children as a couple.

JUDGEMENTS RELATED TO LGBTQ RIGHTS IN INDIA

- ❖ **Suresh Koushal v Union of India**- upheld the constitutional validity of Section 377 of the Indian Penal Code.
- ❖ **Navtej Johar v Union of India**- struck down IPC Section 377 to the extent that it criminalised homosexuality.
- ❖ **NALSA v Union of India**- upheld the right of transgender persons to decide their gender and directed the Centre and state governments to grant legal recognition to their gender identity
- ❖ **KS Puttaswamy v Union of India**- recognised the right to privacy as a fundamental right under the Constitution.
- ❖ **Shafin Jahan v Union of India**- recognised the right to choose one’s partner as a facet of the fundamental right to liberty and dignity.

1.4 ETHICS COMMITTEES OF PARLIAMENT

- ❖ **Lok Sabha Speaker** referred a complaint against TMC MP to the **House Ethics Committee**.

ABOUT ETHICS COMMITTEE

- ❖ The Speaker **appoints members of the committee for one year**.
- ❖ It consists of **15 members**.
- ❖ **Genesis**
 - ✓ **Rajya Sabha**- Upper House’s Ethics Committee was constituted on **March 4, 1997** — it was **officially inaugurated two months later in May** — to **oversee the moral and ethical conduct of members and examine cases of misconduct referred to it**.
 - The **Rules applicable to the Committee of Privileges also apply to the ethics panel**.
 - ✓ **Lok Sabha**- The Committee of Privileges **recommended the constitution of an Ethics Committee during the 13th Lok Sabha**.
 - Late Speaker **G M C Balayogi** constituted an **ad-hoc Ethics Committee in 2000** and it became a **permanent part of the House only in 2015**

WORKING

- ❖ **Any person can complain against a member** through **another Lok Sabha MP** along with **all evidence of misconduct and an affidavit** stating that the complaint is not “false, frivolous or vexatious”.
- ❖ **A member, too, can complain against another member with evidence without any need for an accompanying affidavit**.
- ❖ The Committee **does not entertain complaints based only on media reports or on sub-judice matters**.
- ❖ The **Speaker can refer to the committee any complaint** against an MP.
- ❖ The **committee makes a prima facie enquiry** before **deciding to examine a complaint** and **after the evaluation of the complaint makes its recommendations**.
- ❖ The committee report is **presented to the Speaker** who asks the House if the report should be taken up for consideration.
 - ✓ There is also a **provision for a half-an-hour discussion on the report**.
- ❖ **Difference from Privileges Committee**
 - ✓ While **MPs can be examined for breach of privilege on corruption charges**, a **person who is not an MP can also be accused of breach of privilege for actions that attack the authority and dignity of the House**.
 - ✓ In the case of the **Ethics Committee**, however, **only an MP can be examined for misconduct**.

1.5 MISSION MAHILA SARATHI

- ❖ Uttar Pradesh CM recently launched the 'Mission Mahila Sarathi' initiative under the state's Mission Shakti Abhiyan and flagged 51 buses.
- ❖ These will be operated exclusively by women as drivers and conductors.
- ❖ It will encourage more women empowerment, safety and progress.

2. ECONOMY

2.1 PROJECT MARIANA

- ❖ Project Mariana has successfully tested the cross-border settlement capabilities of wholesale central bank digital currencies (wCBDCs) between three major global markets.
- ❖ The project was launched in November 2022 through a collaboration between the Bank for International Settlements (BIS), Banque de France, the Monetary Authority of Singapore (MAS) and the Swiss National Bank, as a means to establish how tokenisation and automated market makers (AMM) could be applied to the global foreign exchange (FX) market, which currently trades \$7.5 trillion every day.
- ❖ More specifically, it sought to determine how wCBDCs could be leveraged in tandem with decentralised finance (DeFi) to improve the effectiveness and transparency of FX trade and settlements.
- ❖ The project is purely experimental and does not indicate that any of the involved central banks intend to issue CBDC or endorse DeFi or a particular technological solution.

ABOUT BIS

- ❖ An international financial organisation owned by 60 member central banks, representing countries from around the world (including India).
 - ✓ These countries together account for about 95% of world GDP.
- ❖ Established-1930.
- ❖ HQ- Basel, Switzerland.
- ❖ It fosters international monetary and financial cooperation and serves as a bank for central banks.
- ❖ It carries out its work through its meetings, programmes and through the Basel Process – hosting international groups pursuing global financial stability and facilitating their interaction.

2.2 INDEX OF INDUSTRIAL PRODUCTION

- ❖ With the eight core industries' output having grown at a 14-month high of 12.1% in August, and other high frequency indicators showing upbeat performance, economists anticipate the Index of Industrial Production (IIP) growth in the month to come in at around 10%.

ABOUT IIP

- ❖ IIP is a ratio which measures the growth of various sectors in the economy.
- ❖ It is released every month by Central Statistics Office (CSO), under the Ministry of Statistics and Programme Implementation (MoSPI).
- ❖ Base year 2011-12
- ❖ The IIP comprises 3 broad sectors: Manufacturing, Mining and Electricity.
- ❖ The weightage of all 8 core industries in IIP is 40.27 %.

ABOUT INDEX OF EIGHT CORE INDUSTRIES

- ❖ In IIP, the decreasing order of core industries among them is as

- ✓ **Refinery Products** (weight: 28.04%) > **Electricity** (19.85%)> **Steel** (17.92%) > **Coal** (10.33%) > **Crude Oil** (8.98%) > **Natural gas**(6.88%)> **Cement** (5.37%)> **Fertilizers** (2.63%).
- ❖ The Index is **compiled and released by the Office of the Economic Adviser (OEA)**, Department of Industrial Policy & Promotion (DIPP), **Ministry of Commerce & Industry**.
- ❖ **Objective-** to provide an **advance indication of production performance of industries of 'core' nature** before the release of IIP by the Central Statistics Office.

2.3 FINANCIAL STABILITY BOARD

- ❖ The **Financial Stability Board** published final recommendations, **requested by the G20**, on supervising firms that trade cryptoassets such as bitcoin.
- ❖ The watchdog also **revised its existing recommendations for stablecoins** in light of the demise of TerraUSD/Luna coins.

ABOUT FINANCIAL STABILITY BOARD

- ❖ It is an **international body that monitors and makes recommendations about the global financial system**.
- ❖ **Established in April 2009 after the London G20 Summit in London**
- ❖ It is the **successor to the Financial Stability Forum**.
- ❖ **Mandate-** It promotes international financial stability by coordinating, at the international level, **the work of national financial authorities and international standard-setting bodies and to develop and promote the implementation of effective regulatory, supervisory, and other financial sector policies**.
- ❖ HQ- **Basel, Switzerland**.
- ❖ The **board** includes **all G20 major economies**.
- ❖ The Financial Stability Board **publishes the list of Global Systemically Important Banks (G-SIBs)** by consulting the **Basel Committee on Banking Supervision**.
- ❖ The FSB's **decisions are not legally binding on its members**.

2.4 FIRST IEA CRITICAL MINERALS AND CLEAN ENERGY SUMMIT HELD

- ❖ The **challenges and opportunities** behind meeting the rising demand for minerals required for clean energy technologies was at **forefront of discussions** at the **first International Energy Agency (IEA) Critical Minerals and Clean Energy Summit held at Paris, France**.
- ❖ The one-day meeting was **attended by ministers, industry leaders, investors, international organisations and civil societies from 50 countries**, who agreed on six main actions to assure sustainable, long-term and ethical supply chains of vital minerals.
- ❖ The actions include:
 - ✓ **Advancing the goal of diversified mineral supplies;**
 - ✓ **maximising the potential of technology and recycling;**
 - ✓ **fostering market transparency;**
 - ✓ **improving the accessibility of trustworthy information;**
 - ✓ **establishing incentives for sustainable and responsible production; and**
 - ✓ **stepping up efforts to foster international cooperation.**

Critical minerals include copper, lithium, nickel and cobalt, which are essential components in such rapidly growing clean energy technologies.

ABOUT INTERNATIONAL ENERGY AGENCY (IEA)

- ❖ It is an **autonomous inter-governmental organisation within the OECD framework**.
- ❖ **Energy security** remains a **central part of its mission**.
- ❖ It was **founded in 1974** to ensure the security of oil supplies as a response to the 1973-1974 oil crisis.
- ❖ HQ- **Paris, France**
- ❖ Membership: **31 countries (India joined in 2017, but as an Associate member)**.

- ❖ A candidate country to the IEA must be a member country of the **Organisation for Economic Co-operation and Development (OECD)**.

2.5 AP ASSEMBLY PASSES GUARANTEED PENSION SYSTEM BILL

- ❖ The **Andhra Pradesh Assembly** passed the **Andhra Pradesh Guaranteed Pension System Bill-2023**.
- ❖ It will now bring all the state government employees under the **Contributory Pension System (CPS)** replacing the **Old Pension System (OPS)**.
- ❖ Under the **Guaranteed Pension System**, all state government employees will be eligible for a guaranteed monthly pension of **50 per cent** of their last drawn basic salary.
- ❖ There is an addition of **dearness relief (DR)** which will be announced twice a year and will increase the quantum of pension.
- ❖ The scheme will ensure a monthly spouse pension at the rate of **60 per cent** of the guaranteed pension amount after the death of the pensioner.
- ❖ A retired government employee will get a minimum **Rs 10,000** monthly pension.
- ❖ The scheme will combine elements of both the new and the old pension schemes.
- ❖ Those **dismissed or removed from service and facing compulsory retirement** due to disciplinary action will not be eligible under the scheme.

2.6 THE INSOLVENCY AND BANKRUPTCY BOARD OF INDIA

- ❖ The **Insolvency and Bankruptcy Board of India (IBBI)** celebrated its Seventh Annual Day recently.
- ❖ **Success story**
 - ✓ Creditors have recovered **around Rs 3 lakh crore** through the **Insolvency and Bankruptcy Code (IBC)** and the recoveries stood at more than **Rs 51,000 crore** last year, when the number of resolutions rose **80 per cent** to **180**.
 - ✓ Till August this year, **135 resolutions** have happened and the number is likely to touch **300** by year-end.

ABOUT INSOLVENCY AND BANKRUPTCY BOARD OF INDIA (IBBI)

- ❖ Established on **1st October 2016** under the **Insolvency and Bankruptcy Code (IBC), 2016**.
- ❖ It is **responsible for the implementation of the IBC**.
- ❖ The **IBC amends and consolidates the laws** relating to insolvency resolution of individuals, partnership firms and corporate persons in a time-bound manner.
- ❖ **Functions-**
 - ✓ The **IBBI regulates professionals as well as processes**.
 - ✓ It has regulatory oversight over the **insolvency professional agencies, insolvency professional entities, insolvency professionals and information utilities**.
 - ✓ It enforces rules for processes of corporate insolvency resolution, individual insolvency resolution, corporate liquidation and individual bankruptcy under the **IBC**.
 - ✓ It specifies the minimum eligibility requirements for registration of insolvency professional agencies, insolvency professionals and information utilities and curriculum for the qualifying examination of the , insolvency professionals for their enrolment.
 - ✓ It **collects and maintains records relating to insolvency and bankruptcy cases** and disseminate information relating to such cases.
- ❖ **Constitution**
 - ✓ A **Chairperson**.
 - ✓ **Three members from Central Government** equivalent or not below the rank of a Joint Secretary representing the **Ministry of Finance, Ministry of Corporate Affairs and Ministry of Law, ex-officio**.
 - ✓ One member nominated by the **RBI (Reserve Bank of India), ex-officio**.

- ✓ **Five other members nominated by the Central Government, out of which at least three should be whole-time members.**
- ❖ **The term of office of the Chairperson and members (other than ex-officio members) is five years or until they attain sixty-five years, whichever is earlier, and they are eligible for re-appointment.**

2.7 NATIONAL TURMERIC BOARD

- ❖ Recently, **the Government of India has established the National Turmeric Board.**
- ❖ India is presently the **world's largest producer (75% of global turmeric production), consumer, and exporter of turmeric**
- ❖ **Composition of the Board: A Chairperson (appointed by the Central Government) and members from the Ministry of AYUSH, Departments of Pharmaceuticals, Agriculture & Farmers Welfare, Commerce & Industry, etc. along with rotating senior State Government representatives from three states.**
- ❖ The Board is **expected to help develop and grow the spice market in India, which controls over 62% share of the turmeric world trade.**
- ❖ The **largest producing states of Turmeric are Maharashtra, Telangana, Karnataka and Tamil Nadu.**

ABOUT TURMERIC CROP

- ❖ Scientific name- **Curcuma longa**
- ❖ It is a **plant in the ginger family which is native to Southeast Asia.**
- ❖ Favourable Agricultural conditions include-
 - ✓ **tropical conditions,**
 - ✓ **20–35 degree Celsius**
 - ✓ **Annual rainfall of 1500 mm or more.**
 - ✓ **Well-drained sandy or clay loam soils.**
- ❖ **Application-** Turmeric is used in **traditional Indian medical systems, cosmetic industries, Detoxify the liver, exhibit properties like antiviral, analgesic, antibacterial, anti-inflammatory etc.**

2.8 NATIONAL INVESTMENT AND INFRASTRUCTURE FUND

- ❖ The **National Investment and Infrastructure Fund** has entered into a **collaboration with Japan Bank for International Cooperation (JBIC) to unveil a \$600 million India-Japan Fund.**
- ❖ The fund will have **JBIC and Government of India as anchor investors.**
- ❖ It will **focus on investing in environmental sustainability and low carbon emission strategies and aims to play the role of being a 'partner of choice' to further enhance Japanese investments into India.**
- ❖ The announcement marks **NIIF's first bilateral fund, with GoI contributing 49% of the target corpus and the remaining 51% contributed by JBIC.**
- ❖ The **fund will be managed by NIIF Limited (NIIFL), and JBIC IG (a subsidiary of JBIC) will support NIIFL in promoting Japanese investments in India.**

ABOUT NIIF

- ❖ The **₹40,000-crore NIIF was set up in December 2015 as an institution for enhancing infrastructure financing by investing in greenfield (new), brownfield (existing) and stalled projects.**
- ❖ The **fund was set up as Category II Alternative Investment Fund (AIF).**
- ❖ NIIF manages **three funds with distinct strategies – Master Fund, Fund of Funds and Strategic Opportunities Fund.**

2.9 YAK CHURPI' FROM ARUNACHAL PRADESH GETS GI TAG

- ❖ **Yak Churpi** has recently received the GI tag from Arunachal Pradesh.
- ❖ The **slightly sour and salty churpi is a naturally fermented cheese prepared from the milk of Arunachali yak.**

- ❖ It has been a staple food for tribal communities in Arunachal Pradesh.
- ❖ Its nutritional profile, rich in protein, makes it a vital dietary source, especially in regions where fresh vegetables are scarce.

2.10 PUSA-44

- ❖ Punjab government has decided to ban sowing of water-guzzling PUSA-44 variety of paddy crop from the next Kharif season.
- ❖ It takes 152 days for ripening as against the PR-126 variety which takes just 92 days.
- ❖ It was developed in 1993 by the Indian Council of Agricultural Research (ICAR).
- ❖ By the end of 2010s, it had gained widespread popularity among farmers across the Punjab, covering approximately 70 to 80% of the area under paddy cultivation.

2.11 52ND GST COUNCIL MEETING

- ❖ The 52nd GST Council meeting took place on 7th October 2023 at Sushma Swaraj Bhawan, New Delhi.

MAJOR OUTCOMES

- ❖ GST on molasses has been reduced from 28% to 5%.
- ❖ The District Mineral Foundation Trust (DMFT) in mineral mining are eligible for the same GST exemptions as other government authorities.
- ❖ The GST Council has ceded the right to tax the Extra Neutral Alcohol (ENA) used in liquor for human consumption to states.
 - ✓ ENA is highly concentrated alcohol and key ingredient for pharmaceuticals, perfumes, toiletries etc.
- ❖ Rules defined for Composition of GSTAT
 - ✓ Minimum age limit is 50 years while the maximum is 70 years for the President and 67 years for members of GSTAT.
 - ✓ Advocates with 10 years experience can only be appointed as judicial members.

ABOUT GST COUNCIL

- ❖ It is a constitutional body under Article 279A (101 Constitution Amendment Act, 2016).
- ❖ Composition
 - ✓ Chairperson: Union Finance Minister
 - ✓ Members:
 - Union Minister of State, in-charge of Revenue
 - Minister in charge of finance or taxation or any other Minister nominated by each State Government.
- ❖ Functions- Under Article 279A (4), the Council makes recommendations to the Union and the States on important issues related to GST, like the goods and services that may be subjected or exempted from GST, model GST Laws, principles that govern place of supply, threshold limits, GST rates including the floor rates with bands, special rates for raising additional resources during natural calamities/disasters, special provisions for certain States, etc.
- ❖ Decision requires a 3/4th majority of members present and voting.
 - ✓ vote of the Central Government shall have a weightage of one-third of the total votes cast.
 - ✓ votes of all the State Governments taken together shall have a weightage of two-thirds of the total votes cast in that meeting.

ABOUT GST APPELLATE TRIBUNAL (GSTAT)

- ❖ GSTAT is the forum of the second appeal under the GST laws and the first common dispute resolution forum between the Centre and States.

- ❖ All appeals against the orders in the first appeals issued by the Appellate Authorities under the CGST and SGST Laws lie before the GST Appellate Tribunal, common under both the Central and State GST Acts.
- ❖ Being a common forum, the GST Appellate Tribunal will ensure uniformity in the dispute redressal under GST and, therefore, in the implementation of GST across India.

2.12 PERIODIC LABOUR FORCE SURVEY

- ❖ The Periodic Labour Force Survey (PLFS) was released recently.
- ❖ This national survey processed details from 5,639 first-stage sampling units (FSUs) and 1,67,916 people from 44,190 urban houses.

MAJOR FINDINGS

- ❖ It has reported that the unemployment rate in the country has shown a decrease between April and June 2023.
- ❖ Similarly, the Labour Force Participation Rate (LFPR) for persons of age 15 years and above and the Worker-Population Ratio (WPR) have also improved during the period.
- ❖ The LFPR in urban areas increased from 47.5% in April-June 2022 to 48.8% in April-June 2023 for persons of age 15 years and above.

ABOUT PLFS

- ❖ PLFS is carried out by the National Sample Survey Office (NSSO) under Ministry of statistics and programme implementation (MoSPI).
- ❖ It was launched in April 2017.
- ❖ Objective
 - ✓ To estimate the key employment and unemployment indicators (viz. Worker Population Ratio, Labour Force Participation Rate, Unemployment Rate) in the short time interval of three months for the urban areas only in the CWS.
 - ✓ To estimate employment and unemployment indicators in both usual Status and CWS in both rural and urban areas annually.

IMPORTANT DEFINITIONS

- ❖ **Labour Force:** The Labour force, according to Current Weekly Status (CWS), is the number of persons either employed or unemployed on an average in a week preceding the date of the survey.
- ❖ **Labour Force Participation Rate (LFPR)-** Percentage of persons in the labour force (i.e. working or seeking or available for work) in the population.
- ❖ **Worker Population Ratio (WPR):** WPR is defined as the percentage of employed persons in the population.
- ❖ **Unemployment Rate:** The unemployment rate is defined as the percentage of unemployed persons in the labour force.
- ❖ **Current Weekly Status(CWS) Approach:** The urban unemployment PLFS is based on the CWS approach.
 - ✓ Under CWS, a person is considered unemployed if he/she did not work even for one hour on any day during the week but sought or was available for work at least for one hour on any day during the period.

2.13 UDANGUDI 'PANANGKARUPATTI' GETS GI TAG

- ❖ Udangudi 'Panangkarupatti' (palm jaggery/ gur) has been given a Geographical Indication (GI) tag.
- ❖ The palm jaggery preparation procedure in this area is traditional till date without inclusion of any additional modern strategies.
 - ✓ No chemical additives are used in Udangudi Panangkarupatti.
- ❖ The karupatti prepared from the palm sap from the region around Udangudi in Tiruchendur taluk in Thoothukudi district in Tamil Nadu has some uniqueness.
- ❖ This is due to presence of red sand dune soil found in the region.
 - ✓ This soil holds less groundwater.

- ❖ The **moisture content in the atmosphere is less** because of the dry climatic condition, which leads to **high sucrose content, in turn adding taste.**
- ❖ The region's **dry climate is also suitable for storage of karupatti for a longer duration.**
- ❖ **Udangudi jaggery is even exported to foreign countries, including Sri Lanka, Malaysia and Singapore.**

2.14 GOAN CASHEW GETS GI TAG

- ❖ **Goan cashew has been given the geographical indication (GI) tag.**
- ❖ It is **native to northeast Brazil and was introduced to Goa by Portuguese in 1570.**
- ❖ It occupies **largest area among horticultural crops in Goa.**
- ❖ It requires **well-drained deep sandy loam soils.**

ABOUT GI TAGS

- ❖ A GI tag is **conferred upon products originating from a specific geographical region, signifying unique characteristics and qualities.**
- ❖ Essentially, it **serves as a trademark in the international market.**
- ❖ It is **given by the Geographical Indications Registry in Chennai.**
- ❖ GI tag **stands valid for 10 years, and can be renewed from time to time for a further period of 10 years each.**

2.15 INTELLIGENT TRANSPORTATION SYSTEMS

- ❖ **Three new indigenously developed technologies are developed under the Intelligent Transportation System Endeavor for Indian Cities initiative.**
- ❖ These were **launched by Ministry of Electronics and Information Technology (MeitY).**
- ❖ **These technologies are: CMOS Sensor based Camera for Industrial Application, Thermal sensor Camera for Intelligent Transportation System-(TvITS) and Online Sucro Crystal Imaging System (OSIS).**
- ❖ The **CMOS Sensor based Camera for Industrial Vision Applications (iViS) is an indigenous technology for automated inspection and identification of objects.**
 - ✓ It supports AI based applications **employing Machine Learning and Deep Learning Techniques.**
- ❖ The **Thermal Sensor based Camera (TvITS) is an AI powered thermal sensor based smart vision camera for road traffic applications.**
 - ✓ It can **provide data of stationery as well as of moving objects with high accuracy even in a completely dark environment** in all weather conditions.
 - ✓ The modular design **provides ease of operation and changing of lenses per need.**
- ❖ The **Online Sucro Crystal Imaging System (OSIS) is a system developed using the industrial camera for measurement of crystal size in sugar industries.**
 - ✓ It is a very **important quality parameters which is required by the sugar industries.**

2.16 DHORDO AWARDED UNWTO'S BEST TOURISM VILLAGE 2023

- ❖ The village of **Dhordo in Gujarat has secured a place on the list of the 54 best tourism villages announced by the World Tourism Organization (UNWTO).**
- ❖ **Gujarat's Dhordo village is located in the Great Rann of Kutch.**
- ❖ It is **well-known for hosting the annual Rann Utsav - a vibrant cultural festival that showcases the traditional art, music and crafts of the region.**

ABOUT UNITED NATIONS WORLD TOURISM ORGANISATION

- ❖ It is the **United Nations Specialised Agency responsible for the promotion of responsible, sustainable and universally accessible tourism.**
- ❖ It was **established in 1975**
- ❖ **Headquarters- Madrid, Spain.**

- ❖ **UNWTO** encourages the implementation of the **Global Code of Ethics for Tourism**, to maximize tourism's socio-economic contribution while minimizing its possible negative impacts.

2.17 KANNAUJ ATTAR

- ❖ India is the **world's largest exporter of attar**.
- ❖ The **olfactory art and science** was inspired by **Nur Jahan's (Jahangir's wife) love for the damask rose**.
- ❖ Attar is **distilled extracts of flowers and herbs in a base of sandalwood oil**.
- ❖ Kannauj is a **significant hub for the fragrance and flavor industry in India**, contributing to the country's exports.
 - ✓ Hence, it is known as **Perfume city**.
- ❖ It also has **geographical indication (GI) tag**.
- ❖ Attar is made with **natural extracts using the heirloom hydrodistillation process**, without **alcohol and artificial preservatives**.

2.18 'NAMO BHARAT'

- ❖ **Prime Minister Narendra Modi** flagged off the country's first **Regional Rapid Transit System (RRTS)**, calling the **Namo Bharat train** a glimpse of India's promising future.

ABOUT NAMO BHARAT

- ❖ It is the country's first **Regional Rapid Transit System (RRTS)** named **Namo Bharat train**. Formerly, the Namu Bharat train was called "**RAPIDX**."
- ❖ It will establish a **Delhi-Ghaziabad-Meerut corridor** that will have a travel time of less than an hour through urban centers of **Ghaziabad, Muradnagar and Modinagar**.
- ❖ It is a **National Capital Region Transport Corporation (NCRTC)** shuttle train that will run from Meerut to Delhi.
- ❖ The **17-km stretch** from Sahibabad to Duhai Depot in Uttar Pradesh was inaugurated by the Prime Minister.
- ❖ The full **82-km Delhi-Ghaziabad-Meerut corridor** is estimated to be functional by 2025.
- ❖ It has a top speed of **180 km/h**.
- ❖ It is managed and operated by **Deutsche Bahn, a German rail company**.
- ❖ It will offer **high-speed intercity commuter trains every 15 minutes**, with the option to reduce the frequency to as little as every 5 minutes if necessary.
- ❖ It Developed at a cost of more than **₹30,000 crore**.

HISTORY

- ❖ A study conducted by the **Indian Railways in 1998-99** identified regional rapid transit system as an option for connecting regions of the NCR via high-speed commuter trains.
- ❖ **The National Capital Region Transport Corporation (NCRTC)** was established in 2013 to implement eight planned Regional Rapid Transit Systems (RRTS) throughout the NCR to relieve traffic in the **100–200 km radius** surrounding Delhi.
- ❖ The NCRTC rebranded RRTS services as "**RapidX**" in **April 2023**.

ABOUT REGIONAL RAPID TRANSIT SYSTEM (RRTS)

- ❖ A high-frequency, high-speed commuter transit system, the **Regional Rapid Transit System (RRTS)** was created to enhance transportation in urban and suburban areas, especially in places with **dense populations and heavy traffic**.
- ❖ The main goal of **RRTS** is to offer quick, practical, and efficient public transportation choices.

ABOUT NCRTC

- ❖ The **NCRTC** is a joint venture company of the Central government and the governments of **Delhi, Haryana, Rajasthan and Uttar Pradesh**.
- ❖ It falls under the administrative control of the **Union Ministry of Housing and Urban Affairs**.

- ❖ It is mandated to implement the **RRTS project across the NCR** and ensure balanced and sustainable urban development through better connectivity and access.

2.19 KASTURI COTTON

- ❖ The **Kasturi Cotton Bharat website**, a **digital platform** for necessary information and updates on the initiative was launched recently.
- ❖ The website **highlights the registration process** for ginners to produce the **Kasturi Cotton Bharat brand** and its **processes that make the branded Indian cotton unique**.
- ❖ The **Kasturi Cotton Bharat** is a **joint initiative by the ministry of textiles**, the **Cotton Corporation of India (CCI)**, and **trade and industry bodies** to work on the **principle of self-regulation by owning complete responsibility of branding, traceability, and certification of Indian cotton** to enhance its **competitiveness in the global market** and create a **sustainable ecosystem for all stakeholders involved**.
- ❖ On the **eve of World Cotton Day on October 7**, the **ministry of textiles introduced the 'Kasturi Cotton Bharat' brand** of cotton by which **Indian cotton has been endowed with a brand and a logo** that represents **whiteness, softness, purity, lustre, and Indianness**.
 - ✓ It is the **first ever Brand & Logo for Indian Cotton**.

2.20 NATIONAL COOPERATIVE EXPORTS LIMITED

- ❖ Union Home Minister and Minister of Cooperation presided over the **launch of the National Cooperative for Exports Limited (NCEL)**, a **venture that marks the union of cooperative sectors in India's export efforts**.
- ❖ The event saw the **unveiling of the NCEL logo, website, and brochure**.

ABOUT NCEL

- ❖ **NCEL**, established as an **umbrella organization for cooperative sector exports**, was **registered under the Multi-State Co-operative Societies Act, 2002, on January 25 2023**.
- ❖ It has an **authorised share capital of ₹2,000 crore** and those **cooperative societies from the level of primary to apex interested in exports** are **eligible to become its members**.
 - ✓ **NCEL has bagged orders of ₹7,000 crore so far**.
- ❖ Its **objectives include, increasing exports, making farmers prosperous, providing global market for organic products, gaining a place for India in the global market for biofuel etc**.
- ❖ It aims to **focus on exporting the surplus available in the Indian cooperative sector** by accessing wider markets beyond the geographical contours of the country.
- ❖ There are **about 8 lakh cooperative societies in the country** with over **29 crore members**.

2.21 FIRST NANO DAP PLANT INAUGURATED

- ❖ The **country's first Nano Di-Ammonia Phosphate (DAP) plant** by **IFFCO near Kalol in Gandhinagar** was inaugurated recently.
- ❖ The **Nano liquid DAP plant in Kalol** has been **set up by IFFCO at the cost of 300 crore rupees**.
- ❖ The plant has been developed **in tune with the Aatmnirbhar Bharat**.
- ❖ The plant will lead to a **significant reduction in imports of DAP** and also will bring down the **logistics and warehousing costs**.
- ❖ It will **produce 5 crore bottles of Nano dap liquid equivalent to 25 tons of DAP**.

ABOUT NANO DAP

- ❖ It is a **concentrated phosphate-based fertilizer**.
 - ✓ **Nano fertilisers exploit the nanoscale porous domains on plant surfaces to deliver nutrients, improve the effectiveness of nitrogen delivery, and reduce losses to the environment**.

- ❖ While one bag of conventional DAP costs around 1300 rupees, the farmers can get one bottle of nano liquid DAP for just 600 rupees which can be carried by farmers in their pockets

DAP is the second most consumed fertilizer in the country after urea.

- ❖ It provides phosphorous nutrition throughout the crop growth and development cycle.
- ❖ A small bottle of 500 millilitres nano urea spray is said to be a substitute for a full bag of 45 kilogrammes urea.
- ❖ Nano-DAP is jointly manufactured by IFFCO and Coromandel International Limited (CIL).

2.22 JAMRANI DAM

- ❖ The government approved the inclusion of the Jamrani Dam Multipurpose Project of Uttarakhand under the Pradhan Mantri Krishi Sinchayee Yojana-Accelerated Irrigation Benefit Programme (PMKSY-AIBP), which will cost ₹2,584 crore.
- ❖ The project envisages the construction of a dam near Jamrani village across river Gola, a tributary of river Ram Ganga, in the Nainital district of Uttarakhand.
- ❖ The dam will feed the existing Gola barrage through its 40.5 km length of canal system and 244 km long canal system completed in 1981.
- ❖ The central support of ₹1,557.18 crore will be provided to Uttarakhand for completion of the project at an estimated cost of ₹2,584.10 crore, scheduled to be completed by March 2028.
- ❖ The project envisages additional irrigation of 57,065 hectares (9,458 hectares in Uttarakhand and 47,607 hectares in Uttar Pradesh) in Nainital and Udham Singh Nagar districts of Uttarakhand, and Rampur and Bareilly districts in Uttar Pradesh.

2.23 REFERENCE FUELS

- ❖ IndianOil has successfully commenced the production of Reference Gasoline and Diesel fuels for the first time in India.
- ❖ Reference gasoline fuels will be available in E0, E5, E10, E20, E85, E100 from Paradip Refinery.
- ❖ Reference diesel fuel shall be available in B7 grade from Panipat Refinery.
- ❖ Reference fuels (gasoline and diesel) are premium high-value products, used for calibration and testing of vehicles by auto OEMs and organizations involved in testing and certification in the automotive field like ICAT (International Centre for Automotive Technology) and ARAI (Automotive Research Association of India).
- ❖ To meet the international standards, these products had passed through three layers of certification -- Refinery lab, IOCL R&D Centre and an internationally reputed third party lab.
- ❖ India is dependent on imports to cater to the demand for this specialized fuel.
- ❖ Specification requirements of reference fuels are more stringent than commercial gasoline and diesel.
- ❖ The demand of reference fuels in India is currently met by importing from other countries.
- ❖ Advantage - These indigenously developed products will lead to import substitution at a better price and minimum lead time for the vehicle manufacturers.

2.24 CARDAMOM CULTIVATION

- ❖ The timely setting in of North-East monsoon in high-ranges has brought smiles on the face of cardamom growers in realising better productivity and price for the crop.

ABOUT CARDAMOM CULTIVATION

- ❖ Cardamom, popularly known as Queen of Spices is native to the evergreen rainy forests of Western Ghats in South India.

- ❖ It is cultivated in about 1, 00,000 ha mainly confined to the Southern States viz; Kerala, Karnataka and Tamil Nadu.
- ❖ It contains **vitamin C, niacin, magnesium, and potassium** etc.
- ❖ Cardamom is **used for flavouring various preparations of food, confectionary, beverages and liquors.**
- ❖ Soil and climate-
 - ✓ **Thick shady areas with loamy soil** are ideal for cultivating cardamom.
 - ✓ This crop can be grown at an **elevation from 600 to 1500 m.**
 - ✓ Annual rainfall range- **150 to 400 cm**
 - ✓ Temperature- **10° to 35° C**
 - ✓ Areas exposed to **heavy winds are unsuitable.**
 - ✓ **Adequate drainage** must be provided.
 - ✓ It is grown in forest loamy soils which are **usually acidic in nature with a pH range of 5.0 – 6.5**
- ❖ **Challenges-**
 - ✓ Cardamom is a **highly climate sensitive and location specific crop.**
 - ✓ **Pest and disease incidence** is also **very high** in Cardamom.
 - ✓ Cardamom is **grown mainly in high altitude areas** and hence the **scope for area expansion is limited.**

2.25 KERALA ACHIEVES HALLMARKING FEAT

- ❖ With the **inauguration of a hallmarking centre in Idukki, Kerala became the first state in India to have hallmarking centres in all 14 districts.**
- ❖ The **inauguration of these hallmarking centres is a significant step** in ensuring the **quality and reliability of gold ornaments for consumers.**
- ❖ The **Bureau of Indian Standards** made **hallmarking compulsory with a view to protect customers, especially those not aware of the market, from being taken for a ride by jewellers.**
 - ✓ **Hallmarking ensures accurate determination and official recording of the proportionate content of precious metal in the jewellery, artefacts or bullion, and coins.**

3. GEOGRAPHY

3.1 SELA TUNNEL

- ❖ The Sela Tunnel, a **strategically crucial project in Arunachal Pradesh, is almost 96% complete and is expected to be inaugurated by the end of the year.**
- ❖ The **total length of the project, including the tunnels, the approach and the link roads, will be around 12 km.**
- ❖ The Sela Tunnel has been excavated below the **4,200-metre (13,800 ft) Sela Pass, which is often closed due to snowfall and landslides.**
- ❖ The **Sela Pass** connects the **Tawang district with the rest of Arunachal Pradesh.**
- ❖ It will **provide year-round access to Tawang and other areas bordering China, enhancing the operational capabilities of the Indian Army.**
- ❖ **Safety measures are being installed inside the tunnel, and the final touches are being provided.**

3.2 PONTUS TECTONIC PLATE

- ❖ A **long-lost tectonic plate** called 'Pontus' has been **rediscovered 20 million years after disappearing.**
- ❖ The plate is **known only from a few rock fragments from the mountains of Borneo** and the **ghostly remnants of its huge slab detected deep in Earth's mantle.**
- ❖ It was **once a quarter of the size of the Pacific Ocean.**

- ❖ Scientists have **dubbed it the "Pontus plate"** because at the time of its existence, it **sat under an ocean known as the Pontus Ocean.**
- ❖ **Mechanism**
 - ✓ **Tectonic plates constantly move** against one another, and the **crust in oceanic plates is denser than continental plates**, so **oceanic plates get pushed under continental plates in a process called subduction and disappear.**
 - ✓ Sometimes, however, **rocks from a lost plate get incorporated into mountain-building events.**
 - ✓ These remnants can point to the location and formation of ancient plates.

ABOUT TECTONIC PLATES

- ❖ Tectonic plates are **large, rigid pieces of the Earth's lithosphere**, which is **composed of the crust and uppermost mantle.**
- ❖ They are **typically composed of both continental and oceanic crust**, and **their thickness can vary from about 6 to 70 kilometers.**
- ❖ There are **primarily seven major tectonic plates**: the **African Plate, Antarctic Plate, Eurasian Plate, North American Plate, South American Plate, Pacific Plate, and Indo-Australian Plate.**
- ❖ Additionally, **there are several minor plates and microplates.**

3.3 MOUNT VESUVIUS

- ❖ The text in an **ancient scroll that was badly burned** in a **volcanic eruption Mount Vesuvius of nearly 2,000 years ago has been read by artificial intelligence (AI).**
- ❖ The **papyrus scrolls, still rolled up**, were **turned into charcoal erupted** and **reached the Roman town of Herculaneum in 79AD** - the same one that **buried the city of Pompeii and killed around 16,000 people.**

ABOUT MOUNT VESUVIUS

- ❖ It is located in **southern Italy near the coastal city of Naples.**
- ❖ The **4,203-ft tall Vesuvius** is the **only active volcano in mainland Europe.**
- ❖ It has been **classified as a complex volcano (or a compound volcano)**, one that **consists of a complex of two or more vents.**
- ❖ It is part of the **Campanian volcanic arc**, a line of volcanoes that formed over a **subduction zone created by the convergence of the African and Eurasian plates.**
- ❖ Vesuvius typically has **explosive eruptions and pyroclastic flows** — defined as a **high-density mix of hot lava blocks, pumice, ash and volcanic gas.**
- ❖ It is **considered among the most dangerous volcanoes** in the world **due to its proximity to Naples and surrounding towns.**

3.4 CYCLONE TEJ

- ❖ The **Cyclone Tej in the Arabian Sea** is turning into a cyclonic storm.
- ❖ It is expected to turn into a severe cyclonic storm and move towards the south coasts of **Oman** and adjoining **Yemen.**
- ❖ **Cyclone Tej was named by India.**

ABOUT CYCLONES

- ❖ **A Cyclone** is a rapid inward air circulation around a low-pressure area. In other words, it is a low-pressure system that forms over warm waters.

CYCLONES IN INDIA:

- ❖ **Tropical cyclones** in the **North Indian Ocean region (Bay of Bengal and Arabian Sea)** develop during the pre-monsoon (April to June) and post monsoon (October to December) periods.
- ❖ **Cyclone Tej is developing in the Arabian Sea.**

3.5 SWARM EARTHQUAKES

- ❖ A **seismic swarm** has hit the **Reykjanes peninsula in southwest Iceland** with more than **5,500 small earthquakes** recently, raising the prospect of a volcanic eruption, the country's meteorological office (IMO) reported.
- ❖ The quakes **originated at a depth of up to 5 km and were caused by a long-term accumulation of magma that has been building pressure and is now slowly drifting towards the surface of the earth.**
- ❖ Located between the **Eurasian and the North American tectonic plates**, among the **largest on the planet**, Iceland is a **seismic and volcanic hot spot** as the **two plates move in opposite directions.**

Earthquakes with a **magnitude above 2.5** can **often be felt by humans**, according to the Michigan Technological University.

ABOUT EARTHQUAKE SWARM

- ❖ It is a **series of many low magnitude earthquakes without a noticeable main shock.**
- ❖ These are **observed in volcanic environments, hydrothermal systems, and other active geothermal areas.**
- ❖ It occurs when the **piled up seismic energy inside the earth is released in small amounts from certain points.**
 - ✓ **Seismic energy is related to the movement of fluid gases and liquids in the Earth's crust.**
- ❖ It may **range from days, weeks to even months.**
 - ✓ **For e.g. Earthquake swarm in Palghar district of Maharashtra has occurred over the period from 2018 to 2019, with around 30 low-intensity earthquakes.**

4. ART AND CULTURE

4.1 SAMMAKKA SARAKKA

- ❖ PM recently announced the **setting up of a Central Tribal University in Mulugu district of Telangana.**
- ❖ The varsity will be **named after revered tribal Goddesses 'Sammakka and Sarakka'**
- ❖ It will **cost Rs 900 crore.**

ABOUT STORY OF SAMMAKKA AND SARAKKA

- ❖ Legend has it that **Sammakka had miraculous powers.** One story that is much told about is that during the 13th century, a **troop from the Koya tribal community was returning from a trip** when they saw a **little girl playing with tigers.** Amazed at her bravery, the **head of the troop adopted her and named her Sammakka.**
- ❖ **Sammakka later married the headman of a neighbouring tribal group and had a daughter, Sarakka.**
- ❖ Both **mother and daughter opposed the Kakatiya kings who forced the tribes to pay taxes.**
- ❖ They **fought bravely and reportedly lost their lives.**
- ❖ The **Koya community constructed a temple as a token of gratitude and since then the event of Sammakka Sarakka Jatara or Medaram Jatara is held biennially.**
 - ✓ **The Jatara is the State Festival of Telangana.**
- ❖ Medaram Jatara is the **second-largest fair of India, after the Kumbh Mela, celebrated by the second-largest Tribal Community of Telangana- the Koya tribe for four days.**
The Jatra begins at **Medaram in Tadvai Mandal in Warangal district.**

4.2 MEWARI MINIATURE PAINTING

- ❖ A four-volume book, **The Mahabharata: Mewari Miniature Paintings** by Allah Baksh was recently released.
- ❖ **Employed by Raja Jai Singh of Udaipur, Allah Baksh had illustrated the Mahabharata with 4,000 Mewari miniature paintings.**

ABOUT MEWAR MINIATURE PAINTINGS

- ❖ The **Mewar school of miniature painting**, renowned for **vibrant colors and intricate narratives within a single frame**, flourished from the 17th to the 18th century.
- ❖ It **originated from south-central Rajasthan, parts of Madhya Pradesh, and Gujarat.**
- ❖ It is **characterized by simple bright colour and direct emotional appeal.**
- ❖ The **Ragamala** painted in 1605 A.D. is the **earliest example of series of Mewar painting.**
 - ✓ It was painted by the artist- Sahibdin.

4.3 VERANGANA RANI DURGAVATI

- ❖ PM recently laid the **foundation stone of 'Veerangana Rani Durgavati Smarak aur Udyaan'** in **Jabalpur, Madhya Pradesh.**
- ❖ The '**Veerangana Rani Durgavati Smarak aur Udyaan'** project is set to **cost about Rs 100 crore.**
- ❖ It will **cover an expansive area of approximately 21 acres and will feature a 52-foot-high bronze statue of Rani Durgavati.**
- ❖ The **500th birth centenary of Rani Durgavati is being celebrated with great fervour**

ABOUT RANI DURGAVATI

- ❖ Rani Durgavati was the **ruling queen of Gondwana in the mid-16th century.**
- ❖ She is **remembered as a brave, fearless and courageous warrior who fought for freedom against the Mughals.**
- ❖ She was **born in 1524 in Mahoba's Chandela dynasty.**
- ❖ She **married Dalpat Shah in 1542, the son of Gond King Sangram Shah, and ruled the kingdom of Garha-Katanga after the death of her husband in 1550 with great vigor and courage.**
 - ✓ **Adhar Kayastha and Man Thakur**, two ministers, assisted her in running the government.
 - ✓ The Kingdom of **Garha-Katanga** included the **regions of Narmada Valley and parts of Northern Madhya Pradesh.**
- ❖ Rani Durgavati's reputation was improved when **Bajbahadur(ruler of Malwa province) tried to attack her but was soundly defeated.**
- ❖ She **valiantly but unsuccessfully defended her kingdom against attack by Mughals under Asaf Khan (on orders of Akbar).**

OTHER FACTS

- ❖ **Gond tribe is a prominent tribe in central India known for their rich cultural heritage and resilience.**
- ❖ **Chandelas were known for building the famous Khajuraho temples in the 11th century.**
- ❖ Government of India paid its tribute to the **valiant Rani by issuing a postal-stamp commemorating her martyrdom, on 24th June 1988.**

4.4 HAKKI PIKKIS TRIBE

- ❖ The **Hakki Pikki tribal community is unhappy with the land allotted to them around Bannerghatta National Park near Bengaluru.**

- ❖ The settlement on the edge of the Bannerghatta National Park has both Hakki Pikki and Iruliga tribals staying here.

ABOUT HAKKI PIKKIS

- ❖ The Hakki Pikkis are traditionally a semi-nomadic tribe of bird catchers and hunters, who settled down in several parts of Karnataka.
- ❖ In Kannada, the word 'Hakki' stands for 'bird' and 'Pikki' stands for the verb 'to catch'.
- ❖ The Hakki-Pikki community migrated from the northern India population, and is found in Karnataka.
- ❖ The population is predominantly found in Shivamogga, Davanagere and Mysuru districts of Karnataka.
- ❖ According to the 2011 census, the population of Hakki-Pikki is 11,892.
- ❖ The Hakki-Pikkis are said to be a matriarchal group.

LANGUAGE

- ❖ Despite being surrounded by Dravidian languages and living in southern India, the community speaks an Indo-Aryan language. Their mother tongue was designated 'Vaagri' by scholars.
- ❖ They communicate in 'Vaagri' at home but speak in Kannada when conducting daily business.
- ❖ UNESCO has listed 'Vaagri' as one of the endangered languages.

4.5 JAGESHWAR TEMPLE AND PARVATI KUND

- ❖ PM Modi recently visited Jageshwar temple and Parvati Kund in Uttarakhand.

ABOUT JAGESHWAR TEMPLE

- ❖ Jageshwar is a Hindu pilgrimage town in the district Almora (Kumaun region Uttarakhand), known for its group of 125 ancient temples dating from the 7th to the 14th century (primarily constructed and restored by the Katyuri dynasty kings).
- ❖ Jageshwar temple is located near river Jata Ganga.
- ❖ These temples are dedicated to various deities, with many honouring Lord Shiva.
- ❖ According to the Skandha Purana and Linga Purana, the worship of Lord Shiva originated in Jageshwar, making it a significant religious site.
- ❖ Also, the area was a hub for Lakulisha Shaivism, a revivalist sect that reveres Lord Shiva.
- ❖ It also hosts religious festivals like the Jageshwar Monsoon Festival and Maha Shivratri Mela.
- ❖ The temples showcase a mix of North Indian Nagara and South/Central Indian architectural styles.

ABOUT PARVATI KUND

- ❖ Parvati Kund in Pithoragarh is one of India's most revered shrines.
- ❖ At an elevation of about 5,338 feet the Hindu pilgrimage site draws the faithful every year.
- ❖ The site has great spiritual significance and is believed to be the site where Lord Shiva and Goddess Parvati meditated.

4.6 KATI BIHU

- ❖ Kati Bihu is an Assamese festival.
- ❖ It marks the relocation of rice sapling and is known as Kongali Bihu.
- ❖ It is one of the three Bihu festivals celebrated in Assam, all connected to agriculture.
- ❖ During Kati Bihu, people light earthen lamps and candles to celebrate, with a special focus on lighting a diya near the Tulsi plant.
- ❖ Rituals include waking up early, cleaning the house, offering water to the Tulsi plant, and lighting lamps called "Akash Banti" in paddy fields.

4.7 MUTHUVAN TRIBE

- ❖ Members of the **Muthuvan tribe of the Anamalai hills**, who are known for coexisting with the wildlife with their traditional knowledge, have joined hands with the Tamil Nadu Forest Department for a unique task.
- ❖ They will be part of the **Project Nilgiri Tahr**, which is aimed at protecting the State animal, conservation status of which is 'endangered' in the **Red List of Threatened Species** by the International Union for Conservation of Nature (IUCN).

ABOUT MUTHUVAN TRIBE

- ❖ Muthuvan tribe is limited to **fragmented habitats in the Western Ghats in Tamil Nadu and Kerala**.
- ❖ Traditionally, Muthuvans are **nomadic agriculturists, hunters and trappers**.
- ❖ Their primary cultivations are **coffee, ginger, sugarcane and paddy**.
- ❖ The Muthuvans **live in hamlets called Kudi**, whose headman is known as **Kani or Moopan**.
- ❖ They speak slightly two different dialects and call each other **Malayalam Muthuvan** and **Pandi Muthuvan**.
- ❖ Muthuvan are **animists and spirit worshippers** and also worship the forest gods.
- ❖ They believe that the **spirits of their ancestors are to be the first migrants to the hill forests**.

4.8 SOMESHWARA INSCRIPTION

- ❖ Eminent archaeologist T. Murugeshi along with others, has **discovered a rare inscription connected to the Alupa dynasty of the region during a recent archaeological exploration at Someshwara near Mangaluru**.
- ❖ The inscription was the **first record of the Alupas that announced the death of a king** and also mentioned terms related to the **Siri cult, such as Siri, Dalya and Chattara (Chatra)**.

ABOUT THE INSCRIPTION

- ❖ The inscription has **two panels on the top**, and in between the two panels the first line is engraved.
 - ✓ The rest of the inscription written below the panels is in the **Kannada script** and the language of **12th century characters announcing the death of Alupendra I**.
- ❖ The **human figures** shown in the inscription represent **Kulashekara Alupendra himself**.
- ❖ The **Someshwara inscription** is very significant in the **study of Tuluva history and culture**.

ABOUT KULASHEKARA ALUPENDRA I

- ❖ Kulashekara Alupendra I was a **famous ruler of the Alupas of South Canara**.
- ❖ Alupendra I **ruled Tulunadu from 1156-1215 A.D.**, as known from his other records.
- ❖ He was **responsible for the establishment of new city called Kulashekara in Mangaluru**.
- ❖ He also **laid down strict rules and regulations for temple administration**, which are still followed in all temples in this region.
- ❖ He was the **first ruler to give royal patronage to Tulu language and culture**, ruling from **both the capitals, Mangaluru and Barkuru**.
- ❖ He also **built a palace by the name Bhuvanashraya at Kulashekara**.

Alupa Dyansty was one of the longest reigning dynasties of Tulu Nadu (in Karnataka).

Barkur was the capital city.

SOMESHWARA TEMPLE

- ❖ The **Soma cult** was founded by one **Soma Sharma of Gujarat in the 11th century AD** and it spread across the country.
- ❖ The **Someshwara temple at Someshwara** was built during the time of **Kulashekara Alupendra in honour of Soma** and adorned with **Nava Durgas**.
- ❖ **Independent Navadurga sculptures in sitting posture** are found in the temple.

4.9 YUVA SANGAM

- ❖ The registration portal for Phase III of **Yuva Sangam**, under **Ek Bharat Shreshtha Bharat (EBSB)**, was launched.
- ❖ Yuva Sangam is an initiative by the Government of India to strengthen people-to-people connect between **youth belonging to different States/UTs of India**.
- ❖ Interested youth in the **age group of 18-30 years**, mainly students, NSS/ NYKS volunteers, employed/self-employed persons, etc. may register through the **YUVA SANGAM portal** to participate in the forthcoming Phase.

ABOUT YUVA SANGAM

- ❖ Yuva Sangam, launched under EBSB, draws inspiration from the National Education Policy (NEP) 2020 and focuses on experiential learning and imbibing knowledge of the rich diversity of India on a first-hand basis.
- ❖ It is an on-going cultural exchange with the celebration of diversity at its core wherein participants gain an immersive experience of diverse facets of life, natural landforms, development landmarks, recent achievements, and youth connect in the host state.
- ❖ Yuva Sangam focuses on organizing exposure tours for the youth, including on-campus and off-campus students, from one state to another.
- ❖ Multi-dimensional exposure under five broad areas will be provided to them, which are Paryatan (Tourism), Parampara (Traditions), Pragati (Development), Paraspar Sampark (People-to-people connect), and Prodyogiki (Technology).
- ❖ Youths across various states will visit other states for 5-7 days during which they will get an immersive experience of various facets of the state they are visiting and interact with the local youth.
- ❖ Yuva Sangam has been organized on the model of Kashi Tamil Sangamam (KTS).

4.10 MERI MAATI, MERA DESH CAMPAIGN

- ❖ The Indian Railways will operate special trains to transport volunteers carrying mitti (soil) from State capitals and other major stations across the country to reach New Delhi on October 29.
- ❖ The soil that gets collected would be used in the **Amrit Vatika**, a special garden being created in Delhi. To facilitate the movement of the volunteers, the Ministry of Railways would operate special **Amrit Kalash Yatri trains**, add additional coaches in scheduled trains and facilitate release of berths from emergency quota depending upon the demand.

ABOUT MERI MAATI, MERA DESH CAMPAIGN

- ❖ “Meri Maati Mera Desh” [My soil, my country] campaign is envisaged from 9th August 2023 as a culminating event of ‘Azadi Ka Amrit Mahotsav’.
- ❖ It is a tribute to the **Veers and Veeranganas** who have made the supreme sacrifice for the country.
- ❖ It is being organised by the **Ministry of Culture**.
- ❖ It comprises many activities and ceremonies conducted across the country at **Panchayat/Village, Block, Urban Local Body, State and National levels**.

4.11 MEHRAULI ARCHAEOLOGICAL PARK

- ❖ **Lieutenant governor VK Saxena** inaugurated six renovated monuments in **Mehrauli Archaeological Park in Delhi**, along with a restored water body and other amenities. The restoration work was undertaken jointly by stakeholders at a **cost of ₹2.6 crore**.
- ❖ The LG is also chairman of the **Delhi Development Authority (DDA)**.

ABOUT MEHRAULI ARCHAEOLOGICAL PARK

- ❖ It is spread over **200 acres** and is adjacent to **Qutub Minar**, a **UNESCO World Heritage Site**.
- ❖ It is home to **55 historic structures** built by various empires — including the **Khaljis, Tughlaqs, Lodhis, Mughals, and the British** — and many have now been revamped.
- ❖ These include the **Jamali Kamali Mosque, Metcalfe House, Rajon ki Baoli**, as well as the **tombs of Mamluk king Ghiyas-ud-din Balban and Mughal governor Shah Quli Khan**.

4.12 DOGRA ARCHITECTURE

- ❖ **Over a century-old market at Maharaj Gunj locality in Downtown** is getting a much-awaited facelift by the authorities under the **Srinagar Smart City's Downtown Urban Renewal Project**.
- ❖ The Maharaj Gunj market area has a **rich mix of vernacular and colonial architecture**.
- ❖ Other projects taken on in this area include **Bohri Kadal** and **Zaina Kadal** markets under the project.
- ❖ **Initiative by - Srinagar Smart City Limited** and the **Kashmir chapter of the Indian National Trust for Art and Cultural Heritage (INTACH)**.
 - ✓ To **conserve vernacular elements of Kashmiri architecture**, including **colonnaded walkways, decorative pilasters, and exposed moulded brickwork**.
 - ✓ It aims to conserve elements introduced in **Kashmir by Dogra Hindu kings between 1846 and 1947**.

ABOUT DOGRA KINGDOM

- ❖ Dogra dynasty was founded by **Maharaja Gulab Singh Jamwal (1792-1857)**.
- ❖ He was **Jammu and Kashmir's first Maharaja, a princely kingdom**.
- ❖ From the **19th century until October 1947**, Jammu was ruled by the **Dogra Rajputs**, who belonged to the **Jamwal clan**.
- ❖ Under the **1846 Treaty of Amritsar**, British gave away **Kashmir to Gulab Singh**.
- ❖ He also **annexed Ladakh and Baltistan areas**.

4.13 VAJRA MUSHTI KALAGA

- ❖ **Vajra mushti kalaga is on the decline and takes place only during Dasara**.
- ❖ The "**vajra mushti kalaga**" is a form of wrestling different from the conventional grappling and entails two jettys taking a swipe at each other's head with a knuckleduster.
- ❖ **Whoever draws the blood from the opponent's head first is declared the winner**.
- ❖ The **fight is real** and the **jetty's make all efforts to draw blood from the opponent's head** and a **referee intervenes on noticing the first drop**.
- ❖ Sometimes the **fight is over in matter of seconds but is nevertheless conducted**.

BACKGROUND

- ❖ Though this form of wrestling was **popular during the period of the Vijayanagar rulers** who reigned **between the 14th and the 17th centuries**, it has **gone extinct**.
- ❖ It was held at the palace premises on Tuesday to **mark the Vijayadashmi of the Wadiyars** and was **witnessed by a large crowd**.
- ❖ **Medieval travellers from Portuguese** noticed this form of wrestling during the **Navaratri celebrations in Vijayanagar empire** and have **left detailed accounts of it**.

4.14 BANNI FESTIVAL

- ❖ The **traditional Banni festival** was celebrated at **Devaragattu in Kurnool district in Andhra Pradesh**.
- ❖ The **midnight event draws thousands of devotees** from across the **undivided Kurnool district every year**.
- ❖ It is a **practice for the villagers to gather with sticks and clash with one another on the sidelines of the main festival**.
- ❖ The Banni festival is **celebrated on the night of Vijayadasami** on the **account of the victory of Lord Mala Malleswara Swamy and Goddess Parvati** over demonish **Mani and Mallasura**, who troubled the people at **Devaragattu region**.
- ❖ The **annual religious festival** is held on the premises of the **Mala Malleswara Swamy Temple**.

4.15 PICHWAI PAINTINGS

- ❖ Chennai recently hosted an art exhibit showcasing **Pichwai** paintings, some **dating back 350 years**.
- ❖ The exhibit hosted paintings from **all four schools of the art form- Nathdwara, Kishangarh and Bundi** in Rajasthan and **Deccan School**.
- ❖ The word Pichwai comes from **'pichh'** meaning **back**, and **'wai'**, meaning **textile hanging**.
- ❖ The paintings, which **originated over 400 years ago in Nathdwara, about 70 kilometres from Udaipur**, are **always done on cloth, usually khadi**.
- ❖ These are **used as a backdrop to the idol in the temple**.
- ❖ Pichwai paintings **feature intricate designs and vibrant colours**, depicting scenes from the life of **Lord Krishna**.
- ❖ **Other themes** are also portrayed, such as the **map of the Nathdwara, temple, cows (as symbols of Lord Krishna) among others** and not very often, **are also created on paper**.
- ❖ The artists use **stone pigments, especially for gold and silver tones**.
- ❖ The **brighter orange, red, chrome yellow and kesari colours** come from **vegetable dyes**.
- ❖ They are **made by members of the Pushti Marg sect**, founded by **Shri Vallabhacharya in the 16th century**.

4.16 PANAMALAI PAINTINGS

- ❖ Neglect has taken a heavy toll on the **1,300-year-old Pallava period paintings at Talagirishwara temple at Panamalai in Villupuram district** in Tamil Nadu.
 - ✓ The panel **depicting the dance of Lord Shiva has almost faded away and only the face of goddess Parvathi and a few patches remain now**.
- ❖ The **painting is on the wall behind the Ettupattai lingam**.
- ❖ It **shows Lord Shiva with eight hands dancing**, known as **Latathilagabhani**, being **watched by Goddess Parvathi with her crown and well decorated umbrella**.
- ❖ The **colours, face, eyebrows and other features would look stunningly beautiful**.
- ❖ The paintings are on the **wall of a sub-temple on the northern side of the Talagirishwara (Siva) temple**, perched on **Panamalai**, the Tamil name of the word **'Talagiri'**.
- ❖ The **temple is under the control of the Archaeological Survey of India (ASI)**.
- ❖ The **temple was constructed by Pallava king Narasimhavarman II, popularly known as Rajasimha**.
- ❖ The paintings **bear a close resemblance to the paintings in Ajantha and Chithannavasal**.
- ❖ The paintings were created **after covering the stonewalls with paste made of limestone and sand**.

CivilsTap Hlmachal

5. SCIENCE AND TECHNOLOGY

5.1 NATIONAL MISSION ON INTER DISCIPLINARY CYBER-PHYSICAL SYSTEMS (NM-ICPS)

- ❖ C3iHub, a cyber-security Technology Innovation Hub (TIH) of The Indian Institute of Technology Kanpur (IITK) hosted the 3rd National Workshop on Technology Innovation in Cyber-Physical Systems (TIPS).
- ❖ The workshop was organized by the Department of Science & Technology (DST), under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).

ABOUT NATIONAL MISSION ON INTERDISCIPLINARY CYBER-PHYSICAL SYSTEMS (NM-ICPS)

- ❖ It was launched in December 2018.
- ❖ Implemented by Department of Science & Technology (DST).
- ❖ The Mission addresses the ever increasing technological requirements of the society, and takes into account the international trends and road maps of leading countries for the next generation technologies.
- ❖ NM-ICPS is a comprehensive Mission that brings together academia, industry, government and international organizations and has created an ecosystem that fosters entrepreneurship, develops next-generation skilled manpower, catalyses translational research, and promotes the commercialization of CPS technologies.
- ❖ As part of the Mission implementation, 25 Technology Innovation Hubs (TIHs) have been established in advanced technologies in reputed institutes across the country.
- ❖ These TIHs focus on technology development and translation, human resource and skill development, entrepreneurship and start-ups development, and international collaborative research.

ABOUT CYBER-PHYSICAL SYSTEMS

- ❖ Cyber-physical systems integrate sensing, computation, control and networking into physical objects and infrastructure, connecting them to the Internet and to each other.
- ❖ Examples- autonomous vehicles, robotics, remote sensors etc.

5.2 CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS)

- ❖ The central government recently launched a nationwide state-of-the-art National Survey Network of the Continuously Operating Reference Stations (CORS).

ABOUT

- ❖ It is capable of providing real time location-based mapping services with an accuracy of $\pm 3\text{cm}$.
- ❖ It also host an array of different positioning services targeted to cater to requirements for different segments of geospatial and scientific community.
- ❖ CORS stations are permanent installations and continuously stream satellite observations to a central server, forming a CORS Network.
- ❖ The Survey of India has set up more than 1,000 CORS stations across India.
- ❖ The CORS network is available 24X7 throughout the year.
- ❖ Users of the data can subscribe to the nationwide network on a monthly or yearly basis.
- ❖ In addition to the geospatial sector, the CORS-based precision services will also boost auto navigation and machine control-based solutions in the agriculture, mining, construction, transport and civil aviation sectors.
- ❖ CORS data will also aid in various scientific studies like upper atmosphere and space weather studies, meteorology and weather forecast, plate motion and tectonic studies, seismology and hydrology.

5.3 ROBOTIC PROCESS AUTOMATION LAB

- ❖ The First Robotic Process Automation lab under the Future Skill PRIME Project in Uttar Pradesh has been set up at NIELIT Gorakhpur.

- ❖ The lab was inaugurated by Ministry of Electronics and Information Technology secretary.
- ❖ It has been established with the objective of bridging the gap between industry and academia.
- ❖ The lab will provide students and professionals with hands-on experience in RPA technologies, preparing them for careers in this rapidly growing field.
- ❖ The Future Skill PRIME Project, funded by MeitY, aims to upskill and reskill manpower in the emerging technology of RPA.

RPA, also known as **software robotics**, uses **intelligent automation technologies** to **perform repetitive office tasks** of human workers.

5.4 THALLIUM

- ❖ **Two women** allegedly **poisoned five of their family members** in Mahagaon village in Gadchiroli over a period of one month, using **Thallium**.

ABOUT THALLIUM

- ❖ Thallium is a **soft, heavy and inelastic metal**.
- ❖ It is **found in trace amounts in the earth's crust**.
- ❖ It is a **bluish-white metal** that **turns gray on exposure to air**.
- ❖ Thallium is a **substance so lethal** that it's **often referred to as the "poison of poisons"**.
- ❖ Thallium is **notoriously difficult to detect** because it **lacks color, odor, and taste**.
- ❖ **When added to food or drink, it blends seamlessly**, making it **nearly impossible to identify by its flavor**.
- ❖ Historically, **Thallium has been utilized for nefarious purposes, primarily in targeting enemies or prisoners**.
 - ✓ It's worth noting that **former Iraqi leader Saddam Hussein employed Thallium sulfate to eliminate his police adversaries**.

5.5 OPTOELECTRONICS

- ❖ A new **Laboratory of Advance Synthesis and Characterisation (LASC) at Gujarat** is developing **LASC probe stations** for **universities in India and abroad** for **investigation of opto-electronic properties** in a wide range of materials, **including semiconductors, thin films, LEDs, and solar cells**.
- ❖ The heart of the probe station **consists of three elements** which mark it **differ than the available and imported similar systems**. These include-
 - ✓ **Peltier Elements**-- a solid-state device capable of transferring heat when subjected to an electrical current;
 - ✓ **zero welding** helping it attain high vacuum level and
 - ✓ **a system** that offers superior control over opto-electronic functions.
- ❖ The systems are **user-friendly, equipped with tungsten tips**, which provide **exceptionally low resistance for high-temperature measurements**.

ABOUT OPTOELECTRONICS

- ❖ Optoelectronics is the **study and application of electronic devices and systems** that **source, detect and control light**, usually considered a **sub-field of photonics**.
- ❖ It is **largely based on semiconductor materials**.
 - ✓ These exhibit **suitable bandgap energies** for **absorbing near-infrared and visible light**, and their **electric conductivity** (albeit not perfect) is **also essential for such applications**.
- ❖ Examples- **Telecommunication laser, Optical fibre, Blue laser, LED traffic lights, Photodiodes**

5.6 DANGER ANALYSIS

- ❖ A team of researchers has developed a **software tool called DANGER (Deleterious and ANTicipatable Guides Evaluated by RNA-sequencing) analysis** that provides a way for the safer design of genome editing in all organisms with a transcriptome.
- ❖ For about a decade, researchers have used the **CRISPR technology for genome editing**. However, there are some challenges in the use of CRISPR.

ABOUT GENOME EDITING

- ❖ **Genome editing**, or gene editing, refers to technologies that allow researchers to change the genomic DNA of an organism. With these technologies, researchers can add, remove or alter genetic material in the genome.
- ❖ **CRISPR-Cas9** is a well-known gene editing technology.
- ❖ It has a reputation for being more accurate, faster, and less expensive than other similar technologies. However, **gene editing using CRISPR technology presents some challenges**.
 - ✓ The first challenge is that **the phenotypic, or observable, effects caused by unexpected CRISPR dynamics are not quantitatively monitored**.
 - ✓ A second challenge is that the **CRISPR technology generally depends on basic genomic data, including the reference genome**.
 - ✓ The **reference genome is like a template that provides researchers with general information on the genome**.
 - ✓ **Unexpected sequence editing with mismatches can occur**.
 - ✓ **These off-target sites are always unexpected**.
- ❖ **DANGER analysis software overcomes these challenges**.
- ❖ It **allows researchers to perform safer on- and off-target assessments without a reference genome**.
- ❖ It can be **performed on various organisms, personal human genomes, and atypical genomes created by diseases and viruses**.
- ❖ It **holds the potential for applications in medicine, agriculture, and biological research**.

5.7 SIM CARD WORKING

- ❖ **'SIM'** stands for **'subscriber identification module'**.
- ❖ Specifically, it is an **integrated circuit, or a microchip**, that identifies the subscriber on a given network.
- ❖ In order for a mobile phone to connect to any cellular network that follows the **Global System for Mobile Communications (GSM) standard**, a SIM card is mandatory.
- ❖ This **relationship is established using a unique authentication key** – a piece of data that a user needs to **'unlock' access to the network**.
- ❖ **Every SIM card stores this data** and it is designed such that the user can't access it through their phone.
- ❖ Instead, **signals sent by the phone into the network are 'signed' by the key**, and the network uses the **signature to understand whether the phone's connection is legitimate**.
 - ✓ It is **possible to duplicate a SIM card by accessing its key and storing it in multiple cards**.
- ❖ SIM cards **also store information** about its **own ID number** (the integrated circuit card identifier), the **IMSI**, the **subscriber's location area identity** (i.e. their current location), a **list of preferred networks** (to whom the subscriber can connect when roaming), **emergency numbers**, and – depending on the space available – **the subscriber's contacts and SMS messages**.
- ❖ SIM cards are **designed according to the ISO/IEC 7816 international standard maintained by** – as its name indicates – the **International Organisation for Standardisation and the International Electrotechnical Commission**.
 - ✓ It **applies to electronic identification cards, including smart cards**.
 - ✓ In this standard, the **card itself consists of the integrated circuit, which is glued to a silicon substrate on the top side**.
 - ✓ On the **other side of the substrate are metal contacts, which form the gold-coloured side of the SIM card**.

- ✓ Wires connect the integrated circuit from its bottom side to the metal contacts on the top side, and the contacts interface with the phone's data connectors.

5.8 DARK PATTERNS BUSTER HACKATHON 2023

- ❖ The Department of Consumer Affairs, Government of India in collaboration with IIT (BHU), launched Dark Patterns Buster Hackathon 2023.
- ❖ The deliverables of the Hackathon will be to design & prototype innovative apps or software based solutions such as browser extensions, plugins, add-ons, mobile applications.
 - ✓ A dark pattern refers to a design or user interface technique that is intentionally crafted to manipulate or deceive users into making certain choices or taking specific actions that may not be in their best interest.
 - ✓ It is a deceptive practice employed to influence user behaviour in a way that benefits the company implementing it.
- ❖ The winners will be rewarded with a Certificate of Achievement.
- ❖ The objective of the initiative is to provide protection to consumers from all types of unfair trade practices.

5.9 SCIENCE AND TECHNOLOGY CLUSTERS

- ❖ Principal scientific adviser to the union government Ajay Kumar Sood chaired the first joint science and technology clusters' meet at Jodhpur.
- ❖ The meeting was organised by the Jodhpur City Knowledge and Innovation Foundation (JCKIF) and hosted by the Indian Institute of Technology (IIT) Jodhpur.
- ❖ Seven City Science and Technology Clusters of Bengaluru, Bhubaneswar, Delhi, Hyderabad, Jodhpur, Pune, and Chandigarh participated in the meeting.

ABOUT SCIENCE AND TECHNOLOGY CLUSTERS'

- ❖ Launched in 2020, the City S&T Clusters is a flagship initiative of the office of the principal scientific adviser, established on the recommendation of the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC).
- ❖ This initiative aims to tackle local challenges through S&T interventions by bringing together academia, research and development institutions, industries, startups and local governments.
- ❖ Currently, there are seven S&T clusters as listed above, all working together to find solutions to regional issues through collaborative efforts.
- ❖ It will create strong linkages between academic institutions, research laboratories, and other stakeholders.

The Office of the PSA was placed under the Cabinet Secretariat in August 2018.

6. DEFENCE

6.1 PROJECT UDBHAV

- ❖ The Indian Army has started an initiative, named Project Udbhav.
- ❖ It aims to rediscover the "profound Indic heritage of statecraft and strategic thoughts" derived from ancient Indian texts of "statecraft, warcraft, diplomacy and grand strategy"
- ❖ It is in collaboration with the United Service Institution of India, a defence think-tank.
- ❖ The USI will conduct a Military Heritage Festival on October 21 and 22, to acquaint "future thought leaders with the dynamics of comprehensive national security with special emphasis on India's strategic culture, military heritage, education, modernisation of security forces and Atmanirbhar Bharat,".

- ❖ This pioneering initiative stands testimony to the Indian Army's recognition of India's age-old wisdom in statecraft, strategy, diplomacy, and warfare.

OTHER NEWS

- ❖ The army has also been supporting a project that comprises compiling Indian stratagems based on ancient texts.
- ❖ A book called **Paramparik Bhartiya Darshan...Ranniti aur Netriyta ke Shashwat Niyam** — translated in English as **Traditional Indian Philosophy...Eternal Rules of Warfare and Leadership** — was published in 2022.

6.2 MILITARY NURSING SERVICE

- ❖ Military Nursing Service (MNS) celebrated its 98th Raising Day on Oct 1, 2023.
- ❖ As one of the oldest and most distinguished all-women services in the Armed Forces, the Service holds more than 5,000 officers posted at various hospitals of the Armed Forces.

BRIEF HISTORY

- ❖ The origin of MNS dates back to the pre-independence colonial era when British and Indian soldiers served in the British Army.
- ❖ The British Indian government established the Indian Army Nursing Services (IANS) in the year 1888.
- ❖ This marked the formal beginning of Military Nursing in India.
- ❖ The officers of IANS had played a crucial role in providing medical care to wounded soldiers during World War I and II.
- ❖ On 1st Oct 1926, the Permanent Nursing Service was raised in the Indian Army and designated as the Indian Military Nursing Service.
- ❖ Post Independence, the MNS was established as part of the AFMS.

6.3 EXERCISE SAMPRITI XI

- ❖ India and Bangladesh commenced the 11th edition of annual joint military exercise, SAMPRITI recently in Umroi, Meghalaya.
- ❖ The exercise underscores the importance of enhancing interoperability between the two armies, sharing tactical drills, and promoting best practices.
- ❖ It will engage approximately 350 personnel from both sides.
- ❖ Sampriti Exercise is a bilateral defence cooperation exercise between the armies of India and Bangladesh.
- ❖ This exercise, alternately organised by both countries, signifies strong bilateral defence cooperation initiatives.
- ❖ With its inception in Jorhat, Assam in 2009, the exercise has witnessed ten successful editions till 2022.

6.4 TERRITORIAL ARMY

- ❖ With China and India holding multiple rounds of talks on the border row along the Line of Actual Control (LAC), the Territorial Army (TA) has inducted Mandarin experts to act as interpreters during border personnel meetings between the two sides.

ABOUT TERRITORIAL ARMY

- ❖ It is an arm of the Indian Army, established under TA Act 1948.
- ❖ Raised on 9 October, 1949, the TA is a volunteer force of India that can be quickly mobilised and utilised during war as well as "no-war, no-peace" scenarios in regions with a history of unrest — for instance, Jammu and Kashmir (J&K) and the Northeast.
- ❖ Thus, it relieves Regular Army from static duties and assist Civil Administration in dealing with natural calamities etc.

- ❖ It enables young citizens (18 to 42 years age) to serve in a military environment without having to sacrifice their primary professions.
- ❖ The TA has also been undertaking ecological tasks around the country and has raised 10 Ecological Task Force (ETF) battalions that solely undertake ecology-related work around the country.
 - ✓ The first such battalion was raised in December 1982.
 - ✓ About more than nine crore trees have been planted on around 90,000 hectares of land that had been allotted for the work by various state governments.
- ❖ The TA's annual target includes planting roughly 40-45 lakh trees across the country.
- ❖ TA personnel can be decorated for their gallantry services through Kirti Chakra, Vir Chakra, Shourya Chakra, etc.

6.5 EXERCISE CHAKRAVAT JOINT EXERCISE

- ❖ Since its first edition in 2015, the Annual Joint HADR Exercise, CHAKRAVAT, has transformed itself into a multi-agency endeavour involving participation of all three Services, Paramilitary Forces, as well as several disaster response organisations, NGOs, academic institutions and international organisations.
- ❖ The 2023 edition would further synergise efforts at the national level among all stakeholders, as well as witness participation from eight countries of the Indian Ocean Region.
- ❖ The exercise has been conducted by Indian Army, Indian Navy (IN) and Indian Air Force (IAF) in rotation since 2016.
- ❖ The last edition of the exercise was conducted at Agra by IAF.
- ❖ The 2023 edition of the exercise is being hosted by the Indian Navy at Goa from 09 to 11 Oct 23.

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6.7 IRON DOME

- ❖ The 'Iron Dome' is ground-to-air short-range air defence system which intercepts incoming missiles, rockets and even Unmanned Aerial Vehicles (UAVs) and destroys them mid-air.
- ❖ The system, which has been standing guard since 2011, has been deployed across Israel for times like these.
- ❖ The Dome has a range of close to 70 km and has three crucial components, Detection and Tracking radar, Battle Management and Weapons Control and the Missile Launcher armed with 20 Tamir Missiles.
- ❖ It is reportedly capable of handling multiple rocket attacks and has a 90% success rate.
- ❖ Also Operation Iron Swords has been launched by Israel Defence Forces in response to an attack on Israel by the Hamas militant group.

6.8 OPERATION AJAY

- ❖ India announced the launch "**Operation Ajay**" to help Indians stuck in Israel to return home as fresh tension triggered in the region as **Hamas militants made a series of brazen attacks on Israeli towns recently.**
- ❖ As per the external affairs ministry, **around 18,000 Indians are currently residing in Israel.**
- ❖ Operation will be conducted **through specially chartered flights and Indian Navy ships.**

6.9 WHITE PHOSPHOROUS

- ❖ **Israel's use of white phosphorus in military operations in Gaza and Lebanon has put civilians at risk of serious and long-term injuries** as per Human Rights Watch.
- ❖ Human Rights Watch verified videos taken in Lebanon and Gaza on October 10 and 11, 2023, respectively, showing **multiple airbursts of artillery-fired white phosphorus over the Gaza City port and two rural locations.**

ABOUT WHITE PHOSPHOROUS

- ❖ White phosphorus is a **waxy, yellowish-to-clear chemical with a pungent, garlic-like odour.**
- ❖ White phosphorus **ignites when exposed to atmospheric oxygen and continues to burn until it is deprived of oxygen or exhausted.** Its chemical reaction can create intense heat (about 815°C/1,500°F), light, and smoke.
- ❖ White phosphorus, which **can be used either for marking, signaling, and obscuring, or as a weapon to set fires that burn people and objects, has a significant incendiary effect that can severely burn people and set structures, fields, and other civilian objects in the vicinity on fire.**
- ❖ It can cause **severe burn injuries that are slow to heal.**
- ❖ White phosphorus **weapons are not banned, but their use in civilian areas is considered a war crime.**
- ❖ Positively is applications include- use in **fertilisers, food additives and cleaning compounds.**

6.10 DAVID SLING AIR DEFENCE SYSTEM

- ❖ **Israel used David's Sling air-defense system to intercept Hamas rockets.**
- ❖ David's Sling is a **highly sophisticated and state-of-the-art anti-missile defense system developed jointly by Rafael Advanced Defense Systems and Raytheon.**
- ❖ **David's Sling system includes a missile firing unit, a fire control radar, a battle management station, and the interceptor.**
- ❖ It is a **long range** air and missile defense system.
- ❖ It can **protect any country** that uses it **against large-calibre rockets, short-range ballistic missiles, and other developing threats.**
- ❖ It has been designed for **"plug and play" insertion into fielded air and missile defense systems – open architecture.**
 - ✓ Next-generation multi-sensor seeker.
 - ✓ Cost effective.

6.11 JUS AD BELLUM VERSUS JUS IN BELLO

- ❖ **Hamas's attacks in Israel on October 7 and Israel's response in the Gaza Strip have been war crimes met with more apparent war crimes.**
- ❖ There are **two laws associated with wars.**

JUS AD BELLUM

- ❖ **Defines the legitimate reasons** a state may engage in war.
- ❖ It **finds its source in United Nations Charter of 1945.**

- ❖ **Article 2 prohibits** members from **use of force against territorial integrity or political independence of any State.**
- ❖ **Article 51 of provides inherent right of individual or collective self-defense if an armed attack occurs.**

JUS IN BELLO

- ❖ Known as **international humanitarian law (IHL)** and **provides rules to be followed during armed conflict.**
- ❖ It finds its sources in **Hague Conventions (1899 and 1907) and 1949 Geneva Conventions and their Additional Protocols (1977).**
- ❖ Its **purpose is to save lives and reduce suffering.**
- ❖ Both **governmental forces and non-state armed groups need to respect IHL.**
- ❖ Breach of law **may lead to prosecution for War crime.**
- ❖ In 1998 under **Rome Statute an international criminal court, was established for repressing inter alia war crimes.**
- ❖ **IHL has four basic principles** that seek to **minimize the impact of war on civilians and non-combatants :-**
 - ✓ **Humanity** refers generally to restraint in and limiting war's impact on human security and health.
 - ✓ **Distinction** refers to the obligation to differentiate between civilians and civilian objects as well as combatants and military objects.
 - ✓ **Proportionality** provides that even where attacks target military objectives, they cannot cause civilian harm that is "excessive in relation to the concrete and direct military advantage anticipated."
 - ✓ **Military necessity** recognizes that a legitimate military objective is to weaken the capacity of opposing parties and win a battle or war, though this objective must be exercised in accordance with IHL principles intended to minimize harm.

6.12 IRON BEAM DEFENCE SYSTEM

- ❖ The **Iron Beam air defence system** that Israel may deploy, **can fire powerful beams of light that can destroy fast-moving projectiles.**
- ❖ It was **earlier planned to enter service in 2025.** However, following the outbreak of war, the **Israeli Ministry of Defence may consider deploying it sooner.**
- ❖ It was **first unveiled in 2014.**
- ❖ Built by **Rafael Advanced Defense Systems**, the **Iron Beam system is a directed-energy weapon air defence system that fires powerful beams of light.**
- ❖ The **Iron Beam was considered as a cheaper and flexible alternative to work alongside the Iron Dome missile defence system.**
- ❖ Instead of the **interceptors fired by Iron Dome, which can cost \$60,000 each, one could send a laser beam that costs just a few dollars**
- ❖ The **Iron Beam is also smaller and lighter than Iron Dome, which makes it easier to move and to hide.**
- ❖ **Challenges**
 - ✓ It cannot operate effectively in wet conditions. Even in **optimum conditions, the laser loses 30 to 40 percent of its potential energy to atmospheric moisture** before hitting the target.
 - ✓ It **requires a direct line of sight between the system and its target.**
 - ✓ The **Iron Beam also has a much slower rate of fire, requiring five seconds or so to transmit sufficient energy to destroy its target.**
- ❖ As of now, the **functionality of the Iron Beam on the battlefield is down to speculation.**

6.13 CHEETAH & CHETAK HELICOPTERS

- ❖ **The Army will start phasing out the first lot of the vintage Cheetah and Chetak helicopters from 2027 onwards on completion of their Total Technical Life (TTL) while it looks to induct the indigenous Light Utility Helicopters (LUH) in numbers to replace them, according to defence sources.**

ABOUT CHETAK HELICOPTER

- ❖ **Hindustan Aeronautics Limited**, Helicopter Division started manufacturing helicopters in **1962**, by entering an agreement with France for production of **Alouette III helicopters (Chetak)**.
- ❖ The first Chetak in 'Fly Away' condition was delivered in 1965.
- ❖ The **Chetak Helicopter is a two-ton class helicopter**.
- ❖ The **seven-seater Chetak** helicopter is versatile, multi role, multipurpose, and spacious.
- ❖ The helicopter is suitable for **commuting, cargo / material transport, casualty evacuation, Search & Rescue (SAR), Aerial Survey & Patrolling, Emergency Medical Services, Off-shore operations and Under slung operations**.
- ❖ Till date, HAL has **produced and sold more than 350** of these versatile Helicopters which are in service both in India and abroad

ABOUT CHEETAH HELICOPTER

- ❖ The HAL Cheetah is a licence-built version of the **French Aérospatiale SA 315B Lama**.
- ❖ While it is known for its capability to operate in hot tropical weather as well as high altitude conditions, it is an **ageing aircraft – the SA315B Lama was first flown in 1969**, over 50 years ago.
- ❖ Over the years, along with **HAL Chetak, the Cheetah** has developed a reputation of being unsafe, with the armed forces attempting to find upgrades for **these rotorcraft**.
- ❖ Hindustan Aeronautics Limited signed a licence agreement for the **Lama with Aérospatiale in 1970** and christened the India made **aircraft "Cheetah"**.
- ❖ The **first Cheetah** manufactured from raw materials was delivered in **1976-77**.
- ❖ Operated by both the **Indian Air Force and the Army Aviation Corps, it has been used for transporting men and material, search and rescue, and reconnaissance**.
- ❖ **Cheetahs** have especially been crucial for **operations in Siachen, the world's highest battleground at over 6,000 m**.

6.14 MULTILATERAL NAVAL EXERCISE (MILAN)

- ❖ **The Mid Planning Conference (MPC) of MILAN 24 (Multilateral Naval Exercise - 2024)**, to be hosted by the Indian Navy at **Visakhapatnam** from 19 - 27 Feb 24, was conducted by the Eastern Naval Command (ENC) with participating friendly foreign Navies over video conference on 17 Oct 23.
- ❖ The Flagship event, MILAN is a biennial multilateral naval exercise, which was incepted by the **Indian Navy in 1995**. Originally conceived in consonance with **India's 'Look East Policy**, MILAN expanded in ensuing years with the Govt of India's 'Act East policy' and Hon'ble PM Narendra Modi's Security And Growth for All in the Region (SAGAR) initiative, to include participation from other Friendly Foreign Countries (FFCs).
- ❖ MILAN 22 was conducted at/ off Visakhapatnam from 25 Feb - 04 Mar 22 and witnessed participation from 39 countries.
- ❖ The harbour phase of MILAN 24 will comprise of International Maritime Seminar, City Parade at RK Beach, **Swavlamban Exhibition**, Subject Matter Expert Exchange and Milan of Young Officers. Ships, Maritime patrol aircraft and submarines of **Friendly Foreign Countries** would participate in the sea phase along with Indian Navy units. They will **involve large-force manoeuvres, advanced air defence operations, Anti-submarine warfare and Anti-surface warfare operations**.
- ❖ The run-up to MILAN is concomitant to India's G20 Presidency and the conduct of the exercise would yet again realise the '**G20 theme Vasudhaiva Kutumbakam**'.
- ❖ Scheduled from 19 - 27 Feb 24 at/ off Visakhapatnam, MILAN 24 is likely to witness the largest-ever participation to date with invites being extended to over 50 countries.

6.15 PROJECT UDBHAV

- ❖ An ambitious effort for the **integration of India's "ancient strategic acumen"** into the **contemporary military domain** and **develop an "indigenous strategic vocabulary"**, rooted in India's "**philosophy and culture**" was launched under 'Project Udbhav'.

- ❖ Its objective is to **synthesise ancient wisdom with contemporary military practices, forging a unique and holistic approach** to address **modern security challenges**.
- ❖ It is a **collaboration between the Army and the United Service Institution of India (USI), a defence services think tank**.
- ❖ It was **launched at the first Indian Military Heritage Festival (IMHF)**.
- ❖ The **primary deliverables** of Project Udbhav are
 - ✓ To **develop understanding of ancient military system and indigenous strategic military culture** through the **study of evolution of Indian military system and strategic thoughts**;
 - ✓ **Educating junior military leaders and informing senior military commanders and academia** about the **theories concepts and**
 - ✓ **Teachings available in classical texts and facilitate the creation of a knowledge pool for scholars and defence personnel for further studies**.

6.16 THAAD AND PATRIOT AIR DEFENCE SYSTEM

- ❖ The U.S. will send a **Terminal High Altitude Area Defense (THAAD) system** and **additional Patriot air defense missile system** battalions to the **Middle East**.

ABOUT THAAD

- ❖ The **Terminal High Altitude Area Defense, or simply abbreviated as THAAD, is a missile defence system that is designed to intercept and destroy short and medium-range ballistic missiles in their final flight phase**.
- ❖ **First proposed in 1987 and then finally deployed in 2008, the THAAD cannot be used as a form of attack against an enemy**.
- ❖ THAAD is **coupled with space-based and ground-based surveillance stations, which transfer data about the incoming missile and inform the THAAD interceptor missile of the threat type classification**.
- ❖ This system has been designed and manufactured by the **USA company Lockheed Martin**.

ABOUT PATRIOT AIR DEFENCE SYSTEM

- ❖ The **Patriot stands for Phased Array Tracking Radar to Intercept on Target**.
- ❖ It was **initially developed as a system to intercept high-flying aircraft, by U.S. aerospace and defence giant Raytheon Technologies Corp**.
- ❖ It is a **mobile system that usually includes powerful radar, a control station, a power generator, launch stations and other support vehicles**.
- ❖ The Patriot system's radar has a range of over **150 km** and it can track over **50 potential targets at the same time**.
- ❖ It has **been deployed in 18 countries, including the U.S.**

6.17 EXERCISE HARIMOU SHAKTI

- ❖ The **Joint bilateral training exercise "Exercise Harimau Shakti 2023", between Indian & Malaysian Army commenced today in Umroi Cantonment, India**.
- ❖ The Malaysian Army contingent **comprises troops from 5th Royal Battalion of Malaysian Army**.
- ❖ The **Indian contingent is being represented by a Battalion of THE RAJPUT REGIMENT**.
- ❖ Both sides will **rehearse employment of joint forces in jungle/ semi urban / urban environment**.
- ❖ In addition, **intelligence collection, collation and dissemination drills** will also be rehearsed.
- ❖ The Exercise will **also witness employment of Drones/UAVs & Helicopters**.
- ❖ The training will **focus primarily on high degree of physical fitness, conduct of drills at tactical level and sharing of best practices with each other**.

6.18 ITBP

- ❖ PM on **October 24th** greeted the personnel of the Indo-Tibetan Border Police on its raising day and hailed their "**indomitable spirit and valour**" while protecting the nation.
- ❖ In the year **2004**, in pursuance of GoM recommendations on "**One Border One Force**", the entire stretch of the India-China Border comprising **3488 Kms** was assigned to the ITBP for Border Guarding duty and, accordingly, ITBP, replaced Assam Rifles in Sikkim and Arunachal Pradesh in 2004.

ABOUT ITBP

- ❖ It is a specialised security force which was constituted after the Indo-China war in 1962.
- ❖ It is one of the 7 Central Armed Police Forces (CAPFs).
 - ✓ Other 6 are - Border Security Force, Central Reserve Police Force, Central Industrial Security Force, Sashastra Seema Bal, Assam rifles and National Security Guard.
- ❖ **Motto - Shaurya-Dridhata-Karma Nishtha or Valour, Steadfastness and Commitment**
- ❖ ITBP was initially raised under the CRPF Act. However, in 1992, parliament enacted the ITBPF Act and the rules there under were framed in 1994.
- ❖ It trains its personnel in various disciplines including mountaineering and skiing apart from intensive tactical training.
- ❖ ITBP presently has **60 service Battalions, 4 Specialist Battalions, 17 Training Centres and 07 logistics establishments** with a total strength of approx. **88,432 personnel**.

6.19 INTELLIGENCE BUREAU

- ❖ The **Delhi High Court** has ruled that the **Intelligence Bureau (IB)** stands exempted from rigours of RTI Act by virtue of **Section 24** (Act not to apply to certain organizations) thereof.

ABOUT INTELLIGENCE BUREAU (IB)

- ❖ It is **India's intelligence agency** which gathers intelligence from within the country and also executes **counter-intelligence and counter-terrorism tasks**.
- ❖ It was **established in 1887** as the **Central Special Branch**.
- ❖ In addition to domestic intelligence responsibilities, the IB is particularly tasked with **intelligence collection in border areas**, following the 1951 recommendations of the **Himmatsinhji Committee** (also known as the North and North-East Border Committee), a task entrusted to military intelligence organizations, prior to independence in 1947.
- ❖ It functions under the aegis of the **Ministry of Home Affairs**.
- ❖ HQ- **New Delhi**.
- ❖ The IB **draws its employees from law enforcement agencies** such as the Indian Police Service (IPS), the Indian Revenue Service (IRS), and the military.
- ❖ The **Director of Intelligence Bureau (DIB)** has always been an IPS officer.
 - ✓ The **IB director** is part of the **Strategic Policy Group and the Joint Intelligence Committee (JIC)** of the **National Security Council**, and reports directly to the **Prime Minister**.
- ❖ The **IB activities are highly confidential**, and no publications other than the internal ones reveal their **arcane workings**.
- ❖ It is responsible for **granting basic safety clearances to Indian diplomats and judges before their national oath**.
- ❖ It is **also authorized to carry out wiretapping without a warrant**.

6.20 METEOR MISSILE

- ❖ The Indian Air Force (IAF) is set to **make a strategic decision to bolster its acquisition of the Meteor Missile**.

ABOUT METEOR MISSILE

- ❖ It is a **European active radar-guided beyond-visual-range air-to-air missile (BVRAAM)**.
- ❖ It is **manufactured by MBDA Systems for six European nations- UK, Germany, Italy, Spain, France, and Sweden**.
- ❖ It offers a **multi-shot capability** (multiple launches against multiple targets).
- ❖ It has the ability to **engage highly maneuverable targets** such as **jet aircraft**, and **small targets** such as **UAVs and cruise missiles** in a heavy electronic countermeasures.
- ❖ It has a **combat range of 200 km**.
- ❖ A **solid-fueled ramjet motor** allows the **missile to cruise at a speed of over Mach 4**.
- ❖ The missile is **equipped with a blast-fragmentation warhead**.
- ❖ The missile system is **installed with an active radar target seeker**, offering **high reliability in the detection, tracking, and classification of targets**.

This expansion is a result of the **delay in the development and production of the Solid Fuel Ducted Ramjet (SFDR)**, also known as **Astra Mk3**, by the **Defence Research and Development Organisation (DRDO)**.

6.21 EXERCISE KAZIND-2023

- ❖ **Indian Army and Indian Air Force contingent departed for Kazakhstan** to participate in the 7th edition of Joint Military '**Exercise KAZIND-2023**'.
- ❖ It will be conducted in **Otar, Kazakhstan**.
- ❖ The exercise began as "**Exercise PRABAL DOSTYK**" in 2016.
 - ✓ After the second edition, it was **renamed "Exercise KAZIND"** and upgraded to a company-level exercise.
 - ✓ The Exercise **has been further upgraded as a Bi-service Exercise this year** by including the **Air Force component**.

7. SPACE

7.1 CALIPSO SATELLITE

- ❖ **The CALIPSO mission that analysed climate, weather, and air quality ended on August 1**, National Aeronautics and Space Administration (NASA) announced recently.
- ❖ The **CALIPSO (Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation) mission recorded more than 10 billion LIDAR measurements and helped create thousands of scientific reports over its 17 years of operation**.
- ❖ It was **launched jointly by NASA and France's CNES (Centre National d'Etudes Spatiales)**, along with the **cloud-profiling radar system on the CloudSat satellite**.
- ❖ **Working**
 - ✓ The **Lidar and radar instruments on the satellite direct beams of energy at Earth and measure how they reflect off the clouds and the aerosols in the atmosphere**.
 - ✓ **Other orbiting science experiments typically use passive sensors that measure the sunlight or other radiation reflected by the Earth or clouds**.
- ❖ **The two satellites were launched on April 28, 2006**, and they **circled the planet in a Sun-synchronous orbit from the North to the South poles**.
 - ✓ This meant that **they crossed the equator in the early afternoon every day**.
 - ✓ They **measured the altitude of clouds and layers of airborne particles like dust, sea salt, ash and soot while probing the "vertical structure" of the atmosphere**.
- ❖ The **observations from the two satellites allowed scientists to build more sophisticated models to understand complex atmospheric processes like cloud formation, atmospheric convection, precipitation and particle transport**.

- ✓ This was especially useful in situations like during the massive wildfires in Australia in 2020.

7.2 WORLD SPACE WEEK

- ❖ World Space Week (WSW) is a global celebration that highlights the significance of space science and technology in enhancing human life.
- ❖ It was established in 1999 by the United Nations General Assembly.
- ❖ WSW is celebrated worldwide from **October 4 to 10 every year to commemorate the launch of Sputnik, the first artificial satellite, on October 4, 1957, and the Outer Space Treaty, which came into force on October 10, 1967.**
- ❖ The theme for WSW 2023 is **‘Space and Entrepreneurship.’**

7.3 PSYCHE MISSION

- ❖ **NASA’s Psyche spacecraft** was launched recently is on its voyage to an asteroid of the same name.
- ❖ **Psyche asteroid is a metal-rich world that could tell us more about the formation of rocky planets.**
- ❖ By August 2029, the spacecraft will begin to orbit the **173-mile-wide (279-kilometer-wide) asteroid – the only metal-class asteroid ever to be explored.**
- ❖ Because of **Psyche’s high iron-nickel metal content**, scientists think it may be the partial core of a planetesimal, a building block of an early planet.
- ❖ The goal is a **26-month science investigation.**
- ❖ For its **six-year, 2.2-billion-mile (3.6-billion-kilometer) trip to the main asteroid belt between Mars and Jupiter, Psyche relies on solar electric propulsion.**
- ❖ The **efficient propulsion system works by expelling charged atoms, or ions, of the neutral gas xenon to create a thrust that gently propels the spacecraft.**
- ❖ Along the way, **the spacecraft will use Mars’ gravity as a slingshot to speed it along on its journey.**
- ❖ **Arizona State University** leads the **Psyche mission.**
- ❖ Psyche is the **14th mission selected as part of NASA’s Discovery Program**, managed by the agency’s Marshall Space Flight Center in Huntsville, Alabama.

7.4 TV-D1

- ❖ The **Flight Test Vehicle Abort Mission 1 (TV-D1)** was launched successfully by ISRO recently.
- ❖ It is called **“In-flight Abort Demonstration of Crew Escape System (CES)”**.
- ❖ **TV-D1 Vehicle-** The **Liquid propelled single stage Test Vehicle** uses a modified **VIKAS engine with Crew Module (CM) and Crew Escape System (CES) mounted at its fore end.**
- ❖ Following were the **mission objectives and all the objectives were achieved-**
 - ✓ Flight demonstration and evaluation of **Test Vehicle sub systems.**
 - ✓ Flight demonstration and evaluation of **Crew Escape System** including various separation systems.
 - ✓ **Crew Module characteristics and deceleration systems** demonstration at higher altitude & its recovery.
- ❖ Following this, ISRO will carry out a test flight with a **‘Vyomitra’**.
 - ✓ **Vyommitra is a female-looking spacefaring humanoid robot being developed by the Indian Space Research Organisation to function on-board the Gaganyaan.**

ABOUT GAGANYAAN MISSION

- ❖ The ambitious mission aims to send a crew of **3 astronauts into space on a Low Earth Orbit of 400 km for three days and bring them safely back to Earth.**
- ❖ **India will become the fourth country to send a crewed spacecraft to space after USA, Russia, and China.**

7.5 BETELGEUSE STAR

- ❖ Scientists now have established why the **red supergiant star Betelgeuse** turned dim between **2018 and 2020**, **dismissing theories** that suggested that the star might be entering the last stage of its evolution—Supernova or the ultimate explosion.
- ❖ According to a team of **scientists from France’s Université Côte d’Azur**, the **dimming was caused by a burst of dust**, in form of **silicon monoxide**, on the star’s surface.
- ❖ The team used **MATISSE (Multi Aperture mid-Infrared Spectroscopic Experiment)** instrument on the **European Southern Observatory’s Very Large Telescope Interferometer** in northern Chile to snap high-resolution pictures of the star from 2018 to 2020.

A **supernova** is the **cataclysmic explosion of a massive star**.

It is the **largest explosion that takes place in space**.

It also the **primary source of heavy elements in the universe**.

ABOUT BETELGEUSE STAR (ALPHA ORIONIS)

- ❖ **Betelgeuse is a red supergiant star** that forms the **left shoulder** of the **constellation of Orion**.
- ❖ It is **second brightest star in Orion constellation**.
- ❖ It is **one of the brightest star(s) in sky (7,500 to 14,000 times brighter than Sun)** and **one of the largest stars ever discovered**.
 - ✓ It measures more than **700 million miles (1.2 billion kilometres)** in diameter, **764 times as large as the Sun**.
- ❖ It is also known as **‘Thiruvathirai’ or ‘Ardra’** in Indian astronomy.
- ❖ It is **located at an approximate distance of 643 light years from Earth**.
- ❖ It is **known for its periodic dimming and brightening up**.

7.6 EJECTA HALO

- ❖ When **Vikram lander of Chandrayaan-3 touched down** on the Moon’s surface on August 23, it resulted in a **lunar phenomenon called ‘ejecta halo.’**
- ❖ Scientists from the **Indian Space Research Organisation (ISRO)** and the **National Remote Sensing Centre (NRSC)** have now published a paper highlighting the **significance of ‘ejecta halo’**, which has **helped the space agency understand more about the lunar surface**.
- ❖ The paper named **‘Characterisation of Ejecta Halo on the Lunar Surface Around Chandrayaan-3 Vikram Lander Using OHRC Imagery’** indicates that **‘ejecta halo’ was created due to descent stage thrusters and the consequent landing of Vikram lander**.
- ❖ Scientists have **“estimated that about 2.06 tonnes of lunar epi regolith were ejected and displaced over an area of 108.4 m² around the landing site”**.
 - ✓ **Epi regolith** is the **top layer of the lunar surface**, which is made out of **lunar rocks and soil**, commonly known as **moon dust**.

7.7 SWIM PROJECT

- ❖ The **Subsurface Water Ice Mapping (SWIM) project** has released its fourth and the more recent map of the **prospective locations of subsurface water ice on Mars**.
 - ✓ This will help mission planners decide where exactly to send the first humans to Mars.
- ❖ The **SWIM project**, led by the **Planetary Science Institute in Tucson, Arizona**, and managed by **Nasa’s Jet Propulsion Laboratory in Southern California**, combines **data from several Nasa missions**, including the **Mars Reconnaissance Orbiter (MRO)**, **2001 Mars Odyssey**, and the **now-inactive Mars Global Surveyor**.
- ❖ The instruments — **Context Camera (CTX)** and **High Resolution Imaging Experiment (HIRISE)** — provided **high resolution imagery of the Martian terrain**.

IMPORTANCE

- ❖ The map could help the agency decide where the first astronauts to the Red Planet should land.
 - ✓ The more available water, the less missions will need to bring.
- ❖ Ice buried on Mars will be a vital source for humans on Mars, serving both as drinking water and a key ingredient for rocket fuel.
- ❖ SWIM project manager emphasised the importance of landing sites close to the equator, where the atmosphere is thicker, making it easier to slow a descending spacecraft.
- ❖ These regions also offer the warmest possible temperatures for astronauts in an icy region, reducing the energy required to keep astronauts and their equipment warm.

8. ENVIRONMENT

8.1 PINK BOLLWORM

- ❖ The Pink Bollworm (PBW) is causing significant damage in northern states
- ❖ The Pink Bollworm (PBW) infestation has been common in the cotton belt of northern Rajasthan, Haryana and Southwestern Punjab since 2021.

ABOUT PINK BOLLWORM (PECTINOPHORA GOSSYPIELLA)

- ❖ Originally native to India, it is now recorded in nearly all the cotton-growing countries of the world.
- ❖ It is considered possibly the most destructive pest on cotton worldwide.
- ❖ The female moth lays eggs in a cotton boll, and when the larvae emerge from the eggs, they inflict damage through feeding.
 - ✓ The PBW larvae burrow into the developing fruits (bolls) of cotton plants, and the damage affects both the weight and quality of the harvested bolls containing the lint fibre and seeds inside.
 - ✓ Since cotton is used for both fiber and seed oil, the damage is twofold.
- ❖ As per experts, Bt cotton – which incorporates genes from a soil bacteria that code for proteins toxic to the American bollworm – has lost its efficacy against PBW.

8.2 ARMAGEDDON REEDTAIL

- ❖ MIT-World Peace University researchers in Pune have found a damselfly of the 'Armageddon Reedtail – Protosticta Armageddonia' species in Kerala's southern Western Ghats.
- ❖ This newfound species has been officially documented in the International Journal of Odonatology
 - ✓ It is a publication affiliated with the Worldwide Dragonfly Association based in the United States.
 - ✓ The discovery has also been meticulously recorded and registered with the Zoological Survey of India, Pune.
- ❖ The newly-found species exhibits a captivating dark brown to black body with vibrant greenish-blue eyes and it features delicate pale blue markings on half of its eight abdominal segments.
- ❖ Its exclusive habitat choice is primary montane streams, where it thrives beneath a dense canopy cover.
- ❖ The name, Armageddon Reedtail, is a direct reference to the concept of "Ecological Armageddon", a term used to describe the devastating decline of insect populations around the world.
 - ✓ This phenomenon, often referred to as the "Insect Apocalypse," has far-reaching consequences for the entire ecosystem, as insects play crucial roles in pollination, nutrient cycling and as a food source for other animals.

8.3 PYGMY HOGS RELEASED IN MANAS NATIONAL PARK

- ❖ Eighteen captive-bred pygmy hogs were released in western Assam's Manas National Park and Tiger Reserve.
- ❖ It was the fourth such exercise undertaken under the Pygmy Hog Conservation Programme (PHCP) annually since 2020, helping up the total number released at the park to 54.
- ❖ The PHCP target is to reintroduce 60 pygmy hogs in Manas, its historical habitat, by 2025.

ABOUT PYGMY HOG (PORCULA SALVANIA)

- ❖ It is the smallest and rarest pig on earth.
- ❖ Once thriving across the alluvial grasslands along the southern edge of the Himalayas, the pygmy hog was thought to be extinct in the 1970s.
- ❖ Backed by the United Kingdom-based Durrell Wildlife Conservation Trust, the PHCP was started near Guwahati in 1996 with two males and two females captured from the Bansbari Range of Manas National Park.
 - ✓ The reintroduction of the captive-bred hogs to the wild began in 2008.
- ❖ Standing about 25 cm from the ground and weighing 6-9 kg, it lives in small groups of up to eight individuals and builds thatch nests rather than farrow like other pigs.
 - ✓ It is one of the very few mammals that build its own home, or nest, complete with a 'roof'.
- ❖ It is an indicator species as its presence reflects the health of its primary habitat, tall and wet grasslands.
- ❖ It prefers undisturbed patches of grassland
- ❖ Threats include habitat (grassland) loss and degradation, and illegal hunting.
- ❖ Protection status
 - ✓ IUCN red list : Critically Endangered
 - ✓ WPA 1972: Schedule I
 - ✓ CITES: Appendix I

ABOUT MANAS NATIONAL PARK

- ❖ It is located in Assam and is contiguous with the Royal Manas National Park in Bhutan.
- ❖ It is a national park, UNESCO Natural World Heritage site, a Project Tiger reserve, an elephant reserve and a biosphere reserve.
- ❖ Vegetation includes semi-evergreen forests, mixed moist and dry deciduous forests, and alluvial grasslands.
 - ✓ It contains some of the largest remaining grassland habitats in the sub-Himalayan grassland ecosystems.
- ❖ Fauna includes the Greater One-Horned Rhino, Swamp Deer, Pygmy Hog and Hispid Hare, Golden Langur, Endangered Bengal Florican etc.
- ❖ The Manas River is a major tributary of Brahmaputra River, which passes through the Manas National Park.

8.4 BADIS LIMMAKUMI

- ❖ A new fish species, now christened **Badis Limaakumi** has been discovered.

ABOUT BADIS LIMAAKUMI

- ❖ It is a new species of badis fish from Nagaland
- ❖ Several local names are used for this newly discovered fish species, including 'Tepdang,' 'Akgashi (Ao Chungli),' 'Aokngatsü (Ao Mongsen),' and 'Sempi,' among others.
- ❖ This new badis species adds one more member to the group.
 - ✓ Badis are a group of fishes commonly found in many Asian countries. There are currently 26 different confirmed species of badis.
 - ✓ The members of this family of fishes are known as chameleon fishes
- ❖ Till now, this fish is unique in that it has only been reported from the Milak River and might be endemic to this river or endemic to some rivers in Nagaland only.

- ❖ **Badis limaakumi** is also one of the largest **Badis** species, the other being **Badis assamensis**.
- ❖ It appears **black** in its natural habitat but undergoes a remarkable color change when placed in an aquarium or different environments.
 - ✓ **Badis** species are well-known in the aquarium trade and are regularly exported from India to other countries.

8.5 OPERATION “KACHCHHAP”

- ❖ The **Directorate of Revenue Intelligence (DRI)** recently apprehended **6 persons with 955 live baby Gangetic turtles of different species** in a multicity Operation “Kachchhap”.
- ❖ The species of Gangetic turtles rescued are **Indian Tent Turtle, Indian Flapshell Turtle, Crown River Turtle, Black spotted/Pond Turtle and Brown Roofed Turtle**.
- ❖ Some of the species rescued are **specified as vulnerable/near threatened species under IUCN Red List and Schedule I and II of Wildlife (Protection) Act, 1972**.

8.6 CORAL REEF BREAKTHROUGH LAUNCHED

- ❖ The **International Coral Reef Initiative (ICRI)** has launched the **Coral Reef Breakthrough** in partnership with the **Global Fund for Coral Reefs (GFCR)** and the **High-Level Climate Champions (HLCC)**.
- ❖ The Coral Reef Breakthrough aims to **secure the future of at least 125,000 km² of shallow-water tropical coral reefs with investments of at least US\$12 billion** to support the **resilience of more than half a billion people globally by 2030**.
- ❖ In addition to broad-based climate action, the Coral Reef Breakthrough will be achieved through-
 - ✓ **Stop drivers of loss:** Mitigate local drivers of loss including land-based sources of pollution, destructive coastal development, and overfishing.
 - ✓ **Double the area of coral reefs under effective protection:** Bolster resilience-based coral reef conservation efforts by aligning with and transcending global coastal protection targets including 30by30.
 - ✓ **Accelerate Restoration:** Assist the development and implementation of innovative solutions at scale and climate smart designs that support coral adaptation to impact 30% of degraded reefs by 2030.
 - ✓ **Secure investments of at least USD 12 billion** by 2030 from public and private sources to conserve and restore these crucial ecosystems.

ABOUT ICRI

- ❖ The **International Coral Reef Initiative (ICRI)** is an informal partnership between **Nations and organizations which strives to preserve coral reefs and related ecosystems around the world**.
- ❖ The Initiative was **founded in 1994 by eight governments: Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom, and the United States of America**.
- ❖ It is a **network of 101 members including 45 countries that represent over 75% of the world’s coral reefs**.
- ❖ Its **decisions are not binding on its members**.

8.7 STAGHORN CORAL

- ❖ A genome-wide survey of **highly endangered staghorn coral** in the Caribbean **has identified 10 genomic regions associated with resilience against white band disease**.

ABOUT STAGHORN CORAL

- ❖ **Staghorn coral** is one of the **most important corals in the Caribbean**.
- ❖ It, along with **elkhorn coral and star corals** built **Caribbean coral reefs over the last 5,000 years**.
- ❖ These **corals can form dense clusters called “thickets” in shallow waters**, serving as essential habitat for various reef creatures, especially fish.

- ❖ Staghorn coral colonies are **golden tan or pale brown with white tips** and they get their color from the **algae that live within their tissue**.
- ❖ These corals have **antler-like branches** and typically stem out from a central trunk and angle upward.
- ❖ **Each staghorn coral colony is made up of many individual polyps that grow together.**
- ❖ These coral get food from **photosynthetic algae** that live inside the coral's cells. They also feed by **capturing plankton with their polyps' tentacles**.
- ❖ IUCN Red list Status: **Critically Endangered**.
- ❖ **Threats- Ocean warming; ocean acidification, unsustainable fishing practice and land-based sources of pollution.**

8.8 GLACIAL LAKE OUTBURST FLOOD IN SIKKIM

- ❖ A Glacial Lake Outburst Flood (**GLOF**) occurred in the **South Lhonak Lake** in **Sikkim**, killing many and causing the **rise of water levels in Teesta river**.

ABOUT GLOF

- ❖ **Retreating glaciers**, like several in the **Himalayas**, usually result in the formation of lakes at their tips, called **proglacial lakes**, often bound **only by sediments and boulders or moraines**.
- ❖ A **GLOF** is a type of flood occurring when water dammed by a glacier or a moraine is released suddenly.
 - ✓ **Moraine** is a mass of rocks and sediment carried down and deposited by a glacier, typically as ridges at its edges.
 - ✓ Unlike earthen dams, the **weak structure of the moraine dam** leads to the abrupt failure of the moraine dam bounding the glacial lake.

REASONS BEHIND GLOFS

- ❖ **Glacial retreat** increases meltwater.
- ❖ **Cascading flood from upstream lakes**.
- ❖ **Geological Triggers** as earthquakes can destabilize moraines.
- ❖ **Landslides and ice avalanches**.
- ❖ **mass tourism, infrastructure boom etc.**

8.9 DHOLE

- ❖ **Overlapping prey availability** or **habitat suitability** could dictate a positive association between **dholes and tigers**, facilitating **co-existence** or even **cooperative behaviours** between the two species of carnivores, a new study has found.
- ❖ The paper titled '**Do dholes segregate themselves from their sympatrids? Habitat use and carnivore co-existence in the tropical forest**' was published in the latest issue of **Mammalian Biology**.

Sympatric refers to **animals, plant species, and populations within the same or overlapping geographical areas**.

ABOUT DHOLE

- ❖ The **dhole or Asiatic wild dog (Cuon alpinus)** is the **only endangered wild pack-living canid** in the **tropical Indian forests** and is considered at **high risk of extinction**.
- ❖ Operate in **packs of 5-10 individuals** however **larger groups of more than 30** were observed in 2004.
- ❖ Dholes were **once widespread across southern and eastern Asia**.
- ❖ **Factors** such as **habitat loss, declining prey availability, persecution, disease, and interspecific competition** have contributed to the **ongoing fragmentation** of its populations.
- ❖ The **global population** of adult dholes is estimated to be between **949 and 2,215 individuals**, scattered in **localised areas of India and Thailand**.
- ❖ **Manas National Park**, a **UNESCO World Heritage Site** and the **adjoining Royal Manas National Park in Bhutan** form one of the **largest areas of conservation significance** in **South Asia**, representing the **full range of habitats** from the **subtropical plains to the alpine zone**.

- ❖ IUCN red list status- **Endangered**

8.10 KOLLERU LAKE

- ❖ The survival of Kolleru Lake is **under severe threat** as aqua ponds continue to encroach and thrive in the heart of the wetland.
- ❖ The rate at which the lake is witnessing encroachments demands '**Operation Kolleru-2.0**' for the survival of the **unique wetland ecosystem**.
- ❖ In **2006**, the Andhra Pradesh government executed '**Operation Kolleru**' as per the directives of the **Supreme Court** and **demolished 1,776 aqua ponds spread over 43,000 acres** within the **Kolleru Wildlife Sanctuary (KWS)**.
- ❖ In **1999**, the **State government** declared more than **308 sq.km** area as the sanctuary within the **90,100 hectares** of the lake.

ABOUT KOLLERU LAKE

- ❖ It is **India's largest freshwater lake ecosystem**.
 - ✓ It is also **Asia's largest freshwater lake**.
- ❖ It serves as a **breeding and feeding ground** for **220 avian species** including nearly **100 species** migrating from the **Palaearctic region**.
- ❖ It lies **between the Krishna and Godavari deltas**.
- ❖ It is **fed by** seasonal **Budameru and Tammileru rivers**.
- ❖ It was **notified as a Wildlife Sanctuary in 1999** under **Wild Life Protection Act,1972**.
- ❖ Kolleru Lake was **declared as a 'Ramsar' site** in 2002.

8.11 GRADED RESPONSE ACTION PLAN

- ❖ The Centre's air quality panel directed **authorities in the National Capital Region** to enforce a **ban on coal usage in hotels and restaurants**, and to take **punitive measures against polluting industries and thermal power plants** as the air quality in **Delhi** plunged into the '**poor**' category.
- ❖ The **action comes as a part of the central government's pollution control plan** known as the '**Graded Response Action Plan**' (**GRAP**) which is implemented in **Delhi-NCR** to **combat air pollution during the winter season**.
- ❖ The **Commission for Air Quality Management (CAQM)**, a statutory body responsible for **proactively implementing GRAP**, reported a "**sudden decline**" in air quality parameters in the region over the last **24 hours**, with **Delhi's AQI reaching 212** (in the '**poor**' category).
- ❖ **Stage II** measures involve **increasing parking fees** to discourage private transport and **enhancing CNG/electric bus and metro services** by introducing additional fleets and increasing service frequency.
- ❖ Under **Stage III**, **BS III petrol and BS IV diesel four-wheelers** are prohibited from operating in **Delhi, Gurugram, Faridabad, Ghaziabad, and Gautam Buddh Nagar**.
 - ✓ Stage III also involves a **complete halt on construction and demolition work** except for essential **government projects, mining, and stone crushing**.
 - ✓ It also includes a **ban on the entry of light commercial vehicles registered outside Delhi and diesel-guzzling trucks, medium and heavy goods vehicles** (except those involved in essential services).
- ❖ **Stage IV** includes **banning all types of construction and demolition work**.
 - ✓ **State governments** are authorized to decide on **online classes for school students** and **work from home arrangements** for government and private offices during such situations.

8.12 CHILDREN DISPLACED IN A CHANGING CLIMATE

- ❖ **United Nations Children's Fund (UNICEF)** recently released the **Children Displaced in a Changing Climate** report.

MAJOR FINDINGS

- ❖ Over the last six years, weather-related disasters have forcefully displaced at least 134.1 million people, of which **32 per cent or 43.1 million were children from 44 countries.**
- ❖ Thus at **least three of every 10 persons displaced across the world due to weather-related disasters was a child.**
- ❖ **Storms (21.2 million) and floods (19.7 million) have been the most damaging and accounted for 95 per cent of forced child displacements in this period.**
- ❖ The region with the **largest number of weather-related child displacements was East Asia and the Pacific, followed by South Asia,** UNICEF estimates showed.
- ❖ A little **over 53 per cent (23 million) of the children displaced** were in three countries – Philippines, India and China.
 - ✓ These **three countries were highly prone to weather-related disasters and so, the risks may increase further due to climate-driven extreme weather events.**
- ❖ The **greatest proportion of child population displaced** was in **Small Island Developing States (SIDS) and countries in the Horn of Africa**

8.13 WATERMEAL

- ❖ Scientists from a University in Thailand are **conducting groundbreaking research into the potential of watermeal as a source of nutrition and oxygen for astronauts.**

ABOUT WATERMEAL

- ❖ It is the **world's smallest flowering plant.**
- ❖ This **rootless, stemless plant typically floats on the surface of water bodies** in regions like **Thailand and other parts of Asia.**
- ❖ Its **simplicity and rapid growth rate make it an ideal candidate for studying the effects of altered gravity on plant development.**
- ❖ It's a **prolific producer of oxygen through photosynthesis and a rich source of protein.**

In Thailand, it has been **part of the local diet for generations**, appearing in dishes ranging from soups to salads.

8.14 RETICULATED PYTHON

- ❖ A **juvenile reticulated python** was **sighted inside IIT Madras**, slithering across a residential zone.

ABOUT RETICULATED PYTHON

- ❖ Scientific name- **Malayopython reticulatus**
- ❖ Reticulated pythons are the **world's longest and third heaviest snakes ever recorded.**
- ❖ This species has a **broad range across southeastern Asia.**
 - ✓ In India, **they are found in the wild only in Nicobar Islands.**
- ❖ The **species, despite its striking color patterns, camouflage well within its environment.**
- ❖ Growing Conditions- **Tropical environments, Heavily dependent on water, Highly adaptable python species.**
- ❖ Reticulated pythons are **non-venomous, slow-moving reptiles and are commonly found in Southeast Asia.**
 - ✓ The **International Union for Conservation of Nature (IUCN)** lists reticulated python as **"least concern"** globally in view of its wide distribution.

8.15 INTERNATIONAL BIG CAT ALLIANCE

- ❖ **Tanzanian President Samia Suluhu Hassan**, on a bilateral visit to India, conveyed approval to join the flagship Indian programme- **International Big Cat Alliance (IBCA)**.

ABOUT INTERNATIONAL BIG CAT ALLIANCE (IBCA)

- ❖ **Target species- Tiger, Lion, Leopard, Snow Leopard, Puma, Jaguar, and Cheetah.**
 - ✓ **India is home to five of these species** except for the pumas and jaguars.
- ❖ It is open to **97 'range' countries, which contain the natural habitat of these big cats** along with other interested nations, international organizations, etc.
- ❖ It will **provide a platform for the member nations to share knowledge and expertise and extend support to recovery efforts in potential habitats.**
- ❖ IBCA will also **assist existing species-specific inter-governmental platforms to boost conservation efforts.**
- ❖ India has **pledged a 'total grant assistance' of \$100 million in the first five years.**
- ❖ Governance Structure:
 - ✓ A **General Assembly** consisting of all member countries.
 - ✓ A **Council of at least seven but not more than 15 member countries** elected by the General Assembly for a **term of 5 years**, and a Secretariat.
 - ✓ Upon the recommendation of the Council, the **General Assembly will appoint the IBCA Secretary General** for a specific term.

A LOOK AT THE CURRENT STATUS OF THESE SEVEN BIG CATS:

LION (STATUS: VULNERABLE)

- ❖ **Population:** The IUCN estimates that 23,000-39,000 lions remain in the wild.
 - ✓ The total population of lions in **India is around 700, as per 2020 estimates.**
- ❖ **Range:** The big cat is **now found only in parts of sub-Saharan Africa**, along with a **critically endangered subpopulation in West Africa** and a **small population of endangered Asiatic lions at the Gir National Park.**
- ❖ **Threats:** decline in lion ranges due **to land use and climate change, poaching**

TIGER (ENDANGERED)

- ❖ **Population:** Around 3,700-5,000 tigers were living in the wild worldwide, as per a 2022 assessment by the International Union for Conservation of Nature (IUCN).
- ❖ **Range:** Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.
- ❖ **Threats:** The **use of land by humans for agriculture and development** poses a serious risk to their habitat. **Tigers need wide home ranges as they are territorial.** Other threats include poaching and climate change

SNOW LEOPARD (VULNERABLE)

- ❖ **Population:** An estimated number of 4,000-6,500 snow leopards exist in the wild, with their population in decline, as per experts. In India, researchers estimate the total number to be between 400 and 700.
- ❖ **Range:** Across the **mountainous regions of 12 countries across Asia** — Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyz Republic, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan.
- ❖ **Threats:** loss of natural habitat, poaching, a decline in natural prey species and retaliatory killings.

JAGUAR (NEAR THREATENED)

- ❖ **Population:** As per WWF estimates, the global jaguar population is around 1,73,000.
- ❖ **Range:** Their population is **distributed across 18 countries, with most of them in the Amazon rainforest and the Pantanal in South America. Brazil accounts for half of the wild jaguars in the world.**
- ❖ **Threats:** fragmented habitats, deforestation and agricultural activities have resulted in a decline in their range.

CHEETAH (VULNERABLE)

- ❖ **Population:** Cheetah numbers have declined from an estimated 15,000 in 1975 to less than 7,000. The species **was declared extinct in India in 1952.**
- ❖ **Range:** The big cat is **endemic to the savannahs of Africa.** Initially, they were found in Africa, India, Pakistan, Russia, Iran and the Middle East. Currently, **the majority live in east and southern Africa.**
- ❖ **Threats:** loss of habitat, human-wildlife conflict, climate change, loss of prey and illegal trafficking.

PUMA (NEAR THREATENED)

- ❖ **Population:** The total breeding population of pumas is estimated at around 50,000.
- ❖ **Range:** Also known as a **mountain lion**, the puma is found in habitats ranging Canada through the U.S. and Central and South America.
- ❖ **Threats:** The species faces threats of loss of habitat and prey, besides human-wildlife conflict.

LEOPARD (NEAR THREATENED)

- ❖ **Population:** Around 2,50,000 leopards exist globally, while their population is estimated at around 13,000 in India.
- ❖ **Range:** Africa, parts of the Middle East and Asia, including India and China.
- ❖ **Threats:** Like other big cat species, leopards globally face the threat of habitat loss, poaching for body parts and harm due to human intervention.

8.16 DANCING FROGS

- ❖ The **dancing frogs that are endemic to the Western Ghats** are the **most threatened amphibian genus of India**, according to the **Wildlife Trust of India**, which analysed the **second edition of the Global Amphibian Assessment** released recently.
- ❖ It is **also the fifth most threatened genus in the world with 92 per cent of its species in the threatened category.**
- ❖ Of the **24 species of the frogs belonging to the Micrixalus genus** that were assessed, **two were found to be critically endangered and 15 were endangered.**
- ❖ **Characteristic behaviour-** The dancing frogs that are **found near the streams do a unique display to mate.** The **males stretch up their hind legs one at a time and wave their webbed toes in the air in a rapid motion akin to a dance.** This act is called **“foot flagging”** and gives the species their name.
- ❖ The species prefer **habitats in areas with thick canopy cover of at least 70-80 per cent.**
- ❖ **Threats-** invasive species, land use change, extreme weather, etc

8.17 CHILIKA LAKE

- ❖ Migratory birds have **started their annual journey to Chilika ahead of winter this year.**
- ❖ Chilika lake **hosts birds migrating from thousands of miles away from the Caspian Sea, Lake Baikal, Aral Sea, remote parts of Russia, Kirghiz steppes of Mongolia, Central and South East Asia, Ladakh and the Himalayas.**

ABOUT CHILIKA LAKE

- ❖ It is a **brackish water lake and a shallow lagoon with estuarine character** spread across the **three districts of Puri, Khurda and Ganjam** in Odisha.
- ❖ It is **located at the mouth of the Daya River**, flowing into the Bay of Bengal, covering an **expansive area of over 1,100 km².**
- ❖ Chilika is **Asia's largest and world's second largest lagoon.**
- ❖ It is the **largest wintering ground for migratory waterfowl found anywhere on the Indian sub-continent.**
 - ✓ It is **India's largest waterbird habitat.**
- ❖ It was designated the **first Indian wetland of international importance under the Ramsar Convention in 1981.**

- ❖ The **Nalaban Island** within the lake is notified as a **Bird Sanctuary under WPA 1972**.

8.18 ONE CGIAR

- ❖ The **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)** has joined the One CGIAR integrated partnership.
- ❖ The **One CGIAR partnership involves the CGIAR System Organisation and 12 One CGIAR research centres**. The partnership will help build a **unified approach to transforming food, land, and water systems to address the challenges posed by climate crisis**.

ABOUT ICRISAT

- ❖ It is a **Hyderabad based international research institute with a focus on tropical dryland agrifood system innovation**.

ABOUT CGIAR

- ❖ The **CGIAR (Consortium of International Agricultural Research Centres)** is a **publicly-funded network of agrifood systems research centres, works for transforming food, land, and water systems in a climate crisis**.
- ❖ Established -**1971**
- ❖ It has **more than 8,000 employees, working in over 80 countries**.
- ❖ CGIAR members- The CGIAR **consists of 15 international agricultural research institutes**.
 - ✓ The list **includes** Africa Rice Center, Ivory Coast; Centro Internacional de Agricultura Tropical, Columbia; Center for International Forestry Research, Indonesia; Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT), Mexico; International Potato Center, Peru; International Center for Agricultural Research in the Dry Areas, Syria; **and ICRISAT, India**.

8.19 PET COKE

- ❖ The Supreme Court asked the **Commission for Air Quality Management (CAQM)** to consider issues **related to distribution of highly polluting petroleum coke used by various industries**
- ❖ It emphasised that a **“holistic view”** has to be taken to **strike a balance between the needs of industries and imperatives of clean environment**.

ABOUT PET COKE

- ❖ Petroleum coke or pet coke is a **carbon-rich solid material derived from oil refining**.
- ❖ It is a **spongy, solid residue from oil distillation that can be burned for fuel similar to coal**.
- ❖ It is **similar to coal but with different properties**.
- ❖ It is **high in calorific value and easy to transport and store**.
- ❖ There are **two distinctive grades of Petroleum Coke viz. Calcinable or Green Petcoke and Fuel Grade Petcoke**.
- ❖ It **releases toxic gases like carbon dioxide, nitrous oxide, mercury, arsenic, chromium, nickel, and hydrogen chloride after burning**.
- ❖ Application- It is **used by aluminium and iron and steel industries apart from fuelling power plants**.

8.20 NILGIRI TAHR

- ❖ **Tamil Nadu government** recently launched the **‘Project Nilgiri Tahr’ in Chennai**.
- ❖ The project with an **outlay of ₹25 crore, aims to develop a better understanding of Nilgiri Tahr population, distribution and ecology, re-introduction of Nilgiri Tahr to their historic habitats, addressing proximate threat to Nilgiri Tahr, increasing awareness among the public about the Nilgiri Tahr species, developing eco-tourism activities at selected sites, among others**.

ABOUT NILGIRI TAHR

- ❖ Known as **Varai Aadu** locally, Nilgiri Tahr is an **endangered species** endemic to the **Western Ghats** known for their **gravity-defying skills in climbing steep cliffs**, getting them the nickname **Mountain Monarch**.
- ❖ It is **classified as a critically endangered species in the IUCN red list of threatened species** and is **protected under schedule-I of the Wildlife (Protection) Act of India, 1972**.
- ❖ It is **Tamil Nadu's State Animal**.
- ❖ It is the **only mountain ungulate** (animal with hooves) in southern India amongst the **12 species present in India**.
- ❖ Population- According to the **World Wide Fund for Nature Report 2015**, it is estimated that **there are 3,122 Nilgiri Tahr in the wild** and the **population is divided into five metapopulation blocks based on habitat connectivity**.
- ❖ There are **multiple references to Nilgiri Tahr in the Sangam Tamil literature**.
 - ✓ Two epics — **Silappathikaram** and **Sivakasindamani** — mention **descriptions of the Nilgiri Tahr and its habitat**.

8.21 NEW FROG SPECIES IN DAMPA T.R.

- ❖ A group of scientists from India and the United Kingdom have discovered a new species of toads **Bufoides bhupathyi**.
- ❖ It has been **found in the Dampa tiger reserve of Mizoram**.
- ❖ It is the **third of a genus found only in a very narrow area in northeast India**.
- ❖ The **two earlier known species** from the genus 'bufoides' – **Bufoides meghalayanus** and **Bufoides kempi** – were **found in Meghalaya**.
- ❖ The new species from Mizoram is **different from the co-generic (similar) species in interdigital webbing, colouration, skin tuberculation, and the presence of ovoid, tuberculated and depressed parotid glands**.
- ❖ The **new species** has been named after **S Bhupathy**, a noted **herpetologist** who served as principal scientist at the **Coimbatore-based Salim Ali Centre for Ornithology and Natural History**.

ABOUT DAMPA TIGER RESERVE

- ❖ It is located in the western flank (Lushai Hills) of Mizoram.
- ❖ It was **declared as a tiger reserve under the Project Tiger in 1994**.
- ❖ On the West, it is **bound by the Chittagong hill tracts (Sazek hill range) of Bangladesh**.
- ❖ Area- **500 sq km approx**.
- ❖ The habitat is **drained by the River Khawthlangtuipui in the West and the Teirei River to the East**.
- ❖ **Flora:** ranges from tropical evergreen to semi-evergreen forests.
- ❖ **Fauna:** Hoolock Gibbon, Rhesus Macaque, Tiger, Leopard, Clouded Leopard, Golden Cat, Himalayan Black Bear etc.

8.22 GCP AND ECOMARK SCHEME

- ❖ The **Ministry of Environment, Forest and Climate Change** has introduced **two pioneering initiatives that indicate the country's pro-active approach to climate change, sustainability and promotion eco-conscious practices**.
- ❖ These are the **Green Credit Program (GCP)** and the **Ecomark Scheme**

ABOUT GREEN CREDIT PROGRAM (GCP)

- ❖ It is an **innovative market-based mechanism designed to incentivize voluntary environmental actions across diverse sectors**, by various stakeholders like individuals, communities, private sector industries, and companies.
- ❖ The GCP's **governance framework is supported by an inter-ministerial Steering Committee** and **The Indian Council of Forestry Research and Education (ICFRE)** serves as the **GCP Administrator**, responsible for program implementation, management, monitoring, and operation.
- ❖ In its initial phase, the **GCP focuses on two key activities: water conservation and afforestation**.

- ❖ A user-friendly digital platform will streamline the processes for registration of projects, its verification, and issuance of Green Credits.
- ❖ The Green Credit Registry and trading platform, being developed by ICFRE along with experts, would facilitate the registration and thereafter, the buying and selling of Green Credits.

ABOUT ECOMARK SCHEME

- ❖ The Ecomark Scheme notified recently replaces the previous Notification(1991).
- ❖ It provides accreditation and labelling for household and consumer products that meet specific environmental criteria while maintaining quality standards as per Indian norms.
- ❖ Products accredited under the Ecomark Scheme will adhere to specific environmental criteria, ensuring minimal environmental impact.
- ❖ It will build consumer awareness of environmental issues and encourage eco-conscious choices.
- ❖ It will also motivate manufacturers to shift towards environmentally friendly production.
- ❖ The Central Pollution Control Board administers the Ecomark Scheme in partnership with Bureau of Indian Standards (BIS), which is the national body for standards and certification.

8.23 SIMILIPAL TIGER RESERVE

- ❖ The Odisha government begun its own tiger estimation in a vast area comprising 16 ranges of Similipal Tiger Reserve and Baripada, Rairangpur and Karanjia forest divisions even as experts continue to debate the Union environment ministry's report showing a decline in the state's wild cat population.
- ❖ The state government is hopeful that the number of tigers in Similipal will increase from 16 to 35 once the estimation process is over.
- ❖ According to the All India Tiger Estimation (AITE) report released by the Government of India in July, the total number of tigers in Odisha's forests is 20, down from 28 in 2018.
- ❖ Out of 20, 16 tigers are there in Similipal and the rest four live in the area adjoining the Similipal tiger reserve.

ABOUT SIMILIPAL TIGER RESERVE

- ❖ Similipal Tiger Reserve falls within the tribal-dominated Mayurbhanj district.
- ❖ Spreads over 2,750 square kilometres.
- ❖ It was formally designated a tiger reserve in 1956 and brought under Project Tiger in the year 1973.
- ❖ It was declared a biosphere reserve in 1994.
- ❖ It has been part of the UNESCO World Network of Biosphere Reserve since 2009.
- ❖ Tribes - Erenga Kharias , Mankirdias, Sahara, Santhal, Bhumija etc.
- ❖ Vegetation- semi-evergreen forests, tropical moist deciduous forests, dry deciduous hill forests, high level sal forests and sprawling meadows.
- ❖ Fauna- Langur, Barking and Spotted Deer, Sloth Bear, Mongoose, Leopard, Gaur, Elephant, Flying Squirrel, Porcupine, Turtle, Monitor Lizard, Python, Sambar, Pangolin etc.

It is the only landscape in the world that is home to melanistic tigers.

8.24 POBITORA WILDLIFE SANCTUARY

- ❖ Assam Environment & Forest Minister Chandra Mohan Patowary reopened the Pobitora Wildlife Sanctuary for tourists at the elephant-riding point inside the wildlife sanctuary.

ABOUT POBITORA WILDLIFE SANCTUARY

- ❖ It is located on the southern bank of the river Brahmaputra in Morigaon district, adjacent to Guwahati in Assam.
- ❖ It was declared a reserve forest in 1971 and a wildlife sanctuary in 1987.

- ❖ It is home to the highest population density of the **Indian One-Horned Rhinoceros species** (around 102 rhinos in an area of 38.8 sq. km).
- ❖ **Landscape:** It is dominated by alluvial lowlands and marshland.
- ❖ The **Brahmaputra River** offers a natural boundary to the premises of the **Pobitora Wildlife Sanctuary on the north**, while the **Garanga Beel** offers a natural boundary to its south.

8.25 BANNERGHATA NATIONAL PARK

- ❖ The **Supreme Court-appointed Central Empowered Committee (CEC)** has directed the **office of the chief secretary of Karnataka** to submit a response on the issue of encroachment of the **eco-sensitive zone (ESZ) of the Bannerghatta National Park**.

ABOUT BANNERGHATTA NATIONAL PARK

- ❖ It is located near **Bangalore, Karnataka**, in the hills of the **Anekal range**.
- ❖ Area- **260 sq.km**
- ❖ The park is a **portion of the elephant corridor** that runs **between the Sathyamangalam forest and the BR Hills**.
- ❖ **Suvarnamukhi** stream, originating from **Suvarnamukhi Hill**, runs through the **centre of the park**.
- ❖ In **1974**, it was designated as a national park.
- ❖ In 2002 a **portion of the park became a biological reserve, the Bannerghatta Biological Park**.
- ❖ It is the **first biological park in India to have a fenced forested elephant sanctuary**.
- ❖ In 2006, **India's first butterfly enclosure** was inaugurated at the park.
- ❖ Vegetation includes **Dry Deciduous Scrub Forests, Southern Tropical Dry Deciduous Forests and Southern Tropical Moist Mixed Forests** with species, including **Sandalwood, Tamarind, and Bamboo**
- ❖ Fauna- **elephants, gaur, tiger, leopard, jackal, fox, wild boar, sloth bear, Sambar, Chital, spotted deer, barking deer, common langur, pangolin, bonnet macaque, porcupine and hares**.

8.26 UNCCD

- ❖ The **UN Convention to Combat Desertification (UNCCD)** announced the launch of its **first-ever Data Dashboard** compiling national reporting figures from **126 countries**.
- ❖ The **21st session of the UNCCD Committee for the Review of the Implementation of the Convention (CRIC 21)** will be held in **Samarkand, Uzbekistan, from 13-17 November 2023**.

MAJOR FINDINGS

- ❖ It shows that **land degradation is advancing at an astonishing rate across all regions**.
- ❖ Between **2015 and 2019**, the world lost at least **100 million hectares of healthy and productive land each year**, adding up to **twice the size of Greenland**.
- ❖ **Eastern and Central Asia, and Latin America and the Caribbean regions** experience the most severe degradation, affecting at least **20 per cent of their total land area**.
- ❖ Meanwhile, **sub-Saharan Africa, Western and Southern Asia, and Latin America and the Caribbean** experienced **land degradation at rates faster than the global average**.

INDIA SPECIFIC FINDINGS

- ❖ From 2015-2019, **30.51 million hectares of India's total reported land was degraded**.
- ❖ **India's total degraded land is equivalent to the size of 43 million football pitches**, according to UNCCD.
- ❖ **251.71 million Indians** constituting **18.39 per cent of the country's population** were exposed to **land degradation during the same period**.

ABOUT UNCCD

- ❖ **Established in 1994**, it is the **sole legally binding international agreement linking environment and development to sustainable land management**.
- ❖ **Members- 197 Parties** to Convention, including 196 countries and European Union.

- ✓ **India is a signatory.**
- ❖ The **UNCCD permanent secretariat** is located in **Bonn, Germany.**
- ❖ It addresses **specifically the arid, semi-arid and dry sub-humid areas**, known as the **drylands**, where some of the **most vulnerable ecosystems and peoples can be found.**
- ❖ The UNCCD is **one of the three Rio Conventions**, the other two being:
 - ✓ **Convention on Biological Diversity (UNCBD)**
 - ✓ **United Nations Framework Convention on Climate Change (UNFCCC)**

8.27 ANAMALAI TIGER RESERVE

- ❖ A committee headed by **Anamalai Tiger Reserve (ATR) field director** visited the **enclosure** at the **Manthirimattam reserve forest area** of the **Manamobolly forest range** to assess the **progress of the rewilding of a sub-adult tiger.**

ABOUT ANAMALAI TIGER RESERVE

- ❖ It is **carved out of the Tamil Nadu portion of the Anamalais.**
- ❖ The **Tiger Reserve falls in four revenue taluks** namely; **Pollachi, and Valparai of Coimbatore district and Udumalpet of Tiruppur District and Kodaikanal taluk in Dindigul district** in the State of Tamilnadu.
- ❖ The **total area** of the Tiger Reserve is **958.59 sq.km.**
- ❖ It **lies South of the Palakkad gap** in the **Southern Western Ghats.**
- ❖ It is surrounded by **Parambikulum Tiger Reserve** on the East, **Chinnar Wildlife Sanctuary** and **Eravikulam National Park** on the South Western side.
- ❖ The Anamalai Tiger Reserve **falls within the Western Ghats mountain chain of South West India**, a region designated as **one of 25 Global Biodiversity Hotspots.**
- ❖ The **biogeographical classification** of the country includes **Western Ghats** which are considered as **one of eight “hottest hot spots”.**
- ❖ The Tiger Reserve **supports diverse habitat types** viz. **Wet evergreen forests, semi evergreen forests, moist deciduous, dry deciduous, dry thorn and shola forests.**
 - ✓ **Man-made teak plantations of exotics like eucalyptus, wattle, pines are also found.**
- ❖ **Fauna-** it supports **120 species of reptiles, 300 species of birds and 80 species of mammals.**
 - ✓ **Asiatic elephant, Sambar, Spotted deer, Barking deer, Mouse deer, Gaur, Nilgiri tahr, Tiger, etc.**
- ❖ It supports **6 indigenous people** viz. **Malasar, Malai malasars, Kadars, Eravallars, Pulayars and Muduvars.**

8.28 GLOBAL DECLARATION FOR RIVER DOLPHINS

- ❖ After decades of seemingly irreversible decline in global river dolphin numbers, **11 Asian and South American countries today signed a landmark deal in Bogotá** to save the **world’s six surviving species of river dolphins from extinction.**
- ❖ Adopted by **Asian and South American range states from Colombia to India**, the **Global Declaration for River Dolphins** aims to **halt the decline of all river dolphin species and increase the most vulnerable populations.**
- ❖ It **will scale up collective efforts to safeguard the remaining river dolphin species**, by developing and funding measures to **eradicate gillnets, reduce pollution, expand research, and increase protected areas.**
- ❖ **River dolphins live in some of the world’s most important rivers**, including the **Amazon and Orinoco in South America**, and the **Ayeyarwady, Ganges, Indus, Mekong, Mahakam and Yangtze in Asia.**
 - ✓ These **rivers support hundreds of millions of people**, from **Indigenous Peoples and local communities in remote areas to the residents of megacities.**
 - ✓ These rivers **water vast amounts of agricultural land, fuel industry and business, and sustain a wealth of wildlife.**

RIVER DOLPHINS

Name	Habitat	IUCN status
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Yangtze finless porpoises	only freshwater porpoise in world and only found in Yangtze River	Critically endangered
Ganges (susu)	Ganges and Brahmaputra river systems in India and Bangladesh	Endangered
Amazon (pink river dolphin or boto)	Freshwater species found in amazon and orinoco river basin.	Endangered
Indus (bhulan)	Pakistan and River Beas, a tributary of Indus River in Punjab.	Endangered
Irrawaddy	Coastal areas in South and Southeast Asia, and in three river i.e. Ayeyarwady (Myanmar), Mahakam (Indonesian Borneo), Mekong and Chilka lake (India).	Endangered
Tucuxi	freshwater dolphin species that lives in Amazon River system in Brazil, Colombia, Ecuador and Peru.	Endangered

9. POLICY AND PROGRAMME

9.1 INTELLIGENT GRIEVANCE MONITORING SYSTEM (IGMS) 2.0

❖ The Department of Administrative Reforms and Public Grievances (DARPG) (Ministry of Personnel, Public Grievances and Pensions) launched IGMS 2.0. Public Grievance portal and Automated Analysis in Tree Dashboard portal.

ABOUT IGMS

- ❖ IGMS is an artificial intelligence (AI) driven Grievance Monitoring System.
- ❖ It aims to enhance the efficiency of the public grievance redressal process.
- ❖ Implementing Agency- DARPG in collaboration with IIT Kanpur
- ❖ IGMS 2.0 Dashboard has been implemented by IIT Kanpur following an MoU with DARPG on in 2021 for upgrading DARPG Information Systems (CPGRAMS) with Artificial Intelligence capabilities.
- ❖ Objective
 - ✓ To provide instant tabular analysis of Grievances Filed and disposed of.
 - ✓ Offer State-wise and district-wise Grievances Filed data.
 - ✓ Offer Ministry-wise data.
 - ✓ Enhance grievance redressal process with AI capabilities.

ABOUT CENTRALISED PUBLIC GRIEVANCE REDRESS AND MONITORING SYSTEM (CPGRAMS)

- ❖ CPGRAMS is an online platform available 24/7 for citizens to lodge grievances related to service delivery.
 - ✓ It is a single portal connected to all the Ministries/Departments of Government of India and States.
- ❖ Developed by National Informatics Centre in association with Directorate of Public Grievances(DPG) and Department of Administrative Reforms and Public Grievances(DARPG).
- ❖ Citizens can track grievance status using a unique registration ID and use the appeal facility if not satisfied with the resolution by the Grievance Officer.
- ❖ CPGRAMS is now available in 22 scheduled languages and English.

9.2 PM SVANIDHI SCHEME

- ❖ **PM SVANidhi scheme**, achieved its **target of reaching 50 lakh beneficiaries**.
- ❖ So far, **as many as 65.75 lakh loans exceeding Rs 8,600 crore in disbursement took place**.
- ❖ Currently, **Madhya Pradesh, Assam, and Gujarat are among the top-performing states**, while **Ahmedabad, Lucknow, Kanpur, Indore, and Mumbai are the leading cities in terms of implementation**.

ABOUT PRIME MINISTER STREET VENDOR'S ATMANIRBHAR NIDHI (PM SVANIDHI) SCHEME

- ❖ **Street vendors play an integral role in the urban informal economy**, providing essential goods and services to urban residents.
 - ✓ The **PM SVANidhi scheme has been instrumental in bringing them into the formal economic fold**.
- ❖ PM SVANidhi scheme is a **Central Sector Scheme under the aegis of the Ministry of Housing and Urban Affairs (MoHUA)**.
- ❖ The scheme, launched on June 1, 2020, is a **micro-credit scheme for urban street vendors that aims to provide collateral-free working capital loans up to Rs 50,000**.
 - ✓ The **3rd term loan of up to ₹50,000 is in addition to 1st & 2nd loans of ₹10,000 and ₹20,000 respectively**.
- ❖ Under the scheme **regular repayments are incentivized with a 7 per cent interest subsidy and digital transactions are rewarded with cashback up to Rs 1,200 per year**.
- ❖ The scheme **employs Aadhaar-based e-KYC, utilizes an end-to-end IT platform, and employs SMS-based notifications for application status updates**.

9.3 PRADHAN MANTRI UJJWALA YOJANA

- ❖ The government had **raised the subsidy amount for Pradhan Mantri Ujjwala Yojana beneficiaries from ₹200 to ₹300 per LPG cylinder**.
 - ✓ Ujjwala beneficiaries **currently pay ₹703 per 14.2-kg cylinder as against the market price of ₹903. After the decision of the Union Cabinet, they will now pay ₹603**.
- ❖ The Union Cabinet had in September **approved the extension of PMUY for release of 75 lakh LPG connections over three years from financial year 2023-24 to 2025-26**.
 - ✓ The **75 lakh additional Ujjwala connections will take total number of PMUY beneficiaries to 10.35 crore**.

ABOUT PRADHAN MANTRI UJJWALA YOJANA (PMUY)

- ❖ The Pradhan Mantri Ujjwala Yojana (PMUY) was **launched in May 2016 as a flagship scheme with an objective to make clean cooking fuel such as LPG available to the rural and deprived households which were otherwise using traditional cooking fuels such as firewood, coal, cow-dung cakes, etc**.
- ❖ Nodal ministry- **Ministry of Petroleum and Natural Gas**
- ❖ The scheme **provides a financial support of Rs 1600 for each LPG connection to the BPL households**.
- ❖ Along with a **deposit-free LPG connection, Ujjwala 2.0 will provide the first refill and a hotplate free of cost to the beneficiaries**.
- ❖ **Objectives-**
 - ✓ **Empowering women and protecting their health**.
 - ✓ **Reducing the number of deaths in India due to unclean cooking fuel**.
 - ✓ **Preventing young children from a significant number of acute respiratory illnesses caused due to indoor air pollution by burning fossil fuel**.

9.4 PIDF SCHEME AND PM VISHWAKARMA SCHEME

- ❖ Reserve Bank Governor said it has been decided to include PM Vishwakarma under the Payments Infrastructure Development Fund (PIDF) Scheme.
- ❖ Also the tenure of the PIDF scheme has been extended by another two years till 2025.

ABOUT PIDF SCHEME

- ❖ Operationalised in January 2021, the PIDF Scheme aims at incentivising the deployment of payment acceptance infrastructure such as physical Point of Sale (PoS), Quick Response (QR) codes in tier-3 to tier-6 centres, north-eastern states and Union Territories of Jammu & Kashmir and Ladakh.
- ❖ As per the original plan, the tenure of PIDF scheme was fixed for three years till December 2023.
- ❖ As at end-August 2023, over 2.66 crore new touch points have been deployed under the scheme.
- ❖ Also, it is proposed to include beneficiaries of PM Vishwakarma Scheme in all centres under the PIDF Scheme.
- ❖ This decision to expand the targeted beneficiaries under the PIDF scheme will provide a fillip to the Reserve Bank's efforts towards promoting digital transactions at the grassroots level.

ABOUT PM VISHWAKARMA SCHEME

- ❖ PM Vishwakarma scheme proposes to offer up to 8% subsidy for loans given to artisans.
- ❖ The scheme provides collateral-free loans up to ₹Rs 3 lakh to artisans at a very affordable interest rate of 5%.
- ❖ The scheme covers artisans related to 18 fields, including carpenter, goldsmith, blacksmith, mason, stone sculpture, barber and boatmakers.
- ❖ Initially, ₹1 lakh loan will be given and the beneficiary would be eligible for an additional ₹2 lakh after repayment schedule of 18 months.
- ❖ The components of the scheme will include not only financial support but also access to advanced skill training, knowledge of modern digital techniques and efficient green technologies, brand promotion, linkage with local and global markets, digital payments, and social security.

9.5 'SCHEME FOR RESIDENTIAL EDUCATION FOR STUDENTS IN HIGH SCHOOLS IN TARGETED AREAS' (SHRESHTA)

- ❖ In a significant move aimed at advancing education and promoting the socio-economic progress of Scheduled Castes (SCs), the Ministry of Social Justice & Empowerment has introduced the 'Scheme for Residential Education for Students in High Schools in Targeted Areas' (SHRESHTA).
- ❖ The primary goal of this initiative is to extend the impact of government development programmes and bridge service gaps in areas predominantly inhabited by SC communities within the education sector.
- ❖ The scheme's core strategy involves fostering collaboration between grant-in-aid institutions managed by non-governmental organisations (NGOs) and residential high schools offering quality education.
- ❖ Each year, the program will choose about 3,000 deserving SC children and grant them admission to the top private residential schools in the nation.
- ❖ The scheme's implementation is structured in two distinct modes.
 - ✓ First, there are the SHRESHTA schools, which comprise the best CBSE/State Board-affiliated private residential schools. Under this mode, a specified number of outstanding SC students in various States and Union Territories (UTs) will be selected annually through the National Entrance Test for SHRESHTA (NETS), conducted by the National Testing Agency (NTA).
 - ✓ The second mode of implementation pertains to NGO/VO Operated Schools/Hostels. This mode specifically applies to schools and hostels operated by voluntary organizations (VOs) and NGOs, offering education up to the 12th standard.

9.6 ACCREDITED AGENT FOR EXPANSION OF HEALTH AND LIVESTOCK PRODUCTION PROGRAMME

- ❖ The Department of Animal Husbandry and Dairying, launched the 'A-HELP' programme recently in state of Jharkhand.

ABOUT ACCREDITED AGENT FOR HEALTH AND EXTENSION OF LIVESTOCK PRODUCTION PROGRAMME

- ❖ 'A-HELP' program aims to empower women by engaging them as Accredited Agent who contribute significantly to disease control, animal tagging, and livestock insurance.
- ❖ The new scheme would enhance access to veterinary services at the farmer's doorstep and empower Pashu Sakhis.
- ❖ "A-HELP" (Accredited Agent for Health and Extension of Livestock Production) has already initiated across different States/UTs including Bihar, Gujarat, Jammu and Kashmir, Karnataka, Madhya Pradesh, Uttarakhand, and Jharkhand.
- ❖ The Department of Animal Husbandry and Dairying (DAHD) has launched the novel initiative through an MoU signed between DAHD and the National Rural Livelihoods Mission (NRLM) under the Ministry of Rural Development (MoRD).

9.7 PASSPORT TO EARNING (P2E) PROGRAMME

- ❖ Recently the milestone of 1 million certifications of Passport to Earning (P2E) programme was reached.
- ❖ UNICEF's global learning-to-earning solution, Passport to Earning (P2E), has skilled and certified more than one million young people in India in areas of financial literacy and digital productivity.
- ❖ This milestone marks a major step towards helping them gain skills relevant to the future of work and life.
- ❖ Notably, 62% of all young learners who benefitted from P2E courses in India are adolescent girls and young women.
- ❖ In India, aligned with the National Education Policy (NEP) 2020, P2E provides free access to certificate courses in digital productivity, financial literacy, employability skills, and other in-demand, job-ready skills.
- ❖ The P2E solution also offers provisions for online, hybrid, and offline learning models.
- ❖ The digital learning platform aims to deliver long-term sustainable skilling to 5 million youth in the age group of 14-29 in India by 2024 and then connect them to opportunities in job, self-employment and entrepreneurship to be financially independent.

9.8 DATA ANALYTICS DASHBOARD AND POORVOTTAR SAMPARK SETU PORTAL

- ❖ Ministry of Development of North Eastern Region (DoNER) has recently launched two portals-
- ❖ DoNER Data Analytics Dashboard-
 - ✓ It has data of 112 schemes across 55 Departments and Ministries
 - ✓ It will help in Data-driven decision-making; Ease of operations; Centralized monitoring, etc.
 - ✓ It will keep a close watch on NER Aspirational districts, North East border districts and the most backward districts in NER.
- ❖ Poorvottar Sampark Setu portal-
 - ✓ it generates a curated list of Ministers who can be nominated for a fortnightly visit of Union Ministers to North east region.
 - ✓ This initiative is set to redefine the landscape of Ministerial visits, meticulously crafted to elevate their efficacy, transparency, and profound influence.
 - ✓ Its fundamental mission is to unequivocally ensure that the benefits of Central Government Schemes should reach to every citizen in the North East Region of India.

9.9 NATIONAL MISSION FOR CLEAN GANGA

- ❖ The Executive Committee of National Mission for Clean Ganga recently approved 7 projects worth Rs 285 crore.

ABOUT NMCG

- ❖ NMCG was registered as a society in 2011 under Societies Registration Act 1860.
- ❖ It acted as the implementation arm of the National Ganga River Basin Authority (NGRBA) which was constituted under the provisions of the Environment (Protection) Act (EPA),1986.
- ❖ NGRBA was dissolved in 2016 and replaced by the National Council for Rejuvenation, Protection, and Management of River Ganga.
- ❖ Nodal Ministry- Ministry of Jal Shakti.
- ❖ Objectives-
 - ✓ The objective of the NMCG is to reduce pollution and ensure the rejuvenation of the Ganga River by adopting a river basin approach.
 - Namami Gange is one of the Coveted Programmes of NMCG to clean Ganga. It was launched in 2014 with a total budgetary outlay of Rs.20,000 crore.
 - ✓ This can be achieved by promoting intersectoral coordination for comprehensive planning & management and maintaining minimum ecological flow in the river, with the aim of ensuring water quality and environmentally sustainable development.
- ❖ Organization Structure- The Act envisages a five-tier structure at the national, state, and district levels to take measures for prevention, control, and abatement of environmental pollution in river Ganga as below-
 - ✓ National Ganga Council under the chairmanship of the Hon'ble Prime Minister of India.
 - ✓ Empowered Task Force (ETF) on river Ganga under the chairmanship of Hon'ble Union Minister of Jal Shakti (Department of Water Resources, River Development and Ganga Rejuvenation).
 - ✓ National Mission for Clean Ganga (NMCG).
 - ✓ State Ganga Committees
 - ✓ District Ganga Committees in every specified district abutting river Ganga and its tributaries in the states.
- ❖ NMCG has a two-tier management structure and comprises of-
 - ✓ Governing Council
 - ✓ Executive Committee
 - ✓ Both are headed by Director General, NMCG.

9.10 RIGHT TO INFORMATION

- ❖ Central Information Commission (CIC) recently commemorated the 18th anniversary of enactment of the RTI Act.
- ❖ Over these years, CIC has facilitated and disposed of more than 3.5 lakh second appeals/complaints.

ABOUT RIGHT TO INFORMATION ACT

- ❖ Right to Information Act 2005 mandates timely response to citizen requests for government information.
- ❖ Objective- to empower the citizens, promote transparency and accountability in the working of the Government, contain corruption, and make our democracy work for the people in a real sense.
- ❖ The right to information is a fundamental right under Article 19 (1) of the Indian Constitution.
 - ✓ In 1976, in the Raj Narain vs the State of Uttar Pradesh case, the Supreme Court ruled that Right to information will be treated as a fundamental right under article 19.
- ❖ Any person who is citizen of India or Non-Residents of India can file RTI.
- ❖ Right to Information (Amendment) Act, 2019-

Article 19(1) specifies that every citizen has freedom of speech and expression.

- ✓ It provided that the **Chief Information Commissioner and an Information Commissioner** (of Centre as well as States) shall hold office for such **term as prescribed by the Central Government**. Earlier, **their term was fixed for 5 years**.
- ✓ It provided that the **salary, allowances and other service conditions of the Chief Information Commissioner and an Information Commissioner** (of Centre as well as States) shall be such as **prescribed by the Central Government**.
- ❖ **Challenges-** As of June 30, 2023, there were **3.21 lakh pending appeals and complaints within the 27 information commissions**, which serve as the final appellate authorities under this legislation.

9.11 PM GATI SHAKTI COMPLETES 2 YEARS

- ❖ The **PM Gati Shakti initiative**, aimed at **transforming the infrastructure growth in the country**, has reached its **two-year milestone**.

ABOUT PM GATI SHAKTI

- ❖ The government launched the PM Gati Shakti program in 2021, with the **goal of achieving self-reliance and a \$5 trillion economy by 2025**.
- ❖ To realise this vision, there was a **pressing need to establish a comprehensive and efficient multimodal transportation and last-mile connectivity infrastructure across the country**.
- ❖ PM Gati Shakti aims to achieve these objectives through **integrated planning and coordinated project execution involving all relevant ministries and state governments**.
- ❖ The **primary aim** of this initiative is to **enhance multimodal connectivity, improve logistics efficiency, and address crucial infrastructure deficiencies** to ensure **seamless movement of people, goods, and services across the nation**.
- ❖ The program **also seeks to integrate the infrastructure schemes of various ministries and state governments**, including **Bharatmala, Sagarmala, land ports, UDAN, and more**.

MAJOR ACHIEVEMENTS

- ❖ The government has evaluated **more than 300 central and state projects worth ₹11.58 lakh crore in two years**.
- ❖ The projects evaluated under PM Gati Shakti **include over 200 state projects worth over ₹5,000 crore for improving logistic infrastructure and 156 critical infrastructure gap projects for first and last-mile connectivity**.
- ❖ Among the **central infrastructure projects, 45 railway projects worth ₹6.06 lakh crore and 47 road projects worth ₹4.19 lakh crore were evaluated**, besides **eight projects worth ₹79,000 crore of the housing and urban affairs ministry and one project of over ₹ 20,000 crore of the new and renewable energy ministry**.
- ❖ As per the analysis, the **initiative has significantly improved the ease of doing business by bringing down the pre-alignment finalisation time for infrastructure projects from three-four months earlier to one month now**.
- ❖ Besides, the **NOC approvals for all projects are now digitised and integrated via the Gati Shakti portal unlike earlier**.

9.12 INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES (IIPS)

- ❖ The Union government has recently **revoked the suspension order of International Institute for Population Sciences (IIPS) director**.

ABOUT INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES (IIPS)

- ❖ The **International Institute for Population Sciences (IIPS), Mumbai**, formerly known as the **Demographic Training and Research Centre (DTRC) till 1970**, was established in **July 1956** under the joint sponsorship of **Sir Dorabji Tata Trust, the Government of India and the United Nations**.
- ❖ Objective- **to train persons from India and other countries in demography and related fields**.
- ❖ It serves as a **regional centre for Training and Research in Population Studies for the ESCAP region**.

- ❖ It was declared as a 'Deemed to be University' on August 14, 1985, under Section 3 of the UGC Act, 1956.
- ❖ IIPS is the nodal agency, responsible for providing coordination and technical guidance for the National Family Health Survey.
- ❖ It is an autonomous organization of the Ministry of Health and Family Welfare.
- ❖ There are seven Academic Departments in the Institute.

9.13 INTENSIFIED MISSION INDRADHANUSH

- ❖ Intensified Mission Indradhanush (IMI 5.0), the flagship routine immunization campaign of the Union Ministry of Health and Family Welfare concluded all 3 rounds recently in all States/UTs except Bihar, Chhattisgarh, Odisha and Punjab.
- ❖ IMI 5.0 was targeted to ensure that routine immunization services reach the missed-out and dropped out children and pregnant women across the country.
- ❖ For the first time the campaign was conducted across all the districts in the country and includes children up to 5 years of age (Previous campaigns included children up to 2 years of age).
- ❖ IMI 5.0 campaign aimed to enhance immunization coverage for all vaccines provided under the Universal Immunization Programme (UIP) as per the National Immunization Schedule (NIS).
- ❖ Special focus was laid on improvement of Measles and Rubella vaccination coverage with the aim of Measles & Rubella elimination by 2023
- ❖ IMI 5.0 has been conducted in three rounds.
- ❖ As on 30th September 2023, over 34,69,705 children and 6,55,480 pregnant women were administered vaccine doses during the first 2 rounds of IMI 5.0 campaign across the country.
- ❖ It leverages the U-WIN digital platform for Routine Immunization in a pilot mode.

VACCINES UNDER UIP

- ❖ The Universal Immunization Programme provides life-saving vaccines to all children across the country free of cost to protect them against Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia and Meningitis due to Haemophilus Influenzae type b (Hib), Measles, Rubella, Japanese Encephalitis (JE) and Rotavirus diarrhoea. (Rubella, JE and Rotavirus vaccine in select states and districts).
- ❖ Also, Mission Indradhanush was launched in 2014 as a special catch-up campaign under the UIP, to cover the partially and unvaccinated children.
A total of 5.06 crore children and 1.25 crore pregnant women have been cumulatively vaccinated till date.

9.14 APAAR

- ❖ The new identity card for students – Automated Permanent Academic Account Registry (APAAR) ID- is to be rolled out in the country.
- ❖ The Automated Permanent Academic Account Registry -APAAR, dubbed as the 'One Nation, one ID' is an Education Ecosystem Registry or an 'EduLocker'.
- ❖ It is aligned with National Digital Education Architecture (NDEAR).
 - ✓ NDEAR was established in 2021 and act as an enabler for New Education Policy (NEP) 2020.
- ❖ The APAAR will give each student enrolled from pre-primary to higher education, a unique Identification number.
 - ✓ This will be in addition to the already existing Aadhaar ID that every individual has.
- ❖ It will give a unique lifelong identification number to each student (enrolled from pre-primary to higher education).
- ❖ APAAR serves as a registry for institutions, students and faculty by creating lifelong credentials, and Academic Bank of Credits (ABC).
 - ✓ ABC is an online repository of academic data that facilitates students' mobility among higher educational institutions.
- ❖ They will be able to digitally store their exam results, learning outcomes, co-curricular achievements such as ranking in Olympiads or receiving specialized skill training etc.

9.15 'CHAKRA-II' OPERATION

- ❖ The **Central Bureau of Investigation (CBI)** launched search operations in **seventy six locations across India in a major crackdown against cyber criminals.**
- ❖ The **crackdown**, termed '**Operation Chakra-2**' was conducted after registering five separate cases of **cyber-enabled financial fraud**, including a **₹100-crore crypto scam.**
- ❖ **Chakra-1** was conducted nearly a year ago by the CBI in coordination with the Interpol, the FBI and police forces of multiple countries.

9.16 PRADHAN MANTRI ANUSUCHIT JAATI ABHUYDAY YOJANA

- ❖ The **Pradhan Mantri Anusuchit Jaati Abhuyday Yojana (PM- AJAY)** has been implemented since **2021-22** with an aim to **reduce poverty of the SC communities** by generation of additional employment opportunities through **Skill development, income generating schemes and other initiatives and to improve socio-economic developmental indicators** by ensuring adequate infrastructure and requisite services in the SC dominated villages.

ABOUT PRADHAN MANTRI ANUSUCHIT JAATI ABHUYDAY YOJANA

- ❖ It is a **merged scheme of 3 Centrally Sponsored Scheme** namely-
 - ✓ **Pradhan Mantri Adarsh Gram Yojana (PMAGY),**
 - ✓ **Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP) and**
 - ✓ **Babu Jagjivan Ram Chhatrawas Yojana(BJRCY).**
- ❖ The Scheme has **three components-**
 - ✓ **Development of SC dominated villages into an "Adarsh Gram"**- The objective of this component is to ensure integrated development of SC majority villages so that, inter alia, there is:, Adequate infrastructure, all requisite infrastructure necessary for socio-economic development needs are to be provided under the Scheme.
 - ✓ **'Grants-in-aid' for District/State-level Projects for socio-economic betterment of SCs** that may include creation of infrastructure in SC dominated villages including those selected under Adarsh Gram component, construction of Hostels/Residential schools, Comprehensive Livelihood Projects which may include components such as Skill development, related infrastructure development, financial assistance towards loans taken by beneficiaries for acquisition/creation of assets required for livelihood generation etc.
 - ✓ **Construction of Hostels in higher educational institutions** which are top-ranked as per the National Institutional Ranking Framework (NIRF) of Government of India and are funded by the Centre/State/UT Governments either fully or partially.

9.17 AADI MAHOTSAV

- ❖ Aadi Mahotsav, the **National Tribal Festival** – started on 25th October, at Ahmedabad, Gujarat.
- ❖ The mega event is **being organized by the Tribal Cooperative Marketing Development Federation of India Limited (TRIFED).**
- ❖ The Aadi Mahotsav serves as a **unique, symbiotic bridge to embark on a journey through the tapestry of India's indigenous heritage.**
- ❖ This Aadi Mahotsav, besides other attractions of handicrafts, handloom, pottery, jewellery, will be showcasing '**Milletts grown by Tribals**'.

ABOUT TRIFED

- ❖ The **Tribal Cooperative Marketing Development Federation of India (TRIFED)** came into existence in **1987.**
- ❖ It is a **national-level apex organization** functioning under the **administrative control of Ministry of Tribal Affairs.**

- ❖ **HQ-New Delhi**
- ❖ **Objective- socio-economic development of tribal people** in the country by way of **marketing development of the tribal products** such as **metal craft, tribal textiles, pottery, tribal paintings and pottery** on which the tribals depends heavily for major portion of their income.
- ❖ **TRIFED acts as a facilitator and service provider for tribes to sell their product.**
- ❖ It has been entrusted by the Government of India to implement its proposed **Minimum Support Price Scheme for Minor Forest Produce.**

9.18 INDIAN PORCUPINE

- ❖ An **adult male tiger**, estimated to be **about nine years old**, was reportedly **found dead near Kazhudhakatti stream in Amaravathy range in Tamil Nadu**
- ❖ The **carcass bore external injuries caused by a confrontation with a porcupine.**
- ❖ The **swollen front limbs and a portion of the chest indicated infection caused by piercings by the quill.**

ABOUT INDIAN PORCUPINE

- ❖ The **Indian porcupine (Hystrix indica)** is found **throughout southeast and central Asia and in parts of the Middle East**, including such **countries as India, Nepal, Bhutan, Bangladesh, Sri Lanka, Pakistan, Israel, Iran and Saudia Arabia.**
- ❖ Indian Crested Porcupine is **the largest rodent of India.**
- ❖ A **solitary creature** locally known as **Sahi** inhabits **deciduous forest, rocky terrain and opens countryside.**
- ❖ It belongs to family of **Hystricidae** i.e. **Old World Porcupine.**
- ❖ It is covered with **thick long quills** which may reach up to **16 inches in length.**
- ❖ Lifespan of **18 to 20 years**
- ❖ This **large herbivore** is a **nocturnal species** which is often **seen foraging at night**, making a grunting sound while **feeding on plants, fruits and roots.**
- ❖ Porcupines **follow monogamy** and **females produce a single litter per year** having 2-4 pups.
- ❖ Protection Status
 - ✓ **IUCN Red List - least concern**
 - ✓ **Wildlife Protection Act 1972- Schedule IV**

10. INDEX AND REPORTS

10.1 TRADE AND DEVELOPMENT REPORT 2023

- ❖ As per the **UN's latest Trade and Development Report 2023**, the **world economy growth is projected to be 2.4%.**
- ❖ It has been published by the **United Nations Conference on Trade and Development (UNCTAD).**
- ❖ In **2023**, there **will be a global recession**, like that in **2009**. And it may continue in **2024** as well.
- ❖ UNCTAD has termed this growth as **"stalled speed"**.
 - ✓ **A global recession is defined as when the growth rate hits 2.5 per cent and below.**
 - ✓ According to the latest **projection of UNCTAD**, in **2024** the growth rate will have an insignificant increase to hit **2.5 per cent.**
- ❖ The UNCTAD report has **attributed this recession**, after the contraction in pandemic years, to **unprecedented growing inequalities and uneven growth among various regions.**

FINDINGS ABOUT INDIA

- ❖ **UNCTAD revises India's 2023 economic growth forecast to 6.6%**, up from the **previous estimate of 6%.**
- ❖ Predicts a **slight decline in India's growth to 6.2% for the year 2024.**

- ❖ For India, the growth registered is mostly driven by government spending and supporting external trade situations.
- ❖ But its major concern is the “historic” unemployment rate of 8.5 per cent in June 2023.

ABOUT UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD)

- ❖ Established- 1964
- ❖ UNCTAD is a permanent intergovernmental body aimed to promote development-friendly integration of developing countries into the world economy.
- ❖ HQ- Geneva, Switzerland
- ❖ Member- 195 including India
- ❖ UN General Assembly is the parent Organisation.
- ❖ Some of the other reports published by it are: World Investment Report, Information and Economy Report, Technology and Innovation Report, Commodities and Development Report.

10.2 CAPTURING THE RESILIENCE DIVIDEND REPORT

- ❖ Coalition for Disaster Resilient Infrastructure (CDRI)’s Biennial Report on Global Infrastructure Resilience: Capturing the Resilience Dividend was released recently.
- ❖ It provides a Global Infrastructure Risk Model and Resilience Index (GIRI), the first publicly available and fully probabilistic risk model to estimate risk for infrastructure assets with respect to most major geological and climate-related hazards.

MAJOR FINDINGS

- ❖ Around 30% of the average annual loss is associated with hazards such as earthquakes and tsunamis whereas 70% is associated with climate-related hazards like cyclones, floods, and storms.
- ❖ The risk is not spread equally across sectors with around 80% of the risk concentrated in the power, transport, and telecommunications sectors.
- ❖ The global average annual loss in infrastructure sectors and buildings is now in a range of \$732– \$845 billion taking into account climate change and that around 14% of 2021- 2022 global GDP growth is at risk.
- ❖ Annual investment required to address the infrastructure deficit, achieve the sustainable development goals, achieve net zero, and strengthen resilience by 2050 amounts to \$9.2 trillion of which \$2.84-\$2.90 trillion must be invested in low-and middle-income countries.
- ❖ Around 67% of the global value of infrastructure assets is concentrated in high-income countries Low and Middle-Income Countries carry the highest relative risk to their infrastructure.

ABOUT COALITION FOR DISASTER RESILIENT INFRASTRUCTURE (CDRI)

- ❖ It is a global partnership of national governments, United Nations agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and academic and research institutions.
- ❖ It aims to increase the resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development.
- ❖ India launched CDRI at the UN Climate Action Summit in 2019 in New York.
- ❖ It is the Government of India's second major global initiative after the International Solar Alliance, and it demonstrates India's leadership in climate change and disaster resilience issues.
- ❖ Secretariat- New Delhi
- ❖ Members- 31 countries and 8 organisations(which include-)
 - ✓ 6 International Organisations: Asian Development Bank (ADB), World Bank Group, United Nations Development Programme (UNDP), United Nations Office for Disaster Risk Reduction (UNDRR), European Union, European Investment Bank.
 - ✓ 2 Private Sector Organisations: The Private Sector Alliance for Disaster Resilient Societies and Coalition for Climate Resilient Investment.

10.3 SUSTAINABLE FINANCE: BRIDGING THE GAP IN ASIA AND THE PACIFIC REPORT

- ❖ The Sustainable Finance: Bridging the Gap in Asia and the Pacific report was released recently by United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).
- ❖ The new report by the has put forward 10 principles for action for policymakers, regulators and private finance for mobilising and deploying financing for key UN-mandated Sustainable Development Goals, particularly around climate action.
- ❖ The principles put forward are-
 - ✓ Developing new climate finance partnerships
 - ✓ Developing effective NDC financing strategies
 - ✓ Developing policy coherence and capacities across key government ministries
 - ✓ Taking decisive regulatory action to shift capital in Asia and the Pacific towards the Net Zero transition
 - ✓ Driving investment in the capacities of financial personnel
 - ✓ Driving investment in much-needed sectoral and project-based financial data is undertaken
 - ✓ Committing to Net Zero pledges for 2050 with credible transition pathways and including 2030 goals
 - ✓ Increasing local-currency financing of energy transition projects as well as green technologies and other net-zero investments
 - ✓ Expanding and accelerating concessional financing and risk-sharing by multilateral development banks, bilateral development financial institutions, and public development banks
 - ✓ Increasing investment of time and effort with partners in project preparation.

OTHER FINDINGS

- ❖ Only 17 of the 51 Asia-Pacific countries party to the UN Framework Convention on Climate Change have assessed and reported their financial needs to meet their Nationally Determined Contributions
- ❖ Only seven have broken down financial needs between adaptation and mitigation.
- ❖ Furthermore, average economic losses in the region from disaster-related and other natural hazards are expected to rise to \$1.1 trillion in a moderate climate-change scenario and \$1.4 trillion in a worst-case scenario.
- ❖ India may face higher climate change-related losses, reaching 35% of its GDP by 2100, a notable difference from developing Asia's 24%.
- ❖ There is sufficient capital and liquidity to close the global financing gap in sustainable finance.
 - ✓ However, deploying capital for climate action faces a number of challenges.

ABOUT UNESCAP

- ❖ The Economic and Social Commission for Asia and the Pacific (ESCAP) is the most inclusive intergovernmental platform in the Asia-Pacific region.
- ❖ Established in 1947 as Economic Commission for Asia and the Far East (ECAFE)
- ❖ Headquarters- Bangkok, Thailand
- ❖ The Commission promotes cooperation among its 53 member States and 9 associate members in pursuit of solutions to sustainable development challenges.
- ❖ ESCAP is one of the five regional commissions of the United Nations (other belongs to Africa, Europe, Western, Asia, Latin America and the Caribbean).

10.4 GLOBAL HUNGER INDEX (GHI) 2023

- ❖ The Global Hunger Index 2023 was released recently by Irish NGO Concern Worldwide and German NGO Welt Hunger Hilfe.
- ❖ It is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels.
- ❖ It is based on four indicators that together capture the multidimensional nature of hunger-
 - ✓ **Undernourishment:** The share of the population whose caloric intake is insufficient;

- ✓ **Child Stunting**- The share of **children under the age of five** who have **low height for their age**, reflecting chronic undernutrition;
- ✓ **Child Wasting**- The share of **children under the age of five** who have **low weight for their height**, reflecting acute undernutrition; and
- ✓ **Child Mortality**- The **share of children who die before their fifth birthday**, reflecting in part the fatal mix of inadequate nutrition and unhealthy environments.

INDIA RELATED FINDINGS

- ❖ **India with a score of 28.7** was ranked **111th of 125 countries** in the **Global Hunger Index (GHI) 2023**.
 - ✓ In 2022, India ranked **107th out of 121**.
- ❖ **Child stunting** is prevalent at **35.5%**.
- ❖ **Highest child wasting rate** in the world at **18.7%**.
- ❖ The **prevalence of undernourishment** in India is **16.6%**.
- ❖ The **under-five mortality rate** stands at **3.1%**.

OTHER FINDINGS

- ❖ The GHI ranked **Pakistan, Bangladesh, Nepal, and Sri Lanka** at **102nd, 81st, 69th, and 60th**, respectively.
- ❖ **South Asia and Africa south of the Sahara** recorded the **highest regional hunger levels**, both with a GHI score of **27**.

CRITICISM BY MINISTRY OF WOMEN AND CHILD DEVELOPMENT

- ❖ **3 out of 4 indicators** of GHI are **related to health of children** and **cannot be representative of entire population**.
- ❖ **4th indicator (Undernourishment)** is **based on telephone-based opinion poll** conducted on a very small sample size of **3000**.

10.5 STATE OF GLOBAL WATER RESOURCES 2022

- ❖ **State of Global Water Resources 2022 report** was recently released by **World Meteorological Organization**.

MAJOR FINDINGS

- ❖ The volume of water flowing through the rivers was lower than the normal.
 - ✓ In 2022, **over 50 per cent of the global catchment areas** experienced deviations from normal river discharge conditions.
- ❖ Anomalies in **soil moisture and evapotranspiration** also matched the deviations noted in river discharge conditions.
- ❖ The **effect on the hydrological cycle** are leading to **droughts and extreme rainfall events and the erratic water cycles unleashed widespread disruption, burdening livelihoods and economies**.
- ❖ The **ongoing melting of snow, ice and glaciers** compounded the threat, exacerbating the risk of **extreme weather events such as floods**.
- ❖ These events **cast long-term consequences on the water security of millions**.
- ❖ Nearly **four billion people** are already experiencing severe water scarcity for at least a month every year.
- ❖ The **Asian Water Tower (AWT)**, the world's largest reservoir of ice and snow after the Arctic and Antarctic regions, saw **significant glacial melting in 2022**.
 - ✓ This altered the natural **downward flow of major rivers — the Indus, Amu Darya, Yangtze and Yellow River — in the region**.
- ❖ **Recommendation**-
 - ✓ The report called for **enhanced data sharing to enable meaningful early warnings and more coordinated water management policies** that are integral to climate action.

AWT covers the **Third Pole**, which includes the **Tibetan Plateau, the Himalayas, the Karakorum, the Hindu Kush, the Pamirs and the Tien Shan Mountains**.

ABOUT WORLD METEOROLOGICAL ORGANIZATION (WMO)

- ❖ The **World Meteorological Organisation** is an intergovernmental organisation and specialised agency of the **United Nations**.
- ❖ It was **set up in 1950**, originating from the **International Meteorological Organisation (IMO)**.
- ❖ Its **mandate** spans issues pertaining to **weather, climate, and water resources**.
- ❖ Membership- **187 Members states and 6 member Territories**
- ❖ **Headquarters- Geneva, Switzerland**
- ❖ WMO is dedicated to **international cooperation and coordination on the state and behaviour of the Earth's atmosphere, its interaction with the land and oceans, the weather and climate it produces, and the resulting distribution of water resources**.
- ❖ It handles international cooperation and coordination on the state of the Earth's atmosphere.

10.6 FAO RELEASES "THE IMPACT OF DISASTERS ON AGRICULTURE AND FOOD SECURITY" REPORT

- ❖ **United Nations Food and Agricultural Organization (FAO)** has recently released a report titled **"The impact of disasters on agriculture and food security"**.
- ❖ It shows the **first-ever global estimation of the impact on agricultural production with a focus on crops and livestock** due to disasters and aims to put into context the scale of the cost of such events.

MAJOR FINDINGS

- ❖ **Natural and man-made disasters** have led to **\$3.8 trillion in crop and livestock losses over the last three decades**.
- ❖ The world has also lost over **\$120 billion per year** which amounts to **five per cent of the annual global agricultural GDP**.
- ❖ Disasters have **increased in frequency from 100 per year in the 1970s to a whopping 400 events per year in the past 20 years**.
- ❖ According to FAO
 - ✓ the **average annual grain losses amounted to 69 million tonnes in the last three decades**
 - ✓ Also, the **world lost some 40 million tonnes of fruit and vegetable production and 16 million tonnes of meat, dairy and eggs to disasters**.
- ❖ **Lower and lower middle-income countries** witnessed **"highest relative" losses of up to 15 per cent of their total agricultural GDP** whereas **Small Island Developing States (SIDS)** reportedly lost **seven per cent of their agricultural GDP**.
- ❖ **Women were also hit harder than men due to these disasters** due to resource and structural constraints which women face to access **"information, financial instruments, resources that they need to prepare to respond to or recover from disaster events."**

ABOUT UN FAO

- ❖ **Food and Agriculture Organization** is a specialised agency of the **United Nations** that leads international efforts to defeat hunger.
- ❖ Headquarters- **Rome, Italy**.
- ❖ Membership- **194 countries (including India) and the European Union**.
- ❖ Its **sister bodies** are the **World Food Programme (WFP)** and the **International Fund for Agricultural Development (IFAD)**.

10.7 GLOBAL SURVEY REPORT ON PERSONS WITH DISABILITIES AND DISASTERS 2023

- ❖ **Global Survey Report on Persons with Disabilities and Disasters 2023** was recently released by **UN Office for Disaster Risk Reduction**.

- ❖ The survey captured over 6,000 responses from 132 countries to evaluate progress on government policies that should be offering protection.
- ❖ An initial survey focused on disability was conducted in 2013.

MAJOR FINDINGS

- ❖ Persons with disabilities face a “shocking lack of support” with no progress in the last decade, despite a huge increase in climate disasters worldwide.
- ❖ Specifically, 84% of respondents in 2023 reported not having a personal preparedness plan in case of a disaster, such as knowing evacuation routes, available shelters and stocking up on emergency supplies.
- ❖ Even with sufficient advance warning, 17% PwDs face a lot of difficulties in evacuating.
- ❖ 86% PwDs reported no participation in community level DRR decision-making and planning.

Persons with disabilities make up 16% of the world's population and suffer an overall death rate due to disasters that is two to four times higher than the general population.

10.8 'THE HIGH COST OF CHEAP WATER' REPORT

- ❖ A report, titled **The High Cost of Cheap Water**, was released by World Wide Fund for Nature (WWF) on the occasion of World Food Day (October 16).

MAJOR FINDINGS

- ❖ The mounting global water crisis threatens \$58 trillion in economic value, food security and sustainability.
 - ✓ It is the first ever annual estimate of economic value of water and freshwater ecosystems.
 - ✓ It is equivalent to 60 per cent of global gross domestic product.
- ❖ The world has lost a third of its remaining wetlands since 1970, while freshwater wildlife populations have, on average, dropped by 83 per cent.
- ❖ Unsustainable agricultural practices were among the primary threats to rivers and floodplains.
 - ✓ Other threats include- climate change, water pollution and flow modification & fragmentation by dams etc.

RECOMMENDATIONS

- ❖ Countries must support nature-positive food production and maintain free-flowing rivers for agricultural productivity.
- ❖ The world must also apply sustainable land use practices to facilitate natural water retention.
- ❖ We must adopt diets that reduce demand for products that strain freshwater.

ABOUT WORLD WIDE FUND FOR NATURE (WWF)

- ❖ The WWF is an international non-governmental organization dedicated for the conservation and preservation of nature and natural species.
- ❖ It is the largest conservation organization in the world.
- ❖ It was founded on 29th April 1961 in Switzerland as the World Wildlife Fund.
- ❖ Presently, it is active in more than 100 countries around the world.
- ❖ HQ- Gland, Switzerland
- ❖ It works around six major areas- food, climate, freshwater, wildlife, forests, and oceans.

10.9 GLOBAL TAX EVASION REPORT 2024

- ❖ The European Union Tax Observatory released 'Global Tax Evasion Report 2024'

FINDINGS

- ❖ Tax evasion is enabling billionaires to enjoy effective tax rates equivalent to 0% to 0.5% of their wealth.
- ❖ The report highlighted the success of one measure — the automatic exchange of bank information — in reducing offshore tax evasion by a factor of three over the past 10 years.

- ❖ **\$1 trillion profit shifted (in 2022) to tax havens**, with negligible effects of policies like **Base Erosion and profit Shifting (BEPS, 2015)**.
- ❖ The **global minimum tax of 15% on MNCs**, adopted in **2012 by 140 countries and territories** — has been a **disappointment**.
- ❖ **Challenges-** The report identifies **two primary reasons** for offshore tax evasion-
- ❖ **Non-compliance by Offshore Financial Institutions** for the **automatic exchange of bank information**, often due to concerns **about losing their customer base**.
- ❖ **Shift to Uncovered Asset Classes** like real estate

There are an estimated **2,500 billionaires** with a combined wealth of **\$13 trillion**.

RECOMMENDATIONS

- ❖ It has called for a **global minimum tax on billionaires equal to 2% of their wealth**.
 - ✓ This would both address evasion and “generate nearly **\$250 billion** from less than **3,000 individuals**”.
 - ✓ The tax rate of 2% “would still be very modest” given that the wealth of billionaires has grown at **7% a year annually on average since 1995**.

ABOUT EU TAX OBSERVATORY

- ❖ The EU Tax Observatory is an **independent research laboratory**
- ❖ It is **hosted at the Paris School of Economics**.
- ❖ It conducts **innovative research on taxation**, contributes to a **democratic and inclusive debate on the future of taxation**, and fosters a **dialogue between the scientific community, civil society, and policymakers in the European Union and worldwide**.

10.10 WORLD ENERGY OUTLOOK 2023

- ❖ It is a **flagship publication** of the **International Energy Agency** and is the **energy world’s most authoritative source of analysis and projections**.
- ❖ It has been published each year **since 1998**.

MAJOR FINDINGS

- ❖ Following **Russia’s invasion of Ukraine**, **instability in the Middle East** could lead to **further disruption to energy markets and prices**.
- ❖ **Renewables are set to contribute 80% of new power capacity by 2030**.
- ❖ **Fossil fuel share in the global energy supply to reduce from 80% to 73% by 2030**.

INDIA RELATED FINDINGS

- ❖ India will see the **largest energy demand growth of any country or region in the world over the next three decades**.
- ❖ In the same period, **India’s annual carbon dioxide emissions will be the largest** as they will climb to **nearly 30% by 2050**.
- ❖ Over the past five years, **solar PV has accounted for nearly 60% of new generation capacity**.
- ❖ **India’s total electricity demand from residential air conditioners in 2050 is most likely to exceed the total amount of electricity consumed across Africa now**.
- ❖ India is **expected to meet its 2030 target to have half of its electricity capacity consisting of non-fossil resources** well before the end of the decade.

ABOUT INTERNATIONAL ENERGY AGENCY (IEA)

- ❖ It is an **autonomous agency within the framework of the Organisation for Economic Co-operation and Development (OECD)**
- ❖ It was **founded in 1974** to ensure the security of oil supplies, in **response to the 1973-1974 oil crises**.
- ❖ **HQ- Paris, France**
- ❖ **Members- 31 member countries and 11 association countries**.

- ✓ India joined the organization in 2017 as an Associate member.
- ❖ A candidate country to the IEA must be a member country of the Organisation for Economic Co-operation and Development (OECD).
- ❖ Criteria for membership
 - ✓ Crude oil and/or product reserves are equivalent to 90 days of the previous year's net imports, to which the government has immediate access (even if it does not own them directly) and could be used to address disruptions to global oil supply.
 - ✓ A demand restraint programme to reduce national oil consumption by up to 10%.
 - ✓ Legislation and organisation to operate the Co-ordinated Emergency Response Measures (CERM) on a national basis.
 - ✓ Legislation and measures to ensure that all oil companies under its jurisdiction report information upon request.
 - ✓ Measures are in place to ensure the capability of contributing its share of an IEA collective action.

10.11 INTERNATIONAL MIGRATION OUTLOOK 2023

- ❖ 'International Migration Outlook 2023' was recently released by the Organisation for Economic Co-operation and Development (OECD).

MAJOR FINDINGS

- ❖ India saw the highest migration flows to Organisation for Economic Co-operation and Development (OECD) countries in 2021 and 2022.
- ❖ Meanwhile in terms of nationalities, 0.13 million Indian citizens acquired the nationality of an OECD country in 2021.
- ❖ Inflows of refugees from Ukraine reached the highest level on record, OECD-wide, due to the ongoing Russia-Ukraine war; more than 10 million people have become either internally displaced or refugees in the OECD region.
- ❖ In terms of workers, migration flows from India (+172 per cent), Uzbekistan (+122 per cent) and Turkey (+240 per cent) rose sharply, making them primary countries of origin after Ukraine.

ABOUT OECD

- ❖ It is an international organization of 38 countries committed to democracy and the market economy.
- ❖ Most OECD members are high-income economies with a very high Human Development Index (HDI) and are regarded as developed countries.
- ❖ Founded in 1961.
- ❖ HQ- Château de la Muette in Paris, France.
- ❖ It publishes economic reports, statistical databases, analyses, and forecasts on the outlook for economic growth worldwide.
- ❖ The organization also seeks to eliminate bribery and other financial crime worldwide.
- ❖ Other reports and indices by OECD
 - ✓ Government at a Glance 2017 report.
 - ✓ OECD Better Life Index.

10.12 INTERCONNECTED DISASTER RISKS REPORT 2023

- ❖ A new report 'Interconnected Disaster Risks Report 2023' was recently published by United Nations University — Institute for Environment and Human Security (UNU-EHS).
 - ✓ Environmental tipping points are critical thresholds in the Earth's systems beyond which abrupt and often irreversible changes occur, leading to profound and sometimes catastrophic shifts in ecosystems, climate patterns and the overall environment.

- ❖ The report looks at **six environmental tipping points** —
 - ✓ **accelerating extinctions,**
 - ✓ **groundwater depletion,**
 - ✓ **mountain glacier melting,**
 - ✓ **space debris,**
 - ✓ **unbearable heat and**
 - ✓ **an uninsurable future.**
- ❖ It has also found that **27 of the world's 31 major aquifers are depleting faster than they can be replenished.**
- ❖ India is **close to reaching its groundwater depletion tipping point.**
- ❖ India is the **world's largest user of groundwater**, exceeding the use of the **United States and China combined.**
- ❖ The **north-western region of India** serves as the **breadbasket for the nation's growing 1.4 billion people**, with the states of **Punjab and Haryana producing 50% of the country's rice supply and 85% of its wheat stocks.**
 - ✓ However, **78% of wells in Punjab are considered overexploited**, and the **north-western region as a whole is predicted to experience critically low groundwater availability by 2025.**
- ❖ The report **offers a new framework** that categorizes **risk mitigation solutions into four types** based on their approach-
 - ✓ **Avoid** (preventing risk),
 - ✓ **Adapt** (dealing with risk),
 - ✓ **Delay** (slowing risk progression), and
 - ✓ **Transform** (system overhaul).

ABOUT UNU-EHS

- ❖ The **United Nations University (UNU)** is the **academic arm of the United Nations** and acts as a **global think tank.**
- ❖ The **mission of the Institute for Environment and Human Security (UNU-EHS)** is to **carry out cutting edge research on risks and adaptation** related to **environmental hazards and global change.**
- ❖ The institute is **based in Bonn, Germany.**

11. INTERNATIONAL, SUMMITS

11.1 UN CONVENTION AGAINST TRANSNATIONAL ORGANISED CRIME

- ❖ A two-day **UN Convention against Transnational Organised Crime Ministerial Conference** was held at **Palermo in Italy.**
- ❖ This Ministerial Conference **marks the 20th anniversary of coming into force of UNTOC Convention.**

ABOUT UNTOC

- ❖ UNTOC was **adopted by UN General Assembly in Palermo in Italy in 2000.**
- ❖ Therefore it is **also known as the Palermo Convention**
- ❖ It **entered into force in 2003.**
- ❖ It is the **first comprehensive and global legally binding instrument to fight transnational organized crime.**
- ❖ Members: **Signatories-147 and Parties-191.**
 - ✓ **India ratified it in 2011.**
- ❖ The **United Nations Office on Drugs and Crime (UNODC)** is the **custodian of the UNTOC.**
- ❖ The UNTOC is **supplemented by three Protocols-**
 - ✓ **Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children**

Central Bureau of Investigation is the national Nodal Authority to receive and respond for transnational crimes.

- Adopted in 2003, it is the **first global legally binding instrument with an agreed definition of trafficking in persons.**
- India has also ratified it.
- ✓ **Protocol against the Smuggling of Migrants by Land, Sea and Air**
 - **Adopted in 2004**, this protocol deals with the problem of organized criminal groups who smuggle migrants, often at high risk to the migrants and at great profit for the offenders.
- ✓ **Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition**
 - **Adopted in 2001**, its objective is to promote, facilitate and strengthen cooperation among States in order to prevent, combat and eradicate the illicit manufacturing of and trafficking in firearms, their parts and components and ammunition.
 - **Countries must become parties to the Convention itself before they can become parties to any of the Protocols.**

11.2 ASIAN DEVELOPMENT BANK

- ❖ The **Asian Development Bank (ADB)** has approved **capital management reforms** that will **unlock about \$100 billion in new funding capacity** over the next decade to address **major Asian crises including climate change.**

ABOUT ASIAN DEVELOPMENT BANK

- ❖ It is a **multilateral development bank** established on **19th December 1966.**
- ❖ HQ- **Manila, Philippines.**
- ❖ It is owned **68 shareholding members** including **49 from the Asia and Pacific region.**
 - ✓ **India is a founding member** of the Asian Development Bank.
- ❖ **Aim-** To provide prosperity, inclusivity, resilience, and sustainability to Asia and Pacific along with eradication of poverty.
- ❖ It also **aims to promote social and economic development in Asia and the Pacific.**
- ❖ Further, it **assists members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.**
- ❖ It also **provides financing to certain private sector projects as well as public-private partnerships.**
- ❖ As of 2022, **ADB's five largest shareholders** are **Japan and the United States** (each with 15.6% of total shares), the **People's Republic of China (6.4%), India (6.3%), and Australia (5.8%).**
- ❖ ADB is **run by a board of governors**, which represents the member countries of the ADB.
- ❖ It is **modelled closely on the World Bank** and has a similar weighted voting system where votes are **distributed in proportion to members' capital subscriptions.**
- ❖ It lists **75 aphorisms selected from ancient texts.**

11.3 INTERNATIONAL CRIMINAL COURT

- ❖ **Armenia's parliament** has approved a **key step towards joining the International Criminal Court (ICC)**, a move that is **set to escalate tensions with the ex-Soviet country's traditional ally, Russia.**

ABOUT INTERNATIONAL CRIMINAL COURT (ICC)

- ❖ Governed by an **international treaty called 'The Rome Statute'**, the ICC is the **only permanent international criminal tribunal.**
- ❖ It was **created by the 1998 Rome Statute of the International Criminal Court** (its founding and governing document), and began functioning on **1 July 2002 when the Statute came into force.**
- ❖ **Mandate-** It **investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community.**

- ❖ The Rome Statute, grants the ICC jurisdiction over four main crimes:
 - ✓ The crime of Genocide
 - ✓ Crimes against Humanity
 - ✓ War crimes
 - ✓ Crime of Aggression
- ❖ HQ- The Hague, Netherlands.
- ❖ Members: 123 nations are States Parties to the Rome Statute and recognize the ICC's authority.
 - ✓ India is not a party to Rome Statute along with US and China.
- ❖ Official languages (6): English, French, Arabic, Chinese, Russian and Spanish.
- ❖ The Court is funded by contributions from the States Parties and by voluntary contributions from Governments, international organizations, individuals, corporations, and other entities.
- ❖ The court has 18 judges, each from a different member country, elected to nonrenewable nine-year terms.
- ❖ The ICC only has jurisdiction over offences committed after the Statute's entry into force on 1 July 2002.

11.4 CAPE TOWN TREATY

- ❖ The Ministry of Corporate Affairs has issued a notification to quash a key provision of the Insolvency and Bankruptcy Code (IBC) with respect to aircraft, aircraft engines, airframes and helicopters, which will make it easier for lessors to recover their planes in case an airline goes bankrupt.
- ❖ The notification states: "The provisions of sub-section (1) of section 14 of the Insolvency and Bankruptcy Code, 2016 (31 of 2016), would not be applicable to transactions, arrangements or agreements, under the Convention and the Protocol, relating to aircraft, aircraft engines, airframes and helicopters."
- ❖ The Cape Town Convention on International Interests in Mobile Equipment, or Cape Town Treaty, which was signed in 2001 and became effective in 2006, lessens the risks of lending for aircraft lessors and financiers, and for parties involved in aircraft purchasing and leasing.
- ❖ The Cape Town Treaty was formulated to make it easier for lessors to take back aircraft if airlines defaulted on payments.
 - ✓ It was adopted by India in 2008.

11.5 NAGORNO-KARABAKH AND OSCE

- ❖ India has said that it believes that any lasting resolution of the Nagorno-Karabakh conflict can only be achieved peacefully through diplomatic negotiations.
- ❖ India thus supports Organization for Security and Cooperation in Europe Minsk Group's continued efforts for a peaceful resolution of the conflict between Armenia and Azerbaijan.

ABOUT OSCE MINSK GROUP

- ❖ The Minsk Group, the activities of which have become known as the Minsk Process, spearheads the OSCE's efforts to find a peaceful solution to the Nagorno-Karabakh conflict.
- ❖ It is co-chaired by France, the Russian Federation, and the United States.
- ❖ The Group's permanent members are Belarus, Germany, Italy, Sweden, Finland, and Turkey, as well as Armenia and Azerbaijan.
- ❖ On a rotating basis, also the OSCE Troika is a permanent member.

ABOUT ORGANIZATION FOR SECURITY AND COOPERATION IN EUROPE

- ❖ The OSCE's origins date back to the early 1970s, to the Helsinki Final Act (1975) and the creation of the Conference on Security and Co-operation in Europe (CSCE)
- ❖ In 1994, the CSCE was renamed the Organization for Security and Cooperation in Europe to reflect more accurately changes witnessed.
- ❖ The OSCE has a comprehensive approach to security that encompasses politico-military, economic and environmental, and human aspects.

- ❖ It therefore addresses a wide range of security-related concerns, including arms control, confidence- and security-building measures, human rights, national minorities, democratization, policing strategies, counter-terrorism and economic and environmental activities.
- ❖ With 57 participating States in North America, Europe and Asia, the Organization for Security and Co-operation in Europe – is the world's largest regional security organization.
 - ✓ India is not a member.
- ❖ All 57 participating States enjoy equal status, and decisions are taken by consensus on a politically, but not legally binding basis.

ABOUT NAGORNO-KARABAKH

- ❖ Nagorno-Karabakh is a mountainous region officially recognised as part of Azerbaijan.
- ❖ But its 1.2 lakh population is predominantly ethnic Armenian, having close cultural, social, and historical ties with Armenia.
- ❖ Basically, Nagorno-Karabakh is an ethnic Armenian enclave in Azerbaijan.
- ❖ The Armenians are Christians, while Azeris are Muslims.
- ❖ The conclave is connected to Armenia through the 5-km Lachin Corridor.

11.6 ASIA-PACIFIC INSTITUTE FOR BROADCASTING DEVELOPMENT

- ❖ India has been elected president of the Asia-Pacific Institute for Broadcasting Development (AIBD) General Conference (GC) for the third successive term.
- ❖ It is a first in the history of AIBD.
- ❖ The move shows the confidence broadcasting organisations across the Asia Pacific and the world reposed in India.

ABOUT ASIA-PACIFIC INSTITUTE FOR BROADCASTING DEVELOPMENT (AIBD)

- ❖ Established in 1977 under the auspices of UNESCO, the AIBD currently has 92 member organisations from across 44 countries, including 26 government members (countries) represented by 48 broadcasting authorities and broadcasters, and 44 affiliates (organisations) represented by 28 countries and regions in Asia, Pacific, Europe, Africa, Arab States and North America.
- ❖ India is one of the founding members of AIBD, and Prasar Bharati, India's public service broadcaster, is the representative body of the Ministry of Information & Broadcasting, Government of India, at AIBD.
- ❖ The International Telecommunication Union (ITU), the United Nations Development Programme (UNDP), and the United Nations Educational, Scientific Cultural Organisation (UNESCO) and The Asia-Pacific Broadcasting Union (ABU) are founding organizations of the Institute and they are non-voting members of the General Conference.
- ❖ Its secretariat is situated in Kuala Lumpur and is hosted by the Government of Malaysia.

11.7 ISRAEL PALESTINE CONFLICT

- ❖ The Hamas militant group launched its worst attack inside the Jewish state's territory since 1948, killing at least 250 Israelis and abducting several others.
- ❖ The unprecedented attack was launched under 'Operation Al-Aqsa Storm' on Israel on 50th year of Yom Kippur war.

ABOUT CONFLICT

- ❖ The roots of the conflict between Arab Palestinians and Jews lie in the 1st World War and disintegration of the Ottoman Empire.
- ❖ During that time, Jewish immigration to Palestine increased, leading to tensions between Jewish settlers and the Arab population.
- ❖ In 1917, during World War I, the British government issued the Balfour Declaration, expressing support for the establishment of a "national home for the Jewish people" in Palestine.
- ❖ In 1947 the UN voted to split Palestine between Arabs and Jews.

- ❖ Jewish residents accepted the agreement and declared independence of Israel in 1948 while Arabs rejected the agreement leading to the 4 wars over the period of time.

ABOUT YOM KIPPUR WAR

- ❖ Yom Kippur or Ramadan War was fought in 1973.
- ❖ It was the 4th Arab-Israel war fought between Israel on one side and Arabs led by Egypt and Syria on the other.
- ❖ Outcome-Camp David Accords in 1978 in which-
 - ✓ Israel returned the Sinai Peninsula to Egypt.
 - ✓ Also the 1979 Egyptian–Israeli peace treaty was the first instance of an Arab country recognising Israel as a state.

ABOUT HAMAS

- ❖ Hamas are Militant organization that politically controls Gaza Strip and does not recognised Israel's statehood.
- ❖ It violently opposes the Oslo peace accords (1993) under which Palestine Liberation Organization (PLO) formally recognised state of Israel.

11.8 INTERNATIONAL COUNCIL ON ARCHIVES

- ❖ At the International Council of Archives Congress 2023 in Abu Dhabi, representatives from India and the United Arab Emirates came together to strengthen their collaboration in preserving their shared archival heritage.
- ❖ This year's edition of the Congress is held under the theme "Enriching Knowledge Societies"
- ❖ It brings together experts and specialists in the field of archives, as well as thought leaders from around the world, to explore the transformative capabilities of providing information and access to it in modern societies.

ABOUT INTERNATIONAL COUNCIL ON ARCHIVES (ICA)

- ❖ ICA is the professional organization for the world archival community, dedicated to promoting the preservation, development, and use of the world's archival heritage.
- ❖ Secretariat – Paris, France
- ❖ It was established in 1948, under the auspices of UNESCO.
- ❖ It is a neutral, non-governmental organization, funded by the membership, which means that it maintains independence from the political process and its members include public and private archives institutions and individuals.
- ❖ It works closely with intergovernmental organizations such as UNESCO and the Council of Europe.

11.9 UNHRC

- ❖ The UN General Assembly rejected a bid by Russia to regain a seat on the Human Rights Council, from which it was ousted after invading Ukraine.
- ❖ Also, 15 new countries including Brazil, China, France, Albania, , Japan, were elected to serve.
 - ✓ The vote takes place by secret ballot.

ABOUT UNHRC

- ❖ UNHRC is an inter-governmental body within the United Nations responsible for promoting and protecting human rights worldwide.
- ❖ Established in 2006.
- ❖ It superseded the former United Nations Commission on Human Rights.
- ❖ The Office of the High Commissioner for Human Rights (OHCHR) serves as the Secretariat and is based in Geneva, Switzerland.

- ❖ The **Human Rights Council's 47 members** are allocated by region based on equitable geographical distribution.
 - ✓ Seats are distributed among 5 regions.
 - **African States:** 13 seats
 - **Asia-Pacific States:** 13 seats
 - **Latin American and Caribbean States:** 8 seats
 - **Western European and other States:** 7 seats
 - **Eastern European States:** 6 seats
- ❖ Members serve for **three-year terms** and are **not eligible for immediate re-election after two consecutive terms**.

11.10 INTER PARLIAMENTARY UNION

- ❖ The **Ninth P20 Summit** was recently hosted by the **Parliament of India in cooperation with IPU** in New Delhi.
 - ✓ P20 Summit is an annual gathering of **G20 Parliament Speakers discussing global issues**.
- ❖ Also the **first ever G20 Parliamentary Speakers' Summit (P20 Summit)** was hosted by the **world's largest democracy** concluded at **India International Convention Centre, Yashobhoomi, Dwarka, Delhi** recently.

ABOUT IPU

- ❖ The IPU is the **global organization of national parliaments**.
- ❖ It has **179 Members**(including **India**) and **14 Associate Members**.
- ❖ The IPU **facilitates parliamentary diplomacy and empowers parliaments and parliamentarians to promote peace, democracy and sustainable development around the world**.
- ❖ Slogan- **For democracy. For everyone.**
- ❖ It promotes **democratic governance, institutions and values, working with parliaments and parliamentarians to articulate and respond to the needs and aspirations of the people**.
- ❖ It works for **peace, democracy, human rights, gender equality, youth empowerment, climate action and sustainable development through political dialogue, cooperation and parliamentary action**.
- ❖ Financed **primarily by Members out of public funds**.
- ❖ Headquarters - **Geneva, Switzerland** with offices in **New York, USA** and **Vienna, Austria**.

11.11 IORA- INDIAN OCEAN RIM ASSOCIATION

- ❖ **Indian Ocean Rim Association's (IORA) Council of Ministers (COM)** was held in **Colombo** recently.
- ❖ It was attended by **foreign ministers and senior officials** of the **23-nation grouping of countries**.
- ❖ Banner theme- **'Strengthening Regional Architecture: Reinforcing Indian Ocean Identity'**
- ❖ **Sri Lanka** took charge as **Chair** this year from **Bangladesh**, and **India** is **Vice-Chair**, meaning that the **troika of IORA is within the South Asian region**.
- ❖ **'Colombo Communique** and **'IORA Vision 2030 and Beyond'** was adopted.

ABOUT IORA

- ❖ While the **IORA was formed in 1997** (then called the **Indian Ocean Region-Association for Regional Cooperation**) in **Mauritius**, its **genesis came from a speech Nelson Mandela gave in Delhi in 1995**.
- ❖ The Indian Ocean Rim Association **includes 23 countries** from **Africa, West Asia, South Asia, South East Asia, Australia** and **littoral states** situated in and around the Indian Ocean.
- ❖ The grouping, whose **apex body is the Council of Foreign Ministers** that meet once a year, moves by **rotation through members every two years**.
- ❖ IORA's membership **includes 23 countries:** **Australia, Bangladesh, the Comoros, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, the Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, the UAE and Yemen**.
- ❖ It also has **11 dialogue partners**.

- ❖ IORA's seven priority areas are maritime safety and security; trade and investment facilitation; fisheries management; disaster risk management; academic, science and technology; tourism and cultural exchanges; and gender empowerment.
- ❖ **Importance-** A third of the world's population (2.6 billion people) live in the region, and 80% of global oil trade, 50% of the world's containerised cargo and 33% of its bulk cargo passes through it.
 - ✓ The region produces a combined total of \$1 trillion in goods and services and intra-IOA trade is billed at around \$800 billion.

11.12 INDIA- UK 2+2 DIALOGUE

- ❖ India and the UK discussed the possibilities for collaboration in trade, investment, defence, critical technologies and civil aviation during their maiden 2+2 foreign affairs and defence dialogue in New Delhi.
- ❖ The two sides discussed Indo-Pacific and trade at '2+2' Foreign and Defence Dialogue.
- ❖ They also discussed ideas regarding counterterrorism, HADR (Humanitarian Assistance and Disaster Relief) and maritime security.
- ❖ India has a 2+2 dialogue, either at the level of senior officials or ministers, with close strategic partners such as the US, Japan, Australia and Russia.

11.13 WORLD HEALTH SUMMIT

- ❖ The World Health Summit 2023 was recently held in Berlin, Germany.
- ❖ It is a leading global health conference and network, which brings together stakeholders from politics, science, the private sector, and civil society from around the world to set the agenda for a healthier future.
- ❖ Theme- "A Defining Year for Global Health Action".

11.14 MONTREUX CONVENTION

- ❖ Turkish Defence ministry has stated that Ankara intends to continue to faithfully comply with the Montreux Convention on the Non-Admission of warships of Non-Black Sea countries to the Black Sea through the Bosphorus and the Dardanelles.

ABOUT MONTREUX CONVENTION

- ❖ The Montreux Convention Regarding the Regime of the Straits or simply known as the Montreux Convention is an international agreement that governs the use of the Bosphorus and Dardanelles straits in Turkey.
- ❖ The international agreement was signed by Australia, Bulgaria, France, Greece, Japan, Romania, Yugoslavia, the United Kingdom, the Soviet Union and Turkey and has been in effect since November 1936.
- ❖ According to it, Turkey has control over the Turkish Straits.
- ❖ In the event of a war, the pact gives Turkey the right to regulate the transit of naval warships and to block the straits to warships belonging to the countries involved in the conflict.
- ❖ Merchant vessels enjoy freedom of passage through the Turkish Straits, while passages of vessels of war are subject to some restrictions that vary depending on whether these vessels belong to the Black Sea littoral States or not.
- ❖ The Bosphorus and Dardanelles straits, also known as the Turkish Straits or the Black Sea Straits, connect the Aegean Sea and the Black Sea via the Sea of Marmara.
- ❖ It is the only passage through which the Black Sea ports can access the Mediterranean and beyond.

11.15 VIENNA CONVENTION

- ❖ **Canada's inability to provide safety and security to Indian diplomats challenges the "most fundamental aspect" of the Vienna Convention on Diplomatic Relations**, as per External Affairs Minister.
- ❖ Canada recently **withdrew 41 of its diplomats from India and "paused" walk-in services at its consulates in Mumbai, Bengaluru and Chandigarh**, affecting Canadian visa facilities for Indians.
- ❖ Earlier **Indian missions in Canada had stopped issuing visas in September amid diplomatic row**.

ABOUT VIENNA CONVENTION

- ❖ The Vienna Convention on Diplomatic Relations (1961) is a **United Nations treaty that set some common principles and terms on how countries must treat each other's diplomatic representatives, in order to ensure friendly relations and maintain proper communication channels between countries**.
- ❖ **193 countries have ratified the convention**, meaning they agree it should be legally binding on them.
 - ✓ **India ratified it through the Diplomatic Relations (Vienna Convention) Act of 1972.**
- ❖ **Article 9 of the convention states that the receiving State may, at any time and without having to explain its decision, notify the sending State that the head of the mission or any member of the diplomatic staff of the mission is persona non grata or unwelcome.**
- ❖ It also covers **diplomatic immunity**.
 - ✓ It's the **privilege of exemption from certain laws and taxes granted to diplomats by the country in which they are posted.**
 - ✓ It was framed so that **diplomats can function without fear, threat or intimidation from the host country.**
- ❖ **Host nations hold the responsibility to protect diplomats from attacks on their freedom and dignity.**

11.16 INTERNATIONAL ATOMIC ENERGY AGENCY

- ❖ **International Atomic Energy Agency (IAEA) director general Rafael Mariano Grossi commended India's responsible nuclear power record and its global leadership in civil nuclear applications during a meeting with PM.**
- ❖ The Prime Minister emphasized **India's commitment to safe and secure atomic energy and its ambitious goals to increase environmentally-friendly nuclear power capacity.**
- ❖ Both sides agreed to **explore cooperation between India and IAEA for extending civil nuclear technology applications.**

ABOUT INTERNATIONAL ATOMIC ENERGY AGENCY

- ❖ IAEA is the **world's central intergovernmental forum for scientific and technical cooperation in the nuclear field.**
- ❖ The **IAEA was created in 1957** in response to the **deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.**
- ❖ India is a founding member of IAEA.
- ❖ It is widely known as the world's **"Atoms for Peace and Development" organization and reports annually to the United Nation General Assembly.**
- ❖ IAEA is the **international centre for cooperation in the nuclear field.**
- ❖ HQ - **Vienna, Austria.**
- ❖ IAEA **works with its Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear technologies.**
- ❖ It was **awarded the Nobel Peace Prize in 2005 for their work for a safe and peaceful world.**

India and the IAEA signed an **Agreement for Application of Safeguards to Civilian Nuclear facilities in India in 2009.**

11.17 ASIAN DEVELOPMENT BANK

- ❖ The **Asian Development Bank (ADB) has approved a \$400 million policy-based loan to India, aimed at backing urban reforms by way of boosting infrastructure quality, providing assured public services and efficient governance systems.**

- ❖ The loan will be under ADB's Sustainable Urban Development and Service Delivery Program's Subprogram 2, which supports investment and reforms at the state and urban local body (ULB) levels.

ABOUT ASIAN DEVELOPMENT BANK

- ❖ ADB was established in 1966 after a resolution was passed at first Ministerial Conference on Asian Economic Cooperation held by UN Economic Commission for Asia and Far East in 1963.
- ❖ It has 68 members- 49 are from within Asia and Pacific.
- ❖ India is a member.
- ❖ It is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific while sustaining its efforts to eradicate extreme poverty.
- ❖ Headquarters- Manilla, Philippines
- ❖ Further, it assists members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.
- ❖ It aims to promote social and economic development in Asia and the Pacific.
- ❖ ADB's highest policy-making body is Board of Governors.
- ❖ ADB's five largest shareholders are Japan and the United States (each with 15.6% of total shares), the People's Republic of China (6.4%), India (6.3%), and Australia (5.8%).

11.18 SUMMIT OF THE THREE BASINS

- ❖ The Summit of the Three Basins will congregate in Brazzaville, Republic of Congo to strengthen South-South governance for three ecosystems — Amazon, Congo, Borneo-Mekong and Southeast Asia.
 - ✓ These 3 global ecosystems account for 80% of the world's tropical forests and 2/3 of the earth's biodiversity.
- ❖ These basins are seeing extensive forest loss and are moving towards a systemic ecosystem breakdown that affects global climate stability, biodiversity and the livelihoods of millions of indigenous peoples and local communities.
- ❖ The first Summit of the Three Tropical Forest Basins was held in Brazzaville in 2011 and resulted in the Declaration of the Summit of the Three Tropical Forest Basins, which recognised the need to establish a platform to promote cooperation among the countries of the three basins.

11.19 ROBERT FICO TO BE SLOVAKIA'S NEW PM

- ❖ Slovakia's newly appointed Prime Minister, Robert Fico, has assumed office for the fourth time.
- ❖ Fico's Smer party won last month's elections, forming a coalition government with Hlas and the ultra-nationalist Slovak National Party (SNS).

11.20 INTERNATIONAL COMPETITION NETWORK

- ❖ Competition Commission of India (CCI) has become a member of the steering group of the International Competition Network (ICN) at the ICN Annual Conference 2023 at Barcelona, Spain.
- ❖ The ICN comprises 140 competition agencies from 130 countries.
- ❖ ICN is guided by its apex body – a Steering Group of 18 members
- ❖ This is the first time that the CCI has become a member of the ICN's steering group and the membership is for two years.
- ❖ The ICN provides competition authorities with a specialised yet informal venue for maintaining regular contacts and addressing practical competition concerns.
- ❖ The ICN's mission is to advocate the adoption of superior standards and procedures in competition policy around the world.

11.21 INTERNATIONAL LABOUR ORGANISATION

- ❖ According to a new brief from the International Labour Organisation (ILO), a study covering 82 countries has found that **one US dollar invested in closing this childcare policy gap could result in an average increase of US\$3.76 in global Gross Domestic Product (GDP) by 2035.**
- ❖ Such **investments** could also lead to **reductions in gender and other inequalities, generation of decent jobs, improvements in health and wellbeing, and help create a path to social justice.**
 - ✓ The **childcare policy gap** refers to the **period between the end of statutory childcare-related leave and the starting age for free, universal early childhood care and education or primary education.**
 - ✓ Currently, **this averages approximately 4.2 years globally.**

ABOUT ILO

- ❖ International Labour Organization (ILO) is the **only tripartite U.N. agency.**
 - ✓ It **brings together governments, employers and workers.**
- ❖ ILO was **established in 1919** by the **Treaty of Versailles** as an **affiliated agency of the League of Nations.**
- ❖ ILO became the **first affiliated specialized agency of the United Nations in 1946.**
- ❖ HQ- **Geneva, Switzerland**
- ❖ **ILO has 187 member states.**
 - ✓ India is a **founder member** of the International Labour Organization (**since 1919**).
- ❖ The ILO has four strategic objectives-
 - ✓ **Promote and realize standards and fundamental principles and rights at work**
 - ✓ **Create greater opportunities for women and men to decent employment and income**
 - ✓ **Enhance the coverage and effectiveness of social protection for all, and**
 - ✓ **Strengthen tripartism and social dialogue**
- ❖ ILO received the **Nobel Peace Prize in 1969.**

12. DAYS TO REMEMBER

12.1 WORLD NATURE DAY 2023- OCTOBER 3RD

- ❖ **World Nature Day**, established by the **World Nature Organization (WNO)** on **October 3, 2010**, serves as a **crucial platform to raise awareness about the challenges our environment faces, particularly due to climate change.**
- ❖ The **theme chosen for World Nature Conservation Day 2023** is **'Forests and Livelihoods: Sustaining People and Planet'**.

12.2 WORLD TEACHERS' DAY 2023- OCTOBER 5TH

- ❖ **World Teachers' Day** is held **annually on 5 October** to **celebrate all teachers around the globe.**
- ❖ It **commemorates the anniversary of the adoption of the 1966 ILO/UNESCO Recommendation concerning the Status of Teachers.**
 - ✓ It **sets benchmarks regarding the rights and responsibilities of teachers, and standards for their initial preparation and further education, recruitment, employment, and teaching and learning conditions.**
- ❖ **World Teachers' Day** is **co-convened in partnership with the International Labour Organization (ILO), UNICEF and Education International (EI).**
- ❖ With the **theme "The teachers we need for the education we want: The global imperative to reverse the teacher shortage"**, the **2023 celebrations will aim to put the importance of stopping the decline in the number of teachers.**

12.3 WORLD ANIMAL DAY- OCTOBER 4TH

- ❖ **World Animal Day** is observed annually on **October 4th**.
- ❖ It serves as a **global commemoration** focused on the **promotion of animal welfare** and the **protection of their rights**.
- ❖ The **theme for World Animal Day 2023** is "**Big or small, we love them all**,".

12.4 WORLD COTTON DAY

- ❖ Every year, **World Cotton Day** is celebrated on **October 7th**.
- ❖ The day's celebrations **promote fair trade** and help **developing nations engage in all aspects of the cotton industry to improve their economies**.
- ❖ The **first World Cotton Day** was suggested by the **World Trade Organization (WTO)** on **October 7, 2019**, with support from **Benin, Burkina Faso, Chad, and Mali**, known as the **Cotton Four or C4 countries**.
- ❖ The **theme for World Cotton Day 2023** is '**Making cotton fair and sustainable for all, from farm to fashion**'.

12.5 WORLD POST DAY 2023- OCTOBER 9TH

- ❖ **World Post Day** is celebrated each year on **9th October**.
- ❖ The event was declared by the **1969 Universal Postal Congress in Tokyo** as a means to mark the anniversary of the **Universal Postal Union's (UPU) creation in 1874**.
- ❖ **Theme for World Post Day 2023** is "**Together for Trust: Collaborating for a safe and connected future**."
 - ✓ It **urges governments and their postal services to support the development of a digital single postal territory that complements the extensive physical network developed over centuries**.

12.6 INTERNATIONAL DAY OF THE GIRL CHILD 2023

- ❖ Every year on **October 11th**, the **global community** observes the **International Day of Girl Child 2023**.
- ❖ The **day aims to focus on the importance of "girls' education, their rights and promoting gender equality"**.
- ❖ The **theme** of International Day of the Girl 2023 according to the UNICEF website is, "**Invest in Girls' Rights: Our Leadership, Our Well-being**."
 - ✓ It **focuses on taking action to curtail girls' and women's rights and gain progress on gender equality**.
- ❖ The **United Nations General Assembly** adopted a **Resolution 66/170** in 2011 to declare '**October 11**' as the **International Day of the Girl Child**, to recognise their rights and the challenges they face.

12.7 WORLD MENTAL HEALTH DAY- OCTOBER 10TH

- ❖ The **World Mental Health Day** is observed on **October 10th** every year.
- ❖ The **World Mental Health Day** was founded by the **WFMH**, led by **Richard Hunter**, the **deputy secretary-general** at the time, in **1992**.
- ❖ It is observed to create an awareness about mental illness and to start a discussion on mental health issues like **borderline personality disorder, depression, anxiety, etc.** and provide those who suffer from it a **safe space and comfort** to be able to openly accept and address such issues.
- ❖ The **theme for World Mental Health Day 2023** "**Mental health is a universal human right**" provides an **opportunity for individuals and communities to come together to deal with mental health issues**.

12.8 INTERNATIONAL DAY FOR DISASTER RISK REDUCTION 2023- OCTOBER 13TH

- ❖ The **International Day for Disaster Risk Reduction** is observed annually on **October 13th**.
- ❖ It **brings global attention to the critical issues of disasters and inequality**.
- ❖ The **history of International Day for Disaster Reduction dates back to 1989** when the **United Nations General Assembly** established the **day to promote a culture of risk-awareness and disaster reduction across the globe**.
 - ✓ Since then, the day is **observed annually on 13th October**.
- ❖ The **theme of UN International Day for Disaster Risk Reduction 2023** is **“Fighting inequality for a resilient future.”**

12.9 WORLD STUDENTS DAY- OCTOBER 15TH

- ❖ **World Students Day** is celebrated annually on **October 15th**.
- ❖ The **theme for this year- “FAIL: stands for First Attempt in Learning.”**
 - ✓ It is **introduced by the Ministry of Education and the Government of India**, aims to **motivate students to embrace failure as a learning experience and continue their educational journey**.
- ❖ The **United Nations officially designated October 15** as **World Students Day in 2010**.
- ❖ It is **celebrated on the birth anniversary of Dr. APJ Abdul Kalam**.

12.10 WORLD FOOD DAY- OCTOBER 16TH

- ❖ Every year, **World Food Day** is observed on **October 16th**.
- ❖ The **United Nations Food and Agriculture Organisation was founded back in 1945**.
- ❖ **Thirty-four years after that, in 1979**, at the **FAO Conference**, **World Food Day was officially accepted as a world holiday**.
- ❖ The **theme of World Food Day is - Water is life, water is food. Leave no one behind**.

12.11 NATIONAL SPACE DAY

- ❖ The **Indian government has designated August 23rd** as **National Space Day**
- ❖ On **August 23rd** of this year, the **Chandrayaan 3 mission** achieved a **groundbreaking milestone by successfully landing on the South Pole of the Moon**.
- ❖ **India became the fourth country to land on the moon and the very first to reach the vicinity of the South Pole of the Moon**.

12.12 INTERNATIONAL DAY FOR THE ERADICATION OF POVERTY – OCTOBER 17TH

- ❖ **International Day for the Eradication of Poverty** is celebrated every year on **17th October**.
- ❖ The day is **dedicated to create awareness and promote global measures for the prevention of poverty**.
- ❖ On **22 December 1992**, the **General Assembly** declared **17 October** as the **International Day for the Eradication of Poverty**
- ❖ The **theme of International Day for the Eradication of Poverty 2023** is **"Decent Work and Social Protection: Putting Dignity in Practice for All."**

12.13 WORLD TRAUMA DAY 2023- OCTOBER 17TH

- ❖ **World Trauma Day**, observed every year on **October 17th**, is **dedicated to raising awareness about trauma, its causes, symptoms, and prevention**.
- ❖ **Trauma encompasses emotional responses to accidents, injuries, physical violence, rape, natural disasters, or any incident affecting an individual both physically and mentally**.

12.14 WORLD OSTEOPOROSIS DAY 2023- OCTOBER 20TH

- ❖ Each year, on **October 20th**, World Osteoporosis Day is marked to promote awareness regarding the prevention, diagnosis, and treatment of osteoporosis.
- ❖ Theme for this year is **“Step Up for Bone Health – Build Better Bones”**
- ❖ Osteoporosis is a **bone disorder characterized by abrupt structural alterations in the bones**, resulting in a **reduction in bone mass and bone mineral density**.
 - ✓ Consequently, this condition renders the bones vulnerable to injuries and fractures.

12.15 WORLD STATISTICS DAY- OCTOBER 20TH

- ❖ World Statistics Day is **celebrated every year on 20th October**.
- ❖ The **United Nations General Assembly established World Statistics Day on 20th October 2015**.
- ❖ The **main significance of World Statistics Day is educate and aware people about the value of accurate, credible and error free statistical data for making well-informed decisions**.

12.16 INTERNATIONAL CHEFS DAY- OCTOBER 20TH

- ❖ Every year, on **October 20th**, International Chefs Day is celebrated worldwide, paying tribute to the art and science of cooking.
- ❖ It was introduced by the late chef **Dr. Bill Gallagher in 2004** and serves as a platform to honor the contributions of chefs across the globe.
- ❖ This year’s International Chefs Day theme is **‘Growing A Healthy Future.’**

12.17 UNITED NATIONS DAY- OCTOBER 24TH

- ❖ On **October 24**, United Nations Day marks the anniversary of the entry into force in **1945** of the **UN Charter**.
- ❖ With the ratification of this founding document by the majority of its signatories, including the **five permanent members of the Security Council**, the United Nations officially came into being.
- ❖ In **1971**, the **United Nations took a significant step by adopting Resolution 2782**, designating **United Nations Day** as an international observance.

12.18 WORLD DEVELOPMENT INFORMATION DAY- OCTOBER 24TH

- ❖ **World Development Information Day**, celebrated annually on **October 24**, highlights **global development challenges and the importance of international cooperation in addressing these issues**.
- ❖ The day is also dedicated to propagate information and mobilise public opinion in order to draw their attention.
- ❖ In **1972**, the **UN General Assembly established the World Development Information Day with the objective to direct people’s attention toward developmental problems**.

12.19 WORLD POLIO DAY- OCTOBER 24TH

- ❖ The World Polio Day is observed on **24th October each year**.
- ❖ The day is **observed to raise awareness of the importance of polio vaccination to protect every child from this devastating disease and to honor those people whose efforts led to eradication of polio in many parts of the world**.
- ❖ In **1988**, poliovirus was **present in 125 countries**, paralyzing an estimated **1,000 children per day**.

- ❖ That year, the **Global Polio Eradication Initiative (GPEI)** was launched with a goal to eradicate polio worldwide.
- ❖ Polio remains consistently **present in just two countries – Afghanistan and Pakistan.**
- ❖ The **theme for World Polio Day 2023** is **“A healthier future for mothers and children.”**

ABOUT POLIO

- ❖ Polio, a life-threatening disease, is caused by the **poliovirus.**
- ❖ The poliovirus **spreads from person to person** and can infect a person’s spinal cord, causing paralysis.
- ❖ It majorly happens through the **faecal-oral route or contaminated water or food** and then the virus **multiplies in the intestine.**
 - ✓ From there, it can reach the nervous system and lead to paralysis.
- ❖ It **mostly affects kids under the age of five.**

12.20 WORLD DAY FOR AUDIOVISUAL HERITAGE 2023- OCTOBER 27TH

- ❖ The **World Day for Audiovisual Heritage** is observed on **October 27th.**
- ❖ The celebration is a **key initiative for UNESCO and the Coordinating Council of Audiovisual Archives Associations (CCAAA)** to honour **audiovisual preservation professionals and institutions that safeguard our heritage for future generations.**
- ❖ The **theme for this year** is **“Your Window to the World.”**
- ❖ It has its roots in the **adoption of the Recommendation for the Safeguarding and Preservation of Moving Images** during the **21st General Conference of UNESCO in 1980.**

12.21 WORLD STROKE DAY 2023- OCTOBER 29TH

- ❖ Globally, **World Stroke Day** is celebrated on **October 29th.**
- ❖ The **theme for World Stroke Day 2023** was **officially chosen by the World Stroke Organization (WSO)** as **‘Together we are #Greater Than Stroke.’**
- ❖ The day **tries to raise awareness about the prevention and timely treatment of a stroke.**
- ❖ **World Stroke Day was established on 29 October 2004.**
- ❖ **Recognising the FAST symptoms** can help one seek medical treatment on time. It is important to act FAST at the first symptoms of a stroke.
- ❖ **FAST** stands for:
 - ✓ **Face:** It means facial drooping. An individual may experience numbness on one side of the face. You should ask the person to smile to observe any unevenness.
 - ✓ **Arms:** Ask the person to raise both arms. You may notice that the person is not able to move one arm or it is lower than the other.
 - ✓ **Speech:** A stroke can also lead to speech difficulty. If a person has slurred speech, it can be a sign of a stroke.
 - ✓ **Time:** If you notice the above symptoms, it is crucial to seek medical help on an urgent basis.

12.22 WORLD CITIES DAY- OCTOBER 31ST

- ❖ With an aim to **promote the international community’s interest in global urbanization**, every year **World Cities Day** is celebrated on **October 31.**
- ❖ The **day serves as an opportunity to encourage cooperation among nations** in addressing the **challenges of urbanization.**
- ❖ This year the **international day** focuses on the **theme of “Financing sustainable urban future for all”.**
- ❖ The theme **centres on how to unlock transformative investment in urban planning and achieve sufficient fiscal decentralization.**

- ❖ In its resolution 68/239, the **United Nations Organisation** established **World Cities Day** on **December 27, 2013**.
 - ✓ Therefore, on **October 31, 2014**, **World Cities Day** was celebrated for the first time.

13. APPOINTMENTS

13.1 LT GENERAL RAGHU SRINIVASAN IS NEW BRO DG

- ❖ Lieutenant General Raghu Srinivasan assumed the role of the **28th Director General (DG) of the Border Roads Organisation (BRO)**.
- ❖ He succeeds after Lt Gen Rajeev Chaudhry retired recently.

13.2 ARINDAM BAGCHI IS INDIA'S UN AMBASSADOR

- ❖ **Arindam Bagchi** has been **appointed as India's next Ambassador/Permanent Representative to the United Nations and other International Organisations in Geneva**.
- ❖ **Arindam Bagchi** is an **Indian Foreign Service (IFS) officer from the 1995 batch** and has a **rich and diverse background in the foreign service**.
- ❖ He is **set to succeed the incumbent Indian envoy to the UN in Geneva, Indra Mani Pandey**, who assumed the role in **July 2020**.

12.3 PRESIDENT MURMU APPOINTS NEW GOVERNORS OF ODISHA, TRIPURA

- ❖ **President Droupadi Murmu** has appointed **Raghubar Das** as Governor of **Odisha**, and **Indra Sena Reddy Nallu** as Governor of **Tripura**.
- ❖ **Raghubar Das** has been appointed as the **26th governor of Odisha**. He will succeed **Ganeshi Lal** as the new governor of Odisha.
- ❖ **Das is a former Chief Minister of Jharkhand**, belonging to the **Bharatiya Janata Party (BJP)**. He has also served as the president of the **Jharkhand BJP** twice.
- ❖ **Indra Sena Reddy Nallu** is a national secretary of the **BJP** and has thrice served as an **MLA in Andhra Pradesh**. He is a **BJP leader from Bihar** and has previously served as a **Governor of Haryana**.

13.4 SANJAY KUMAR JAIN APPOINTED CMD OF IRCTC

- ❖ **Indian Railway Traffic Service (IRTS) officer Sanjay Kumar Jain** has been appointed as the **Chairman and Managing Director (CMD) of the Indian Railway Catering and Tourism Corporation (IRCTC)**.
- ❖ **After the recommendation of Search-Cum-Selection Committee (SCSC)**, his appointment to this post was approved. The post of **CMD** has been vacant since **January 2021**, after the retirement of **Mahendra Pratap Maal**.
- ❖ **Jain, an IRTS officer of the 1990 batch**, was serving as the **Principal Chief Commercial Manager in Northern Railway**.

14. PERSON IN NEWS

14.1 SHYAMJI KRISHNA VARMA

- ❖ The Prime Minister paid tributes to revolutionary freedom fighter Shyamji Krishna Varma on his birth anniversary on October 4th.

ABOUT SHYAMJI KRISHNA VARMA

- ❖ He was born on 4th October, 1857 in Mandvi town of Kachchh district of Gujarat.
- ❖ He was an expert in Sanskrit and other languages.
- ❖ He was inspired by Bal Gangadhar Tilak, Swami Dayanand Saraswati and Herbert Spencer.
- ❖ He founded the Indian Home Rule Society, India House and The Indian Sociologist in London.
 - ✓ Indian Home Rule Society and the India House worked towards inspiring youngsters in Britain to take up revolutionary activities against their own representatives in India.
 - ✓ The monthly Indian Sociologist became an outlet for nationalist ideas and through the Indian Home Rule Society, he criticised the British rule in India.
- ❖ Varma became the first President of Bombay Arya Samaj.
- ❖ He inspired Veer Savarkar who was a member of India House in London.
- ❖ Varma also served as the Divan of a number of states in India.
- ❖ In the face of criticism by the British, Varma shifted his base from England to Paris and continued his movement.
- ❖ After the outbreak of the First World War (1914-18), however, he moved to Geneva in Switzerland and spent the rest of his life there.
 - ✓ He died on 30th March, 1930.
 - ✓ A memorial called Kranti Teerth dedicated to him was inaugurated in 2010 near Mandvi, Kutch, Gujarat

14.2 NANAJI DESHMUKH

- ❖ PM Modi paid tribute to Bharatiya Jana Sangh leader Nanaji Deshmukh on his birth anniversary recently.

ABOUT NANAJI DESHMUKH

- ❖ Nanaji Deshmukh was a Sangh Parivar veteran, founder member of the Janata Party and one of the seniormost members of the Bharatiya Janata Party.
- ❖ He was born in small town Kadoli in Maharashtra's Parbhani district on October 11, 1916.
- ❖ He was an active participant of the Bhoodan Movement launched by Acharya Vinoba Bhave.
- ❖ He also extended his support to Jayaprakash Narayan's call for 'Total Revolution'.
- ❖ Nanaji was elected to Lok Sabha from Balrampur parliamentary constituency of Uttar Pradesh.
- ❖ He established the country's first Saraswati Sishu Mandir at Gorakhpur in 1950 and was the founder of Deendayal Research Institute situated at Chitrakoot.
- ❖ Credited with exemplary work in the field of education, health and rural self-reliance, Nanaji was nominated to the Rajya Sabha in 1999 in recognition of his services to the nation.
- ❖ A Padma Vibhushan awardee, Nanaji also established Chitrakoot Gramodya Vishwavidyalaya, India's first rural university and also served as its first Chancellor.
- ❖ He passed away on February 27, 2010 in Chitrakoot, at the age of 93.
 - ✓ After his demise, his body was donated to the All India Institute of Medical Sciences (AIIMS), as per his wishes.

14.3 HOMI JEANGIR BHABHA

- ❖ **30th October 2023** marks the 114th birth anniversary of **Homi Jehangir Bhabha**.

ABOUT H J BHABHA

- ❖ Dr. **Homi Jehangir Bhabha**, born on **October 30, 1909**, was a renowned nuclear physicist and a key figure in shaping India's scientific future.
- ❖ He is popularly known as **the father of India's nuclear programme**.
- ❖ As a student, **Dr Bhabha worked** with a Nobel Prize winner, **Niels Bohr in Copenhagen and played a crucial role in the development of The Quantum Theory**.
- ❖ While **pursuing his PhD**, Dr Bhabha contributed to **major inventions in the Cavendish Laboratory at Cambridge**.
- ❖ He explained **relativistic exchange scattering**, which is known as **'Bhabha Scattering'**.
- ❖ He made the **theory of the production of electron and positron showers** in cosmic rays, known as the **'Bhabha-Heitler theory'**.
- ❖ Additionally, **he also predicted and forecasted the relativistic time dilation effects in the decaying of meson**.
- ❖ After returning to India, Dr Bhabha **established the Cosmic Ray Research Unit** and also played a major role in the **establishment of the Tata Institute of Fundamental Research in Mumbai**.
- ❖ Following the same, in **1944 he started to research nuclear weapons and set up the Atomic Energy Commission**.
- ❖ International
 - ✓ He served as **president of the United Nations Conference on the Peaceful Uses of Atomic Energy in 1955** and also as the **president of the International Union of Pure and Applied Physics from 1960 to 1963**.
- ❖ Awards
 - ✓ Dr Bhabha was honoured with the **Adams Prize by the University of Cambridge in 1942**.
 - ✓ He received the **third highest civilian award Padma Bhushan by the Government of India in 1954** and also the **Fellow of the Royal Society by the Royal Society, London**.

14.4 SARDAR PATEL

- ❖ The **birth anniversary of Sardar Vallabhbhai Patel** is celebrated as **National Unity Day or Rashtriya Ekta Diwas**.
 - ✓ **Rashtriya Ekta Diwas or National Unity Day** was introduced by the Government of India in **2014** to pay tribute to the great man.
- ❖ **Vallabhbhai Jhaverbhai Patel** also dubbed as **'Sardar Patel'** was **born on October 31, 1875**, into a landowning family of the **Leva Patidar** caste.

ROLE IN FREEDOM STRUGGLE

- ❖ In **1917**, impressed by the **principles of satyagraha by Gandhi ji**, he decided to follow and support him.
- ❖ Patel first **made his mark in 1918**, when he **planned mass campaigns of peasants, farmers, and landowners of Kaira, Gujarat**, against the decision of the Bombay government to collect the full annual revenue taxes despite crop failures caused by heavy rains.
- ❖ In **1928** he **successfully led the landowners of Bardoli in their resistance against increased taxes**.
 - ✓ His efficient leadership of the **Bardoli campaign** earned him the title **'sardar'** (leader).

ROLE IN CONSTITUTIONAL ASSEMBLY

- ❖ He headed **various Committees of the Constituent Assembly of India- Advisory Committee on Fundamental Rights, Committee on Minorities and Tribal and Excluded Areas, Provincial Constitution Committee**.

POST INDEPENDENCE

- ❖ He was the **first home minister of Independent India**.
- ❖ Sardar Patel **achieved the incredible feat of persuading almost 565 self-governing princely states**, that had been released from British suzerainty, **to accede to the Union of India**.

- ✓ For his commitment to the national integration of the newly independent country, he earned the sobriquet "Iron Man of India".
- ❖ He is remembered as the 'Patron Saint of India's Civil Servants' as he established the modern all-India services system.

14.5 NORMAN PRITCHARD

- ❖ **October 30th** marks the death anniversary of India's first Olympic medallist, Norman Peterson Pritchard.
- ❖ He was born in Calcutta (now Kolkata) on **January 23, 1875** to parents **George Peterson Pritchard and Helen Maynard Pritchard**.
- ❖ Norman was a **British citizen who represented India in the 1900 Olympics**.
 - ✓ India took part in its first-ever modern Olympic Games during the second edition of the Summer Olympic Games held in Paris in 1900.
- ❖ Pritchard is **India's first Olympic medallist** where he clinched **two medals - silver in 200m hurdles and in 200m dash event**.
- ❖ However, he is considered a "controversial" Olympian as **he is claimed by both Britain and India**.

15. AWARDS AND HONOURS

15.1 2023 SASTRA RAMANUJAN PRIZE

- ❖ **Ruixiang Zhang, Assistant Professor, University of California, Berkeley, USA** will be awarded with the **2023 SASTRA Ramanujan Prize** for his outstanding contributions in mathematics.
- ❖ Dr. Zhang is a **young mathematician whose fundamental work spans from analytic number theory, combinatorics, Euclidean harmonic analysis to geometry**.

ABOUT THE PRIZE

- ❖ The award was instituted by the **Shanmugha Arts, Science, Technology & Research Academy (SASTRA)** in 2005.
- ❖ The **annual cash prize of USD 10,000** will be given at an international conference in **Number Theory during December 20 and December 22 at SASTRA University in Kumbakonam**, mathematician **Srinivasa Ramanujan's hometown**.
- ❖ The **age limit for the prize has been set at 32** influenced by **Ramanujan's achievements in his brief life of 32 years**.

15.2 NOBEL PRIZE IN PHYSICS

- ❖ This year's **Nobel Prize in Physics** has been awarded to **three physicists — Pierre Agostini at Ohio State University in Columbus, Ferenc Krausz at the Max Planck Institute of Quantum Optics in Garching, Germany, and Anne L'Huillier at Lund University, Sweden** — for their research into **attosecond pulses of light**.
- ❖ The prize was announced by the **Royal Swedish Academy of Sciences in Stockholm**. The winners will share a **prize of 11 million Swedish kroner (US\$1 million)**.

NEED

- ❖ Since **electrons move inside atoms and molecules at very high speeds**, that they are measured in **attoseconds (10^{-18} seconds)**.
- ❖ Scientists were **not able to observe the individual movements of an electron**.

DISCOVERY

- ❖ **Attosecond physics** allows scientists to look at the **very smallest particles at the very shortest timescales**.

- ❖ An **object that moves too fast to be photographed produces the image of a band of light** when its picture is taken.
- ❖ The **winners developed methods that produce these ultrafast laser pulses or extremely fast strobe light to illuminate the object can make it look like it has been frozen in time.**

APPLICATIONS-

- ❖ **Studying Short-Lived Processes** with implications for fields such as materials science, electronics, and catalysis.
- ❖ **Medical Diagnostics**
- ❖ **Advancing Electronics-** It may lead to the development of faster electronic devices, pushing the boundaries of computing and telecommunications technology.
- ❖ **Enhanced Imaging and Spectroscopy**

15.3 NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE 2023

- ❖ The **2023 Nobel Prize in Physiology or Medicine** has been awarded to **Katalin Karikó and Drew Weissman** for their **“discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19”**.
- ❖ The **first vaccines to use the mRNA technology** were those made by **Pfizer/BioNTech and Moderna against COVID-19.**
- ❖ **Katalin Karikó** has become the **13th women to win Nobel in Medicine.**

ABOUT MRNA VACCINES

- ❖ mRNA stands for **messenger RNA, is a form of nucleic acid which carries genetic information.**
- ❖ Like other vaccines, the **mRNA vaccine also attempts to activate the immune system to produce antibodies that help counter an infection from a live virus.**
- ❖ However, while most vaccines use **weakened or dead bacteria or viruses to evoke a response from the immune system, mRNA vaccines only introduce a piece of the genetic material that corresponds to a viral protein.**
 - ✓ This is **usually a protein found on the membrane of the virus and is called spike protein.**
- ❖ Therefore, **the mRNA vaccine does not expose individuals to the virus itself.**

HOW ARE THESE VACCINES DIFFERENT?

- ❖ **A piece of DNA must be converted into RNA for a cell to be able manufacture the spike protein.**
- ❖ While an mRNA vaccine might look like a more direct approach to getting the cell to produce the necessary proteins, **mRNA is very fragile and will be shred apart at room temperature or by the body's enzymes when injected.**
- ❖ To preserve its integrity, **the mRNA needs to be wrapped in a layer of oily lipids, or fat cells.**
- ❖ **DNA is much more stable and can be more flexibly integrated into a vaccine-vector.**
- ❖ In terms of **performance, both are expected to be as effective.**

CHALLENGE

- ❖ A challenge with mRNA vaccines is that **they need to be frozen from -90 degree Celsius to -50 degree Celsius.**
- ❖ They **can be stored for up to two weeks in commercial freezers and need to be thawed at 2 degrees Celsius to 8 degrees Celsius at which they can remain for a month.**

ABOUT NOBEL PRIZE

- ❖ The **first Nobel Prizes were awarded in 1901, following Nobel's death in 1896.**
- ❖ Each prize is **worth 10 million kronor.**
- ❖ The award is **administered by Nobel Foundation in Stockholm, Sweden for 6 streams- Medicine, physics, chemistry, literature, economics, and peace.**
- ❖ The **Nobel prize for Economics was created by Sweden's central bank in 1968.**

15.4 KONGTHONG VILLAGE

- ❖ The **charming whistling village of Kongthong**, located in the **East Khasi Hills of Meghalaya**, has been awarded the '**Best Tourism Village (Bronze)**' at the **National Tourism Awards 2023** by the **Ministry of Tourism**.
- ❖ Kongthong, with a **population of approximately 750 inhabitants**, is a **Meghalayan gem** that has managed to **preserve a unique tradition** known as "**Jingrwai lawbei**."
- ❖ This tradition **roughly translates to the "song of the first clan lady"** and involves the **practice of creating a unique melody for each individual in the community**.
- ❖ This **melody, or jingrwai lawbei**, is used to call out to the person and is believed to be so distinctive that it can even be heard by the spirits of the ancestors.

15.5 2023 NOBEL PRIZE IN CHEMISTRY

- ❖ The 2023 Nobel Prize in chemistry was awarded to **Moungi G. Bawendi, Louis E. Brus and Alexei I. Ekimov** for the **discovery and synthesis of quantum dots**.
- ❖ These nanoparticles have **wide-ranging applications across fields like electronics, advanced surgery, and quantum computing**.

ABOUT QUANTUM DOTS

- ❖ Quantum dots are **particles that are a few nanometres wide**.
- ❖ They **exhibit unique optical properties due to their small physical size**.
- ❖ Their **structure and atomic composition are the same as bulk materials, but the properties of the latter don't depend on their size**.
- ❖ In fact, the **properties of quantum dots can be changed by changing their size**.
- ❖ **At the scale of nanometres**, materials and particles are capable of new, size-dependent properties because **quantum physical forces start to dominate**.
- ❖ At the **macroscopic scale**, on the other hand, like in our day to day lives, **gravity and the rules of classical physics dominate**.

THE NOBEL-WINNING RESEARCH

- ❖ In the early 1980s, **Dr. Ekimov** succeeded in **creating size-dependent quantum effects in coloured glass**.
- ❖ In 1983, **Dr. Brus and his colleagues went a step ahead and prepared similar crystals in a liquid solution**, rather than in a glass. This allowed the researchers to better manipulate and study the crystals.
- ❖ Finally, in 1993, **Dr. Bawendi and his coworkers** developed a technique to **make the quantum dots of well-defined sizes and with high optical quality**.
 - ✓ This process began by **injecting some substance** (of which the dot would be made) into a hot solvent and then heating the solution. **Nanocrystals automatically began to take shape, and larger particles formed when the solution was heated for longer**. The solvent also ensured that the crystals had a smooth outer surface.
 - ✓ This **method was quite easy, which meant many scientists could use it to make quantum dots that they required and study them**.

APPLICATIONS

- ❖ One of the **simplest applications of quantum dots** is to **light computer monitors and television screens**.
 - ✓ **Blue LEDs** behind the screen **excite these dots**, causing them to **emit light of different colours**.
- ❖ **Nanoscale-sized quantum dots** are also used to **map biological tissues by biochemists**.
- ❖ Quantum dots are also used in **photovoltaic cells** to **improve the absorption and efficiency in converting solar light into electricity**.
- ❖ Certain cancer treatments use quantum dots **for targeted drug delivery and other therapeutic measures**.
- ❖ Quantum dots **can be used as security markers on currency and documents as an anti-counterfeit measure**. Broadly, they can be used as fluorescent markers to tag and track objects.

15.6 NOBEL PRIZE IN LITERATURE

- ❖ The **Nobel Prize for Literature 2023** has been awarded to Norwegian author Jon Olav Fosse, for his “innovative plays and prose which give voice to the unsayable” .

ABOUT JON FOSSE

- ❖ Fosse writes in **Norwegian Nynorsk**, the least common of the two official versions of Norwegian.
- ❖ Born in 1959, Fosse first started writing novels, switching to plays in his 30s.
- ❖ He went on to become one of Norway’s most-performed dramatists, and is in fact counted among the most performed of living European dramatists.
- ❖ His work has been translated into more than 40 languages.
- ❖ Fosse has written around 40 plays, apart from novels, short stories, children’s books, poetry and essays.
- ❖ Famous works - **A New Name: Septology VI-VII, I Am the Wind, Melancholy, Boathouse, and The Dead Dogs.**

15.7 NOBEL PEACE PRIZE

- ❖ **Narges Mohammadi**, an Iranian women's rights advocate, has been awarded the **2023 Nobel Peace Prize**.
- ❖ She was honoured for her fight against the oppression of women in Iran and to promote human rights and freedom for all.
- ❖ The Nobel Peace Prize is the **only Nobel prize that is presented by the chairman of the Norwegian Nobel Committee**; the other Nobel prizes are administered by the Nobel Foundation in Stockholm, Sweden.
- ❖ She is the **second Iranian woman to be awarded in the prize's history after Shirin Ebadi.**

15.8 ASIA-PACIFIC INSTITUTE FOR BROADCASTING DEVELOPMENT

- ❖ **India** has been elected president of the Asia-Pacific Institute for Broadcasting Development (AIBD) General Conference (GC) for the third successive term.
- ❖ It is a first in the history of AIBD.
- ❖ The move shows the confidence broadcasting organisations across the Asia Pacific and the world reposed in India.

ABOUT ASIA-PACIFIC INSTITUTE FOR BROADCASTING DEVELOPMENT (AIBD)

- ❖ Established in 1977 under the auspices of UNESCO, the AIBD currently has 92 member organisations from across 44 countries, including 26 government members (countries) represented by 48 broadcasting authorities and broadcasters, and 44 affiliates (organisations) represented by 28 countries and regions in Asia, Pacific, Europe, Africa, Arab States and North America.
- ❖ **India** is one of the founding members of AIBD, and Prasar Bharati, India’s public service broadcaster, is the representative body of the Ministry of Information & Broadcasting, Government of India, at AIBD.
- ❖ The International Telecommunication Union (ITU), the United Nations Development Programme (UNDP), and the United Nations Educational, Scientific Cultural Organisation (UNESCO) and The Asia-Pacific Broadcasting Union (ABU) are founding organizations of the Institute and they are non-voting members of the General Conference.
- ❖ Its secretariat is situated in Kuala Lumpur and is hosted by the Government of Malaysia.

16. SPORTS

16.1 INDIA’S FIRST HIGH-TECH SPORTS TRAINING CENTRE FOR DIVYANGJAN INAUGURATED

- ❖ PM Modi recently inaugurated the country's first high-tech sports training centre for Divyangjan in **Gwalior, Madhya Pradesh**.
- ❖ It has been named **Atal Bihari Training Center for Divyang Sports**.
- ❖ It is a **state-of-the-art facility dedicated to training and nurturing athletes with disabilities**.
- ❖ It **houses world-class infrastructure and coaching staff to provide the best possible training environment for differently-abled athletes**.
- ❖ It is an **Autonomous body** established by the **Department of Empowerment of Persons with Disabilities (Divyangjan), Ministry of Social Justice & Empowerment**

16.2 19TH ASIAN GAMES CONCLUDED

- ❖ The 19th **Asian Games 2023** came to an end with a **closing ceremony at the Hangzhou Olympic Sports Centre Stadium**.
- ❖ Hosts **China finished with a record 201 gold medals** followed by **Japan and Republic of Korea**.
- ❖ **India finished fourth with a total of 107 medals that included 28 gold**.
- ❖ The **20th Asian Games** will be held in **Japan in 2026**.

Motto of Asian games 2023 was **'Heart to heart, @ Future'**.

India hosted the first and ninth edition in **1951 and 1982** respectively.

Both were held in **New Delhi**.

ABOUT ASIAN GAMES

- ❖ Asian Games are the **oldest and most prestigious event on Olympic Council of Asia calendar**.
- ❖ Asian Games is **recognised by International Olympic Committee**.
- ❖ It is **second largest multi-sport event after Olympics**.
- ❖ They are **held every four years**.

16.3 RAUNAK SIDHWANI WINS JUNIOR CHAMPIONSHIP

- ❖ The PM **congratulated Grandmaster Raunak Sadhwani** who had won the **FIDE World Junior Rapid Chess Championship** in **Sardinia, Italy**.
- ❖ Raunak **scored 8.5 over 11 rounds to win the Championship** ahead of **Arseniy Nesterov of Russia**, who scored 8.
- ❖ Raunak **became a grandmaster at the age of 13**.
- ❖ He is the **ninth youngest player in history** and the **fourth youngest Indian to be awarded the title**.

About FIDE (Federation International des Echecs) or International Chess Federation

- ❖ FIDE is constituted as a **non-governmental institution**.
- ❖ Founded - **1924**
- ❖ HQ- **Lausanne, Switzerland**
- ❖ Motto is "**Gens una sumus**," which is **Latin** for "**We are one family**."
- ❖ It is the **governing body of the sport of chess** and **regulates all international chess competitions**.
- ❖ It was **recognized by the International Olympic Committee** as a **Global Sporting Organization in 1999**.
- ❖ It has **199 countries as affiliate members (including India)**, in the form of **National Chess Federations**.

16.4 ASIAN PARA GAMES 2023

- ❖ The opening ceremony of the **4th Asian Para Games** will kick off in Hangzhou, East China's Zhejiang Province.
- ❖ Themed "**Hearts Meet, Dreams Shine**," the ceremony will take place at the Hangzhou Olympic Sports Center, or "**Big Lotus**," on Sunday evening.
- ❖ India is sending its largest-ever contingent, consisting of **313 athletes**, to compete in various events at the **Asian Para Games 2023**.

FLAG BEARERS:

- ❖ **Parul Parmar:** Renowned Para Shuttler Parul Parmar will proudly bear the Indian flag during the opening ceremony, symbolizing the spirit of Indian para-athletes.
- ❖ **Amit Saroha:** Para-club Thrower Amit Saroha joins Parul Parmar as the co-flag bearer, representing India with pride and determination.

16.5 SHUBMAN GILL FASTEST BATSMAN TO SCORE 2000 RUNS

- ❖ **Opener Shubman Gill** on October 22 bettered **Hashim Amla's** record to become the fastest batsman to reach 2,000 runs in ODI cricket during the **World Cup match against New Zealand**.
- ❖ Gill achieved the milestone in 38 innings — two better than South Africa's Amla who needed 40 visits to the crease to reach the mark — and hand India a quick start in reply to New Zealand's 273 in Dharamsala.

16.6 37TH NATIONAL GAMES

- ❖ PM recently inaugurated the **37th edition of the National Games in Panaji, Goa**.
- ❖ The National Games **are being held in Goa for the very first time**.
- ❖ The Games will be **held from October 26 to November 9**.
- ❖ **More than 10,000 athletes** from across the country **will compete in over 43 sports disciplines** across **28 venues**.

17. PLACES IN NEWS

17.1 RAFAH CROSSING

- ❖ Rafah crossing is the **southernmost post of exit from the Gaza Strip (Palestine) and borders with Egypt's Sinai peninsula**.
 - ✓ It is the **only crossing point for humanitarian aid to the Gaza Strip right now**.
- ❖ Two other border crossings from and into the Gaza Strip are-
 - ✓ **Erez- a crossing for people with Israel in northern Gaza**.
 - ✓ **Kerem Shalom- it is a solely commercial goods junction with Israel in southern Gaza**.

18. SOCIAL ISSUES, HEALTH, EDUCATION

18.1 R21/MATRIX-M (MALARIA VACCINE)

- ❖ The **R21/Matrix-M malaria vaccine** developed by the **University of Oxford and the Serum Institute of India, leveraging Novavax's adjuvant technology**, has been recommended for use by the **World Health Organisation (WHO)** after meeting required **safety, quality and effectiveness standards**.
- ❖ The **Matrix-M component** is a **proprietary saponin-based adjuvant from Novavax**, which is licensed to the **Serum Institute for use in endemic countries**, while **Novavax retains commercial rights in non-endemic countries**.
- ❖ The vaccine was **developed by the Jenner Institute at Oxford University and the Serum Institute of India** with support from the **European and Developing Countries Clinical Trials Partnership (EDCTP), the Wellcome Trust, and the European Investment Bank (EIB)**.
- ❖ To date **the R21/Matrix-M malaria vaccine has been licensed for use in Ghana, Nigeria and Burkina Faso**.
- ❖ The Serum institute added that the **efficacy of the vaccine over 12 months was 75% at sites with high seasonal malaria transmission and 68% at the sites with more perennial transmission using standard age-based administration**.

ABOUT MALARIA

- ❖ Malaria is **caused by Plasmodium parasites**.
- ❖ It is **spread to people through bites** of infected female **Anopheles mosquitoes**.
- ❖ Malaria is **most common in tropical and subtropical regions of the world**, including **sub-Saharan Africa, Southeast Asia, and South America**.
 - ✓ While **Plasmodium falciparum** is responsible for more deaths, **Plasmodium vivax** is the most **widespread of all of the malaria species**.
- ❖ **Symptoms**- fever, chills, headache, muscle aches, and fatigue. In severe cases, malaria can lead to organ failure, coma, and death.

18.2 PROTEIN BINDERS

- ❖ The **Food Safety and Standards Authority of India (FSSAI)**—the **country's food safety regulator**—has said that **there is no need to add ingredients such as protein binders and emulsifiers in milk and milk products**.
- ❖ The **communication from the food safety watchdog comes days before the onset of the festive season in the country**.

ABOUT PROTEIN BINDERS

- ❖ Protein binders are **biological research reagents** which **bind to a specific target protein to manufacture a wide range of new food products**.
- ❖ They **can enhance or detract performance**.
- ❖ It is **known to affect the digestibility of the protein-bond and thus can affect the biological and nutritive value of milk protein**.

18.3 HEMOCHROMATOSIS OR 'BRONZE DIABETES'

- ❖ **Hemochromatosis** is a **rare genetic disorder** that **quietly threatens the health of affected individuals by causing iron overload**, which can lead to **severe organ dysfunction**.
- ❖ Hemochromatosis has been dubbed "**bronze diabetes**" because of the **skin darkening and concomitant pancreatic illness**.
- ❖ This health condition is **primarily classified into two types**-
 - ✓ **Hereditary hemochromatosis**
 - It is a **genetic disorder driven by a mutation in the HFE gene**, resulting in **individuals being homozygous for the C282Y variant**.
 - This genetic anomaly sets the stage for a **lifelong struggle with excessive iron absorption within the intestines**.
 - **Individuals with hereditary hemochromatosis have a relentless and indiscriminate iron absorption mechanism, leading to a gradual buildup of iron in their system**.
 - **Over time, this iron overload becomes a ticking time bomb for multiple organs**.
 - ✓ **Secondary hemochromatosis**
 - On the other hand, **Secondary hemochromatosis differs from the hereditary form as it is typically caused by external factors like frequent blood transfusions, excessive iron supplementation, or certain medical conditions**.
 - **The iron accumulation in secondary hemochromatosis is often more rapid and can have a similar impact on organ function**.
- ❖ **Common symptoms include**- **Feeling very tired all the time (fatigue), weight loss, weakness and joint pain etc.**
- ❖ **Treatment**- **Phlebotomy** is the standard treatment for primary hemochromatosis. Iron toxicity can be reduced by removing **red blood cells, the body's main mobilizer of iron**. Phlebotomy is **usually performed once or twice a week**.

18.4 CHIMERIC ANTIGEN RECEPTOR (CAR)-T CELL THERAPY

- ❖ The **Central Drugs Standard Control Organization (CDSCO)** has issued **market authorisation to CAR-T (Chimeric Antigen Receptor-T) cell therapy** paving the way for its **commercial launch of indigenous NexCAR19** in the country.
- ❖ **ImmunoACT** – an **IIT Bombay** incubated company and **Tata Memorial Centre (TMC)** collaborated to **invent indigenous CAR-T Cell Therapy**.
- ❖ It can prove to be a **breakthrough treatment for treating relapsed/refractory (r/r) B-cell lymphomas and leukaemia**.
- ❖ The NexCAR19 will be **₹30-40 lakh per patient, which is 1/10th of the cost abroad**.
- ❖ The therapy would be **available in around 20 government and private hospitals across most major cities**.
- ❖ It has an **approximate 70% overall response rate (ORR)**.
- ❖ This therapy is intended for patients with the **CD19 marker in B cells, a protein used to diagnose cancers stemming from B cells, such as B cell lymphomas, acute lymphoblastic leukaemia, and chronic lymphocytic leukaemia**.

ABOUT CAR-T CELL THERAPY

- It is a **type of cancer immunotherapy treatment** that **uses a patient's own immune cells called T cells that are genetically altered in a laboratory to enable them to locate and destroy cancer cells more effectively**.
- Currently, **this therapy is offered as a second-line treatment for late-stage leukaemia and lymphoma when patients do not respond to conventional treatments like chemotherapy and bone marrow transplants or experience relapsed cancer**.
- While it has demonstrated **substantial effectiveness, particularly in blood cancers and lymphomas, ongoing research seeks to determine its role in treating solid tumours and autoimmune diseases such as lupus and multiple sclerosis**.

T cells are immune cells that attack infection causing pathogens (viruses, bacteria etc.) and harmful cells (cancer cells).

18.5 HIGHLY PATHOGENIC AVIAN INFLUENZA

- ❖ The **World Organisation for Animal Health (WOAH)** has **approved the country's self-declaration of freedom from Highly Pathogenic Avian Influenza (HPAI), commonly known as bird flu, in specific poultry compartments (approved farms) in Maharashtra, Tamil Nadu, Uttar Pradesh, and Chhattisgarh**.
- ❖ The **approval to this self-declaration is expected to open up new opportunities for Indian poultry in the global market, contributing to the country's economic growth**.
- ❖ Status- **India is currently the third-largest producer of eggs (130 billion) and the fifth-largest producer of poultry meat (4.5 million tonnes) in the world**.

ABOUT HPAI

- ❖ **Highly Pathogenic Avian Influenza (HPAI), commonly known as bird flu, was first detected in India in Maharashtra in February 2006.**
 - ✓ Since then, the **country has experienced annual outbreaks of HPAI in different regions, leading to substantial losses**.
- ❖ **Person-to-person spread of bird flu is not common**.
- ❖ Those who **work in close contact with infected live or dead poultry or contaminated environments are at risk**.
- ❖ **4 strains have mainly caused concern i.e., H5N1, H7N9, H5N6 and H5N8**.
- ❖ **H1N1 flu, sometimes called swine flu, is a type of influenza A virus**.

COUNTER MEASURES BY INDIA

- ❖ **India's approach to controlling HPAI follows a "detect and cull" policy as outlined in the National Action Plan for Prevention, Control, and Containment of Avian Influenza (revised – 2021)**.

- ❖ India has also taken a **proactive approach to mitigate the risks** associated with HPAI by adopting the **concept of poultry compartmentalization**.
 - ✓ Compartmentalization is a **crucial tool that enhances animal health, reduces the risk of disease outbreaks within and outside the compartment, and facilitates the trade of poultry and poultry-related products**.

ABOUT WOAHP

- ❖ It is an **intergovernmental organization with focus on transparently disseminating information on animal diseases, improving animal health globally and thus builds a safer, healthier and more sustainable world**.
- ❖ **Founded in 1924** as the **Office International des Epizooties (OIE)**, in **May 2003** it adopted the common name **World Organisation for Animal Health**.
- ❖ **Headquarters- Paris, France**.

18.6 HEPATITIS C

- ❖ According to the World Health Organization, Egypt became the first country to **achieve “gold tier” status on the path to elimination of hepatitis C** as per the **global health body criteria**.
- ❖ The **“gold tier” status** to reach the stated goal of eliminating hepatitis C includes meeting specific criteria such as-
 - ✓ **ensuring 100% blood and injection safety, maintaining a minimum of 150 needles/syringes per year for people who inject drugs (PWID)**,
 - ✓ **diagnosis of over 80% of people living with chronic hepatitis C virus (HCV)**,
 - ✓ **treating of over 70% of individuals diagnosed with HCV**, and
 - ✓ **the establishing of a sentinel surveillance programme for hepatitis sequelae, including liver cancer**.
- ❖ Egypt had undertaken the **“100 Million Healthy Lives” initiative**. Through this initiative, **Egypt “significantly reduced the prevalence of hepatitis C from 10% in 2016 to 5% in 2018 and an estimated less than 1% in 2019”**.

ABOUT HEPATITIS C

- ❖ Hepatitis C is a **viral infection that affects the liver**.
- ❖ It can **cause both acute (short term) and chronic (long term) illness**.
- ❖ It is **caused by a group of viruses known as the “hepatotropic” (liver directed) viruses, including A, B, C, D and E**.
- ❖ **Transmission-** The most common route of virus spread is through **unsafe injection practices such as sharing needles, syringes, or any other equipment to inject drugs**.
 - **Unscreened blood and blood products and inadequate sterilisation of medical equipment in health-care settings are other two important routes of virus transmission**.
- ❖ There is **no vaccine for hepatitis C**, but it can be treated with antiviral medications.
- ❖ **Effective vaccine** is although, available for Hepatitis A and B.
- ❖ Also, **Hepatitis A and E are self-limiting diseases (i.e. go away on their own)**.

18.7 TILAPIA PARVOVIRUS

- ❖ The occurrence of **tilapia parvovirus (TiPV)** affecting **farm-bred tilapia, a freshwater fish species**, and causing a **huge mortality rate** has been reported for the first time in India at ponds in **Walajah in Ranipet district of Tamil Nadu**.
- ❖ The TiPV was **first reported in China in 2019 and Thailand in 2021**. India is the **third country to report the occurrence of TiPV**.

ABOUT TILAPIA PARVOVIRUS

- ❖ Tilapia parvovirus (TiPV) is a **single-stranded DNA virus**.
- ❖ This virus **was localized in the gills, heart, brain, liver, pancreas, spleen, intestine, kidney, eyes, and muscles of tilapia**.

- ❖ Currently **no vaccine** is available against TiPV.

ABOUT TILAPIA FISH

- ❖ Tilapia is a **freshwater fish species**.
- ❖ It is called **Jilabi in Tamil**.
- ❖ **Mozambique tilapia** was introduced to Indian freshwater bodies in the 1950s.
- ❖ **Nile tilapia** introduced in the 1970s is a little bigger and is cultured on a large-scale.
- ❖ It is **capable of surviving in low-oxygen levels in water** and has **turned invasive across the country**.
- ❖ In India, tilapia farming is being carried out in different parts of Andhra Pradesh and Kerala, and is **sold in domestic markets as whole fish**.

18.8 AYUSHMAN BHAV CAMPAIGN

- ❖ Prime Minister recently **applauded the success of organ donation drive** as over **80,000 People have taken the pledge to donate their organs**, under the Ayushman Bhav campaign.

ABOUT AYUSHMAN BHAV

- ❖ The 'Ayushman Bhav' campaign, initiated by the Ministry of Health and Family Welfare, is a **comprehensive nationwide healthcare initiative** that aims to **provide saturation coverage of healthcare services, reaching every village and town in the country**.
- ❖ This initiative **builds upon the success of the Ayushman Bharat program**.
- ❖ It **unites government sectors, civil society organizations, and communities** under a **common mission to ensure that every individual receives essential health services** without any disparity or exclusion.
- ❖ It is a collaborative **effort spearheaded by Gram Panchayats** in coordination with the Department of Health, other government departments, and local elected bodies in rural and urban areas.
- ❖ It has three components-
 - ✓ **Ayushman Ape Dwar 3.0-** This initiative aims to **provide Ayushman cards to remaining eligible beneficiaries enrolled under the PM-JAY scheme**, ensuring that more individuals have access to essential health services.
 - ✓ **Ayushman Melas at HWCs and CHCs-** These Melas at Ayushman Bharat- HWCs and CHCs will facilitate the creation of ABHA IDs (Health IDs) and the issuance of Ayushman Bharat Cards. They will also offer early diagnosis, comprehensive primary health care services, teleconsultation with specialists, and appropriate referrals.
- ❖ **Ayushman Sabhas-** These gatherings in every village and Panchayat will play a pivotal role in distributing Ayushman cards, generating ABHA IDs, and raising awareness about vital health schemes and disease conditions, such as non-communicable diseases, tuberculosis (Nikshay Mitra), sickle cell disease, as well as blood donation and organ donation drives.

18.9 LYMPHATIC FILARIASIS

- ❖ Lao People's Democratic Republic has **eliminated lymphatic filariasis (LF) disease** according to the **World Health Organization (WHO)**.
- ❖ It is **country's second neglected tropical disease (NTD)** to be **eliminated in six years, following the elimination of trachoma** as a public health hazard in 2017.
- ❖ Lao PDR is now the **second country after Bangladesh to eliminate lymphatic filariasis (LF) in 2023**. **Nineteen countries have been able to eliminate LF**.

ABOUT LYMPHATIC FILARIASIS

- ❖ LF, also known as elephantiasis, is a **preventable mosquito-borne infectious disease** targeted for global elimination as a public health problem.
- ❖ It occurs when **one of the filarial parasites — Wuchereria bancrofti, Brugia malayi and B. timori — are transmitted to humans through mosquito bites**.

- ❖ The **parasites nest in the lymph vessels, damaging them**. This leads to **hydrocele, lymphedema, and elephantiasis**.
- ❖ The **most cost-effective method for treating all affected residents of LF-endemic areas and stopping future transmission is mass drug administration (MDA)**.
 - ✓ WHO recommends the **triple therapy combination of ivermectin (I), diethylcarbamazine (D) and albendazole (A), for MDA against LF**.
 - ✓ **Multiple rounds of MDA, covering over 65 per cent of the population, are required**.
- ❖ The Road Map for NTDs 2021-2030 had a **target to eliminate LF from 23 countries by 2023**.
- ❖ The **elimination of NTDs by 2030** is one of the primary objectives of the **United Nations-mandated global sustainable development goal of “health for all” (SDG 3)**.

18.10 NIEMANN-PICK DISEASE

- ❖ **Parents of children suffering from Niemann Pick disease, a rare genetic disorder that affects the body's ability to metabolise cholesterol and other fats, have urged the Union government to notify the ailment under the National Policy for Rare Diseases**.
- ❖ This, they say, would enable eligible patients to receive financial support from the government and **access Xenpozyme (olipudase alfa powder), an expensive enzyme replacement therapy used for treatment**.
- ❖ NPD is a **lysosomal storage disease (LSD) caused by acid sphingomyelinase deficiency (ASMD)**.
 - ✓ The **disease refers to a group of inherited metabolic disorders in which abnormal amounts of lipids (fatty materials such as waxes, oils, and cholesterol) build up in the brain, spleen, liver, lungs, and bone marrow**.
- ❖ **Symptoms include Enlarged liver and spleen, difficulty in coordinating movement, frequent respiratory infections, slurred speech among others**.

18.11 CBSE MERIT SCHOLARSHIP SCHEME FOR SINGLE GIRL CHILD, 2023

- ❖ **The Central Board of Secondary Education (CBSE) has extended the last date to fill up the application form for the CBSE Single Girl Child Scholarship**. Students who are yet to apply can fill up the application form till October 31, 2023 now.

ABOUT CBSE MERIT SCHOLARSHIP SCHEME FOR SINGLE GIRL CHILD

- ❖ It was launched by the **Ministry of Education**.
- ❖ The scheme is aimed at recognizing the **efforts of parents in promoting education among girls** and to providing encouragement to meritorious students.
- ❖ The objective of the scheme is to provide scholarships to meritorious single girl students, who are the only children of their parents; and have passed the **CBSE Class X Examination with 60% or more marks**, and are continuing their further school education in **Class XI and XII**.
- ❖ It provides **financial aid every month to the selected students**, so they can continue their higher education.

ELIGIBILITY CRITERIA:

- ❖ The applicant should be the **single girl child of her family**.
- ❖ The applicant should have secured **60% or more marks in the CBSE Class 10th Examination** and be studying **Class 11th and 12th in school (affiliated with CBSE)**.
- ❖ The tuition fee should not be **more than ₹1,500/- per month** during the academic year. In the next two years, the total enhancement in tuition fees in such a school shall not be more than 10% of the tuition fee charged.
- ❖ The applicant must be an **Indian National**.
- ❖ The student must continue her school studies in **Classes 11th and 12th**.
- ❖ Applicants who have the status of **Non-Resident Indian (NRI)** are also eligible to apply. The tuition fee for the NRIs has been decided maximum of **Rs. 6,000/- per month**.

BENEFITS:

- ❖ The scholarship offers a maximum of **Rs. 500 per month**.
- ❖ The amount is payable for a maximum period of two years. Payment will be made through **ECS/NEFT**.
- ❖ The scholarship is eligible for renewal annually upon successful completion of **class XI**, contingent upon the scholar's **achievement of 50%** or more aggregate marks in the exam determining promotion to the next class.
- ❖ **Renewal or continuation of the scholarship** requires the prior approval of the Board if the scholar discontinues the current course of study or changes schools.
- ❖ Satisfactory conduct and regular attendance are necessary for **maintaining the scholarship**.

18.12 PM- SCHOOLS FOR RISING INDIA (SHRI)

- ❖ **Recently, 124 PM-Shri schools were launched** in the state of Haryana.
- ❖ The schools have been **designed with smart classrooms and Information and Communication Technology (ICT) labs**.
- ❖ It is a **Centrally sponsored scheme** under the **Ministry of Education** launched in **2022**.
- ❖ **Objective-** Development of **more than 14500 schools** across the country by strengthening selected existing schools being **managed by Central Government/ State/ UT Government/ local bodies**.
- ❖ It aims at **providing high-quality education** and **making children active participants** as per the vision of **NEP 2020**.
- ❖ The schools now under PM Shri are **not new ones but existing government schools**, both **co-educational and girls'**, that have **received special attention on infrastructure**.
- ❖ The scheme will **be implemented from 2022-23 to 2026-27**, after which it shall be the responsibility of the **states/UTs to continue to maintain the benchmarks** achieved by these schools.
- ❖ The **total cost of the project will be Rs 27,360 crore spread over a period of five years**, of which the Centre's share is **Rs 18,128 crore**.
- ❖ PM Shri schools will provide
 - ✓ **Student registry** for tracking enrolment and learning progress.
 - ✓ **Sports and arts labs, smart classes, CBSE affiliation**
 - ✓ **Sustainable and carbon-neutral buildings**
 - ✓ **Links with higher education institutions and local entrepreneurs for mentoring**
 - ✓ **New-age pedagogy** under **NEP** to enhance **students learning outcomes**
 - ✓ **Counseling** for **psychological wellbeing and career**

18.13 25 X 25 INITIATIVE

- ❖ India will **likely miss reaching targets** set by the **World Health Organization (WHO)** and the **United Nations-mandated Sustainable Development Goals (SDG)** to **reduce premature deaths from four major Non-Communicable Diseases (NCD)**, according to an **analysis by the Indian Council of Medical Research (ICMR)**.
- ❖ The **premature mortality rate for four major non-communicable diseases (NCD)** namely
 - ✓ **cancer,**
 - ✓ **cardiovascular disease (CVD),**
 - ✓ **chronic respiratory diseases (CRD), and**
 - ✓ **diabetes, is projected to decrease by 13.9 per cent from 2010 to 2025 in India.**
- ❖ Therefore, the **country's progress toward the WHO target of a 25 per cent reduction in premature mortality for the four NCDs by 2025, compared to 2010, will likely be missed by a considerable margin.**
- ❖ The **"25 by 25 target"** was outlined when the **WHO adopted a global NCD monitoring framework in 2013.**

19. HIMACHAL NEWS

19.1 SHIMLA KALKA RAILWAY TRACK RESUMES

- ❖ Train service resumed completely after **nearly three months on the UNESCO world heritage Shimla-Kalka railway line** which was **damaged due to torrential rains**.
- ❖ The **railway track was damaged at 20-25 points from Shimla to Kalka** due to the rains in July and August.

ABOUT THE TRACK

- ❖ The **96-km-long Shimla-Kalka Railway track** had been **laid in tough hilly terrain with 103 tunnels (now 102 tunnels as tunnel no 46 had collapsed, four decades ago), 800 bridges, and 919 curves along with negotiable gradient**.
- ❖ The **track which gains altitude of about 1590 metre** is a marvel of engineering and a tourist attraction.

19.2 HP WOOL FED OFFICE TO BE SHIFTED

- ❖ Revenue Minister recently said that the **office of the HP Wool Federation** located in **Palampur** will be **shifted to Bharmour in Chamba district**.
- ❖ The decision was taken at a meeting of the Tribal Project Advisory Committee presided over by the minister at Bharmour.

19.3 PADDY PROCUREMENT CENTRES OPENED IN KANGRA

- ❖ The **State Food and Civil Supply Corporation (SFCSC)** in **collaboration with Kangra District Agriculture Produce Marketing Committee (APMC)** is all set to **procure paddy from farmers at central government's announced MSP Rs 2,023 per quintal in three procurement centres set up in Kangra district**.
- ❖ The state government has **notified procurement centres at Fatehpur, Milwan and Riyali in lower Kangra district for procuring paddy**.
- ❖ The **Milwan, Riyali and Fatehpur procurement centers** have **storage capacity of 1100, 600 and 400 metric tons, respectively**.

19.4 CM ANNOUNCES RS 2 LAKH INCENTIVE TO PARENTS OF SINGLE GIRL CHILD

- ❖ Himachal Pradesh Chief Minister said **parents of single girl child will be given an incentive of Rs 2 lakh as part of the government's efforts to remove the evil practice of female foeticide in the state**.
- ❖ Earlier an **incentive of Rs 35,000** was given for to parents of single girl child, which would now be **increased to Rs 2 lakh**.
- ❖ **Rs 2 lakh** would henceforth be given to the parents **who adopt family planning after birth of one girl child and Rs one lakh to those who decide not to have another child after two girls**.

19.5 ISRAELI FROM DHARAMKOT LONG TO RETURN HOME

- ❖ Amid the ongoing counter-offensive by Israeli forces following the multi-pronged terror attacks by Hamas, **tourists from Israel** in the **Kangra's Dharamkot village** shared their willingness to head back and serve their homeland in whatever way they can.
- ❖ Dharamkot is **also known as 'Mini Israel'** as it is the **only village in Himachal to have a Jewish centre**.

19.6 DISTRICT GOOD GOVERNANCE INDEX RELEASED

- ❖ CM recently released the **District Good Governance Index (DGGI) Annual Report-2022**.
- ❖ As per the rankings for 2022, **Kangra district bagged the first prize of Rs 50 lakh, Hamirpur district was second and got Rs 35 lakh reward while Lahaul and Spiti district was third and got the third prize of Rs 25 lakh.**
- ❖ The DGGI report includes **eight themes of essential infrastructure, support to human development, social protection, women and children, crime, law and order, environment, transparency and accountability and economic performance.**
- ❖ In the **second tier**, there are **19 focus subjects like power, water, roads, education, health, PDS, social justice, employment, children & women, crime, law & order, atrocities, environmental violations, forest, transparency & accountability, farm & allied sectors and commerce and industry.**
- ❖ In the **third tier**, there are **90 specific variables on which the data available in the districts is analysed and integrated.**

19.7 SJVN GETS NOD FOR 100-MW SOLAR PROJECT

- ❖ SJVN chairman reported that **SJVN has received a Letter of Award (LoA) for 100 MW solar power project from Rajasthan Urja Vikas Nigam Limited (RUVNL) at a tariff of Rs 2.62 per unit.**
- ❖ The **project was secured through SGEL, a wholly-owned subsidiary of SJVN, on Build Own and Operate basis.**
- ❖ The **project is to be developed at an estimated development cost of Rs 600 crore in Rajasthan through EPC contract.**
- ❖ The **project shall be commissioned in a period of 18 months from the date of signing of Power Purchase Agreement, which shall be signed between the RUVNL and SGEL for 25 years**
- ❖ The **project was expected to generate 252 MU in the first year and 5,866 MU over a period of 25 years. The commissioning of this project is expected to reduce 2,87,434 tonne of carbon emission.**

19.8 BHOOTHNATH BRIDGE REOPENS

- ❖ The **Bhootnath bridge in Kullu has been finally restored for light vehicles after about four-and-a-half years.**
- ❖ It is **built across Beas river.**
- ❖ The **95-metre double lane bridge, constructed at a cost of Rs 10 crore, had developed cracks and inclined from the centre in November 2018 within 5 years of its inauguration.**

19.9 11 SITES IDENTIFIED TO PROMOTE ECO-TOURISM

- ❖ Chief Minister revealed that **11 new eco-tourism sites had been identified as part of initiatives to promote eco-tourism on a large scale.**
- ❖ The identified 11 eco-tourism sites are **Swaar, Saurabh Van Vihar, Neugal Park and Bir-Billing in Palampur forest division, Kasol, Kheer Ganga and Sumarupa in Parvati forest division, Sojha in Seraj, Narkanda in Kotgarh and Shogi camping site besides Potter Hill camping site under Shimla forest division.**
- ❖ Each of **these eco-tourism sites would be developed in an area of one hectare and a reserve price had been fixed for developing these sites through outsourcing.**

19.10 FIRST DIGITAL LIBRARY OF THE STATE

- ❖ Chief Minister recently laid the **foundation stones of the first digital library of the state to be built at a cost of Rs 3 crore in Bilaspur.**
- ❖ A **Krishi Bhavan at Dholra will also be to be constructed at a cost of Rs 5.18 crore.**
- ❖ This **one of the kind digital library in the state would have digital books that could be accessed online.**
- ❖ More such digital libraries will be **opened in 10 panchayats of Bilaspur district so that readers in rural areas can benefit from them.**

19.11 PAINTBRUSH SWIFT BUTTERFLY

- ❖ A species of butterfly that is rare in the western Himalayas, the paintbrush swift butterfly has been photographed and documented for the first time in Himachal Pradesh's Chamba district.
- ❖ The State supports around 430 butterfly species or about 25% of the total number of butterfly species found in India.
- ❖ The paintbrush swift (*Baoris farri*), a butterfly species of the HesperIIDae family, was sighted and photographed in the second week of October.
- ❖ It was first described by lepidopterist Frederic Moore, more than 145 years ago, from the eastern Himalayas.
- ❖ Paintbrush swift's habitat distribution is common in northeast, central and south India, and rare in Uttarakhand.

19.12 HORTICULTURE UNIVERSITY, NAUNI, BAGS CERA AWARD

- ❖ The Satyanand Stokes Library of Dr YS Parmar University of Horticulture and Forestry, Nauni, bagged the Best Usage of J-Gate@CeRA award for the year 2022.
- ❖ The Consortium for e-Resources in Agriculture (CeRA) is an e-Consortium of agricultural libraries under the Indian Council of Agricultural Research for National Agricultural Research and Education System Libraries.
- ❖ Established in 2007, CeRA is a first-of-its-kind organisation to facilitate 24x7 online access to select journals in agricultural and allied sciences to all researchers, teachers and students, policy planners, administrators and extension specialists.

19.13 PRE-WORLD CUP PARAGLIDING EVENT

- ❖ Pre-World Cup Paragliding tournament will begin in Bir-Billing in Kangra district.
- ❖ The tournament would be held from October 26 to November 2.
- ❖ About 120 paragliding pilots from around 28 countries would participate in the event.
- ❖ Bir-Billing is ranked among the top 10 paragliding sites of the world and attracts thousands of paragliding enthusiasts from across the world every year.
- ❖ Paragliding pilots and tourists fly solo or tandem flights, taking off from Billing ridge located at a height of 2,400 m from the sea level, hovering in skies along the ridges of Dhauladhar mountain ranges and landing at Bir.
- ❖ Open valley beyond Billing take off enables fliers to cover long distances.
- ❖ At present, record of flying 257 km in a single flight from Billing is in the name of India's Debi Chaudhary.

19.14 INDIAN ARMY'S FIRST WIND TUNNEL

- ❖ To augment the training infrastructure of special forces and combat free-fallers, the Army's Special Forces Training School (SFTS) at Bakloh, Chamba, got the Army's first Vertical Wind Tunnel (VWT).
- ❖ Functioning as a freefall simulator, the VWT creates a column of air at specific velocities, orchestrating different CFF conditions.
- ❖ The system simulates varied freefall scenarios which is crucial in assessing individual reactions to numerous situations in an airborne operating environment.

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