



WE4U IAS COACHING
UPSC MONTHLY CURRENT AFFAIRS
DECEMBER 2022

1.INDIAN POLITY

1.1	Start-Ups Intellectual Property Protection (SIPP)	1
1.2	National Commission for Minorities	2
1.3	kangaroo court	4
1.4	Chairman of Rajya Sabha	5
1.5	PM Svanidhi Scheme	8
1.6	Sixth schedule	9
1.7	Zonal Councils	11
1.8	Special Category Status (SCS)	14
1.9	International Arbitration Centre	15

2.INDIAN ECONOMY

2.1	Foreign Exchange Management Act	18
2.2	Prevention of Money Laundering Act (PMLA) 2002	19
2.3	The Paris Club	20
2.4	Trademark	22
2.5	The Telecom Regulatory Authority of India (TRAI)	23
2.6	Maritime Anti- Piracy Bill 2022	26

3.INTERNATIONAL RELATIONS

3.1	Asia-Pacific Broadcasting Union	28
3.2	Wassenaar arrangement	29

3.3	Singapore Declaration	30
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4.INDIAN HISTORY AND CULTURE

4.1	Dr. Rajendra Prasad	32
4.2	Mahaparinirva n Diwas	34
4.3	Sangai Festival	37
4.4	Sylhet-Silchar festival	38
4.5	Pt. Madan Mohan Malviya	40
4.6	Ratnagiri's pre- historic rock art	41
4.7	Tanpura/Tambura	42
4.8	Meitei script	43
4.9	1925 Kakori Train Action	44
4.10	Panini's 'Ashtadhyayi	45
4.11	Betta-Kuruba tribe	46
4.12	Srisailam Temple	47
4.13	National Archives of India	48
4.14	Sri Guru Gobind Singh	48

5.GEOGRAPHY

5.1	Fiji	50
5.2	Cactus Plantation and its Economic Usage	50

5.3	Okavango delta and Murchison Falls	52
5.4	Barak River	54

6.ENVIRONMENT

6.1	State of the Climate in Asia 2021 report	55
6.2	State of Finance for Nature report	56
6.3	Flue Gas Desulphurisation	57
6.4	Zombie Virus'	59
6.5	Bhopal Gas Tragedy	60
6.6	Kunming- Montreal Global Biodiversity Framework.	61
6.7	Nevada wildflower	62

7.SCIENCE AND TECHNOLOGY

7.1	Dark patterns	64
7.2	Tidal disruption event (TDE)	64
7.3	Vikram S rocket	65
7.4	Ethylene Glycol	66
7.5	Neuralink	67
7.6	ChatGPT	67
7.7	NavIC	68

1.INDIAN POLITY

1.1 Start-Ups Intellectual Property Protection (SIPP)

[News]:

The Ministry of Commerce and Industry recently announced that IP facilitator charges have increased for patent filing under the SIPP scheme. The facilitation fees has been increased by at least 100%.

[Concept]:

Start-Ups Intellectual Property Protection (SIPP)

- * To protect and promote Intellectual Property Rights (IPR) of Startups and to encourage innovation and creativity among them, Government of India had launched a Scheme for facilitating Start-Ups Intellectual Property Protection (SIPP) in 2016.
- * The scheme facilitated startups in filing and processing of their patent, design or trademark application through the assistance of IP Facilitators, whose fee was borne by the Office of the Controller General of Patents Designs and Trademarks, Department for Promotion of Industry and Internal Trade, Government of India.
- * After its successful implementation resulting in a significant increase in IP filings by Startups the Scheme was extended for a period of three years till 31st March 2023.

What is the Purpose of Start-ups Intellectual Property Protection (SIPP) Scheme?

- * The Start-ups Intellectual Property Protection (SIPP) Scheme is focused on encouraging Intellectual Property Rights Registration (such as Copyright Registration, Trademark Registration & Patent Registration), awareness and promoting creativity and innovation;
- * The Start-ups Intellectual Property Protection (SIPP) Scheme envisages guiding emerging technologies among start-ups and aiding them to commercialize them by way of giving access to high-quality Intellectual

Property (IP) services & resources.

Eligibility Criteria for SIPP Scheme

- * In this scheme, a start-up is a company that has been registered in India or not more than seven years before the application;
- * The company shall cease to be a start-up if its turnover for the early financial years has more than Rs. 25 crores or it has completed seven years from the registration date;
- * The company should be working towards the development, commercialisation, or innovation of new products and processes or services which are driven by technology;
- * A start-up shall be entitled to getting the benefits of this scheme only after it has procured certification from the start-up certification board;
- * The yearly turnover should not more than Rs. 25 crores in any preceding financial year;
- * Moreover, the company is not formed by the splitting up or reconstruction of a business already in existence.

1.2 National Commission for Minorities

[News]:

The National Commission for Minorities recently held a meeting with the Sikh Intelligentsia for inviting suggestions and advice to make the commemoration of the Veer Bal Diwas more meaningful.

[Concept]:

National Commission for Minorities

Genesis:

- * In 1978, setting up of the Minorities Commission (MC) was envisaged in the Ministry of Home Affairs Resolution.
- * In 1984, the MC was detached from the Ministry of Home Affairs and placed

under the newly created Ministry of Welfare, which excluded linguistic minorities from the Commission's jurisdiction in 1988.

- * In 1992, with the enactment of the NCM Act, 1992, the MC became a statutory body and was renamed as the NCM.
- * In 1993, the first Statutory National Commission was set up and five religious communities viz the Muslims, Christians, Sikhs, Buddhists and Zoroastrians (Parsis) were notified as minority communities.
- * In 2014, Jains were also notified as a minority community.



Composition:

- * NCM consists of a Chairperson, a Vice-Chairperson and five members and all of them shall be from amongst the minority communities.
- * Total of 7 persons to be nominated by the Central Government should be from amongst persons of eminence, ability and integrity.
- * Tenure: Each Member holds office for a period of three years from the date of assumption of office.

Functions:

- * Evaluation of the progress of the development of minorities under the Union and States.
- * Monitoring of the working of the safeguards for minorities provided in the Constitution and in laws enacted by Parliament and the state legislatures.
- * Ensures that the Prime Minister's 15-Point Programme for the Welfare of

Minorities is implemented and the programmes for minority communities are actually functioning.

- * Making recommendations for the effective implementation of safeguards for the protection of the interests of minorities by the central or state governments.
- * Looking into specific complaints regarding deprivation of rights and safeguards of minorities and taking up such matters with the appropriate authorities.
- * Investigates matters of communal conflict and riots.
- * For example, the 2011 Bharatpur communal riots, as well as the 2012 Bodo-Muslim clashes in Assam, were investigated by the commission and their findings were submitted to the government.
- * Observes the Minorities Rights Day every year on 18th December which marks the adoption of the “Declaration on the Rights of Persons belonging to National or Ethnic, Religious and Linguistic Minorities” by the United Nations in 1992.

1.3 kangaroo court

[News]:

A kangaroo court in Tamil Nadu subjected a couple to fine for their love marriage.

[Concept]:

kangaroo court:

- * Oxford Dictionary defines it as “an unofficial court held by a group of people in order to try someone, without good evidence”.
- * It is used to refer to proceedings or activities where a judgement is made in a manner that is unfair, biased, and lacks legitimacy.
- * Some dictionaries say the association with the animal could have a relation to Australians, though the concept probably originated in America.

1.4 Chairman of Rajya Sabha

[News]:

Recently, Rajya Sabha welcomed its new Chairman, Shri Jagdeep Dhankhar

[Concept]:

Key Points Related to RS Chairman

About:

- * The Vice-President is the ex-officio chairman of the Rajya Sabha.
- * The Vice-President as Chairman of the Rajya Sabha is the unchallenged guardian of the eminence and dignity of the House.

Constitutional Provisions:

- * Article 64: The Vice-President shall be ex officio Chairman of the Council of States and shall not hold any other office of profit.
- * Article 89 of the Constitution provides provision for the Chairman (Vice-President of India) and the Deputy Chairman of the Rajya Sabha.

Power and Functions:

- * The Chairman of the Rajya Sabha is empowered to adjourn the House or to suspend its sitting in the event of the absence of quorum.
- * The 10th Schedule of the Constitution empowers the Chairman to determine the question as to disqualification of a member of the Rajya Sabha on the ground of defection;
- * The Chairman's consent is needed to raise a question of breach of privilege in the House.
- * Parliamentary Committees, regardless of whether set up by the Chairman or by the House, work under the direction of the Chairman.
- * He nominates members to different Standing Committees and the Department-related Parliamentary Committees. He is the Chairman of the Business Advisory Committee, the Rules Committee and the General Purposes Committee.

- * It is the duty of the Chairman to interpret the Constitution and rules so far as matters in or relating to the House are concerned, and no one can enter into any argument or controversy with the Chairman over such interpretation.

Removal of Chairperson:

- * He can only be removed as the chairman of Rajya Sabha when he is removed from the office of Vice-President of India.
- * While the resolution is in effect for the removal of Vice-President, he cannot preside over the house as chairman, although he can be part of the house.

What are the Provisions Related to the Vice-President?

Vice President:

- * The Vice President is the second highest constitutional office in India. He/She serves for a five-year term, but can continue to be in office. Irrespective of the expiry of the term, until the successor assumes office.
- * The Vice President may resign his office by submitting his resignation to the President of India. The resignation becomes effective from the day it is accepted.
- * The Vice President can be removed from office by a resolution of the Council of States (Rajya Sabha), passed by a majority of its members at that time and agreed to by the House of the People (Lok Sabha). A resolution for this purpose may be moved only after a notice of at least a minimum of 14 days has been given of such an intention.

Eligibility:

- * Should be a citizen of India.
- * Should have completed 35 years of age.
- * Should be qualified for election as a member of the Rajya Sabha.
- * Should not hold any office of profit under the Union government or any state government or any local authority or any other public authority.

Electoral College:

- * As per Article 66 of the Constitution of India, the Vice-President is elected by the members of the Electoral College.
- * Electoral College consists of:
 - * Elected members of Rajya Sabha.
 - * Nominated members of Rajya Sabha.
 - * Elected members of Lok Sabha.

Election Procedure:

- * As per Article 68 of the Constitution, the election to fill the vacancy caused by the expiration of the term of office of the outgoing vice-president is required to be completed before the expiration of the term.
- * Article 324 of the Constitution read with the Presidential and Vice-Presidential Elections Act, 1952 and the Presidential and Vice-Presidential Elections Rules, 1974, vests the superintendence, direction and control of the conduct of election to the office of the Vice-President of India in the Election Commission of India.
- * The notification for election shall be issued on or after the sixtieth day before the expiration of the term of office of the outgoing Vice-President.
- * Since all the electors are members of both Houses of Parliament, the value of the vote of each Member of Parliament would be the same i.e., 1 (one).
- * The Election Commission, in consultation with the Central Government, appoints the Secretary-General of Lok Sabha and Rajya Sabha, by rotation, as the Returning Officer.
- * Accordingly, the Secretary-General, Lok Sabha will be appointed as the Returning Officer for the present election to the Office of the Vice-President of India.
- * The Commission also decides to appoint Assistant Returning Officers in Parliament House (Lok Sabha) to assist Returning Officers.
- * As per Rule 8 of the Presidential and Vice-Presidential Elections Rules, 1974,

polls for the election are taken in the Parliament House.

1.5 PM SVANIDHIScheme

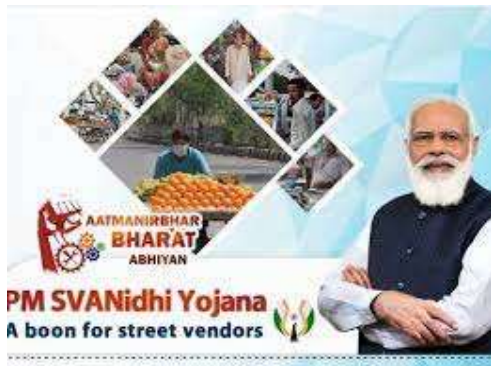
[News]:

Recently the Government of India has extended the PM Street Vendor's Atma Nirbhar Nidhi (PM SVANidhi) Scheme beyond March, 2022.

[Concept]:

PM SVANIDHI SCHEME

About:



- * The scheme was announced as a part of the Economic Stimulus-II under the Atmanirbhar Bharat Abhiyan.
- * It has been implemented since 1st June 2020, for providing affordable working capital loans to street vendors to resume their livelihoods that have been adversely affected due to Covid-19 lockdowns.
- * A total of 13,403 vending zones have been identified so far.
- * 42 lakh street vendors are to be provided benefits under PM SVANidhi Scheme by December, 2024.

Funding:

- * It is a Central Sector Scheme i.e., fully funded by Ministry of Housing and Urban Affairs with the following objectives:
- * To facilitate working capital loan;
- * To incentivize regular repayment; and

- * To reward digital transactions

Significance:

- * The scheme will open up new opportunities for street vendors to move up the economic ladder.

Eligibility:

States/Union Territories (UTs):

- * The Scheme is available for beneficiaries belonging to only those States/UTs which have notified Rules and Scheme under Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.
- * Beneficiaries from Meghalaya, which has its own State Street Vendors Act may, however, participate.

Street Vendors:

- * The Scheme is available to all street vendors engaged in vending in urban areas. Earlier the Scheme was available to all street vendors engaged in vending on or before March 24, 2020.

1.6 Sixth schedule

[News]:

Several political groups in Ladakh have been demanding Statehood and possible inclusion of Ladakh under the Sixth Schedule of the Constitution, on the lines of Jammu & Kashmir.

[Concept]:

Sixth schedule of the Constitution

- * It provides for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram to safeguard the rights of the tribal population in these states.
- * This special provision is provided under Article 244(2) and Article 275(1) of the Constitution.

- * It seeks to safeguard the rights of the tribal population through the formation of Autonomous District Councils (ADC).
- * ADCs are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislature.

Features:

- * Provisions have been made for the creation of the District Councils and regional councils for the exercise of certain legislative and judicial powers. However, their jurisdiction is subject to the jurisdiction of the concerned High Court.
- * They have powers to form courts to hear cases where both parties are members of Scheduled Tribes and the maximum sentence is less than 5 years in prison.
- * They also have powers to levy taxes, fees and tolls on buildings, land, animals, vehicles, boats, entry of goods into the area, roads, ferries, bridges, employment and income and general taxes for the maintenance of schools and roads.
- * The Acts of Parliament or the State Legislature do not apply to autonomous districts and autonomous regions or apply with specified modifications and exceptions.
- * the Governor is vested with powers regarding the councils. He/she, by public notification, may:
 - * Include or exclude any new area.
 - * Create a new autonomous district.
 - * Define the boundaries of any autonomous district.
 - * Increase or decrease the area of an existing autonomous district.
 - * Alter the name of any autonomous district.

Benefits:

- * It was incorporated to protect the rights of the minority tribals living within a larger state dominated by the majority.

- * It allows for greater political autonomy and decentralised governance in certain tribal areas of the Northeast.

Issues:

- * It undermines the social harmony, stability and economic development of the state and the region.

Way Forward

- * There should be certain clear-cut parameters and safeguards to check the unfettered demands.
- * It is better to allow democratic concerns like development, decentralisation and governance rather than religion, caste, language or dialect to be the valid bases for conceding the demands.

1.7 Zonal Councils

[News]:

Union Home and Cooperation Minister Shri Amit Shah presided over the 25th Eastern Zonal Council meeting .

[Concept]:

Zonal Council

About:



- * Zonal Councils are the statutory (and not the constitutional) bodies.
- * They are established by an Act of the Parliament, that is, States Reorganisation

Act of 1956.

- * The act divided the country into five zones- Northern, Central, Eastern, Western and Southern and provided a zonal council for each zone.
- * While forming these zones, several factors have been taken into account which include:
 - * The natural divisions of the country.
 - * The river systems and means of communication.
 - * The cultural and linguistic affinity.
 - * The requirements of economic development, security and law and order.
- * In addition to the above mentioned Zonal Councils, a North-Eastern Council was created by a separate Act of Parliament, the North-Eastern Council Act of 1971.
- * Its members include Assam, Manipur, Mizoram, Arunachal Pradesh, Nagaland, Meghalaya, Tripura and Sikkim.
- * These are advisory bodies that make recommendations with regard to any matter of common interest in the field of economic and social planning between the Centre and States border disputes, linguistic minorities, inter-State transport or matters connected with the reorganisation of States.

Composition:

- * The Northern Zonal Council: It comprises the States of Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, National Capital Territory of Delhi and Union Territory of Chandigarh,
- * The Central Zonal Council: It comprises the States of Chhattisgarh, Uttarakhand, Uttar Pradesh and Madhya Pradesh,
- * The Eastern Zonal Council: It comprises the States of Bihar, Jharkhand, Orissa, Sikkim and West Bengal,
- * The Western Zonal Council: It comprises the States of Goa, Gujarat, Maharashtra and the Union Territories of Daman & Diu and Dadra & Nagar

Haveli,

- * The Southern Zonal Council: It comprises the States of Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and the Union Territory of Puducherry.

Organizational Structure:

- * Chairman: The Union Home Minister is the Chairman of each of these Councils.
- * Vice Chairman: The Chief Ministers of the States included in each zone act as Vice-Chairman of the Zonal Council for that zone by rotation, each holding office for a period of one year at a time.
- * Members: Chief Minister and two other Ministers as nominated by the Governor from each of the States and two members from Union Territories included in the zone.
- * Advisers: One person nominated by the Planning Commission (now NITI Aayog) for each of the Zonal Councils, Chief Secretaries and another officer/Development Commissioner nominated by each of the States included in the Zone.

Objectives:

- * Bringing out national integration.
- * Arresting the growth of acute State consciousness, regionalism, linguism and particularistic tendencies.
- * Enabling the Centre and the States to co-operate and exchange ideas and experiences.
- * Establishing a climate of co-operation amongst the States for successful and speedy execution of development projects.

Functions of the Councils:

- * Any matter of common interest in the field of economic and social planning,
- * Any matter concerning border disputes, linguistic minorities or inter-State transport,

- * Any matter connected with or arising out of, the reorganization of the States under the States Reorganisation Act.

1.8 Special Category Status (SCS)

[News]:

Recently, the Chief Minister of Andhra Pradesh requested the Prime Minister for the grant of Special Category Status (SCS).

[Concept]:

Special Category Status (SCS)

- * Special category status is a classification given by the Centre to assist development of states that face geographical and socio-economic disadvantages.
- * This classification was done on the recommendations of the Fifth Finance Commission in 1969.
- * It was based on the Gadgil formula. The parameters for SCS were:
 - * Hilly Terrain;
 - * Low Population Density And/Or Sizeable Share of Tribal Population;
 - * Strategic Location along Borders With Neighbouring Countries;
 - * Economic and Infrastructure Backwardness; and
 - * Nonviable Nature of State finances.
- * SCS was first accorded in 1969 to Jammu and Kashmir, Assam and Nagaland. Since then eight more states have been included (Arunachal Pradesh, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Tripura and Uttarakhand).
- * There is no provision of SCS in the Constitution.
- * Special Category Status for plan assistance was granted in the past by the National Development Council to the States that are characterized by a

number of features necessitating special consideration.

- * Now, it is done by the central government.
- * The 14th Finance Commission has done away with the 'special category status' for states, except for the Northeastern and three hill states.
- * Instead, it suggested that the resource gap of each state be filled through 'tax devolution', urging the Centre to increase the states' share of tax revenues from 32% to 42%, which has been implemented since 2015.
- * Benefits to States with SCS:
 - * The Centre pays 90% of the funds required in a centrally-sponsored scheme to special category status states as against 60% or 75% in case of other states, while the remaining funds are provided by the state governments.
 - * Unspent money does not lapse and is carried forward.
 - * Significant concessions are provided to these states in excise and customs duties, income tax and corporate tax.

1.9 International Arbitration Centre

[News]:

The New Delhi International Arbitration Centre (Amendment) Bill was passed by the Rajya Sabha on 14th December 2022.

[Concept]:

International Arbitration Centre

New Delhi International Arbitration Centre (Amendment) Bill, 2022

Renaming Arbitration Centre:

- * The bill renames the New Delhi International Arbitration Centre as the India International Arbitration Centre.

International and domestic arbitration:

- * The Act requires the Arbitration Centre to strive to facilitate the conduct of international and domestic arbitration and conciliation and the new legislation

expands this to include the conduct of other forms of alternative dispute resolution.

- * The bill will help India emerge as an attractive destination for arbitration at the global level.

Other highlights:

- * The manner of conduct of arbitration and other forms of alternative dispute resolution will be specified by the Central government through regulations.
- * The Bill also allows the government to provide for removing any difficulties in implementing the Act up to five years from the date of commencement of the Act.

Other ADRs:

- * Bill also includes the conduct of other forms of alternative dispute resolution (ADRs) besides arbitration.
- * Significance

Changing name:

- * Important cities in India such as Mumbai and Kolkata have their own arbitration centres.
- * Even in Delhi, another body Delhi Arbitration Centre [DAC] is functioning.
- * So it was envisaged that it will not be good to have two arbitration centres having the same name of Delhi.

Making India international hub of arbitration:

- * India is the fifth biggest economy in the world, yet we are not the international hub of arbitration, while small countries and cities have emerged as major centres for arbitration.
- * Presently people prefer places such as Singapore, London and Hong Kong for arbitration.
- * India can provide arbitration awards at more affordable charges in comparative to those centres.

Institutionalisation of Arbitration:

- * The main problem in arbitration in the country right now is of delays – resulting from ad hoc arbitration – which are often appealed in courts.
- * Considering the issue of pending cases in different levels of courts, the current system of arbitration is not institutionalised and through this Bill, the Government is making it institutionalised.
- * Not under pressure:
- * Government also rejected the allegations that the government has brought this bill and procedure under the pressure of the World Bank.

2. INDIAN ECONOMY

2.1 Foreign Exchange Management Act

[News]:

Actor Vijay Devarakonda appeared before Enforcement Directorate in connection with the Foreign Exchange Management Act (FEMA) investigation for producing the recent multilingual movie, 'Liger' which had a cameo by boxing legend Mike Tyson.

[Concept]:

What is Foreign Exchange Management Act, 1999

- * The legal framework for the administration of foreign exchange transactions in India is provided by the Foreign Exchange Management Act, 1999.
- * Under the FEMA, which came into force with effect from 1st June 2000, all transactions involving foreign exchange have been classified either as capital or current account transactions.

Current Account Transactions:

- * All transactions undertaken by a resident that do not alter his / her assets or liabilities, including contingent liabilities, outside India are current account transactions.
- * Example: payment in connection with foreign trade, expenses in connection with foreign travel, education etc.

Capital Account Transactions:

- * It includes those transactions which are undertaken by a resident of India such that his/her assets or liabilities outside India are altered (either increased or decreased).
- * Example: investment in foreign securities, acquisition of immovable property outside India etc.

Resident Indians:

- * A 'person resident in India' is defined in Section 2(v) of FEMA, 1999 as:

- * Barring few exceptions, a person residing in India for more than 182 days during the course of the preceding financial year.
- * Any person or body corporate registered or incorporated in India.
- * An office, branch or agency in India owned or controlled by a person resident outside India.
- * An office, branch or agency outside India owned or controlled by a person resident in India.

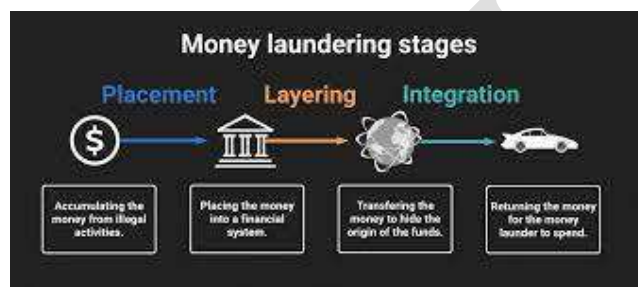
2.2 Prevention of Money Laundering Act (PMLA) 2002

[News]:

The Finance Ministry notified changes to the Prevention of Money Laundering Act (PMLA), 2002

[Concept]:

Changes to PMLA 2002:



- * Allowed Enforcement Directorate (ED) to share incriminating information and material about economic offenders with 15 more agencies. These include
 - National Investigation Agency (NIA)
 - Serious Fraud Investigation Office (SFIO)
 - Directorate General of Foreign Trade (DGFT)
 - Competition Commission of India (CCI)
 - National Intelligence Grid
 - Central Vigilance Commission (CVC)
 - Wildlife Crime Control Bureau

- MEA, State Police Department, regulators under various Acts, Defence Intelligence Agency, National Technical Research Organisation, Military Intelligence, inquiry authority under Central Civil Services Rules.
 - Earlier, the ED was permitted to share data with only 10 agencies, including CBI, RBI, Sebi, IRDAI, Intelligence Bureau, and Financial Intelligence Unit (FIU), among others.
- * Apprehend social evils and bring them to justice in the court of law
- Prevention of Money Laundering Act(PMLA):
- * It is a criminal law of the Parliament of India passed by the NDA government in 2002
 - * PMLA became law and came into force on July 1, 2005.
 - * It has blanket powers assigned to the Enforcement Directorate (ED) under PMLA for seizing, investing, searching and attaching assets.

2.3 The Paris Club

[News]:

Paris Club creditor nations are proposing a 10-year moratorium on Sri Lankan debt and another 15 years of debt restructuring as a formula to resolve the Sri Lankan debt crisis.

[Concept]:

The Paris Club



- * The Paris Club is a group of mostly western creditor countries that grew from a 1956 meeting in which Argentina agreed to meet its public creditors in Paris.

- * Their objective is to find sustainable debt-relief solutions for countries that are unable to repay their bilateral loans.
- * It describes itself as a forum where official creditors meet to solve payment difficulties faced by debtor countries.
- * All 22 are members of the group called Organisation for Economic Co-operation and Development (OECD).

MEMBERS:

- * Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Japan, Netherlands, Norway, Russia, South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States.

HOW HAS PARIS CLUB BEEN INVOLVED IN DEBT AGREEMENTS?

- * Paris Club has reached 478 agreements with 102 different debtor countries.
- * Since 1956, the debt treated in the framework of Paris Club agreements amounts to \$ 614 billion. Principles:
- * It operates on the principles of consensus and solidarity. Any agreement reached with the debtor country will apply equally to all its Paris Club creditors.
- * A debtor country that signs an agreement with its Paris Club creditors, should not then accept from its non-Paris Club commercial and bilateral creditors such terms of treatment of its debt that are less favourable to the debtor than those agreed with the Paris Club.

THE ROLE OF THE PARIS CLUB:

- * The Paris group countries dominated bilateral lending in the last century, but their importance has receded over the last two decades or so with the emergence of China as the world's biggest bilateral lender.
- * In Sri Lanka's case, for instance, China, Japan and India are the largest bilateral creditors.
- * Sri Lanka's debt to China is 52 per cent of its bilateral debt, 19.5 per cent to

Japan, and 12 per cent to India. With Japan a member of the Paris Club, Sri Lanka needed assurances from China and India as well.

- * The Paris Club had tried to get both countries on board a centralised effort, but Delhi launched its own bilateral negotiations with Colombo.
- * Last month, during a visit to Colombo, External Affairs Minister S Jaishankar announced that India had written to the IMF providing the necessary financial assurances, adding that it hoped others would follow suit.
- * The reported readiness by the Paris Club comes against this background. That still leaves China, whose Exim Bank offered a two-year moratorium on its loans soon after the Indian announcement. This has been deemed to be insufficient.

2.4 Trademark

[News]:

Recently, the Delhi High Court, in the case of Hamdard National Foundation (India) vs Sadar Laboratories Pvt. Ltd., restrained Sadar Laboratories from manufacturing and selling beverages under the impugned trademark 'Dil Afza'.

[Concept]:

Trade mark:



- * Trademark refers to graphical representation of goods or services to make it distinguishable from others.

- * It can be words, symbols, sound, colours, shape of goods, graphics representation or packaging etc.
- * It protects owner against unfair competition, prevents damage to reputation of owner and consumer welfare.
- * In India, trademarks are governed under Trademarks Act, 1999 (it deals with precise nature of rights one can acquire in respect of trademarks), under aegis of Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce.
- * The implementing body is Controller General of Patents, Designs and Trademarks.

2.5 The Telecom Regulatory Authority of India (TRAI)

[News]:

The Telecom Regulatory Authority of India (TRAI) has issued its recommendations on “Renewal of Multi-System Operators (MSOs) Registration”.

[Concept]:

The Telecom Regulatory Authority of India (TRAI)

Legal Backing: The Telecom Regulatory Authority of India (TRAI) was established on 20th February, 1997 by the Telecom Regulatory Authority of India Act, 1997.

Objectives of TRAI:

- * TRAI's mission is to create and nurture conditions for growth of telecommunications in the country.
- * TRAI regulates telecom services including fixation/revision of tariffs for telecom services which were earlier vested in the Central Government.
- * It also aims to provide a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.

- * Headquarters: The head office of the Telecom Regulatory Authority of India (TRAI) is located at New Delhi.

What is the Composition of TRAI?

- * Members: The TRAI consists of a Chairperson, two whole-time members and two part-time members, all of which are appointed by the Government of India.
- * Tenure of Members: The Chairperson and other members shall hold their office for a term of three years or till the age of 65 years, whichever is earlier.
- * Chairperson: The Chairperson has the powers of general superintendence.
- * He/She presides over the meetings of the TRAI.
- * Vice-Chairperson: The Central Government may appoint one of the members of the Authority as the Vice-Chairperson of TRAI.
- * The vice-chairperson exercises and discharges the powers and functions of the Chairperson in his/her absence.
- * Removal of Members: The Central Government is empowered to remove any member of the TRAI, if he/she:
 - * has been adjudged an insolvent
 - * has been convicted of an offence which involves moral turpitude
 - * has become physically or mentally incapable of acting as a member
 - * has abused his/her position, rendering his/her continuance in office prejudicial to the public interest.

TRAI Meetings:

- * The Chairperson has the power of organising the meetings at times. He/She presides over the meetings.
- * In the absence of the chairperson, the vice-chairperson presides over the meetings.
- * In the absence of a vice-chairperson, any member can be chosen from the authority to preside over the meeting.

- * The decisions in the meetings are taken by the majority vote of the members present.
- * In the event of an equality of votes, the Chairperson (or the member presiding the meeting) gives a second or casting vote.

What are the Functions of TRAI?

- * **Makes Recommendations:** The function of the TRAI is to make recommendations on the following matters:
 - * Need for introduction of new service provider.
 - * Revocation of license for non-compliance of terms and conditions of licence.
 - * Measures to facilitate competition and promote efficiency in the operation of telecommunication services to facilitate their growth.
 - * Technological improvements in the services provided by the service providers.
- * **Discharge of Responsibilities:** The TRAI is responsible for discharging the following functions:
 - * Ensuring the compliance of terms and conditions of licence.
 - * Ensuring the technical compatibility and effective interconnection between different service providers.
 - * Laying down the standards of quality of service to be provided by the service providers.
 - * Ensuring the quality of service and conducting the periodical surveys of such services.
 - * Timely and officially notifying the rates at which the telecommunication services within India and outside India shall be provided under the TRAI Act, 1997.
- * **Non-Binding Recommendations:** The recommendations of the TRAI are not binding upon the Central Government.
- * If the Central Government does not accept any recommendation of the TRAI

or needs modifications, it refers the recommendation back to the Authority for its reconsideration.

- * The TRAI forwards to the Central Government its recommendation after considering the reference made by that Government within 15 days.

What are the Powers of TRAI?

- * **Order for Furnishing Information:** It can call upon any service provider to furnish in writing the information or explanation relating to its affairs as the Authority may require.
- * **Appointments for Inquiry:** The Authority may appoint one or more persons to make an inquiry in relation to the affairs of any service provider.
- * **Order for Inspection:** It is empowered to direct any of its officers or employees to inspect the books of accounts or other documents of any service provider.
- * **Issue Directions to Service Providers:** The Authority shall have the power to issue such directions to service providers as it may consider necessary for proper functioning by service providers.

2.6 Maritime Anti- Piracy Bill 2022

[News]:

Parliament has passed the Maritime Anti-Piracy Bill 2022 with Rajya Sabha approving it.

[Concept]:

About the bill:

- * The Bill defines piracy as any illegal act of violence, detention, or destruction against a ship, aircraft,
- * person, for private purposes, by the crew or passengers of a private ship or aircraft.
- * The Bill enables Indian authorities to act against piracy on the high seas.

- * It applies to the sea beyond the Exclusive Economic Zone (EEZ)
- * EEZ is beyond 200 nautical miles from India's coastline.

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3.INTERNATIONAL RELATIONS

3.1 Asia-Pacific Broadcasting Union

[News]:

Prasar Bharati, India's Public Service Broadcaster, hosted the 59th Asia Pacific Broadcasting Union (ABU) General Assembly 2022. The conference began in New Delhi on 25th of November

[Concept]:

Asia-Pacific Broadcasting Union



- * It was established in 1964 as a not-for-profit, non-government, non-political, professional association with a mandate to assist the development of broadcasting in the region.
- * It is the biggest broadcasting union in the world.
- * It works closely with the regional broadcasting unions in other parts of the world on matters of common concern.
- * Members: ABU's membership footprint covers around 70 countries and regions on five continents.
- * The Union serves its diverse 250 members with tailored capacity-building in news, sports, programming, and technology.
- * Functions: It promotes the collective interests of television and radio broadcasters as well as key industry players and facilitates regional and international media cooperation.
- * It provides rights-free content acquisition for developing countries, negotiates rights for major sports events, and organises coverage for the region.
- * It facilitates high-quality co-productions between members bringing together

the talent of Asia and the Pacific.

3.2 Wassenaar arrangement

[News]:

India will assume chairmanship of Wassenaar arrangement on 1 Jan 2023. India has also assumed the presidency of the UNSC.

[Concept]:

Wassenaar arrangement:



- * Established in 1996
- * It is a voluntary multilateral export control regime.
- * Member states exchange information on various issues like transfer of conventional arms and dual-use goods and technologies.
- * Dual-use refers to the ability of a good or technology to be used for multiple purposes - usually peaceful and military.
- * Wassenaar Arrangement's Secretariat is in Vienna, Austria.
- * It has 42 member states.
- * India became a member of the Arrangement in 2017.

Significance for India:

- * India would be able to prevent arms diversion to terrorists or to sovereign nations supporting terrorism.
- * India could play a significant role in democratising access to technologies and processes that can serve as crucial building blocks for the newly emerging defence and space manufacturing sectors in India.

- * India is slowly emerging as a low-cost producer of several items in the WA's control lists.

3.3 Singapore Declaration

[News]:

The 17th Asia Pacific Regional Meeting (APRM) of the International Labour Organization (ILO) was held in Singapore.

[Concept]:

Singapore Declaration:

- * The Singapore Declaration aims to ensure social dialogue to address challenges associated with labour market and finding solutions for crises like the COVID-19 pandemic, natural disasters, and economic uncertainty.
- * It provides a shared vision of 10-point priorities of national action of members of the ILO to deal with issues like dwindling wages, inflation and unemployment.
- * It recognized that social dialogue is vital for gaining trust and resilience in the labour market institution, sustainable recovery, and inclusive global progress.
- * Strong and representative organizations of labours and employers are critical for building sustainable and inclusive societies and fundamental for achieving social justice and decent job opportunities.
- * Capacity must be strengthened for employers, labour organizations and governments in countries where there is insufficient capacity, mechanism or freedom to contribute in the policy development and discussion.
- * The governments must ensure that labour interests are protected through the promotion of freedom of association and the recognition of the right to collective bargaining throughout the regions, including for marginalized workers and informal workforce.
- * The gender gaps must be addressed across the world by increasing the

participation of women in the job market, promoting equal pay for equal value, balancing work and responsibilities, and promoting women's leadership.

- * Collective actions must be taken to promote a smooth and sustained transition from the informal to formal economy.
- * The rights of migrant workers must be protected by strengthening governance frameworks and respecting the freedom of association. Efforts must be taken to improve their accommodation, protect their wages, and extend social security, and where appropriate, through enhanced bilateral labour migration agreement between the sending and receiving countries.
- * Governments must facilitate the smooth transition to peace, security and decent work during times of crises.
- * Just transitions must be ensured to build environmentally sustainable economies and societies, through meaningful and effective social dialogue.

4.HISTORY AND ART & CULTURE

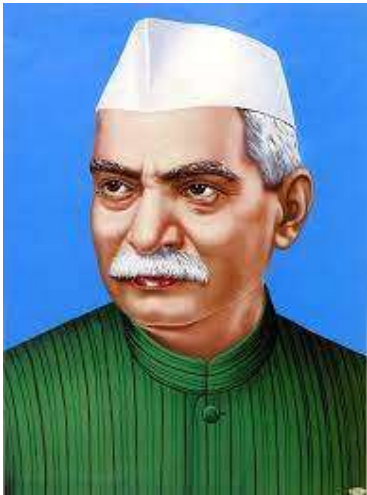
4.1 Dr. Rajendra Prasad

[News]:

Prime Minister of India paid tribute to former president of India Dr.Rajendra Prasad on his birth anniversary on 3rd December 2022.

[Concept]:

Dr. Rajendra Prasad



Birth:

- * He was born on 3rd December 1884 in the Siwan district of Bihar.

Education:

- * He joined the famed Calcutta Presidency College in 1902. After completing his Master's degree in Economics from the University of Calcutta in 1907, he went on to study law at the Calcutta Law College and practised at the Calcutta High Court.
- * He completed his Doctorate in Law from Allahabad University in 1937.
- * In the early 1920s, he became the editor of a Hindi weekly Desh and an English biweekly, Searchlight.

Role in India's Independence Movement:

- * In 1911, he became a member of the Indian National Congress and subsequently served as its President thrice.

- * He was imprisoned during the Salt Satyagraha in 1931 and the Quit India movement in 1942.
- * While Gandhiji was on a fact finding mission in Champaran district of Bihar to address grievances of local peasants, he called on Dr. Rajendra Prasad came to Champaran with volunteers.
- * Initially he was not impressed with Gandhiji's appearance or conversation. In time, however, he was deeply moved by the dedication, conviction and courage that Gandhiji displayed.
- * The Rowlatt Act of 1918 and the Jallianwala Bagh massacre of 1919 pushed Rajendra Prasad closer to Gandhiji.
- * In 1914 floods ravaged Bihar and Bengal. He became a volunteer distributing food and cloth to the flood victims.
- * Dr. Prasad called for non cooperation in Bihar as part of Gandhiji's non-cooperation movement. He gave up his law practice and started a National College near Patna, 1921.
- * In March 1930, Gandhiji launched the Salt Satyagraha. He planned to march from Sabarmati Ashram to Dandi seashore to break the salt laws. A salt Satyagraha was launched in Bihar under Dr. Prasad.
- * He presided over the Bombay session of the Indian National Congress in October 1934. Following the resignation of Subhash Chandra Bose as the President of the Congress in April 1939, He was elected President.

Contribution to Constitution Making:

- * In 1946, Rajendra Prasad joined the Interim Government of India as the Minister of Food and Agriculture.
- * As a firm believer in the maximization of agricultural production, he crafted the slogan "Grow More Food."
- * He was elected as a member of the Constituent Assembly from the Bihar Province where he served as the president of the Constituent Assembly from

1946 to 1950.

- * On 24th January 1950, at the last session of the Constituent Assembly, Prasad was elected as the President of India and has the distinction of being the only President to have been re-elected for a second term.
- * Committees of Constituent Assembly under the chairmanship of Dr. Prasad includes:
 - * Ad hoc Committee on the National flag
 - * Committee on the Rules of Procedure
 - * Finance and Staff Committee
 - * Steering Committee

Writings:

- * He recorded his life and the decades before independence in many books, among the more noted of which are “Satyagraha at Champaran” (1922), “India Divided” (1946), his autobiography “Atmakatha” (1946), “Mahatma Gandhi and Bihar, Some Reminiscences” (1949), and “Bapu ke Kadmon Mein” (1954).
- * Awarded Highest Civilian Award: In 1962, after 12 years as President, Dr. Prasad retired, and was subsequently awarded the Bharat Ratna, the nation’s highest civilian award.

4.2 Mahaparinirvan Diwas

[News]:

Bharat Ratna Dr BR Ambedkar’s 67th Mahaparinirvan Diwas or death anniversary was celebrated recently.

[Concept]:

Mahaparinirvan Diwas

- * Parinirvana, regarded as one of the major principles as well as goals of Buddhism, is a Sanskrit term which means release or freedom after death.

- * As per the Buddhist text Mahaparinibbana Sutta, the death of Lord Buddha at the age of 80 is considered as the original Mahaparinirvan.
- * 6th December is observed to commemorate the unfathomable contribution to society given by Dr. Bhimrao Ambedkar and his achievements. Owing to Ambedkar's status as a Buddhist leader, his death anniversary is referred to as Mahaparinirvan Diwas.

Who was Dr. Bhimrao Ambedkar?

About:

Babasaheb Dr. Bhimrao Ambedkar was a social reformer, jurist, economist, author, polyglot (knowing or using several languages) orator, a scholar, and thinker of comparative religions.

Birth:

He was born in 1891 in Mhow, Central Province (now Madhya Pradesh).

Brief Profile:



- * He is known as the Father of the Indian Constitution and was India's first Law Minister.
- * He was the Chairman of the Drafting Committee for the new Constitution.
- * He was a well-known statesman who fought for the rights of the Dalits and other socially backward classes.

Contributions:

- * He led the Mahad Satyagraha in March 1927 against Hindus who were opposing the decision of the Municipal Board.
- * In 1926, the Municipal Board of Mahad (Maharashtra) passed an order to throw open the tank to all communities. Earlier, the untouchables were not allowed to use water from the Mahad tank.
- * He participated in all three Round Table Conferences.
- * In 1932, Dr. Ambedkar signed the Poona pact with Mahatma Gandhi, which abandoned the idea of separate electorates for the depressed classes (Communal Award).
- * However, the seats reserved for the depressed classes were increased from 71 to 147 in provincial legislatures and to 18% of the total in the Central Legislature.
- * His ideas before the Hilton Young Commission served as the foundation of the Reserve Bank of India (RBI).

Election and Designation:

- * In 1937, he was elected to the Bombay Legislative Assembly as a legislator (MLA).
- * He was appointed to the Executive Council of Viceroy as a Labour member in 1942.
- * In 1947, Dr. Ambedkar accepted PM Nehru's invitation to become Minister of Law in the first Cabinet of independent India.

Shift to Buddhism:

- * He resigned from the cabinet in 1951, over differences on the Hindu Code Bill.
- * He converted to Buddhism in 1956.
- * He was awarded India's highest civilian honour the Bharat Ratna in 1990.

Important Works:

Journals:

- * Mooknayak (1920)
- * Bahishkrit Bharat (1927)
- * Samatha (1929)
- * Janata (1930)

Books:

- * Annihilation of Caste
- * Buddha or Karl Marx
- * The Untouchable: Who are They and Why They Have Become Untouchables
- * Buddha and His Dhamma
- * The Rise and Fall of Hindu Women

Organisations:

- * Bahishkrit Hitkarini Sabha (1923)
- * Independent Labor Party (1936)
- * Scheduled Castes Federation (1942)

Death:

- * He died on 6th December 1956.
- * Chaitya Bhoomi is a memorial to B R Ambedkar, located in Mumbai.

Relevance of Ambedkar in Present Times:

- * Caste-based inequality in India still persists. While Dalits have acquired a political identity through reservation and forming their own political parties, they lack behind in social dimensions (health and education) and economic dimension.
- * There has been a rise of communal polarization and communalization of politics. It is necessary that Ambedkar's vision of constitutional morality must supersede religious morality to avoid permanent damage to the Indian Constitution.

4.3 Sangai Festival

[News]:

Recently the Prime Minister of India addressed the Manipur Sangai Festival via video message.

[Concept]:**About Sangai Festival:**

- * The festival is named after the state animal, Sangai, the brow-antlered deer found only in Manipur.
- * Sangai festival is an annual cultural festival organised by Manipur Tourism Department every year.
- * Many editions of this Festival has been celebrated over the past few years with the name of Tourism Festival, since 2010 this has been renamed as the Sangai Festival.
- * This festival is being celebrated to promote Manipur as a world class tourism destination.
- * It showcases the states contributions to: art and culture, handloom, handicrafts, fine arts, indigenous sports, cuisine, music and adventure sports, natural environment.

4.4 Sylhet-Silchar festival**[News]:**

The first edition of the Sylhet-Silchar Festival was organized on 7th December, 2022, in Assam's Barak Valley to celebrate the cultural ties between India and Bangladesh.

[Concept]:**What is Sylhet-Silchar Festival?**

- * The Sylhet-Silchar Festival aims to strengthen the bilateral relations between India and Bangladesh.
- * The two-day festival was jointly organized by the India Foundation (which

comes under the aegis of the Union Ministry of Culture) and Bangladesh Foundation for Regional Studies.

- * This event commemorated the 75th anniversary of India's independence and 50th anniversary of Bangladesh's liberation from Pakistan.
- * It showcased the cuisine, arts, crafts, culture, and local products of the two neighboring regions of Sylhet (Bangladesh) and Silchar (India).
- * It provided the platform for exploring multi-disciplinary trade opportunities in sectors like healthcare, tourism, education and digital infrastructure.
- * It was organized with the help from the Indian Government's Culture Ministry, Assam government, Bangladesh India Friendship Society and India-Bangladesh Chamber of Commerce and Industry.

What are the areas of focus of the event?

- * Sylhet and Silchar have been sharing close cultural ties for many years, like common language, traditions and cuisine. This festival sought to further strengthen the people-to-people ties between the two regions. Eminent people from India and Bangladesh discussed issues of mutual interest during the event.
- * The event included a series of panel discussions by experts and policymakers on issues pertaining to mutual growth and opportunities. Both countries have reiterated their desire to restore bus and flight services between India and Bangladesh, including the introduction of direct flights between Sylhet and Guwahati. Authorities also discussed the importance of preserving and protecting ecosystems in the neighboring regions. They called for a concerted approach to protect the Meghna river basin that is shared by the two countries. The basin has 29 transboundary rivers originating from India and flowing southwards through Bangladesh before draining into the Bay of Bengal. The Garo, Khasi and Jaintia communities live around this river basin.

4.5 Pt. Madan Mohan Malviya

[News]:

The Prime Minister, Shri Narendra Modi has paid tributes to Pt. Madan Mohan Malviya on his Jayanti. Shri Modi recalled Pt. Madan Mohan Malviya's memorable contribution to enrich the education sphere.

[Concept]:

Pt. MM Malviya:

- * Born in Allahabad on December 25, 1861, Malviya took early education under the 'Pathshala' system, and was proficient in Sanskrit.
- * In 1879, he graduated from the Muir Central College (today's Allahabad University) and started working as a teacher at a local high school.
- * Contributions:
- * Founded Hindu Mahasabha in 1906
- * Founded Banaras Hindu University (BHU) in 1915
- * Malviya joined the Indian National Congress at its Calcutta session in 1886.
- * He was president of INC four times – in 1909, 1918, 1932 and 1933.
- * He was a social reformer and a successful legislator, serving as a member of the Imperial Legislative Council for 11 years (1909–20).
- * Malviya espoused free and compulsory primary education, opposed the system of indentured labour in the British Empire, and supported the nationalisation of railways.
- * In 1930, when Mahatma Gandhi launched the Salt Satyagraha and the Civil Disobedience Movement, he participated in it and courted arrest.
- * He gave two famous speeches on communal harmony- one in Lahore in 1922 and in Kanpur 1931.
- * He created a non-governmental organization named Shri Mathura Vrindavan Hasanand Gochar Bhoomi in Vrindavan for Welfare of Cow.

Achievements:

- * He is referred to as ‘Mahamana’
- * In 2015, the government bestowed Malviya with the Bharat Ratna, India’s highest
- * civilian honour, 68 years after his death.
- * In 2016, the Indian Railways started the Varanasi-New Delhi Mahamana Express in
- * the leader’s honour.
- * Books – A Criticism of Montagu-Chelmsford Proposals of Indian Constitutional Reform, Speeches and Writings.

4.6 Ratnagiri’s pre- historic rock art

[News]:

Experts and conservationists have raised concerns that the proposed mega oil refinery in Barsu village, Maharashtra, may damage nearby prehistoric geoglyphs.

[Concept]:

Ratnagiri’s pre- historic rock art

What are Geoglyphs?

- * Geoglyphs are a form of prehistoric rock art, created on the surface of laterite plateaus by removing a part of the rock surface through an incision, picking, carving or abrading.
- * They can be in the form of rock paintings, etchings, cup marks and ring marks.
- * Ratnagiri’s prehistoric rock art Clusters of geoglyphs are spread across the Konkan coastline in Maharashtra and Goa, spanning around 900 km.
- * Ratnagiri district has more than 1,500 pieces of such art, also called “Katal shilpa,” spread across 70 sites.
- * Age: According to carbon dating, these sites are believed to be over 12,000 – 20,000 years old. The sites are protected by the Archaeological Survey of

India (ASI).

Figures depicted in the geoglyphs

- * The figures depicted in the geoglyphs include humans and animals such as deer, elephant, tiger, monkey, wild boar, rhinoceros, hippopotamus, cattle, pig, rabbit, and monkey.
- * They also include a high number of reptilian and amphibian creatures such as tortoises and alligators, aquatic animals such as sharks and stingrays, and birds like peacocks.

Significance of Ratnagiri's rock art

- * Ratnagiri's rock art is evidence of the continued existence of human settlements from the Mesolithic (middle stone age) to the early historic era.
- * The geoglyphs also show the existence of certain types of fauna that are no longer present in the region today.
- * Imagery from these sites shows how people “adapted to ephemeral wetlands in a dry-arid plateau having shallow rock pools, streams and watercourses”.

Inclusion in UNESCO's Tentative List

- * In April 2022, these sites in the Konkan region were added to a tentative list of UNESCO's world heritage sites.
- * The UNESCO listing mentions “Konkan geoglyphs.” However, elsewhere, the term petroglyph (literally, “rock symbol/character”) is also used.
- * UNESCO's tentative world heritage list mentions seven sites with petroglyphs in Ratnagiri district — Ukshi, Jambharun, Kasheli, Rundhe Tali, Devihsol, Barsu and Devache Gothane, one in Sindhudurg district –Kudopi village, and nine sites at Phansamal in Goa.

4.7 Tanpura/Tambura

[News]:

Beleaguered tanpura makers get some support from the Indian Council for

Cultural Relations.

[Concept]:

About Tanpura/Tambura:

- * The tanpura, also referred to as tambura and tanpuri, is a long-necked plucked string musical instrument, originating in India.
- * It does not play melody, but rather supports and sustains the melody of another instrument or singer.
- * A tanpura is not played in rhythm with the soloist or percussionist.
- * Hindustani musicians favour the term tanpura whereas Carnatic musicians say tambura.
- * Tanpuras are designed in two different styles:
- * Miraj style: This is the favourite form of tanpura for Hindustani performers.

4.8 Meitei script

[News]:

The script, once patronised by Meitei rulers but which fell into disuse with the advent of Hinduism and eventually disappeared, is now enjoying a new lease of life after a decades-old movement for its revival.

[Concept]:

About the Meiteilon script:

- * The Meiteilon (Manipuri language) script is fairly old.
- * The earliest epigraphic record of the script is a stone inscription from Khoibu village which was erected on the orders of Meidingu Kiyamba (1467-1508).
- * 'Meidingu' are kings who belong to the Ningthouja clan whose rule extends from 33 AD to 1949 AD.
- * The Meitei Mayek or Meitei script evolved with time and this led to conflict between various proponents.
- * The inscriptions on the coins of the 7th and 8th Century were perhaps in the

18- letter script, which, with the advent of Hinduism in the 17th century during the reign of Meidingu Pamheiba (1709-1748), was perhaps expanded to the 36-letter script.

- * With the advent of Hinduism, Bengali scripts became so popular that stone inscriptions in the 18th and 19th century were in Bengali script.
- * A movement to revive the Meitei Mayek started in the 1930s and gathered strength in the 1950s.
- * By a Cabinet decision taken on May 18, 2005, Manipuri written in Meitei Mayek was
- * introduced in schools and by now, it is taught even at the university level, replacing Bengali script.

4.9 1925 Kakori Train Action

[News]:

Four revolutionaries of the Indian independence movement were hanged on December 17 (Rajendranath Lahiri) and December 19 (Ashfaqullah Khan, Ram Prasad Bismil, Thakur Roshan Singh) in 1927.

[Concept]:

What was the Kakori Train Action incident?

- * The train robbery at Kakori was the HRA's first major action, in August 1925.
- * The Number 8 Down Train ran between Shahjahanpur and Lucknow.
- * It carried treasury bags meant to be deposited in the British treasury in Lucknow.
- * The revolutionaries planned to rob this money, which they believed legitimately belonged to Indians anyway.
- * Their objective was both to fund the HRA and garner public attention for their work and mission.
- * On August 9, 1925, as the train was passing the Kakori station, about 15 km

from Lucknow, Rajendranath Lahiri, a member of the HRA who was already seated inside, pulled the chain and stopped the train.

- * Subsequently, around ten revolutionaries, including Ram Prasad Bismil and Ashfaquallah Khan, entered the train and overpowered the guard.
- * They looted the treasury bags and escaped to Lucknow.
- * Response of Britishers: The British authorities were enraged, undertaking a violent crackdown and soon arresting many members of the HRA.
- * The only major leader of HRA at this time who evaded arrest was Chandrashekhar Azad.
- * The severity of the British response was somewhat surprising, especially the handing out of capital sentences.
- * Status of HRA: In 1928, a year after the execution of the Kakori Conspiracy accused, the HRA merged with various other revolutionary groups that had emerged in Punjab, Bihar, and Bengal and became the Hindustan Socialist Republican Association (HSRA).

4.10 Panini's 'Ashtadhyayi'

[News]:

Recently Cambridge scholar claimed to have solved Sanskrit's biggest puzzle—a grammar problem found in the 'Ashtadhyayi', an ancient text written by the scholar Panini towards the end of the 4th century BC.

[Concept]:

About Panini, the 'father of linguistics':

- * Panini probably lived in the 4th century BC, the age of the conquests of Alexander and the founding of the Mauryan Empire.
- * He likely lived in Salatura (Gandhara), which today would lie in north-west Pakistan.
- * Panini was probably associated with the great university at Takshashila, which

also produced Kautilya and Charaka, the ancient Indian masters of statecraft and medicine respectively.

About Ashtadhyayi:

- * ‘Ashtadhyayi’, or ‘Eight Chapters’ – is a linguistics text that set the standard for how Sanskrit was meant to be written and spoken.
- * Commentaries on Panini includes Mahabhasya of Patanjali (2nd century BC) and the Kashika Vritti of Jayaditya and Vamana (7th century AD).

4.11 Betta-Kuruba tribe

[News]:

Recently the Lok Sabha passed the Scheduled Tribes (Fourth Amendment) Bill, 2022 to include Betta-Kuruba on the Scheduled Tribes list.

[Concept]:

Betta kurubas:

- * The Betta Kuruba (Betta meaning ‘Hill’, Kuruba meaning ‘shepherd’) tribe lives in the hilly regions of Karnataka, and is one of the few indigenous communities of the Nilgiris.
- * Traditionally, the Kuruba people drew sustenance from hunting, gathering and collecting wild honey.
- * Due to relocation, the Betta Kuruba people are being forced to give up their traditional livelihood, and work as agricultural labourers in coffee, spice (such as pepper, ginger, cardamom) and tea plantations.
- * They speak Betta Kurumba language which is a Dravidian language closely related to Tamil.
- * They are generally believed to be the descendants of the Pallavas.
- * Consanguineous marriages like cross-cousin marriages are preferred among the Kurumbas.

4.12 Srisailam Temple

[News]:

Recently, President of India has inaugurated the project development of Srisailam Temple in the State of Andhra Pradesh.

[Concept]:

Srisailam temple:



- * Mallikarjuna Temple or Srisailam Temple is a Hindu temple dedicated to the deity Shiva.
- * It is located at Srisailam in Indian state of Andhra Pradesh.
- * It is referred to as one of the twelve Jyothirlingas of Lord Shiva. Here Parvati is worshiped as "Mallika" and Shiva is worshipped as "Arjuna", represented by the lingam.
- * There are inscriptional evidence from the Satavahana dynasty which place the temple to be existent from the 2nd century.
- * Most modern additions were done during the time of king Harihara I of Vijayanagara Empire. The veerasheromandapam and paathalaganga steps was constructed during the time of Reddi Kingdom.
- * The temple complex houses many halls; the most notable is the Mukha Mandapa built during the Vijayanagar period.

4.13 National Archives of India

[News]:

The National Archives of India (NAI) does not have records of 1962, 1965, and 1971 wars, or even of the Green Revolution.

There are in all 151 ministries and departments, and the NAI has only records of 64 agencies – several Union ministries and departments have not shared their records with NAI

[Concept]:

NAI:

- The NAI functions under the Ministry of Culture.
- It is the repository of all non-current government records, holding them for the use of administrators and scholars.
- Originally established as the Imperial Record Department in 1891 in Calcutta, the capital of British India, the NAI is now located in Delhi.
- It keeps and conserves records of the government and its organisations only, and does not receive classified documents.
- The holdings in NAI are in a regular series starting from the year 1748, and the languages of the records include English, Arabic, Hindi, Persian, Sanskrit and Urdu.
- Lately, NAI has also made efforts to make available all the records digitally — on the newly created Abhilekh Patal portal.

4.14 Sri Guru Gobind Singh

[News]:

The Prime Minister, Shri Narendra Modi has paid tributes to Sri Guru Gobind Singh Ji on the sacred occasion of Parkash Purab of Sri Guru Gobind Singh.

[Concept]:

Sri Guru Gobind Singh:

- * Guru Gobind Singh was (January 5, 1671 – 21 October, 1708) born “Gobind Rai” at Patna Sahib, Bihar, India
- * He was the tenth and last of the Gurus of Sikhism.

- * He became Guru at the age of nine, following the martyrdom of his father, the ninth Guru, Guru Tegh Bahadur (killed by Aurangzeb).

WE4U IAS

5.GEOGRAPHY

5.1 Fiji

[News]:

Recently Former military commander and Two-time coup leader Sitiveni Rabuka took oath as Fiji's Prime Minister.

[Concept]:

About Fiji:



- * It is a part of Oceania.
- * It was a British colony for almost one hundred years from 1874.
- * It gained independence in 1970.
- * Capital: Suva
- * Main Rivers: The Rewa, Navua, Sigatoka (Singatoka), and Ba (Mba).
- * Highest Peak: Tomanivi (Mount Victoria) with 4,344 feet (1,324 metres).
- * UNESCO's world heritage site: Levuka Historical Port Town.
- * Its largest island is called Viti Levu.
- * It surrounds Koro Sea, north of Auckland, New Zealand.

5.2 Cactus Plantation and its Economic Usage

[News]:

Recently Union Minister of Rural Development and Panchayati Raj convened a consultation meeting on 'Cactus Plantation and its Economic Usage'.

[Concept]:

About Cactus:



- * A cactus is a member of the plant family Cactaceae.
- * Although some species live in quite humid environments, most cacti live in habitats subject to at least some drought.
- * Many live in extremely dry environments, even being found in the Atacama Desert, one of the driest places on Earth.
- * Because of this, cacti show many adaptations to conserve water.
- * For example, almost all cacti are succulents, meaning they have thickened, fleshy parts adapted to store water.
- * Unlike many other succulents, the stem is the only part of most cacti where this vital process takes place.
- * Most species of cacti have only spines, which are highly modified leaves.
- * Spines help prevent water loss by reducing air flow close to the cactus and providing some shade.
- * In the absence of true leaves, cacti's enlarged stems carry out photosynthesis.

Conservation:

- * All cacti are included in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- * Some cacti, such as all Ariocarpus and Discocactus species, are included in the more restrictive Appendix I.

Uses:

- * Cactuses are known for their nutrients as well as their medicinal value.
- * Both cactus pads and cactus fruit can help fight infections and ease the symptoms of anything from hangovers to high cholesterol.
- * Both the cactus pad and the cactus fruit are high in fiber, which can lower cholesterol levels in the blood.
- * used as ornamental plants
- * used for fodder or forage,
- * Cactus fruits in particular are an excellent source of vitamin C, which is one of the best immune boosters.
- * **Nutrition:** Cactus fruits and pads offer a dose of vitamins and nutrients that have anti-inflammatory properties and can help reduce the risk of serious health conditions like diabetes and heart disease.

5.3 Okavango delta and Murchison Falls**[News]:**

Oil companies are threatening two of Africa's most iconic biodiversity hotspots in an effort to drill for oil that will ultimately make its way to a global elite and won't benefit Africans, a recent report by a German non-profit has highlighted.

[Concept]:**Okavango delta:**

- * The Okavango delta is a UNESCO World Heritage Site
- * It is in Botswana.
- * It is homeland of indigenous people like the San.
- * It is formed by the Okavango river – originates in the highlands of Angola.
- * The river flows into the Kalahari Desert of southern Africa and spreads out, forming what is called a 'fan'.
- * It is one of the very few major

- * interior delta systems that do not flow into a sea.
- * This delta comprises permanent marshlands and seasonally flooded plains.

Importance of Okavango delta:

- * The Okavango's waters make the otherwise dry area a waterlogged wetland that
- * provides vital water resources for animals, plants and over one million people.
- * It is home to Africa's Big Five wildlife species: Savanna elephants, Cape buffaloes,
- * rhinos, lions and leopards.
- * There are also giraffes, zebras, antelopes, pangolins, 400 bird species and over 1,000 plant species.
- * More than 200,000 people live in the area that falls under Recon Africa's exploration licenses.

Murchison Falls:

- * It is Uganda's oldest and largest national park,
- * It is home to iconic African wildlife species.
- * It is situated on the northern shore of Lake Albert, one of the Rift Valley Great Lakes that lies on the border between Uganda and the Democratic Republic of Congo.
- * The River Nile flows through the park and elephants, hippos, Nile crocodiles, buffaloes and marabou storks can regularly be seen on its banks.
- * Kavango Zambezi Transfrontier Nature Conservation Area (KAZA):
- * KAZA is the second- largest nature and landscape conservation area in the world.
- * It is spread across the borders of Angola, Botswana, Namibia, Zambia and Zimbabwe.

About Botswana:

- * Capital – Gaborone

- * It is a landlocked country in Southern Africa.
- * Its 70% territory is covered by Kalahari Desert.
- * Botswana has the world's largest elephant population, estimated to be around 130,000.
- * It is Africa's oldest continuous democracy.

5.4 Barak River

[News]:

The assured depth dredging work of river Barak from Badarpur to Bhanga (10.5 km) has been awarded to Dredging Corporation of India.

[Concept]:

Barak River:



- * Barak River is one of major rivers of South Assam.
- * It rises in Manipur. After Manipur it flows through Mizoram and Assam.
- * The 564 kilometres long river is part of Surma-Meghna River System.
- * It later enters Bangladesh where it splits into Surma and Kushiya rivers.
- * The principal tributaries of Barak are the Jiri, the Dhaleswari, the Singla, the Longai, the Sonai and the Katakhal.
- * The Barak sub-basin drains areas in India, Bangladesh and Burma.
- * The drainage area lying in India is 41723 sq.km which is nearly 1.38% of the total geographical area of the country.
- * The sub-basin lies in the States of Meghalaya, Manipur, Mizoram, Assam, Tripura and Nagaland.

6.ENVIRONMENT

6.1 State of the Climate in Asia 2021 report

[News]:

The State of the Climate in Asia 2021 report published by the World Meteorological Organization (WMO) and the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) has been released.

[Concept]:

Findings of the report:

- * India suffered a total loss of \$3.2 billion from floods and \$4.4 billion from storms in 2021 as climate change has made these events more frequent.
- * During 2021, India experienced five cyclonic storms with maximum sustained
- * wind speeds of ≥ 34 knots
- * Extremely severe cyclonic storm Tauktae (May) formed over Arabian Sea during pre-monsoon season was the most devastating.
- * Severe Cyclonic Storm Yaas (May) hit West Bengal and northern Odisha, causing damages worth Rs 20,000 crore and Rs 600 crore, respectively.
- * Cyclone Gulab (September) landed on the Andhra Pradesh and Odisha coasts, accumulated damages to the tune of Rs 2,000 crore.
- * Cyclone Shaheen was formed from the remnants of Gulab and caused heavy rainfall in Gujarat.
- * Cyclonic Storm Jawad, causing heavy rainfall over the eastern coast.
- * Thunderstorms and lightning claimed around 800 lives in the country.
- * India was only second to China in Asia. China suffered the highest economic loss in Asia (\$18.4 billion) after flooding.
- * Floods and storms accounted for 80 per cent of the natural disasters that struck Asia in 2021.
- * Ocean warming could contribute to sea level rise, alter storm paths and ocean currents and increase stratification, the report warned.

- * Upper-ocean warming is important because it directly affects the atmosphere in terms of convection, winds, cyclones etc.
- * The deep ocean does not affect the atmosphere directly
- * Warming is particularly strong in the Arabian Sea because it has pathways to receive excess heat through atmospheric tunnels and bridges. Mixed warm water from various oceans is pumped into it.
- * These regions are warming more than three times faster than the global mean upper-ocean warming rate
- * Kuroshio Current takes warm water from the tropics and stronger winds force more heat into the current.
- * Excessive rainfall due to La Nina – During this time, the pressure patterns set up in India go from North to South, which drives circulations from Eurasia and China.
- * Northeast monsoon rainfall experienced over southern peninsular India during
- * the northeast monsoon was exceptionally above normal (171 per cent of the long-term average) and was the highest (579.1 millimetre) since 1901.

6.2 State of Finance for Nature report

[News]:

According to a new United Nations (UN) report, Financing for nature-based solutions (NbS) needs to be doubled to deal with multiple global crises of climate change, biodiversity loss and land degradation.

[Concept]:

About the report:

- The report was released by the UN Environment Programme (UNEP) along with the Economics of Land Degradation initiative of the Federal Ministry for Economic Cooperation and Development (BMZ) of Germany, the United Nations Convention to Combat Desertification (UNCCD) and

the European Commission.

*** Key findings of the report:**

- The key focus should be on doubling finance flows to NbS and reducing it for activities that increase greenhouse gas (GHG) emissions.
 - According to the report, the current global investments in NbS are around \$154 billion (Rs 12,49.44 crore) per year, which needs to be increased to \$384 billion by 2025.
 - “Harmful subsidies are highest in the energy sector, estimated to range from
- * \$340 billion/ year to \$530 billion/year and in the agriculture sector, estimated around \$500 billion/year,” estimated the report.
- The report recommended the phase-out of these investments.
 - Another highlight of the report was the need for private investments in nature- based solutions, which currently stands at only 17 per cent.
 - Private actors can combine Net Zero with nature positive, the report suggested.

6.3 Flue Gas Desulphurisation

[News]:

According to study conducted by Centre for Research on Energy and Clean Air (CREA), since December 2015 , not one single power station in West Bengal has installed Flue Gas Desulphurisation (FGD) technology to reduce SO₂ emissions.

[Concept]:

About Flue Gas Desulphurisation (FGD):

- * Flue-gas desulfurization (FGD) is a set of technologies used to remove Sulphur dioxide (SO₂) from exhaust of fossil-fuel power plants.
- * Flue gas is the gas exiting to the atmosphere via a flue, which is a pipe or channel for conveying exhaust gases from a fireplace, oven, furnace, boiler or steam generator.

- * FGD systems may involve wet scrubbing or dry scrubbing.
- * In wet FGD systems, flue gases are brought in contact with an
- * absorbent, which can be either a liquid or a slurry of solid material. The Sulphur dioxide dissolves in or reacts with the absorbent and becomes trapped in it.
- * In dry FGD systems, the absorbent is dry pulverized lime or limestone; once absorption occurs, the solid particles are removed by means of baghouse filters.
- * **About Sulphur dioxide:**
 - It is an inorganic compound, heavy, colourless, and poisonous gas.
 - It has a pungent, irritating odour, similar to the smell of a just-struck match.
 - In nature, it occurs in volcanic gases and in a solution of some water warm springs.
 - Usually, it is prepared industrially by the burning in air or
 - In large quantities, sulphur dioxide is formed in the combustion of sulphur-containing fuels.
 - It can combine in the atmosphere with water vapour to form sulphuric acid which is a major component of acid rain.
 - **Sulphur Dioxide uses are:**
 - It is used in the preparation of sulphuric acid, sulphur trioxide, and sulphites.
 - It is also used as a disinfectant.
 - It is used in a refrigerant, a reducing agent, a bleach, and food preservation mainly in dried fruits.
 - **Sulphur Dioxide (SO₂) and Air Pollution:**
 - SO₂ emissions are a significant contributor to air pollution. High concentrations of SO₂ in the air generally lead to the formation of other Sulfur Oxides (SO_x).
 - SO_x can react with other compounds in the atmosphere to form small particles. These particles contribute to Particulate Matter (PM) pollution.
 - Small particles may penetrate deeply into the lungs and in sufficient

quantity can contribute to health problems.

- The greatest source of SO₂ in the atmosphere is the burning of fossil fuels in power plants and other industrial facilities.
- Other sources include industrial processes such as extracting metal from ore, natural sources such as volcanoes, and locomotives, ships and other vehicles and heavy equipment that burn fuel with high sulphur content.

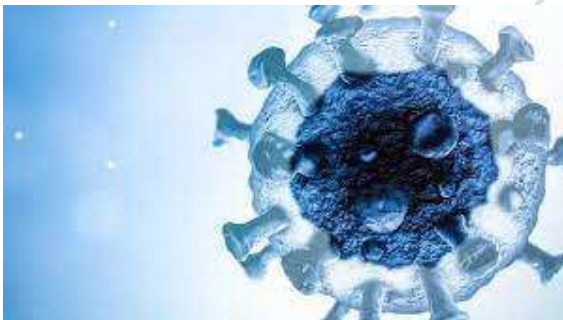
6.4 'Zombie Virus'

[News]:

European researchers have raised concerns of yet another pandemic after resurrecting a 48,500-year-old 'zombie virus' from a frozen lake in Russia.

[Concept]:

About Zombie Virus:



- * Zombie virus is the term given to a virus that is frozen in ice and therefore dormant.
- * The virus emerged due to the thawing of permafrost as the global temperature is rising.
- * It is a group of viruses which have been dormant for thousands of years.
- * It is dubbed Pandoravirus yedoma after the mythological character Pandora which was 48,500 years old and has the potential to infect other organisms.
- * It was discovered below the bottom of a lake in Yukechi Alas in Yakutia, Russia.

6.5 Bhopal Gas Tragedy

[News]:

According to the Sambhavna Trust, the leakage of 27 tonnes of deadly methyl isocyanate (MIC) gas from the pesticide plant owned by Union Carbide Corporation in Bhopal 38 years ago is still wreaking havoc on the city. The latest is the spike in incidences of fungal infection among survivors.

[Concept]:

About Bhopal Gas Tragedy:

- * In the early hours of December 3, 1984, methylisocyanate (MIC) gas leaked from a plant operated by Union Carbide India Limited (UCIL) at Bhopal (Madhya Pradesh).
- * The final death toll was estimated to be between 15,000 and 20,000.
- * Some half a million survivors suffered respiratory problems, eye irritation or blindness, muscular dystrophy and other maladies resulting from exposure to the toxic gas.
- * The study found out that babies born to women exposed to gas were significantly more likely to have “congenital malformations” than those born to women unexposed to gas.
- * Government’s response to Bhopal Gas tragedy:
 - * The government passed the Bhopal Gas Leak Act in March 1985, which allowed it to act as the legal representative for victims.
 - * In June 2010, seven former employees of Union Carbide, who were all Indian nationals, were convicted of causing death by negligence and sentenced to two years of imprisonment. However, they were later released on bail.
- * Fungal Infections:
 - * Ringworm disease, caused by a fungus called tinea, is on the rise. • Red itchy patches occur in the groin, on the head or in different places of the body. The rash spreads if left untreated.

- * Yeast infection candida albicans is also being reported to the Sambhavna Clinic by female survivors.
- * **About Methyl Isocyanate (MIC):**
- * Methyl isocyanate is a colourless highly flammable liquid that evaporates quickly when exposed to the air. It has a sharp, strong odour.
- * It is used in the production of pesticides, polyurethane foam, and plastics.
- * The chemical is highly reactive to heat. When exposed to water, the compounds in MIC react with each other causing a heat reaction.
- * Immediate health effects include ulcers, photophobia, respiratory issues, anorexia, persistent abdominal pain, genetic issue, neuroses, impaired audio and visual memory, impaired reasoning ability, and a lot more.
- * Long-term health effects include chronic conjunctivitis, decreased lung function,
- * increased pregnancy loss, increased infant mortality, increased chromosomal abnormalities, impaired associate learning and more.

6.6 Kunming- Montreal Global Biodiversity Framework.

[News]:

In 2022, at the 15th Conference of Parties (COP15) to the UN Convention on Biological Diversity delegates from 196 countries met in Montreal, Canada from December 7-21 with the aim to hammer out a new global agreement on halting environmental loss.

[Concept]:

Major Outcomes of COP15:

- * 30x30 Deal: Restore 30% degraded ecosystems globally (on land and sea) by 2030
- * Conserve and manage 30% areas (terrestrial, inland water, and coastal and marine) by 2030

- * Money for Nature: Signatories aim to ensure USD200 billion per year is channelled to conservation initiatives, from public and private sources.
- * Wealthier countries should contribute at least USD20 billion of this every year by 2025, and at least USD30 billion a year by 2030.
- * Big Companies Report Impacts on Biodiversity: Companies should analyse and report how their operations affect and are affected by biodiversity issues.
- * The parties agreed to large companies and financial institutions being subject to “requirements” to make disclosures regarding their operations, supply chains and portfolios.
- * Harmful Subsidies: Countries committed to identify subsidies that deplete biodiversity by 2025, and then eliminate, phase out or reform them.
- * They agreed to slash those incentives by at least USD500 billion a year by 2030 and increase incentives that are positive for conservation.
- * Monitoring and reporting progress: All the agreed aims will be supported by processes to monitor progress in the future, in a bid to prevent this agreement meeting the same fate as similar targets that were agreed in Aichi, Japan, in 2010, and never met.
- * National action plans will be set and reviewed, following a similar format used for greenhouse gas emissions under U.N.-led efforts to curb climate change.

6.7 Nevada wildflower

[News]:

In the United States, wildlife officials declared a Nevada wildflower endangered at the only place it’s known to exist – on a high-desert ridge where a lithium mine is planned to help meet the growing demand for electric car batteries.

[Concept]:

About Nevada Wildflowers:



- Sierra Nevada meadows explode in the spring and summer with beautiful wildflowers.
- In English Meadow, the orange-red Indian paintbrush (genus *Castilleja*) grows amid tall, yellow-flowered arrowleaf ragwort (*Senecio triangularis*).
- Meadow wildflowers play an important role in the larger ecosystems of the Sierra Nevada.
- The flowers are a primary food source for insects, and insects are an important food source for bats and birds.
- * About Sierra Nevada:
 - Sierra Nevada, also called Sierra Nevadas, major mountain range of western North America, running along the eastern edge of the U.S. state of California.
 - Its great mass lies between the large Central Valley depression to the west
- * and the Basin and Range Province to the east.
 - Extending more than 250 miles (400 kilometres) northward from the Mojave Desert to the Cascade Range of northern California and Oregon, the Sierra Nevada varies from about 80 miles wide at Lake Tahoe to about 50 miles wide in the south.

7.SCIENCE & TECHNOLOGY

7.1 Dark patterns

[News]:

Some Internet-based firms have been tricking users into agreeing to certain conditions or clicking a few links.

[Concept]:

About Dark patterns:



- * These patterns are unethical user interface designs that deliberately make users' Internet experience harder or even exploit them.
- * In turn, they benefit the company or platform employing the designs.
- * By using dark patterns, digital platforms take away a user's right to full information about the services they are using and their control over their browsing experience.
- * The term is credited to UI/UX (user interface/user experience) researcher and designer Harry Brignull, who has been working to catalogue such patterns and the companies using them since around 2010.

7.2 Tidal disruption event (TDE)

[News]:

A mysterious and intensely bright flash of light coming from halfway across the universe earlier this year stunned astronomers worldwide. The source of the intense beam has now been identified — a supermassive black hole ripping apart a star, pointing directly at Earth.

[Concept]:**About Tidal disruption event (TDE):**

- * Astronomers study Blackholes by watching for their effects on nearby stars and gas. These stars are disrupted when the black hole's tidal gravity exceeds the star's self- gravity, and this phenomenon is called tidal disruption events (TDE).
- * The tidal disruption events are crucial and
- * useful phenomena to detect and predict the mass of supermassive black holes in quiescent galaxies.

7.3 Vikram S rocket**[News]:**

On November 18, 2022, Hyderabad-based Skyroot Aerospace scripted history by becoming the first private Indian organisation to launch a rocket from Indian Space Research Organisation (ISRO)'s launch pad in Sriharikota

[Concept]:**Vikram S rocket:**

- * It is a part of Mission Parambh, which means the beginning.
- * It is a sub-orbital rocket, which reached outer space and then splashed into the sea.
- * Has payload capacity of up to 300 kilograms.
- * Vikram-S used solid fuel-ammonium perchlorate, which is not completely green fuel.

- * With Vikram-2, it is planned to use liquefied natural gas (LNG), which is greener compared with traditional kerosene fuel.

7.4 Ethylene Glycol

[News]:

A day after Uzbekistan alleged 18 child deaths in Samarkand from consumption of a medicinal syrup manufactured by an Indian drug maker, the Department of Chemicals and Petrochemicals with the Ministry of Chemicals and Fertilizers issued a gazette notification titled Ethylene Glycol (Quality Control) Order, 2022 on December 29.

[Concept]:

About Ethylene glycol:

- * Ethylene glycol is a colourless and odourless alcoholic compound that can be fatal if consumed.
- * It is mostly used as an automotive antifreeze and as a raw material for manufacturing polyester fibres.
- * Diethylene glycol and ethylene glycol are adulterants that are sometimes illegally used as solvents in liquid drugs.
- * Diethylene glycol and ethylene glycol may be used by pharma companies as an alternative to non-toxic solvents such as glycerine or propylene glycol to cut costs.
- * It is also found in several products such as:
 - I. hydraulic brake fluids
 - II. stamp pad inks
 - III. ballpoint pens
 - IV. solvents, paints
 - V. cosmetics
 - VI. Plastics.

7.5 Neuralink

[News]:

Neuralink, the Elon Musk company is the target of a federal investigation over its animal trial program. The company has been trying to develop a brain chip that would enable the paralyzed to walk and the blind to see.

[Concept]:

About Neuralink:

- * Founded in 2016 by Elon Musk and a group of engineers.
- * Neuralink is building a brain chip interface that can be implanted within the skull, which it says could eventually help disabled patients to move and communicate again, and restore vision.
- * Neuralink's device has a chip that processes and transmits neural signals that could be transmitted to devices like a computer or a phone.
- * It has yet to secure U.S. regulatory approval to move to human trials.

7.6 ChatGPT

[News]:

Last week, OpenAI, introduced a new chatbot called ChatGPT.

[Concept]:

About ChatGPT:

- * ChatGPT is a 'conversational' AI.
- * It is based on the company's GPT 3.5 series of language learning models (LLM).
- * GPT stands for Generative Pre-trained Transformer.
- * This is a kind of computer language model that relies on deep learning techniques to produce human-like text based on inputs.
- * It is being seen as a replacement for much of the daily mundane writing, from

an email to even college-style essays.

- * The model is trained to predict what will come next, and that's why one can technically have a 'conversation' with ChatGPT.
- * It is trained using "Reinforcement Learning from Human Feedback (RLHF)."
- * OpenAI uses Microsoft Azure's cloud infrastructure to run these models.
- * Users have the option of downvoting or upvoting a response.
- * Application:
- * It will answer queries just like a human would.
- * Such as tips on how to set up a birthday party, write an essay on why parliamentary democracy is better, and even a fictional meeting between two well-known personalities.
- * It can answer follow-up questions and can also admit its mistakes, challenge incorrect premises, and reject inappropriate requests.
- * It is being seen as a replacement for the basic emails, party planning lists, CVs, and even college essays and homework.
- * It can also be used to write code, solve math equations, and even spot errors in code.
- * It can write fiction but not at the level of a humans.

7.7 NavIC

[News]:

To promote the use of 'NAVigation with the Indian Constellation' (NavIC), the Indian Space Research Organisation (ISRO) will introduce the L1 frequency in all its future satellites, for civilian navigational use.

[Concept]:

What is NavIC:



- * It is the navigation satellite system and homegrown alternative to GPS.
- * Developed by ISRO, it was first approved in 2006 but became operational only by 2018.
- * At present, it consists of eight satellites, covering the whole of India and up to 1,500 km from its boundaries.
- * The seven satellites in the NavIC constellation use two frequencies for providing positioning data — the L5 and S bands.
- * The new satellites NVS-01 onwards, meant to replace these satellites, will also have L1 frequency.
- * NavIC is as accurate as GPS. What is L1 frequency:
- * The L1 is the oldest and most established GPS signals
- * Even the less sophisticated, devices such as smartwatches can receive it.
- * Thus, with this band, the use of NavIC in civilian-use gadgets can go up.
- * GPS satellites generally transmit on two frequencies—L1 (42 MHz) and L2 (1227.60 MHz).

Advantages of NavIC:

- * Since it is homegrown, will be more accurate than other systems.
- * With a fully operational constellation and ground stations outside of India — ISRO plans to set up ground stations in Japan and France to better triangulate the entire area under NavIC coverage – the system is likely to become more accurate than GPS.
- * The satellites placed directly over India also ensure better availability of

signals in varied geographical regions compared to GPS, which India receives at an angle, making it difficult to access in dense forests or valleys.

Other navigation systems:

- * Galileo – European Union
- * GLONASS – Russia
- * China's – Beidou
- * QZSS – Japan