



# Updated Classroom Study Material March - April 2018

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### PT – 365 UPDATED MATERIAL

#### MARCH – APRIL 2018

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### **1. POLITY**

#### 1.1. ELECTIONS

#### SIMULTANEOUS

#### Why in News?

Recently, Law Commission issued a draft working paper on **Simultaneous Elections.** 

#### **About Simultaneous Elections (SE)**

- It is defined as structuring the Indian election cycle in a manner that elections to Lok Sabha and State Assemblies are synchronized together under which voters in a particular constituency vote for both State Assembly and Lok Sabha the same day.
- It **does not mean** that voting across the country for Lok Sabha and State Assemblies needs to happen on a single day
- Earlier, SEs were held in India till 1967 which was disrupted due to premature dissolution of Assemblies.
- Election to the third tier of democracy cannot be included in SE because-
  - It is a part of state list.
  - The number of local bodies is huge.

### **1.2. MOTION FOR REMOVAL OF CHIEF JUSTICE OF INDIA**

#### Why in news?

Recently, Rajya Sabha chairman refused to admit the motion for removal of Chief Justice of India.

### The Impeachment Process of a Supreme Court Judge

- The process of removal is mentioned in Article 124(4) of the Constitution and is described in the Judges (Inquiry) Act 1968.
- A judge can be removed on the ground of "proved misbehaviour or incapacity". Neither misbehaviour nor incapacity are defined but would include any criminal activity or other judicial impropriety.
- An impeachment motion against the judge needs to be raised in either of the Houses of Parliament. The motion can only be admitted (Or rejected) by the Speaker in the Lok Sabha or Chairperson in Rajya Sabha if it has the support of 100 MPs in Lok Sabha or 50 MPs in Rajya Sabha.

- The Speaker/Chairman holds the right to admit or reject the motion. If the motion is admitted, a **three-member committee** is set up to investigate the allegations. The committee is made up of a Supreme Court judge, the Chief Justice of any High Court, and a 'distinguished jurist' nominated by speaker/Vice President.
- The committee submits its report to the Speaker/Vice-President, who then also shares it with the other House.
- Both Houses of Parliament then need to pass an 'address to the President' asking for the judge to be removed with a majority of the total membership of that house; and a majority of at least two-thirds of the members of that house present and voting.
- If both addresses succeed, then the President can remove the judge from his position by Presidential Order.

#### 1.3. SCHEDULED CASTES AND THE SCHEDULED TRIBES (PREVENTION OF ATROCITIES) ACT

#### Why in news?

Scheduled Castes and Scheduled Tribes (Prevention of Atrocities act), 1989 came in limelight following Supreme court's directions for the same.

Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act 1989

- It prohibits the commission of offences against members of the SCs and STs and establishes **special courts** for the trial of such offences and the rehabilitation of victims.
- It outlines actions (by non SCs and non STs) against SCs or STs to be treated as offences.
- The Act specifies that a non-SC or ST public servant who **neglects his duties** relating to SCs or STs shall be punishable.
- Investigation of an offence committed under the SC/ST Act cannot be investigated by an officer not below the rank of Deputy Superintendent of Police (DSP)
- For certain offences the Act also provides for capital punishment and confiscation of property. Repeated offences under the Act attract enhanced punishments.

The act was amended in 2015 to add new offences to, addition of chapter on the 'Rights of Victims and



Witnesses', defining 'wilful negligence' of public servants clearly and addition of presumption of offence.

#### **Related information**

- In a complaint filed under the Atrocities Act, Supreme Court of India felt the need of procedural safeguards and issued the following directions in Subhash Mahajan vs State of Maharashtra vis a vis PoA act:
  - There is **no absolute bar against grant of anticipatory bail** in cases under the Atrocities Act if no prima facie case is made out or where on judicial scrutiny the complaint is found to be prima facie mala fide.
  - In view of acknowledged abuse of law of arrest in cases under the Atrocities Act, arrest of a public servant can only be after approval of the appointing authority (Prior Sanction)and of a nonpublic servant after approval by the S.S.P. which may be granted in cases considered necessary and Such reasons must be scrutinized by the Magistrate for permitting further detention.
  - To avoid false implication of an innocent, a preliminary enquiry may be conducted by the DSP concerned to find out whether the allegations make out a case under the Atrocities Act and that the allegations are not frivolous or motivated
  - Any violation of above direction will be actionable by way of disciplinary action as well as contempt.
- Subsequently, Centre moved to Supreme Court challenging the ruling that prevented automatic arrests on complaints filed under PoA act but Supreme Court upheld the directions it had issued.

#### 1.4. NATIONAL COMMISSION FOR MINORITY EDUCATION INSTITUTIONS

#### Why in news?

Recently, Supreme Court held that National Commission for Minority Education Institutions (NCMEI) has **original jurisdiction** to determine an establishment as a minority education institution.

#### About NCMEI

 NCMEI under the Ministry of Human Resource Development was **established** **through an ordinance** promulgated in 2004 which was replaced by NCMEI Act later.

- Commission is composed of a Chairman and three other members.
  - The Chairman should have been a judge of High Court and must belong to a minority community.
  - The members shall also belong to a minority community and are persons of eminence, ability and integrity.
- The Central Government has notified six minority communities namely – Muslim, Christian, Sikh, Buddhists, Parsi and Jain. However no linguistic minority has been notified till date.
- Therefore, linguistic minorities remain outside the jurisdiction of the Commission.
- The Commission is a quasi-judicial authority which has been endowed with the powers of a civil court.
- Only Supreme Court exercising writ jurisdiction under Article 32 and High Courts under Articles 226 and 227 of the Constitution of India can entertain any suit, application or proceedings in respect of any order made by the Commission.
- The Commission has adjudicatory and recommendatory functions such as:
  - to advise the Central Government and the State Governments on any question relating to the educational rights of the minorities referred to it.
  - enquire, suo motu, or on a petition presented to it by any Minority Educational Institution, or any person on its behalf into complaints regarding deprivation or violation of rights of minorities to establish and administer educational institutions of their choice and any dispute relating to affiliation to a University.
  - review the safeguards provided by or under the Constitution, or any law for the time being in force, for the protection of educational rights of the minorities and recommend measures for their effective implementation.
  - specify measures to promote and preserve the minority status and character of institutions of their choice established by minorities.
  - make recommendations to the appropriate Government for the



effective, implementation of programmes and schemes relating to the Minority Educational Institutions.

• The Commission has also been granted appellate jurisdiction in cases where the State Government refused to provide the NOC for establishing a minority institution.

#### 1.5. SPECIAL CATEGORY STATUS (SCS)

#### Why in news?

Recently, Andhra Pradesh MPs have been protesting for special category status for the state which centre has refused.

#### About SCS

- The Constitution does not include any provision for categorisation of any State as a SCS.
- The concept of SCS was first introduced in 1969 by the 5th Finance Commission based on the Gadgil formula. The formula was modified various times to suit the contemporary needs.
- In 1991 the Gadgil-Mukherjee formula was adopted that was in use till the 14<sup>th</sup> finance commission.
  - Population 60%
  - Per capita Income- 25%
  - Deviation Method- 20%
  - Distance Method- 5%
  - Performance in tax methods, Fiscal Management & Progress in respect of National Objective- 7.5%
  - Special Problems- 7.5%
- The NITI Aayog, which has replaced the Planning Commission (PC), has no power to allocate funds, therefore, the discretion that the Centre had to give special favours to states through the Plan panel, no longer exists.

**Gadgil Formula-** Named after Dhananjay Ramchandra Gadgil, the then Deputy Chairman of PC, was evolved in 1969.

It stated that-

- SCSs like like Assam, J&K and Nagaland to be given preference in terms of allocation of funds by the Centre.
- The remaining balance of Central assistance may be divided among the other states based on weightage assigned to various parameters like -
  - Population [60%]
  - Per Capita Income [10%]

- Tax Effort [10%]
  - On-going Irrigation & Power Projects [10%]
- Special Problems [10%]

**Gadgil-Mukherjee Formula** was made the basis of allocation in the 8<sup>th</sup> Five Year Plan.

#### 14<sup>th</sup> Finance Commission recommendations

- The Commission has not categorised states between normal states or special category states as it is beyond its terms of reference.
- Instead, it suggested that the resource gap of each state be filled through 'tax devolution', urging the Centre to increase its share of tax revenues to the states from 32% to 42%.
- If devolution alone could not cover the revenue gap for certain states, the Commission said, the Centre could provide a **revenue deficit grant** to these states.

#### 1.6. CESS AS A REVENUE RAISING TOOL

#### Why in news?

The newly-constituted Fifteenth Finance Commission is expected to commission a study on the legality of the use of **surcharge and cess**.

#### Why has Cess become contentious?

- The share of cess and surcharges as a percentage of tax revenues has increased over the years for the Centre.
- Both these levies go to the consolidated fund of India and do not form part of the divisible pool.

#### **Constitutional Provisions**

**Article 271** - Surcharge on certain duties and taxes for purposes of the Union Notwithstanding anything in Articles 269 and 270, Parliament may at any time increase any of the duties or taxes referred in those articles by a surcharge for purposes of the Union and the whole proceeds of any such surcharge shall form part the Consolidated Fund of India

#### Cess and surcharge

Cess	Surcharge
It is earmarked for a specific	It can be used for
purpose	any purpose
If the purpose gets fulfilled, the	There are no such
cess is removed.	restrictions.
Applicable on total payable tax	Applicable on total
(including surcharge).	service value.
However, there can be	
exceptions like Krishi Kalyan	



Cess which is applicable on total service value.

# **1.7. ARMED FORCES (SPECIAL POWERS) ACT (AFSPA)**

#### Why in news?

Recently Union Home Ministry removed the Armed Forces (Special Powers) Act (AFSPA) from Meghalaya and reduced the number of police stations under the Act in Arunachal Pradesh.

#### AFSPA

Armed Forces (Special Powers) Act was enacted in the year 1958 by the parliament of India grants extraordinary powers and immunity to the armed forces to bring back order in the disturbed areas.

AFSPA gives powers to the Army and central forces deployed in "disturbed areas" to

- Kill anyone acting in contravention of the law,
- Arrest and search any premises without a warrant and
- Provide cover to forces from prosecution and legal suits without the Central government's sanction.

As per Section 3 of the AFSPA, it can be invoked in places where "the use of armed forces in aid of the civil power is necessary."

It can be applied only after an area has been declared "disturbed"

The Central Government, or the Governor of the State or administrator of the Union Territory can declare the whole or part of the State or Union Territory as a disturbed area.

# 1.8. TRANSFORMATION OF ASPIRATIONAL DISTRICTS

#### Why in News?

The NITI Aayog recently launched the baseline ranking for the Aspirational Districts based on published data of 49 indicators (81 data points) across five developmental areas.

#### **Additional Information**

- Out of 115 districts, 30 were identified by the NITI Aayog and another 50 districts by Central Ministries and remaining 35 identified by the Ministry of Home Affairs as Left-Wing Extremist districts.
- The **KPIs are a combination** of inputs, outputs, and outcomes across the five specified sectors.

#### Associated Recent Developments

• Small Industries Development Bank of India (SIDBI) has tied with the Common Service Centres (CSC) in these Aspirational Districts to implement a plan to promote micro enterprises in 115 aspirational districts across the country to contribute in their development.

#### **Common Service Centre**

 It is an information and communication technology (ICT) access point created under the National e-Governance Project. The project plan includes the creation of a network of over 100,000 CSCs throughout the country.

#### About the Programme

- It aims to quickly and effectively transform the chosen 115 districts, with at least one from 28 states (excluding Goa).
- The broad contours of the programme are Convergence (of Central & State Schemes), Collaboration (of Central, State level 'Prabhari' Officers & District Collectors), and Competition among districts driven by a mass Movement. It will be based on the real time data and driven by Mass Movement.
- The states would be the main drivers of this programme while NITI Aayog will anchor it.
- The **Key Performance Indicators** chosen to monitor the progress of districts are to be district specific.
- **5 sectors identified to** monitor the progress are- Health & Nutrition, Education, Agriculture and Water Resources, Basic Infrastructure and Financial Inclusion and Skill Formation.
- The programme includes appointment of Central and State Government Officers at the level of Additional/Joint Secretary as the "Prabhari" and Nodal Officers. These officers are to act as a bridge between centre, state and district.
- A district level team would prepare a baseline report of the current status of different indicators and based on the resources available, would also prepare yearwise targets.
- The central representatives would be visiting the district at least once in two months and prepare a report for NITI Aayog, which after analysing it would place the findings for consideration to the Empowered Committee of secretaries.



#### 1.9. RASHTRIYA GRAM SWARAJ ABHIYAN

#### Why in News?

The PM of India launched restructured **Rashtriya Gram Swaraj Abhiyan** on the Panchayati Raj Day on 24<sup>th</sup> April, 2018.

#### About Rashtriya Gram Swaraj Abhiyan (RGSA)

- It is a revamped version of Rajiv Gandhi Panchayat Sashaktikaran Abhiyan
- It is a centrally sponsored which aims at making rural local bodies self-sustainable, financially stable and more efficient.
  - The Central component of the Scheme includes national level activities such as 'National Plan of Technical Assistance', 'Mission Mode project on e-Panchayat', 'Incentivisation of Panchayats'. This will be fully funded by Central Government.
  - The State component includes 'Capacity Building of Panchayati Raj Institutions (PRIs)'.
- This scheme will extend to all States and UTs of the Country and will also include institutions of rural local government in non-Part IX areas, where Panchayats do not exist.
- It will be implemented in a demand driven mode and activities under the scheme will be aligned for achieving the Sustainable Development Goals (SDGs) with main thrust on Panchayats identified under Mission Antyodaya and 115 Aspirational districts as identified by NITI Aayog.
- It focuses on:
  - Promoting devolution of powers and responsibilities to Panchayats according to the spirit of the Constitution and PESA Act.
  - Creating and strengthening democratic local self-government in areas where Panchayats do not exist.
  - Strengthening Gram Sabhas to function effectively as the basic forum of people's participation, transparency and accountability within the Panchayat system.

#### 1.10. ARUNACHAL'S 2-TIER PANCHAYATI RAJ

#### Why in News?

Arunachal Pradesh Assembly passed a bill to do away with the **Anchal Samiti** (Intermediate level) and set up a two-tier system in the state.

States/UTs with 2-Tier government Goa, Manipur, Sikkim, D& N Haveli, daman & Diu and Lakshadweep do not have intermediate level.

#### Details

- According to the 73rd Amendment of the Constitution, states are required to constitute Panchayats at three tiers, i.e., Village, Intermediate and District except the States having a population of less than 20 lakhs, which may not constitute a Panchayat at Intermediate level.
- Arunachal Pradesh has a population of 13.84 lakh which, thus, makes it eligible for having 2-tier government.

#### **1.11. E-VIDHAN MISSION MODE PROJECT**

#### Why in news?

A new office of Central Project Monitoring Unit for the e-Vidhan project of the Government was inaugurated recently.

#### About e-vidhan project

- It is a mission mode project to digitize and make the functioning of State Legislatures in India paperless.
- It is a software suite of public website, secure website, house applications and mobile apps that fully automate the functioning of legislative assembly
- The Ministry of Parliamentary Affairs is the Nodal Ministry for the project.
- One of the key component of the strategy devised for implementation of the project is to create Project Monitoring Units both at Central as well as State levels.
- Himachal Pradesh became the first state to use e-vidhan site and launch a mobile app.



#### **1.12. E-OFFICE**

#### Why in News?

 Recently, government awarded certificates of appreciation to 34 central government ministries for implementing "e-office" in departments.

#### **Related Information**

- **e-Kranti: National e-Governance Plan 2.0-** It is one of the pillars of Digital India Programme, to ensure delivery of all government services electronically to citizens.
- There are 44 Mission Mode Projects under e-Kranti programme.

#### What is e-office?

- It is a project which intends to make transition of government functions from manual to digital ones.
- It is a core mission mode project (MMP) under the e-Kranti: National e-Governance Plan (NeGP) 2.0.
- The Department of Administrative Reforms and Public Grievances (DAR&PG) is the nodal department for implementation of e-office project.
- National Informatics Centre (NIC) is the technical partner in this project.

# 1.13.COMPETITIONCOMMISSION OF INDIA (CCI)

#### Why in news?

Central Government has decided to reduce the members appointed by it in the CCI from one chairperson and six members to one chairperson and three members.

#### **Competition Commission of India**

- It was established under CCI Act, 2002 with following functions:
  - To Prevent practices having adverse effect on competition
  - To Promote and sustain competition in markets
  - To Protect the interests of consumers
  - To ensure freedom of trade carried on by other participants in the markets of India.
- Competition Appellate Tribunal (COMPAT) was subsumed into NCLAT (National Company Law appelate Tibunal) in 2017. Now, it is the Appellate Tribunal to hear and

dispose off appeals against any direction issued or decision made or order passed by the Competition Commission of India (CCI).

#### 1.14. ANNUAL SURVEY OF INDIA'S CITY-SYSTEMS (ASICS), 2017

#### Why in news?

Recently Janaagraha Centre for Citizenship and Democracy released ASIC, 2017 which evaluated governance in cities.

#### About ASICS

- It is an annual study which evaluates the City-Systems which comprises of mainly four interrelated aspects- urban planning and design, urban capacities and resources, transparency, accountability & participation, and empowered and legitimate political representation.
- The result indicates the health of the governance system and its ability to deliver good quality of life and aims to push towards transformative reforms in city governance.

#### **Findings of Report**

- **Pune** (score 5.1) topped the survey while Bengaluru (3) was ranked the lowest in the list.
- Comparatively, global benchmarks of Johannesburg, London and New York have scored 7.6, 8.8 and 8.8 respectively whereas Indian cities have barely touched 5.1 (being highest).

#### **1.15. PRASAR BHARATI**

#### Why in news?

Recently Prasar Bharati (PB) turned down a resolution moved by the ministry of information and broadcasting (I&B) to appoint a serving IAS officer to its board, and also deferred its proposal to bring in professionals to head the news service units of Doordarshan and All India Radio.

About Prasar Bharati

- It is a statutory autonomous public broadcasting agency which was set up in 1997 under the Prasar Bharati (Broadcasting Corporation of India) Act, 1990.
- It comprises **Doordarshan Television Network** and **All India Radio**, which were earlier part of the Ministry of Information and Broadcasting.



# **1.16. WORLD COUNCIL ON CITY DATA CERTIFICATION**

#### Why in news?

Chennai is set to join the list of 50 cities notified by World Council on City Data Certification (WCCD).

#### More on news

- Ahmedabad, Pune, Surat and Jamshedpur have already received the certification from the WCCD.
- WCCD is a global hub for creative learning partnerships across cities, international organizations, corporate partners, and academia to further innovation, envision alternative futures, and build better and more liveable cities.

- The WCCD ISO 37120 certification published for globally-comparable city data, provides a comprehensive set of indicators to measure the city's social, economic and environmental performance in relation to other cities.
- Once ISO 37120-certified, Chennai will be included in the WCCD's Global Cities Registry.

#### **1.17. MISCELLANEOUS TITBITS**

- The Haryana government recently announced that a **Cooperative Election Authority** would be set up in the State for supervising the election process in cooperative bodies.
- Recently India stood at rank 136 among 180 countries in World Press Freedom Index (PFI) devised by Reporters without borders (Reporters Sans Frontières, RSF).





### **2. INTERNATIONAL RELATIONS**

#### 2.1. INDUS WATER TREATY

#### Why in news?

The meeting of the Permanent Indus Commission (PIC) between India and Pakistan was held in New Delhi recently.

#### More about the news

- This was the 114th meeting of the Permanent Indus Commission (PIC), a bilateral commission that looks into the sharing of the Indus waters since the Indus water treaty (IWT) was signed by the two countries in 1960.
- Pakistan expressed concerns over India's Pakal Dul (1000 MW), Ratle (850 MW) and Lower Kalnai (48 MW) projects — located in Chenab basin – contending they violated IWT.
- India's stand is that designs of the projects are in accordance with the treaty. These are run of the river projects which is allowed under the treaty.
- The World Bank's (which brokered the deal) role in relation to "disputes" and "differences" with respect of IWT is limited to the designation of people to fulfil certain roles when requested by either or both of the parties.

THE INDUS WATER TREATY (IWT) The distribution of waters of the Indus and its tributaries between India and Pakistan is governed by the Indus Water Treaty (IWT) Was signed on Sept 19, 1960, between India, Pakistan and a representative of World Bank after eight years of negotiations. Partition of India cut across the Indus river basin, which has the Indus river, plus five of its main tributaries. Western rivers Chenab, Kishanganga/Neelum Jhelum, Indus Indus **Eastern rivers** India's rights over these Sutlej, Beas, Ravi rivers: Limited - can set India's rights over up certain irrigation, run-of-the-river power these rivers: All 38.K plants, very limited exclusive rights lie with India. storage, domestic and nonconsumptive ROY Sutio use, all subject to conditions Indus Waters Commission a success story ♦ Once every five years, conducts ♦ Regularly meets once a year.

 Once every five years, conducts 
 Regularly meets once a year, a general of all rivers in parts. Total inspection tours so far: Over 100
 Pak objections: Over 100

### 2.2. AFGHANISTAN MAKES A PEACE OFFER TO TALIBAN

#### Why in news?

Afghanistan has made an offer for unconditional talks to Taliban and offered a pact to recognise the insurgents as a legitimate party in negotiations and end the 16-year old war.

#### More on news

- In current Kabul peace process, Afghanistan has offered that in exchange for a ceasefire, the government will allow Taliban members to have a "peaceful and respectful life", political recognition, prisoner release, passports to Taliban members and visas to their families, as well as office space in Kabul.
- **Kabul Peace Process** It is a gathering of 23 nations including India, the EU, U.N. and NATO intended to discuss security and political issues in the Afghanistan.

#### 2.3. COMMONWEALTH HEADS OF GOVERNMENT MEET

#### Why in news?

Recently London hosted the Commonwealth Heads of Government Meet (CHOGM) with the theme "Towards a Common Future" for 2018.

#### More about the news

- Commonwealth Heads of Government Meeting (CHOGM) is a biennial meeting of heads of states of Commonwealth countries.
- The four main goals for the summit were:
  - **Prosperity:** Boosting intra-Commonwealth trade and investment.
  - Security: Increasing cooperation across security challenges including global terrorism, organised crime and cyberattacks.
  - Fairness: Promoting democracy, fundamental freedoms and good governance across the Commonwealth.
  - Sustainability: Building the resilience of small and vulnerable states to deal with the effects of climate change and other global crises.
- It saw the release of Blue Charter on Ocean Governance which emphasised fair ocean governance, more prosperous maritime and



marine industries, sustainable ocean use, and secure marine space across the Commonwealth.

- Commonwealth Connectivity Agenda for Trade and Investment, which could together counter China's Belt and Road Initiative was announced.
- Further the Commonwealth Cyber Declaration, Commonwealth Innovation Fund and Commonwealth Innovation Index were also announced (See Box)
- It was also announced Prince Charles would 'succeed' Queen Elizabeth as the head of the Commonwealth.

### Commonwealth or the Commonwealth of Nations

- It is a group of 53 states, all of which (except for two i.e. Rwanda and Mozambique) were formerly part of the British Empire. Further Myanmar and Aden (now part of Yemen) are the only former British colonies who elected not to join the Commonwealth
- Queen Elizabeth II is Head of the Commonwealth
- It was created in the early 1900s when nations began to secede from British Empire to ease the process of British decolonization.
- It was seen as a way of maintaining global unity through shared language, history, and culture despite growing independence and self-governance of former British colonies.

#### **Commonwealth Cyber Declaration**

- The declaration is the world's largest and most geographically diverse inter-governmental commitment on cybersecurity cooperation.
- UK government pledged up to £15 million to help Commonwealth countries strengthen their cybersecurity capabilities.

#### Commonwealth Innovation Index

- The index was launched as part of a new Commonwealth Innovation Hub on the sidelines of the CHOGM.
- It has been created in partnership with the United Nations World Intellectual Property Organisation (WIPO) and its annual Global Innovation Index (GII).
- India was today ranked 10th on the new Index, topped by the UK, Singapore and Canada.

#### **Commonwealth Innovation Fund**

- The Global Innovation Fund (GIF) will also host a new Commonwealth Innovation Fund (CIF) with size of 25 million pounds with financial commitments from member-countries.
- It will deploy grant, equity and debt investments to support innovators across the Commonwealth

to accelerate the development, testing and scaling up of evidence-based and market-tested innovations.

#### 2.4. CLARIFYING LAWFUL OVERSEAS USE OF DATA ACT (CLOUD ACT)

#### Why in news?

Recently, U.S. President signed the Clarifying Lawful Overseas Use of Data Act (CLOUD Act).

#### **Condition for CLOUD Act**

- Bilateral Agreement: U.S. requires the foreign states to share a common commitment in the form of bilateral agreement/data sharing agreement to be abided by the rule of law and the protection of privacy and other civil liberties.
- **Procedure and Review Mechanism:** The partner country will need to ensure that its authorities collect, retain, use and share data as per an established procedure and electronic data requests to be reviewed by a court or other independent authority.

#### About CLOUD Act

- It will enable the U.S. government to enter into agreements with other country for bilateral data sharing- under the emerging trends of globalization of criminal data.
- This will allow law enforcement agencies from other country to directly obtain electronic data, held by communication service providers headquartered in the U.S. to combat crime.
- The act will provide that the law enforcement authority presumptively requires the government to disclose data in its custody and control, regardless of its location.

#### 2.5. INDIA-NORDIC SUMMIT

#### Why in news?

The **first India-Nordic Summi**t took place in Stockholm.

#### **Other Facts**

- Nordic countries include Sweden, Norway, Finland, Denmark and Iceland.
- India had proposed the idea of this summit.
- The only instance when Nordic Countries had held such a summit was with the then President Barack Obama of USA.
- This exercise by Delhi will be first of its kind in Europe as traditionally India has been engaged in talks with EU (European Union).



#### 2.6. ASIAN PREMIUM

India would coordinate with China and other Asian countries to raise voice against the "Asian premium" being charged by the **Organization of the Petroleum Exporting Countries (OPEC).** 

#### About OPEC

Organization of the Petroleum Exporting Countries (OPEC) is an intergovernmental organization of 14 nations, founded in 1960.

- Headquarters: Vienna, Austria
- Type: International cartel
- Members of the Organization:
  - **Middle East:** Iran, Iraq, Kuwait, Saudi Arabia, Qatar, the United Arab Emirates,
  - **Africa:** Libya, Algeria, Nigeria, Angola, Equatorial Guinea, Gabon
  - o South America: Venezuela, Ecuador

India sources about 86 per cent of crude oil, 75 per cent of natural gas and 95 per cent of LPG from OPEC member nations.

#### What is Asian Premium?

- It is the extra charge being collected by OPEC countries from Asian countries when selling oil.
- The Asian premium has its roots in the establishment of market oriented crude pricing in 1986.
- There are 3 important benchmarks in global market, representing the cost of oil produced in respective geographies.
  - **Brent:** Light sweet oil representative of European market
  - West Texas Intermediate(WTI): US market
  - **Dubai/Oman:** Middle East and Asian Market.

#### 2.7. AFRICAN ASIAN RURAL DEVELOPMENT ORGANIZATION (AARDO)

#### Why in news?

African Asian Rural Development Organization (AARDO) held a workshop recently in Kochi that focused on food security, agriculture, and fisheries.

### African-Asian Rural Development Organization (AARDO)

 AARDO was established in 1962 as an autonomous inter-governmental organization and has 33 member-states from Africa and Asia.

 The group is devoted to developing understanding among members for better appreciation of each other's' problems and to explore, collectively, opportunities for coordination of efforts for promoting welfare and eradication of thirst, hunger, illiteracy, disease and poverty amongst rural people.

#### 2.8. INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA (ITLOS)

#### Why in News?

• **Neeru Chadha** became the first Indian Women to be the member of **ITLOS.** 

#### ITLOS

- Independent judicial body established by United Nations Conventions on Law of Sea.
- The Tribunal is based in **Hamburg** (Germany), established in 1996.
- It adjudicates the disputes which arise out of application and interpretation of the UNCLOS.
- ITLOS consists of **21 independent members** (Judges).

#### United Nations Conventions on Law of Sea

- It was opened for signature in 1982 and came into force in 1994.
- Convention establishes a comprehensive legal framework to regulate all ocean space, its uses and resources.
- Convention contains provisions related to the territorial sea, the contiguous zone, the continental shelf, the exclusive economic zone and the high seas.
- International Seabed Authority, established by the Convention, administers the resources of the Area.
- Convention provides for alternative means of dispute settlement through ITLOS, ICJ (International Court of Justice) and Arbitrary Tribunal.
- Judges are elected for a period of **9 Years** and can be **re-elected**.
- President and Vice-President of the tribunal are elected by the majority of the member of the tribunal from among the 21 judges and serve for the period of 3 years and can be re-elected.



# 2.9. UN ROAD SAFETY TRUST FUND

#### Why in News?

Recently, United Nations has launched UN Road Safety Trust Fund in order to enhance road safety worldwide.

#### About UN Road Safety Trust Fund

• It is a trust fund managed by United Nations Economic Commission for Europe.

#### United Nations Economic Commission for Europe

- It was set up in 1947 by ECOSOC, (United Nation Economic and Social Council) a regional commission for Europe.
- UNECE includes 56-member States in Europe, North America and Asia.
- India is not a member country to it.
- Its major aim is to promote pan-European economic integration.
- It aims to accelerate progress in improving global road safety by bridging the gaps in the mobilization of resources for effective action at all levels.
- Fund will mobilize resources from governments, intergovernmental or nongovernmental organizations, the private sector, philanthropic organizations and individuals.
- It will focus on strengthening the capacity of government agencies, local governments and city authorities to develop and implement road safety programmes, prioritizing projects in low and middle-income countries.
- It will support mainly two initiatives;
  - Five pillars of Global Plan for Decade of Action for Road Safety (2011-20)developed by UN Road Safety Collaboration.
  - o Sustainable Development Goal-
    - 3.6 which aims to halve the number of global deaths and injuries from road traffic accidents
    - 11.2 which provides access to safe, affordable, accession, sustainable transport systems for all, improving road safety.

#### 2.10. SOUTH ASIA COOPERATIVE ENVIRONMENT PROGRAM (SACEP)

#### Why in news?

An MoU has been approved by Cabinet between India and SACEP for cooperation on the response to Oil and Chemical Pollution in the South Asian Seas Region.

#### About SACEP

- It is an inter-governmental organization, established in 1982 by the governments of South Asia to promote and support protection, management and enhancement of the environment in the region.
- It also serves as the secretariat of South Asian Seas Programme (SASP).
- The Governments of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka are the members of SACEP.

#### South Asian Seas Programme

It is one of the 18 Regional Seas Programmes of UNEP. The South Asian Seas Action Plan was adopted in March 1995 and today enjoys the unqualified support of the region's five countries (Bangladesh, India, Maldives, Pakistan and Sri Lanka).

#### 2.11. SOUTH ASIAN CLIMATE OUTLOOK FORUM (SASCOF)

#### Why in news?

Recently,  $12^{\text{th}}$  edition of SASCOF was held in Pune.

#### About SASCOF

- It was established in 2010 by the South Asian members of the World Meteorological Organization (specialised agency of UN for Meteorology, operational hydrology and related geophysical science).
- It is a platform where the members of SAARC along with Myanmar could discuss common weather and climate related matters.
- It is coordinated by Indian Meteorological Department.
- It also reviews the progress made in understanding and long range prediction of South Asian monsoons both regionally and globally.



 It aims to initiate capacity building/human resource development activities for the South Asian region, particularly in seasonal prediction.

South Asia Association for Regional Cooperation (SAARC)

- It is a regional organisation which was established in 1985 .
- The main objective of setting up of SAARC was to promote the welfare of the people of South Asia, improve the quality of life and accelerate economic growth, social progress and cultural development in the region.
- Member countries India, Pakistan. Bangladesh, Nepal, Sri Lanka, the Maldives, Afghanistan and Bhutan.

# 2.12. INTERNATIONAL ENERGY FORUM (IEF)

#### Why in news?

Recently, the 16th International Energy Forum Ministerial (IEF 16) was hosted by India and cohosted by China and S. Korea.

#### **International Energy Forum**

- The IEF is an inter-governmental forum set up in 1991 and is based in Riyadh, Saudi Arabia.
- It serves as neutral facilitator of informal, open, informed and continuing global energy dialogue among its member countries.
- It includes 72-member countries from all six continents and accounts for around 90% of global supply and demand for oil and gas.
- The IEF is unique in that it comprises not only consuming and producing countries of the IEA and OPEC but also Transit States and major players outside of their memberships, including Argentina, China, India, Mexico, Russia and South Africa.
- By virtue of being among the top 11 largest consumers of oil and gas (India is presently 4th), India has been the Permanent Member of its Executive Board.
- India had earlier hosted the 5th IEF Ministerial in 1996 at Goa.
- The Forum's **biennial Ministerial Meetings** are the world's largest gathering of Energy Ministers.
- The theme of IEF 16 was "Future of Global Energy Security: Transition, Technology, Trade and Investment".

#### 2.13. INDIA-WIESBADEN CONFERENCE 2018

#### Why in news?

India hosted the India-Wiesbaden Conference, 2018 with the theme- Securing Global Supply Chains through Government-Industry Partnerships towards Effective Implementation of UNSC Resolution 1540.

#### Details

 The conference was held in cooperation with Ministry of External Affairs, Government of Germany and the United Nations Office for Disarmament Affairs (UNODA).

**UN Office for Disarmament Affairs (UNODA)** is an Office of the United Nations Secretariat established in January 1998 as the Department for Disarmament Affairs

- Its goal is to promote nuclear disarmament and non-proliferation and the strengthening of the disarmament regimes in respect to other weapons of mass destruction, chemical and biological weapons.
- It also promotes disarmament efforts in the area of conventional weapons, especially landmines and small arms, which are often the weapons of choice in contemporary conflicts.
- The Conference provides an opportunity to participants to share experiences on their export control systems and to identify legal & technical assistance, action plans & challenges in national implementation of UNSC 1540.
- Federation of Indian Chambers of Commerce and Industry (FICCI) is the industry partner for the event.

#### What is UN Security Council Resolution 1540?

- It was adopted in 2004 under United Nations Charter and affirms that the proliferation of nuclear, chemical and biological weapons and their means of delivery constitutes a threat to international peace and security.
- It imposes binding obligations on all States to adopt legislation to prevent the proliferation of nuclear, chemical and biological weapons and their means of delivery, and establish appropriate domestic controls over related materials to prevent their illicit trafficking.



## 2.14. IMF WORLD ECONOMIC OUTLOOK

#### Why in news?

The International Monetary Fund (IMF) has published its World Economic Outlook (WEO), 2018 Report.

#### More on news

- WEO is a survey by the IMF staff economists, usually **published twice a year**.
- It presents an analysis of global economic developments during the near and medium term; considers issues affecting industrial countries, developing countries, and economies in transition to market; and addresses topics of pressing current interests.
- It has projected that India will grow (7.4% in 2018 and 7.8% in 2019) faster than China due to strong private consumption.
- In 2017, India marginally lagged behind China due to initiation of its two major economic reforms i.e. Demonetization and GST.
- It points out that implementation of the GST will help in reduction of internal barriers to trade, increase efficiency, and improve tax compliance.
- High public debt and failure to achieve budget deficit target may reduce its **fiscal credibility.**
- It also suggested that if India wants to ensure that the demographic dividend is not wasted and more jobs are created, it must ease labour market rigidities, reduce infrastructure bottlenecks, enhance inclusiveness and improve educational outcomes.
- For **Global economy** it forecasted that despite a looming trade war between US and China, Global growth will be stable at **3.9** percent in **2018 and 2019**.

# 2.15.UNBROADBANDCOMMISSIONFORSUSTAINABLE DEVELOPMENT

#### Why in news

Recently, report of the Expert Group to the Broadband Commission recommended to close the broadband gap.

#### More on Report

The report sets out specific actions for policymakers and regulators, addressing **four key themes**:

- Healthy investment climate
- Lower infrastructure supply costs
- Better functioning ICT markets
- Liberating demand for the wider digital economy to encourage supply and investment.

### UN Broadband Commission for Sustainable Development

- It was established in May 2010 by ITU and UNESCO as Broadband Commission for Digital Development.
- Following adoption of the UN's Sustainable Development Goals in September 2015, the Commission was re-launched as the Broadband Commission for Sustainable Development
- Aims: To boost the importance of broadband on the international policy agenda and expand broadband access in every country as key to accelerating progress towards national and international development targets.
- **Report:** 'State of Broadband' is an annual report released by commission.

### Broadband Commission for Sustainable Development 2025 Targets:

#### By 2025-

- All countries should have a funded national broadband plan or strategy or include broadband in their universal access and services definition.
- Entry-level broadband services should be made affordable in developing countries, at less than 2% of monthly gross national income per capita.
- Broadband-Internet user penetration should reach:
  - o 75% worldwide
  - 65% in developing countries
  - 35% in least developed countries
- 60% of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills.
- 40% of the world's population should be using digital financial services.
- Gender equality should be achieved across all targets.



#### 2.16. GSP ELIGIBILITY REVIEW OF INDIA

#### Why in news?

Recently, United States Trade Representative (USTR) formally announced that it is reviewing the eligibility of India, Indonesia, and Kazakhstan in the Generalized System of Preferences (GSP).

#### What is GSP?

- GSP is a preferential treatment that US government gives when products are imported from one of 120 designated developing and developed countries.
- The benefits under the GSP includes duty free entry of certain goods like chemicals, gems, textiles among others to the US market.
- In 2017, India was the biggest beneficiary of the GSP with subsidies worth \$5.6 billion.
- GSP benefits India's exports and US industries get cheaper intermediate products from India.

#### 2.17. VIDESH AYA PRADESH KE DWAAR

#### Why in news?

The **Ministry of External Affairs** recently launched 'Videsh Aaya Pradesh ke Dwaar' initiative.

#### Details

- It is a part of the **enhanced public diplomacy outreach** to take the objectives of the foreign policy to the common people.
- The Ministry will have direct interaction with the Local Media to communicate foreign policy priorities in simple terms, highlight the benefits accruing to the common people through diplomatic efforts and bring the domain of foreign policy closer to the people.
- It also intends to create a pool of media professionals interested in foreign policy and guide them on connecting with the MEA.

#### 2.18. STUDY IN INDIA PROGRAM

#### Why in news?

Ministry of Human Resource Development has approved Study in India Program to attract foreign students.

The 'Study in India' programme's primary objective is to target foreign students by branding India as an attractive education destination.

#### **Details of the Program**

- Meritorious foreign students will be given fee waiver.
- Deserving students will be selected by the Institution based on their merit e.g. the top 25% student will get 100% fee waiver in tuition fee.
- The expenditure on the fee waiver will have to be **borne by the Institute concerned**, based on cross-subsidisation or through its existing funding.
- No additional cash flow from Government is proposed for the same.

#### 2.19. E-FOREIGNERS REGIONAL REGISTRATION OFFICE SCHEME (E-FRRO)

#### Why in news?

Recently, Ministry of Home Affairs launched e-FRRO in the country.

#### What is e-FRRO Scheme?

- It is a web based application introduced by Indian Bureau of Immigration, aimed at providing fast and efficient services to foreigners vising India.
- On the new system the foreigners would get 27 Visa and Immigration related services in India by using e-FRRO service and obtain services through email or post without being physically present barring exceptional cases.

#### **2.20. EXERCISES**

- Recently, the biennial exercise 'Milan' was organised at the Andaman and Nicobar Islands. The participating nations include at least 16 countries i.e. Australia, Malaysia, Maldives, Mauritius, Myanmar, New Zealand, Oman, Vietnam, Thailand, Tanzania, Sri Lanka, Singapore, Bangladesh, Indonesia, Kenya and Cambodia
- The Indian Navy also conducted a tri-service maritime exercise named 'Exercise Pashchim Leher (XPL)' in the Arabian Sea.
- Recently, Indo-Malaysian joint defence training exercise Harimau shakti 2018 was held in Malaysia.

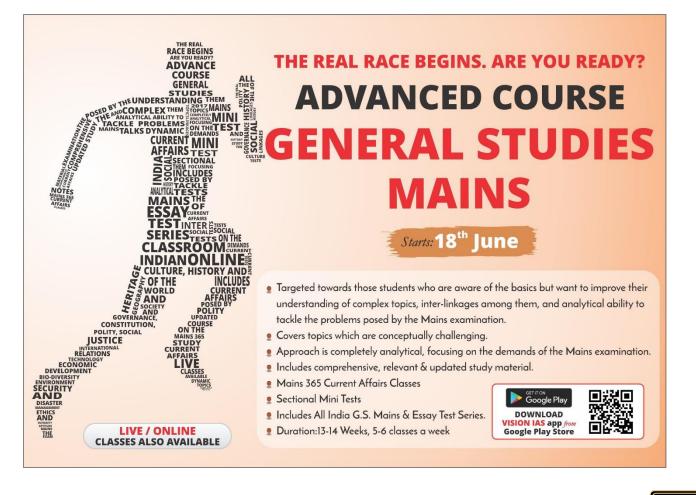


- Recently, Sahyog-HYEOBLYEOG 2018, a joint bilateral Indo –Korean exercise, was held off the Chennai coast on Bay of Bengal.
- Recently, recently a Joint Humanitarian Assistance and disaster relief (HADR) exercise 'Chakravath' was held in Cochin by Indian Navy- Southern Command in Coordination with Kerala Government.
- Recently, Indo-US joint military exercise 'Vajra Prahar' was conducted.
- Recently, a two-day Coastal Security Exercise 'Sagar Kavach' was held off the coast of Kerala, Mahe, and Lakshadweep and Minicoy (L&M) Islands.
- Recently, 11<sup>th</sup> Edition of Naseem-Al-Bahr a bilateral exercise between Indian and Oman Navy was conducted.

#### **2.21. MISCELLANEOUS TITBITS**

- Jordan has recently launched the **Aqaba process** to promote deradicalisation in which India is an active participant.
- The "Industrial Way Forward Agreement" was signed between French utility EDF and India's NPCIL for the construction of six nuclear reactors at Jaitapur.

- Recently, a tripartite MoU was signed between India, Russia and Bangladesh for development of Rooppur Nuclear Power Plant on Padma river in Bangladesh. It is the first nuclear reactor in Bangladesh and will be built by Russia's State Atomic Energy Corporation Rosatom and the Nuclear Power Corporation of India Limited (NPCIL) will assist in construction, installation and infrastructural assignments. It is the first initiative under an Indo-Russian deal to undertake atomic energy projects in third country.
- Australia abolished the subclass 457 visa category, popular among skilled overseas workers, especially Indians. It has been replaced by **Temporary Skill Shortage (TSS)** visa which would help enable hiring of overseas employees.
- Recently, North Korea and South Korea signed Panmunjom Declaration which envisages denuclearisation of Korean peninsula, a peace treaty, reunion programs for families and creation of a demilitarised zone.





### **3. ECONOMY**

### **3.1. RBI DECIDES TO USE GDP INSTEAD OF GVA**

#### Why in news?

Reserve Bank of India has decided to use Gross Domestic Product (GDP), instead of Gross Value Added (GVA) to measure economic activity in the country.

#### **Background Information and Key Definitions:**

- Through revision of National Accounts statistics in 2015 by following changes were made:
  - Gross Value Added (GVA) from different sectors will be calculated at basic prices.
  - GDP of the country is to be estimated in terms of Market Price
- GDP means the total value of a country's annual output of goods and services and GDP at factor cost represents what the producers in the economy make from industrial activity

   wages, profits, rents and capital called 'factors of production.
- Gross value added (GVA) is the value addition done to a product resulting in the production of final product. GVA provides the rupee value of the amount of goods and services that have been produced, less the cost of all inputs and raw materials while producing these goods and services. There can be GVA for a firm, industry, sector or the entire economy.
- GVA at basic prices include production taxes and exclude production subsidies available on the commodity and GDP at market prices include both production and product taxes and excludes both production and product subsidies.

GVA at factor cost + (Production taxes – Production subsidies) = GVA at basic prices GDP at market prices = GVA at basic prices + Product taxes –Product subsidies

• GVA gives a picture of the state of economic activity from the producers' side or the supply side. GDP gives the picture from the consumers' side or the demand perspective.

#### Reasons for switching over to GDP

 Although GVA is considered a closer representative of economic activities because it provides sector wise breakdown measure and helps policymakers decide which sectors need incentives or stimulus and accordingly formulate sector specific policies.

- But RBI has decided to shift to GDP as it is the measure of economic performance used not only by multilateral institutions, international analysts and investors but it is also in consonance with international practice and thus facilitates easy cross-country comparisons.
- Even CSO has started using GDP as the main measure of economic activity from this year.

# 3.2.STATEMENTONDEVELOPMENTALANDREGULATORY POLICIES

#### Why in News?

Recently, Reserve Bank of India (RBI) released its Statement on Developmental and Regulatory Policies.

### Important developmental and regulatory policy measures include

- Framework on countercyclical capital buffer (CCCB): It has been decided that it is not necessary to activate CCCB at this point in time.
  - Aim of the CCCB
    - It requires banks to build up a buffer of capital in good times which may be used to maintain flow of credit to the real sector in difficult times. The main objective is to protect banks from the effects of the financial cycle.
    - It achieves the broader macroprudential goal of restricting the banking sector from indiscriminate lending in the periods of excess credit growth that have often been associated with the building up of system-wide risk.
  - **Credit-to-GDP gap** will be the main indicator in the CCCB framework in India.

**Credit-to-GDP gap (credit gap)** is difference between credit-to-GDP ratio and the long term trend value of credit-to-GDP ratio at any point in time.

• Deferment of Indian Accounting Standards (IndAS) implementation for scheduled



commercial banks from April 1, 2018 to April 1, 2019.

**IndAS** are recommended by National Advisory Committee on Accounting Standards (NACAS) to the Ministry of Corporate Affairs, which then issues them. These standards on an par with International Financial Reporting Standards (IFRS). Corporate entities started complying with IndAS with effect from 2016.

#### • Banning Virtual currency dealing

- RBI has asked all the regulated entities, including banks, not to provide services to any individual or business dealing in digital currencies and has given three months to banks to end all existing relationships with bitcoin players
- Finance Minister in his Budget speech 2018, also said that digital currencies cannot be recognized as a legal tender

#### • Revamping of the Lead Bank Scheme

- Scheme would be revisited based on the recommendation of the "Committee of Executive Directors" to make it more relevant to changes that have taken place in the financial sector over the years.
- About scheme: Launched in 1969 on the recommended by DR Gadgil study group, it envisages lead roles of individual banks (both in public sector and private sector) for the development of districts allotted to them.
  - Lead bank acts as a leader for coordinating the efforts of all credit institutions in the allotted districts to increase the flow of credit to agriculture, small-scale industries and other economic activities included in the priority sector in the rural and semi-urban areas.

# 3.3. REGIONAL RURAL BANKS (RRB)

#### Why in news?

NABARD has come out with a **Prompt Corrective** Action (PCA) Framework for RRBs.

#### Regional Rural Bank (RRB)

- These are scheduled commercial banks,
- Jointly owned by the Central government (50% capital share), the State government concerned (15%) and sponsor/public sector bank (35%).
- Their main purpose is to serve the rural areas, however their branches can be established for urban operations as well.

#### What is PCA Framework for RRBs?

- The aim of framework is to arrest further deterioration of RRBs which are failing to meet prudential requirements relating to capital adequacy, net non-performing assets (NNPAs) and return on assets (ROA) through self-corrective actions.
- Three parameters/trigger points will set the PCA:
  - Capital to Risk-Weighted Asset Ratio (CRAR): between 6-9%, between 3-6% and less than 3%
  - o NPAs:
    - NNPAs between 10-15% (for RRBs having retained profit) or Gross NPAs (GNPAs) between 10-15% (for RRBs having accumulated losses)
    - NNPAs of 15% and above (for RRBs having retained profit) or GNPAs of 15% (for RRBs having accumulated losses).
  - o **ROA:** falls below 0.25%
- When an RRB is put on PCA, the bank's management should identify the cause of deterioration and take corrective measures promptly.

# **3.4. LIBERALISED REMITTANCE SCHEME**

#### Why in news?

Reserve Bank of India has recently, tightened reporting norms for the Liberalized Remittance Scheme (LRS) Scheme.

#### The Liberalized Remittance Scheme (LRS)

- It's a facility provided by the RBI for all resident individuals including minors to freely remit upto \$ 250,000 per person per year for current and capital account purposes or a combination of both.
- Regulations for the scheme are provided under the FEMA Act 1999.
- Under LRS, remittances can be made for overseas education, travel, medical treatment, apart from maintenance of relatives living abroad, gifting and donations. The money can be remitted for the purchase of shares and property as well.

Restriction on Remittance – Individuals are not allowed

- to send money to countries identified as 'noncooperative jurisdictions' by the Financial Action Task Force.
- to entities identified as posing terrorist risks. etc
- for trading on the foreign exchange markets,



purchase of Foreign Currency Convertible Bonds issued by Indian companies abroad.

#### Highlight

#### • Prevalent Situation

- Transactions LRS are being permitted by authorised dealer (AD) banks based on the declaration made by the remitter.
- However, it is difficult for the authorised dealer banks to monitor/ensure that a remitter has not breached the prescribed limit by approaching multiple authorised dealer banks.

#### Changed situation

- Banks will be required to upload daily transaction-wise information undertaken by them under LRS.
- Move is aimed at improving the monitoring and ensuring compliance with the LRS ceilings.

#### 3.5. CHANGES IN PRIORITY SECTOR LENDING

#### Why in news?

The Reserve Bank of India (RBI) has revised certain priority sector lending targets & classification

#### Changes made

- From FY 2018-19 the foreign banks with 20branches and above will have to ensure that:
  - minimum 8% of Adjusted Net Bank Credit (ANBC) or Credit Equivalent Amount of Off-Balance Sheet Exposure (CEOBE), whichever is higher, is earmarked for lending to the small and marginal farmers.
  - minimum 7.5 per cent of ANBC or CEOBE, whichever is higher, is earmarked for lending to micro-enterprises.
- The loan limits per borrower for Micro/ Small and Medium Enterprises (Services) has been removed for classification under priority sector.

#### 3.6. FOREIGN PORTFOLIO INVESTMENT

#### Why in news?

The Reserve Bank of India (RBI) has relaxed its rules for investments by Foreign Portfolio Investors (FPIs) in Indian bonds.

#### The New norms

- RBI has withdrawn the clause that forced FPIs to buy government bonds and state development loans with at least three years of residual maturity. However, investment in bonds with maturity below a year must not exceed 20% of the total investment of that FPI.
- It has **increased aggregate FPI investments** in a single government bond to 30% of outstanding stock from 20% earlier.
- The central bank also removed the three-year residual maturity rule for corporate bond investments by allowing FPIs to buy securities with at least one year maturity.
- It has also Withdrawn the Auction Mechanism, wherein FPIs were required to purchase investment limits once the limit utilisation breached 90 per cent of the permitted quota. The Clearing Corporation of India Ltd (CCIL) will monitor utilisation of G-sec limits online.

**Reasons for relaxing the norms:** The bond market is struggling with lower demand and rising bond yields (negative sentiments in the market, falling rupee, uncertainty over interest rate trajectory).

#### Clearing Corporation of India Ltd. CCIL:

- The CCIL was set up in April, 2001 to provide guaranteed clearing and settlement functions for transactions in Money, G-Secs, Foreign Exchange and Derivative markets.
- It also provides **non-guaranteed settlement** for Rupee interest rate derivatives and cross currency transactions through the CLS (Continuous Linked Settlement) Bank.
- It has been recognised as a **Qualified Central Counterparty** (QCCP) by the Reserve Bank of India in 2014.
- It has also set up a Trade Repository to enable financial institutions to report their transactions in OTC (Over-the-counter) derivatives.

**G-Secs or Government Securities:** These are debt obligations issued by Central or State Governments for short (Treasury Bills) or long terms (Bond or dated securities). In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs). G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments. **Bond Yield:** As investors sell bonds, prices drop and yields increase (inversely proportional). A higher bond yield indicates greater risk. If the yield offered by a bond is much higher than what it was when issued,



there is a chance that the company or government that issued it is financially stressed and may not be able to repay the capital.

# **3.7. NATIONAL FINANCIAL REPORTING AUTHORITY**

#### Why in news?

 Recently, Union Cabinet approved establishment of National Financial Reporting Authority, a key recommendation under the Companies Act 2013.

#### National Financial Reporting Authority (NFRA)

- It will be established as an independent regulator to oversee the auditing profession and accounting standards with jurisdiction extending to all listed companies and large unlisted companies.
  - ICAI under the Chartered Accountants Act, 1949 shall continue to audit smaller unlisted companies.
  - Quality Review Board will also continue quality audit in respect of private limited companies, public unlisted companies and also with respect to audit of those companies delegated by NFRA.
- It will have the power to investigate Chartered Accountants and their companies either suo motu or on a reference for any misconduct.
- NFRA will have the same powers as of a Civil Court while trying a suit.

#### Members of NFRA

- It shall consist of a Chairperson, three full time members, nine part-time members.
- Chairperson and full-time members would be selected through a search-cum-selection committee headed by Cabinet Secretary
- Terms of Office The chairperson and full-time members shall have tenure of 3 years or until they attain the age of 65 years, whichever is earlier. They shall be eligible for re-appointment for only one more term.
- In case of a part-time member, the tenure would be not more than three years but would be eligible for re-appointment.
- Removal The Chairperson or members could be removed by the central government if adjudged insolvent, convicted of moral turpitude, mentally or physically incapable of performing duties, acquired financial interest, abuse his position to render continuance.
- Chairpersons and full-time members of NFRA should not be associated with any audit firm

during their tenure as well as two years after demitting office.

#### **3.8. ALGORITHM TRADING**

#### Why in news?

Recently, Securities and Exchange Board of India (SEBI) relaxed restrictions on algorithm trading at commodity derivatives exchanges.

#### What is algorithm trading?

- Algorithmic trading refers to orders generated at a super-fast speed by use of advanced mathematical models that involve automated execution of trade.
- It helps institutional investors increase the efficiency of trade execution and spot fleeting trading opportunities.
- However, there are concerns also that it may trigger a large volume of trades that magnify the trend causing wild swings and crashes in the market.

# **3.9. START-UPS CAN SEEK EXEMPTION FROM ANGEL TAX**

#### Why in news?

Recently, the government has put in place a mechanism for start-ups to secure exemption from the 'angel tax' with retrospective effect.

The DIPP notification has defined a startup as an entity that is incorporated or registered in India with following criteria:

- Up to a period of seven years from the date of incorporation/registration. For biotechnology firms, that period is ten years
- An annual turnover not exceeding Rs 25 crore in any preceding financial year, and
- If it works towards innovation, development or improvement of products or processes or services, or if it's a scalable business model with a high potential of employment generation or wealth creation.

**Angel investors** invest in small startups or entrepreneurs. The capital angel investors provide may be a one-time investment to help the business propel or an ongoing injection of money to support and carry the company through its difficult early stages.

#### Background

 Under Section 56 of I-T law, a startup receiving equity infusion in excess of fair value faces tax, named as angel tax. Fair value is a rational and unbiased estimate of



the potential market price of a good, service, or asset.

- The law treated such equity infusion as other income and is accordingly taxed.
- Many startups have received tax notices for this 'angel tax'.

#### **Recent changes**

- Startups with total investment including funding from angel investors up to Rs 10 crore can seek approval from an eightmember government board for exemption from tax.
- Exempting startups from angel investment tax would provide easy access to funding.
- However, Startups will still have to meet stringent conditions to avail the tax exemption such as
  - need to obtain a report from a merchant banker specifying fair market value of shares under income-tax rules increasing their costs.
  - Recognisation as an innovative startup by the inter-ministerial board of certification.

# 3.10. FARM MSP MODELS BY NITI AAYOG

#### Why in news?

In the recent Budget, the government has announced to ensure the minimum support price (MSP) to farmers for all agricultural crops. In light of this, the NITI Aayog has come out with three models.

#### Details

- The three models are:
  - The market assurance scheme: It proposes procurement by States and compensation of losses up to certain extent of MSP after the procurement and price realisation out of sale of the procured produce.
  - The price deficiency procurement scheme
  - Private procurement and stockist scheme: Under this, procurement would be done by private entrepreneurs at MSP. The government would provide some policy and tax incentives to these entrepreneurs. The private player is

nominated through a transparent bidding process by the state government.

- States can adopt one or more options depending on their requirements. However, all the three options may not be implemented for the same crop.
- Before finalizing any model, the government must also consider report of National Commission for Farmers (NCF) which had recommended that MSP should be at least 50% more than the weighted average cost of production.

#### MSP and procurement in India

- Minimum Support Price is the price at which government purchases crops from the farmers, whatever may be the price for the crops.
- MSP for certain agricultural commodities of Kharif and Rabi season are announced by the Cabinet Committee on Economic Affairs (CCEA), Government of India at the beginning of the sowing season based on the recommendations of the Commission for Agriculture Cost and Prices (CACP).

#### Some crops covered under MSP includes

- seven cereals (paddy, wheat, barley, jowar, bajra, maize and ragi);
- five pulses (gram, arhar/tur, moong, urad and lentil);
- eight oilseeds (groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and nigerseed);
- cash crops: copra, raw cotton, raw jute and virginia flue cured (VFC) tobacco.

#### **3.11. NUTRIENT BASED SUBSIDY SCHEME**

#### Why in News?

 Recently, government has approved the continuation of Nutrient Based Subsidy (NBS) till 2019-20.

#### About Nutrient Based Subsidy Scheme (NBS)

- Under this scheme a fixed amount of subsidy decided on annual basis, is provided to fertilizer companies (other than Urea) depending on its nutrient content to fertilizer manufacturer.
- Under this scheme Minimum Retail Price (MRP) of Phosphatic & Potassic (P&K) fertilizers has been left open and the manufacturers/importers/marketers are allowed to fix MRP of P&K fertilizers at reasonable level.



- MRP will be decided taking into account the international and domestic prices of P&K fertilizers, exchange rate, and inventory level in the country.
- The scheme aims:
  - to ensure that adequate quantity of P&K is made available to the farmers at statutory controlled price.
  - to ensure balanced use of fertilizers, improve agriculture productivity, promote growth of indigenous fertilizer industry and to reduce the burden of subsidy.

#### 3.12. INTEGRATED MANAGEMENT OF PUBLIC DISTRIBUTION SYSTEM

#### Why in news?

IM-PDS is new central sector scheme that has been approved for implementation under Ministry of Consumer Affairs, Food & Public Distribution

#### About IM-PDS

- The key objectives of the scheme are
  - To **integrate PDS system/portals** of States/UTs with Central System/portals.
  - Introduction of National Portability to provide the option to PDS beneficiaries to lift their entitled foodgrains from the Fair Price Shops (FPS) of their choice at the national level. Presently, Andhra Pradesh, Haryana, Delhi has started portability at the State level, whereas, Karnataka, Maharashtra, Chhattisgarh and Telangana have also started portability in the few FPS areas within the State.
  - **De-duplication of ration cards**/ beneficiary.

#### **3.13. CITY COMPOST SCHEME**

#### Why in news?

 Recently, government has approved the continuation of City Compost Scheme till 2019-20.

#### About City Compost Scheme

 Market Development Assistance- under the scheme a market development assistance of Rs. 1500 per tonne of city compost for scaling up production and consumption of the product, is being provided.

- Marketing: Fertilizer companies and marketing entities will also co-market City Compost with chemical fertilizers through their dealers' network.
- Under the provision of adoption, companies also adopt villages for promoting the use of compost.
- An appropriate BIS standard/ Eco-Mark ensures that environment friendly quality product reaches the farmers.

#### 3.14. PARAMPARAGAT KRISHI VIKAS YOJANA

#### Why in news?

Recently, Ministry of Agriculture and Farmer welfare revised the guideline of Paramparagat Krishi Vikas Yojana.

#### Paramparagat Krishi Vikas Yojana(PKVY)

- It is an elaborated component of Soil Health Management (SHM) of major project National Mission of Sustainable Agriculture (NMSA).
- Its objectives are-
  - To support and promote organic farming and thereby improving soil health.
  - Reduce farmer's dependence on fertilizers and agricultural chemicals to improve yields.
  - Motivate the farmers for natural resource mobilization for input production.
  - Plans to form around 10 thousand clusters in three years and cover an area of 5 Lakh hectares under organic farming.
- Every farmer will be provided Rs. 20,000 per acre in three years for seed to harvesting of crops and to transport produce to the market.

#### About the move

- Under revised guidelines farmers will be eligible for an assistance of Rs 48,700 per hectare for a three-year period for adopting the traditional methods of cultivation and standard organic farming practices like zerobudget natural farming and permaculture.
- These measures include a focus on natural practices.
- These Traditional methods include: yogik farming, gou mata kheti, Vedic farming, Vaishnav kheti, Ahinsa farming, Adhvoot Shivanand farming, and rishi krishi.



#### Why in news?

Recently, Cabinet approves restructured National Bamboo Mission under National Mission for Sustainable Agriculture (NMSA) for 2018-2020.

#### National Mission for Sustainable Agriculture (NMSA)

- It is one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC)
- Aim: Promoting sustainable agriculture through a series of adaptation measures focusing on ten key dimensions encompassing Indian agriculture namely; 'Improved crop seeds, livestock and fish cultures', 'Water Use Efficiency', 'Pest Management', 'Improved Farm Practices', 'Nutrient Management', 'Agricultural insurance', 'Credit support', 'Markets', 'Access to Information' and 'Livelihood diversification'.
- Focus: To infuse the judicious utilization of resources of commons through community-based approach.

#### Background

- National Bamboo Mission (NBM) was launched by Government as a Centrally Sponsored Scheme in 2006-07 and was subsumed under Mission for Integrated Development of Horticulture (MIDH) during 2014-15.
- Government has taken out bamboo from the tree category (in non-forest areas) to encourage people to grow bamboo on private lands, thus, enhance the green cover and carbon stock of the country.
- According to government in the FY 2016-17, Export value of Indian bamboo stand at Rs 18 crore while it's import value is around Rs 25 crore.

#### Bamboo in India

- India has 125 indigeneous and 11 exotic bamboo species belonging to 23 genera, in which more than 50% of the Indian bamboo resource is confined to North-East.
- India is only second to China in bamboo reserves, accounting for 20 per cent of the global production
- **Bamboo Area**: According to India State of Forest Report (ISFR) 2017, bamboo-bearing area in country is estimated at 15.69 million ha.
- Applications of Bamboo: use in building materials, agricultural implements, furniture, musical instruments, food items, handicrafts, large bamboo based industries (paper pulp, rayon etc.), packaging, etc.

#### About the Mission

#### • Objectives of Restructured NBM

- To increase the area under bamboo plantation in non-forest Government and private lands to supplement farm income and contribute towards resilience to climate change.
- To improve post-harvest management through establishment of innovative primary processing units, treatment and seasoning plants, primary treatment and seasoning plants, preservation technologies and market infrastructure.
- To promote product development at micro, small and medium levels and feed bigger industry.
- To rejuvenate the under developed bamboo industry in India.
- To promote skill development, capacity building, awareness generation for development of bamboo sector.
- Implementation strategy and targets of Mission
  - The Mission will focus on development of bamboo in limited States where it has social, commercial and economical advantage with focus on genetically superior planting material of bamboo species of commercial and industrial demand.
  - Adoption of end to end solution in bamboo sector i.e. complete value chain approach starting from bamboo growers to consumers would be emphasized.
  - Mission has been developed as a platform for integration of Ministries/Departments/Agencies with implementation responsibilities given based on their mandate.
  - Capacity building of the officials, field functionaries, entrepreneurs and farmers through skill development and trainings will be emphasised.
  - Focus will be given on Research & Development (R&D) to increase the production and productivity of bamboo.
- State covered: North Eastern region and States including Madhya Pradesh, Maharashtra, Chhattisgarh, Odisha, Karnataka, Uttarakhand, Bihar, Jharkhand, Andhra Pradesh, Telangana, Gujarat, Tamil Nadu and Kerala.



• Empowerment of Executive Committee for formulation of guidelines of the NBM and to make the changes therein.

#### 3.16. NORTH-EAST INDUSTRIAL DEVELOPMENT SCHEME (NEIDS)

#### Why in news?

Recently, Union Cabinet approved the North East Industrial Development Scheme (NEIDS) 2017 up to March 2020.

#### More about scheme

- **Objective**: To promote **employment** in the North East States including Sikkim, the government is incentivizing primarily the **MSME Sector** through this scheme
- Various specific incentives given under the scheme includes incentive on capital investment in Plant & Machinery; interest incentive on credit; reimbursement of insurance premium to the tune of 100% for 5 years; reimbursement of central government share of GST and income tax; transport incentive and employment incentive through part contribution to EPF.
- There is an overall cap of Rs. 200 crores per units for all components of incentives.

#### **3.17. RURAL ELECTRIFICATION**

#### Why in news?

Recently, Government achieved village electrification targets under 'Deen Dayal Upadhyaya Gram Jyoti Yojana' (DDUGJY).

**GARV II APP:** Power ministry launched GARV app to provide real time data about rural electrification in all villages of the country.

National Rural Electrification Policy, 2006

- It was notified in compliance with **the Electricity** Act, 2003 by the Central Government.
- According to it, an electrified village is defined as one that has the following:
  - provision of basic infrastructure such as distribution transformers and lines in the inhabited locality,
  - provision of electricity in public places like schools, panchayat office, health centers, dispensaries, and community centers, and
  - At least 10% of the total numbers of households in the village are electrified.

#### More about news

- As per Government of India, out of 18,452 villages in India that were power deprived 3 years ago, 17,181 have been electrified. Others are uninhabited or classified as grazing reserves.
- According to DDUGJY website, 99.8% of census villages had been electrified by February, 2018, while "intensive electrification" (household electrification) has been completed in around 80% of villages.

**Deendayal Upadhyaya Gram Jyoti Yojana** (**DDUGJY**): Launched in 2014, components of DDUGJY include:

- Separation of agricultural and nonagricultural electricity feeders to improve supply for consumers in rural areas.
- Improving sub-transmission and distribution infrastructure in rural areas.
- Rural electrification by carrying forward targets specified under the RGGVY.
- The central government provides 60% of the project cost as grant, the state power distribution companies (discoms) raise 10% of the funds, and 30% is borrowed from financial institutions and banks.
- Rural Electrification Corporation Ltd (REC), is the nodal agency for executing DDUGJY.

#### 3.18. UNNATI PROJECT

#### Why in news?

Under Project UNNATI 86 out 116 initiatives have been implemented for various major ports.

#### About UNNATI Project

- It was launched by Ministry of Shipping with following objectives:
  - Benchmark operational and financial performance of the 12 major ports with selected Indian private ports and best-inclass international ports for identifying improvement areas.
  - Undertake capability maturity assessment for key processes and functional capabilities and identify gap and areas for further strengthening
  - Detailed deep-dive diagnosis and root cause analysis for the identified opportunity areas in each of the 12 major



ports to understand underlying reasons for performance bottlenecks.

 Develop practical and actionable solutions on the basis of root cause findings, and develop a comprehensive improvement roadmap for each of the 12 major ports.

#### 3.19. PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

#### Why in news?

Recently, Public Accounts Committee (PAC) found issues in the implementation of PMGSY.

#### **About Parliamentary Accounts Committee**

- It is a joint committee consisting of 15 members from Lok Sabha and 7 from Rajya Sabha.
- Since 1967, its chairman by convention is selected from the Opposition parties.
- Primary Functions of the Committee: In scrutinizing the Appropriation Accounts and the Reports of the Comptroller and Auditor-General.

About Pradhan Mantri Gram Sadak Yojana (PMGSY)

- It's a centrally sponsored flagship scheme of the Ministry of Rural development.
- **Objective:** to provide all-weather rural road connectivity and to access eligible unconnected habitations as a strategy for poverty alleviation and to overcome deficiencies in rural road planning, inadequacy and unpredictability of funds and lack of maintenance of rural roads.
- **Criteria for Habitation**: Habitations with 500 populations in plain areas and 250 in hilly areas had to be connected by all-weather roads.
- Out of a total of 1,78,184 eligible habitations under PMGSY, 1,45,158 habitations have been connected till 2017, achieving **82% of the target.**
- It is aggressively encouraging use of "Green Technologies" and non-conventional materials like waste plastic, cold mix, geotextiles, fly-ash, iron and copper slag etc. in rural roads.
- **Mobile Application "Meri Sadak**" launched to enable citizens to register complaints regarding the quality and pace of construction of PMGSY roads.

- PMGSY-II aims to cover upgradation of existing selected rural roads based on a criterion to make the road network vibrant.
- **PMGSY-III** is also proposed for upgradation of 1.07 lakh kilometers. For this, the annual funding support of Rs. 19000 crore from the Central Government will be maintained upto 2022.

#### Related information

- **Core Network** is the network of all the Rural Roads that are necessary to provide basic access to all the Habitations. **Basic access** is defined as single all-weather road connectivity to each Habitation.
- The effort under the PMGSY is to provide single all-weather road connectivity to each eligible Habitation by way of connecting it to another Habitation having all-weather connectivity or to an all-weather road, in such a way that there is access to, inter alia, Market Centres.
- Core Network is extracted out of the total Network mentioned in the DRRP and consists of existing roads as well as the roads required to be constructed to the as yet unconnected Habitations.
- However, it will not consist of all the existing roads of the DRRP since the objective is to establish 'basic access' i.e., one all-weather road connectivity to each habitation.
- It is primarily intended to mark out the essential network that is required to be maintained in good condition at all times.

#### Issues highlighted by the Report

- States deviated from the prescribed procedures while preparing District Rural Road Plan (DRRP) and Core Network. Consequently, eligible habitations were either left out or wrongly shown as connected.
- It was also found that no state has implemented the online fund processing and even after 13 years of introduction on online management, monitoring and accounting system (OMMAS), the Rural Development Ministry was still relying on manual monthly progress reports for decision making.

### 3.20. COAL BED METHANE (CBM)

#### Why in news?

The Cabinet Committee on Economic Affairs chaired by the Prime Minister gave its approval



for amendment of Oil Fields (Regulation and Development) Act, 1948 (ORD Act, 1948).

#### More on news

- Government had earlier issued a notification in 2015 granting rights to Coal India Limited and its subsidiaries for exploration and exploitation of CBM from all coal bearing areas for which they possess mining lease for coal. However, permission was required for Mining Lease for CBM by Ministry of Petroleum and Natural gas.
- Now with new amendment, requirement of permission has been done away with for CIL and its subsidiaries.

#### About coal bed methane

- Coal Bed Methane (CBM) is an unconventional form of natural gas found in coal deposits or coal seams.
- It is formed during the process of coalification, the transformation of plant material into coal.
- It can be recovered from underground coal before, during, or after mining operations.
- It can also be extracted from "unminable" coal seams that are relatively deep, thin or of poor or inconsistent quality.
- It is a cleaner and more efficient fuel than coal or furnace oil.
- In CBM, as opposed to conventional oil and gas, the production increases gradually till it hits it peak, and so it is best suited for small and medium enterprises (SMEs) who require smaller amounts of fuel.

#### 3.21. SOLAR ROOFTOP INVESTMENT PROGRAM (SRIP)

#### Why in news?

Asian Development Bank (ADB) and Punjab National Bank (PNB) have signed a \$100 million loan to finance large solar rooftop systems on industrial and commercial buildings throughout India.

**Climate Investment Funds:** is one of the world's largest and most ambitious climate finance mechanisms.

- It includes four key programs:
  - Clean Technology Fund (CTF)
  - Forest Investment Program (FIP)
  - Pilot Program Climate Resilience (PPCR)
  - Scaling Up Renewable Energy Program (SREP)

 It provides developing countries with grants, concessional loans, risk mitigation instruments, and equity that leverage significant financing from the private sector, multilateral development banks (such as ADB, World Bank etc.) and other source

#### About SRIP

- SRIP aims to install solar rooftop system of around 1 gigawatt capacity in India.
- The entire cost of the project is estimated to be \$1billion dollars out of which \$500 million will be provided under a multi tranche facility approved by ADB.
- However, out of the \$500 million \$330 million will be provided by ADB and \$170 million will be provided by Clean Technology Fund (CTF).

#### **3.22. PILOT SCHEME FOR PROCUREMENT OF AGGREGATE POWER**

#### Why in news?

Recently Central Government launched pilot scheme for procurement of aggregate power.

#### **Details of the Scheme**

- The scheme has been launched for procurement of 2500 MW on competitive basis for three years under medium term from generated with commissioned projects but without Power Purchase Agreement.
- The main purpose of the scheme is to revive commissioned power plants which are unable to sell electricity in absence of Power Purchase Agreement.
- Under the scheme PFC Consulting Limited (A wholly owned subsidiary of PFC Ltd) has been appointed as Nodal Agency and PTC India Limited as the Aggregator.
- PTC India would sign three-year (mid-term) Agreement for Procurement of Power with successful bidders and Power Supply Agreement with the Discoms.
- Under the scheme a single entity can be allotted maximum capacity of 600 MW and it also assures a minimum off-take of 55 per cent of contracted capacity.
- The Bidding for the scheme will be conducted on DEEP e-Bidding Portal.

#### DEEP e-Bidding Portal

 It is an initiative of Ministry of Power to introduce uniformity and transparency in power



- procurement by the DISCOMs.
- It is an e-Bidding and e-Reverse auction portal for procurement of short term power by DISCOMs.
- The web portal seeks to ensure seamless flow of power from seller to buyer.

#### 3.23. PRADHAN MANTRI ROZGAR PROTSAHAN YOJANA (PMRPY)

#### Why in news?

The scope of PMRPY under Ministry of Labour & Employment has been enhanced by the cabinet.

#### About PMRPY

- Under the scheme, the government provided 8.33% of the contribution of Employers to the Employees' Pension Scheme (EPS) (12% in case of textile, leather and footwear industry) in respect of new employees (who have joined on or after 1st April 2016) having a new Universal Account Number (UAN), with salary up to Rs 15,000/- per month.
- The Gol will now contribute the employer's full admissible contribution (12%) for the first three years from the date of registration of the new employee, and for all the sectors including existing beneficiaries for their remaining period of three years.
- The scheme has a dual benefit as the employers are incentivized for increasing the employment base of workers in the establishments and a large number of workers also find jobs and access to social security.
- All establishments registered with Employees' Provident Fund Organisation (EPFO) can apply for availing benefits under the scheme. The establishments must have a valid LIN (Labour Identification Number).

### 3.24. GLOBAL FINDEX REPORT 2017

#### Why in news?

Recently, World Bank released Global Findex Report.

#### **About Global Findex Report**

 It is world's most comprehensive data set on how adults save, borrow, make payments, and manage risk. It has been prepared in partnership with Gallup, Inc. with funding of Bill & Melinda Gates Foundation.

# 3.25. ENERGY TRANSITION INDEX

#### Why in news?

Recently, energy Transition index was released by **World Economic Forum**.

#### TRANSITION READINESS ENABLING DIMENSIONS



#### About Energy Transition Index (ETI)

- It is a part of first edition of the Fostering Effective Energy Transition Report which builds upon previous series of Global Energy Architecture Performance Index.
- It ranks countries on how well they are able to balance energy security and access with environmental sustainability and affordability.
- It is a composite index that focuses on tracking specific indicators to measure the energy system performance and transition readiness of 114 countries. The score vary from 0-100%.
- India has been **ranked at 78<sup>th</sup> position** which is lower than Brazil and China.
- The index has been topped by Sweden followed by Norway and Switzerland.

#### 3.26. INDEX OF ECONOMIC FREEDOM

#### Why in news?

India has recently earned 130th spot in the latest annual Index of Economic Freedom.



#### About the Index

- It is released by The Heritage Foundation and The Wall Street Journal
- The index measures economic freedom based on 12 quantitative and qualitative factors, grouped into four broad categories, or pillars, of economic freedom:
  - **Rule of Law** (property rights, government integrity, judicial effectiveness)
  - **Government Size** (government spending, tax burden, fiscal health)
  - **Regulatory Efficiency** (business freedom, labor freedom, monetary freedom)
  - **Open Markets** (trade freedom, investment freedom, financial freedom)
- Hong Kong has topped the list.

#### **3.27. PROJECT JAL SANCHAY**

#### Why in News?

Government in June 2017, selected **Project Jal Sanchay** for the national award for excellence in the Mahatma Gandhi national rural employment guarantee programme **(MGNREGP**)

#### **About Project**

- It's a water conservation model adopted in Nalanda district of south central Bihar, to offer farmers a solutions to their water crisis.
- Under it, check dams were created and traditional Aahar-Pyne irrigation system and traditional water bodies were desilted and renovated. Awareness campaign was carried out to create awareness about rainwater harvesting.
- It has improved the availability of water and positively impacted farm production in the areas covered by the project.

### 3.28. GLOBAL INNOVATION INDEX

#### Why in news?

Recently, Global Innovation Index 2017 (GII) was co-published by Cornell University, INSEAD, and the World Intellectual Property Organization.

 It is an annual index which aims to capture the multi-dimensional facets of innovation and provide the tools that can assist in tailoring policies to promote long-term output growth, improved productivity, and job growth.  India has been ranked 60<sup>th</sup> among 130 nations and improved from 81<sup>st</sup> rank in 2015. The index has been topped by Switzerland.

#### **3.29. MENTOR INDIA**

#### Why in News?

• Recently, NITI Aayog launched Mentor India campaign for Atal Tinkering Labs.

#### About Mentor India Campaign

- It is a strategic nation building initiative to engage leaders who can guide and mentor students at more than 900 Atal Tinkering Labs.
- In the campaign mentors are expected to be enablers rather than instructors.
- It aims at maximising the impact of Atal Tinkering Labs.
- Possible areas of contribution could be; building prototypes, Innovation and Design, inculcating leadership and self-motivation, and encouraging ideas and team building and mind set and behavioural change against stereotypes etc.

#### **3.30. MISCELLANEOUS TITBITS**

- Recently, Cabinet Committee on Economic Affairs (CCEA) removed the decades-old ban on export of bulk edible oils, except mustard oil. Mustard oil will continue to be exported only in consumer packs up-to 5 kgs and with a minimum export price of \$900 per tonne.
- Recently, cabinet has approved the restructuring the NSDC and NSDF. NSDF has given a supervisory role over NSDC's functions by including a provision in the Investment Management Agreement (IMA). IMA is agreement of NSDF with NSDC for utilization of its corpus to meet the desired objectives of National Skill Development Mission.
- Recently the Unlocking Transparency by Third Party Assessment of Mined Coal (UTTAM) App for Coal Quality Monitoring. It has been developed by the Ministry of Coal and Coal India Limited (CIL).
- Recently, India became the world's second largest importer of liquefied petroleum gas (LPG) overtaking Japan, after China. Increase in imports is due to Increase in household demand by nearly 8% in 2017-18 due to Pradhan Mantri Ujjwala Yojana (PMUY). Saudi



Arabia as the largest LPG exporter to India in 2016.

- Recently, Cabinet delegated its power to approve award of block for exploration and production of oil and gas, to the Ministry of Finance and Ministry of Petroleum and Natural Gas.
  - The delegation of power is for open acreage licensing policy (OALP) bid rounds under the Hydrocarbon Exploration and Licensing Policy (HELP).
  - Aforesaid ministries, will approve the award based on the recommendations of a panel of secretaries, called the empowered committee of secretaries (ECS).
- Recently, National Highway Authority of India had signed its first international project agreement for upgradation of a highway in Myanmar. It has been funded by External Affairs Ministry and will be implemented on EPC - PPP Model (Engineering, Procurement and Construction).
- Ministry of Electronics and IT planning to expand phased manufacturing programme, aimed at increasing use of locally-produced electronic components in mobile phones, to other product segments. The scheme would promote domestic production of mobile phones by providing financial and fiscal incentives (tax relief) on components and accessories used for the cellular devices in a phased manner (2016-2020).
- Recently, Multi Commodity Exchange (MCX) of India launched world's first Brass futures contract.
- State-run fuel retailers IOCL, HPCL and BPCL recently bid for the 'Highway Village' which is a brand name under NHAI's Highway Amenities Scheme.
  - Under the Scheme, NHAI plans to develop a network of sites at every 50 km distance along national highways with a range of amenities.
  - The facilities having areas more than 5 acres shall be developed under the brand name 'Highway Village' and facilities on area smaller than 5 acres with brand name 'Highway Nest'.
  - These facilities will be developed on the **public-private-partnership (PPP) model**.
- Recently, World Bank released India Development Update. It is a biannual flagship

publication of World Bank which analysis Indian economy and shares India's growth experience and trajectory over the past several years and provides a long-term perspective on India's growth outlook.

- Recently, Sardar Sarovar Project (SSP) on Narmada river was declared officially complete.
- Mission Raftaar was recently launched which targets doubling of average speeds of freights trains and increasing the average speed of superfast mail/express trains by 25 kmph in the next 5 years. Loco hauled passenger trains will be replaced by DEMU/MEMU over the next five years. It will complement Mission 25 Tonne to increase throughput of the railway system.

#### **3.31. ERRATA**

- 1. Article 1.1.1: Bank Recapitalisation Plan: recapitalisation bonds to be issued by the government will not be counted under statutory liquidity ratio (SLR) requirement and would not be tradeable
- 2. Article 4.1: Goods and Services Tax: At the Central level, the taxes being subsumed are: Central Excise Duty, Additional Excise Duty, Service Tax, Additional Customs Duty commonly known as Countervailing Duty, and Special Additional Duty of Customs.
  - At the State level, the taxes being subsumed are: State Value Added Tax/Sales Tax, Entertainment Tax (other than the tax levied by the local bodies), Central Sales Tax (levied by the Centre and collected by the States), Octroi and Entry tax, Purchase Tax, Luxury tax, and Taxes on lottery, betting and gambling.
- 3. Article 4.2.: Capital Gains Tax Rules: The short-term capital gains (securities sold within one year) are taxed at 15%.
  - For immovable property (land or building or both) the period of holding is 24 months to qualify as a long term capital asset. Earlier, this period was 36 months to qualify as a long-term capital asset.
  - The definition of a long-term investor in stocks for tax purposes is one year.
- Article 10.9: National Investment And Infrastructure Fund: In India, alternative investment funds (AIFs) are defined in Regulation 2(1) (b) of Securities and Exchange Board of India (Alternative Investment Funds)



Regulations, 2012. It refers to any privately pooled investment fund, (whether from Indian or foreign sources), in the form of a trust or a company or a body corporate or a Limited Liability Partnership (LLP). Hence, in India, AIFs are private funds which are **otherwise not coming under the**  jurisdiction of any regulatory agency in India. They are regulated by SEBI.

 Article 11.6: Strategic Oil Reserves: Strategic crude oil storages at three locations namely, Visakhapatnam, Mangalore and Padur (near Udupi in Karnataka).



### **4. ENVIRONMENT**

# 4.1. INTERNATIONAL SOLAR ALLIANCE

#### Why in news?

The founding ceremony of the International Solar Alliance recently took place in New Delhi. It was followed by the first summit of the Alliance.

#### About ISA

- The International Solar Alliance (ISA) was unveiled by Prime Minister Narendra Modi and then French President Francois Hollande at the U.N. Climate Change Conference in Paris on November 30, 2015.
- The idea was to form a coalition of solar resource-rich countries to collaborate on addressing the identified gaps in their energy requirements through a common approach. Towards this, the ISA has set a target of 1 TW of solar energy by 2030.
- It is open to 121 prospective member countries, most of them located between the Tropics of Cancer and Capricorn that support the Paris Declaration.

#### India's Role

Apart from being a founding-member, India plays a significant role in the alliance in terms of being a host as well as a major contributor to the achievement of the target. The ISA is the first international body that will have a secretariat in India.

#### 4.2. SOLAR GEO-ENGINEERING

#### Why in news?

Developing Nations are planning to increase research in dimming Sunlight through man made Sun-Shade to prevent climate change.

### Solar Radiation Management Governance Initiative (SRMGI)

- It is an international, NGO-driven project, financed by Dustin Moskovitz (co-founder of facebook) for expanding the discussion of SRM climate engineering research governance to developing countries.
- The Royal Society, The academy of sciences for the developing world) and Environmental Defense Fund (EDF) are its partners.

### What is Solar Geo-Engineering/Solar Radiation Management (SRM)

- It is a process through which the reflectivity (albedo) of the Earth's atmosphere or surface is increased, in an attempt to offset some of the effects of GHG-induced climate change.
- The technique mimics big volcanic eruptions that can cool the Earth by masking the sun with a veil of ash or similar other things.
- The methods include:
  - Space-Based Options/Space Sunshades e.g. using mirrors in space, placing vast satellites at Lagrange Point 1, space parasol, etc.
  - Stratosphere-Based Options such as injection of sulfate aerosols into the stratosphere.
  - Cloud-Based Options/Cloud Seeding e.g. Marine Cloud Brightening (by spraying a fine seawater spray in the air), seeding of high cirrus clouds with heterogeneous ice nuclei.
  - **Surface-Based Options** e.g. whitening roofs, growing more reflective crops, etc.

#### 4.3. GLOBAL COMMISSION ON THE GEOPOLITICS OF ENERGY TRANSFORMATION

#### Why in News?

 Recently, International Renewable Energy Agency (IRENA), launched the Global Commission on the Geopolitics of Energy Transformation.

### About the Global Commission on the Geopolitics of Energy Transformation

- It will work to achieve a better understanding of the geopolitical **implications** of a large-scale **shift to renewable energy**.
- It will analyse how higher shares of renewable energy and increased energy efficiency will impact relations between states and thus reshape global energy diplomacy.
- It will suggest how countries can thrive in the new energy economy in line with the Paris Climate Agreement objectives and the SDGs.



#### International Renewable Energy Agency (IRENA)

- It is an intergovernmental organisation that supports countries in their transition to a sustainable energy future.
- It serves as the principal platform for international cooperation, and a repository of policy, technology, resource and financial knowledge on renewable energy.
- It is **Permanent Observer** to United Nation.
- India is a founder Member of the International Renewable Energy Agency (IRENA).
- It has two main governing structures.
  - IRENA Assembly takes decisions at Macro level and gives policy guidance to IRENA.
  - IRENA Council which is the main governing body of the agency responsible for implementing various decisions of the assembly.

Recently, International Renewable Energy Agency's (IRENA's) launched its long-term renewable energy outlook 'Global Energy Transformation: A Roadmap to 2050'.

# 4.4. NATIONAL E-MOBILITY PROGRAMME

#### Why in news

Recently, Minister of Power has launched National E-Mobility Programme in India.

- NITI Aayog has tasked seven ministries (heavy industries, power, new and renewable energy, road transport and shipping and highways, earth sciences, urban affairs and information technology) with framing guidelines to encourage the use of such vehicles.
- Nagpur is the first city in India which is equipped with battery swapping and charging stations.

#### About the Programme

- Aim: To provide an impetus to the entire emobility ecosystem including vehicle manufacturers, charging infrastructure companies, fleet operators, service providers, etc.
- It will be implemented by Energy Efficiency Services Limited (EESL).
- Under it, Electric Vehicles (EVs) will be procured by EESL in bulk to increase aggregate demand and ensure economies of scale.

#### 4.5. SAND MINING

#### Why in news?

Recently, Ministry of Mines has released a sand mining framework to assist the state

governments in addressing the issues of the Sand mining sector.

#### Sand

Under the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act), sand is a minor mineral and sand mining is regulated by the respective state governments.

#### About Sand Mining

- Sand mining is a practice that is used to extract sand, mainly through open pit mining.
- Main sources of sand are agricultural fields, riverbeds and floodplains, coastal and marine sand, lakes and reservoirs.
- Sand mining is also done on beach, inland dunes and dredged from ocean beds and river beds.
- It's done to extract minerals such as Rutile, Ilmenite and Zircon which contain useful elements Titanium and Zirconium.

#### Issues

- Loss of revenue for exchequer due to cartelisation among mining companies during auction.
- Higher prices of sand in many cities due to nonavailability there and absence of robust monitoring mechanism or regulation by the Government.
- Mixing of low quality sand with usable sand leading to construction of weak buildings.

#### Background

- Demand of sand in the country was around 700 million tonnes in FY-2017 and it is increasing at the rate of 6-7% annually.
- Government amended the Mineral Auction Rules 2015 in November 2017 to make the auction process less cumbersome and help states auction mineral blocks.

#### Features of the framework

 Mining will be done as per the guidelines laid down in the Sustainable Sand Mining Management Guidelines 2016 by the MoEFCC.

Steps taken by government to Promote Sustainable Mining

- Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY): It's to be implemented by the funds collected under District Mineral Foundations (DMF) and utilised for the welfare and development of the mining affected areas.
- Mining Surveillance System (MSS): Ministry of Mines, through the Indian Bureau of Mines (IBM), has developed the MSS in collaboration with the Ministry of Electronics and Bhaskaracharya Institute of Space Applications and Geo-Informatics (BISAG) to use the space technology to check illegal mining.



• Mining Tenement System (MTS): It will facilitate end to end national scale accounting of all the minerals produced in the country through automation from the pithead to its end use, reducing the scope for illegal mining.

#### Importance of sustainable sand mining

- To ensure the conservation of the river equilibrium and its natural environment by protection & restoration of the ecological system.
- To ensure there is no obstruction to the river flow, water transport and restoring the riparian habitats.
- To avoid pollution of river water leading to water quality deterioration.
- To prevent ground water pollution by prohibiting sand mining on fissures where it works as filter prior to ground water recharge.
- To maintain the river equilibrium with the application of sediment transport principles in determining the locations, period and quantity to be extracted.

### Salient features of the Sustainable Sand Mining Management Guidelines, 2016:

- It allows environment clearances for up to five hectares of mine lease area for sand and minor minerals to be done at the district level by the District Environment Impact Assessment Authority headed by the District Collector.
- States will give clearances for mine lease areas up to 50 hectares, while the Centre would give permissions for areas larger than 50 hectares.
- It calls for use of technology for stringent monitoring of sand mining through tools such as bar coding, remote sensing etc.
- It calls for promotion of manufactured sand, artificial sand, fly ash and alternative technologies in construction materials and processes for reducing the dependence on naturally occurring sand and gravel.
- It also calls for training of architects and engineers, new laws and regulations, and positive incentives to initiate a shift for lowering dependency on sand.
- Alternatives to sand: To meet the growing pace of urbanization and infrastructure development alternatives should be explored like
  - Manufactured sand (M-sand) which is produced by crushing of rocks, quarry stones to a stipulated size of 150 microns. As compared to river sand, it is cheaper and has marginally higher bond strength and its mortar shows higher compressive strength.
  - Sand produced from coal overburden.

- **Importing sand** from other countries such as Malaysia and Philippines to meet the requirement of coastal states.
- Encouraging alternative technologies in construction materials processing for reduced dependence on natural sand.
- Affordability: can be achieved by
  - Controlling the price from supply side rather than through administrative mechanism
  - Reducing illegal mining, closure of quarries and smuggling of sand to neighboring States.
  - Regulating transportation through use of GPS/ RFID enabled dedicated vehicles for better and efficient management of resource.
- Business Model: States should opt out of either of the two models depending upon their objective:
  - Market Model (Simple Forward Auction) for revenue maximization by State.
  - Notified/ Controlled Price Model for keeping the prices and operations under control.
- Classification of states: as Sand surplus State, Sand sufficient State and Sand deficit State on the basis of analysis of demand and supply situation and to help them in framing policy and regulation according to the needs of the states.
- Separate Sand Mining Policy and Rules: for each state to better manage the sector and only the State Mining Department should be entrusted for regulating sand mining in the State.
- District Survey Report (DSR): shall be prepared by the State Government to estimate the annual quantity of sand available in a particular district and their usage.
- Clearances and approvals: Responsibility of seeking the clearances and approvals should be given to the lessee/contractors only and department should play the role of facilitator/ regulator only.
- **360-degree monitoring mechanism:** States need to create and establish a robust system to monitor and measure the mined-out mineral at each lease location and its transportation in the State.
- Classification of the rivers: States need to classify the rivers based on the stream orders



i.e. stream orders I, II, III, IV and above, where for stream I, II and III, sand may be allowed to be extracted by manual means for local use in villages or towns bordering the streams, while for order IV and above streams, bidding is done for sustainable commercial mining and usage.

# 4.6. BRAZZAVILLE DECLARATION

### Why in news?

Recently, Brazzaville Declaration was signed to promote better management and conservation of Cuvette Centrale Region in Congo Basin.

### About the Brazzaville Declaration

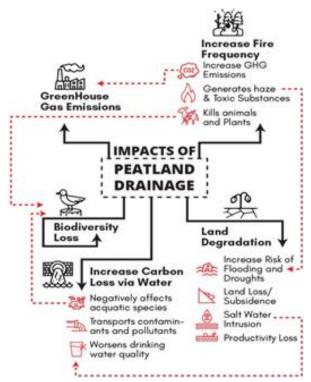
- The declaration has been signed by Democratic Republic of Congo, the Republic of Congo and Indonesia in the backdrop of the 3<sup>rd</sup> Conference of Partners of the Global Peatlands Initiatives (GPI), taking place in Brazzaville, Republic of Congo.
- GPI is an initiative by leading experts and institutions to save peatlands as world's largest terrestrial organic carbon stock and to prevent it being emitted.

### What are Peats?

- Peats are a heterogeneous mixture of plant material (vascular plants, mosses and humus) that had accumulated in a water-saturated area and are only partially decomposed due to absence of oxygen.
- The natural areas covered by peat are called peatlands. Various types of peat are swamp forests, fens, bogs or mires.
- They form where climate, bedrock and relief create an area with permanent water saturation i.e. either in shallow water over layers of lake sediments (called terrestrialisation) or directly on mineral soil (called palaudification).
- They are mostly found in permafrost regions towards the poles and at high altitudes, in coastal areas, beneath tropical rainforest and in boreal forests. Countries with largest peatland areas are – Russia, Canada, Indonesia, USA, Finland etc.
- Several multilateral conventions take peatland into consideration such as UNFCCC, Ramsar Convention on Wetlands, Convention

on Biodiversity and United Nation Convention to Combat Desertification.

 Peatlands face threats such as- agricultural expansion and commercial forestry, peat extraction and usage as fuel, waste disposal and infrastructure development.



### Importance of Peatland

- Carbon Storage Although they cover less than 3% of the global surface, estimates suggest that peatlands contain twice as much carbon as in the world's forest.
- Supporting unique and critically threatened biodiversity – 37% of all the vascular plants in the peatlands of Yamal Peninsula and 10% fish species within Malay Peninsula are only found in peatland ecosystem.
- Supporting water cycle by regulating water flow, retaining pollutants and nutrients and water purification, preventing intrusion of salt water.
- Supporting livelihood They are source of berries, mushrooms and medicinal plants in boreal and temperate regions and of nontimber forest products in tropical regions. Even the peat itself is used as fuel.
- As a cultural landscape and archive They hold some of the most evocative archeological discoveries of last decades such as 4<sup>th</sup> millennium BCE footpath 'sweet tracks'. They also record environmental changes.



### Solutions

- **Rewetting** It is an essential step in the restoration of Peatlands as they rely on waterlogged conditions for their survival.
- Plaudiculture and sustainable management techniques – It is a practice of crop production on wet soils, predominantly in peatlands. Other sustainable techniques could be cultivation of fish or pursuit of ecotourism.
- Creating a market to finance peatland management – Using Funding mechanism such as Green Bonds, private capital (equity and debt), funding from government sources etc.
- Restricting new agriculture & industrial activities that threaten their long-term viability and developing long-term land use policies which favour conservation and protection of peatlands.

# 4.7. CONSERVATION ASSURED | TIGER STANDARDS (CA|TS)

### Why in news?

 Recently a survey has found that only 13 per cent of the tiger conservation areas meets the global standards of an accreditation system- the Conservation Assured | Tiger Standards.

### More on news

- The survey is the first and largest rapid assessment of site-based tiger conservation across Asia and has been driven by 11 conservation organisations and tiger-range governments that are part of the CA|TS coalition.
- It found out that tiger monitoring is being implemented in 87 per cent of the sites and all sites surveyed in South Asian and East Asian countries like Bangladesh, Bhutan, China, India, Nepal and Russia have management plans.

### Conservation Assured (CA|TS)

 It is a management tool which sets basic criteria for effective management of tiger conservation reserves or other conservation reserves and protected areas which have tiger populations.

- It is based on a set of seven pillars with 17 minimum standards and associated criteria for effective management.
- It addresses multiple factors which impact conservation management, including support for resident human populations (including their social, cultural, spiritual and economic needs), enhancing overall biodiversity richness, prey-base and habitat cover, and also considers the legal context of an area in terms of content, application and capacity of those on the ground to enforce those laws.
- It is driven by the CA|TS Partnership, which comprises of tiger range governments, intergovernmental agencies, conservation organisations and other institutions, such as Global Tiger Forum, IUCN, United Nations Development Program (UNDP), WWF etc.
- The secretariat for CA|TS is hosted by WWF.
- It is a key element in realizing the ambitious goal of doubling the global tiger population by 2022, a commitment made by all 13 Tiger Range Countries (TRC).
- **Nepal is the first** TRC to implement the process.
- To date, three sites- Lansdowne Forest Division in Uttarakhand, India, Chitwan National Park in Nepal and Sikhote-Alin Nature Reserve in Russia have been awarded CA|TS Approved status.

# 4.8. RISE IN RHINO POPULATION IN KAZIRANGA NATIONAL PARK

### Why in news?

 According to a recent census conducted by the Assam Forest Department, it was found that the population of the iconic one-horned Rhino has risen from 2401 in 2015 to 2413 in Kaziranga National Park.

#### **Northern White Rhino**

- The world's last male northern white rhino named Sudan died as he was euthanised after suffering from "age-related complications" in the Kenya.
- Now only 2 females of this subspecies are alive.

### **Other recently Extinct Species**

- Baiji River Dolphin 2006
- Western Black Rhino 2011
- Formosan Clouded Leopard 2013
- Barrier Reef Rodent 2016 (first mammal to go extinct due to climate change)

# Kaziranga National Park

- It is located in Assam and is one of the UNESCO world heritage site and is also located in the edge of the Eastern Himalaya biodiversity hotspot.
- It hosts two-third of the world's Great Onehorned rhinoceros.
- The Park area is circumscribed by the Brahmputra River, Mora Dhansiri, Diphlu and Mora Diphlu.
- It has also been identified by Birdlife International as an Important Bird Area and it is home to important migratory birds such as lesser white fronted goose, ferruginous duck, lesser adjutant etc.

# 4.9. ANIMAL WELFARE BOARD OF INDIA

### Why in news?

The headquarters of the Animal Welfare Board of India (AWBI) has been shifted from Chennai to Haryana's Ballabhgarh for better coordination with the environment ministry.

### Animal welfare board of India

- The Animal Welfare Board of India is a statutory advisory body established in 1962 under Section 4 of the Prevention of Cruelty to Animals Act, 1960.
- Started under the stewardship of Late Smt. Rukmini Devi Arundale, well known humanitarian.
- It ensures that animal welfare laws in the country are diligently followed, provides grants to Animal Welfare Organizations and advises the Government.

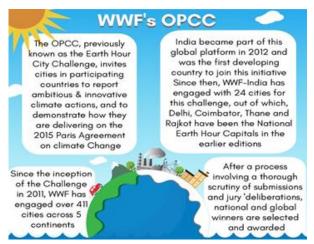
#### Prevention of Cruelty to Animals Act, 1960

- It was enacted to prevent the infliction of unnecessary pain or suffering on animals.
- It extends to whole of India except J&K.
- Animal welfare board of India in MoEF, was established under this act.
- It regulates animal markets, dog breeders, aquarium and pet fish shop owners.
- Treating animals cruelly under this act, includes:
  - Inflicting pain through beating etc.
  - Wilfully and unreasonably administering drugs.
  - Caging, conveying and carrying animals inappropriately as to cause pain & suffereing to them
  - Mutilating any animals etc.

### 4.10. ONE PLANET ONE CITY CHALLENGE OF WWF

### Why in news?

Recently 3 Indian cities have been selected as national finalists in the 2017-18 edition of WWF's One Planet City Challenge (OPCC).



#### More about the news

- World Wildlife Fund for Nature (WWF) works in collaboration with ICLEI - Local Governments for Sustainability (a global network of more than 1,500 cities, towns and regions committed to building a sustainable future) to mobilize cities to participate in the One Planet City Challenge.
- The three cities Panaji, Pune and Rajkot that are among cities in India's Smart City Mission, will now compete for the title of National and Global Winner.

# 4.11. EIGHTH REGIONAL 3R FORUM

#### Why in news?

Recently, 8<sup>th</sup> Regional 3R Forum in Asia and Pacific was held.

#### More on news

- The United Nations Centre for Regional Development (UNCRD) has been organizing International Regional Forum on 3Rs since 2009 with the support of Government of Japan to promote the concept of Reduce, Reuse, Recycle in industry, service and agriculture sector.
- The Fourth Regional 3R Forum adopted the Ha Noi 3R Declaration - Sustainable 3R Goals for Asia and the Pacific for 2013-2023.



- It is a legally non-binding and voluntary document which aims to provide a basic framework for Asia-Pacific countries to develop measures and programs to promote 3Rs including a set of 3R indicators for monitoring specific progress.
- The Indore 3R Declaration of Asian Mayors on Achieving Clean Land, Clean Water and Clean Air in Cities was adopted during the forum.
- Through this forum India aims to further strengthen this focus through its 'Mission Zero Waste' approach thereby encouraging cities, industries and other stakeholders to see waste as a resource.

The United Nations Centre for Regional Development (UNCRD): established in 1971 based on the agreement between the United Nations (UN) and the Government of Japan aims to achieve sustainable living environment for all - safe, secure, equitable and inclusive development in harmony with nature.

### Mission ZERO Waste - Swachh Bharat Mission

Under the Swachh Bharat Mission (Urban), Government is approaching, Mission ZERO Waste which aims at sound management of the solid wastes generated in the country with special focus on Reduce, Reuse and Recycle (3Rs).

"Mission Zero Waste" complements the **Swachh Bharat Mission** of Government of India aiming at fostering creativity, innovation, green business, ecoeducation & consumerism.

# 4.12. PERSISTENT ORGANIC POLLUTANTS

### Why in news?

 Recently, the environment ministry has notified new Regulation of Persistent Organic Pollutants (POP) Rules, 2018.

### What are POPs?

- POPs are organic chemical substances—toxic to both humans and wildlife—which once released into the environment remain intact for years on end.
- They become widely distributed throughout the environment as a result of natural processes and accumulate in the fatty tissues (thus they have to be fat soluble) of living organisms including humans.
- POPs are recognized by the International Agency for Research on Cancer as Group 1 carcinogens or cancer-causing substances.
- Specific effects of POPs can include cancer, allergies and hypersensitivity, damage to the central and peripheral nervous systems,

reproductive disorders, and disruption of the immune system.

### Details about the notification

• It bans the manufacture, trade, use, import and export of the seven toxic chemicals listed under the **Stockholm Convention**.

Stockholm Convention on Persistent Organic Pollutants

- It is a **legally binding** global treaty that aims to protect human health and the environment from the effects of persistent organic pollutants (POPs).
- The Convention sought initially 12 chemicals, for restriction or elimination of the production and release. Now, it **covers 23 chemicals.**
- The **Global Environmental Facility (GEF)** is the designated interim financial mechanism for the Stockholm Convention.
- India has ratified the Convention and its 12 initially listed chemicals.
- The notification held that industrial units or persons, "shall not drain or discharge or dispose the chemicals directly or indirectly in effluent treatment plant, sewage treatment plant, onto any land, in public sewers, in inland surface water or in marine coastal areas".
- It further held that the waste containing these chemicals "shall be disposed of as per the provisions of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016".
- These rules apply to hazardous and other wastes like metal and metal bearing wastes, wastes which may contain either inorganic or organic constituents. They do not apply to wastes covered under other acts such as waste-water and exhaust gases, radio-active wastes, bio-medical wastes and municipal solid wastes.

# 4.13. E-WASTE (MANAGEMENT) AMENDMENT RULES, 2018

### Why in News?

 Recently, Ministry of Environment, Forest and Climate Change (MoEF&CC) amended the earlier E-Waste Management Rules, 2016.

### **Highlights of new rules**

 It aims to formalise the e-waste recycling sector by channelizing the E-waste generated



towards authorized dismantlers and recyclers.

- Phase wise Collection: It introduced the phase-wise collection targets for e-waste, which shall be 10% of the quantity of waste generation as indicated in the Extended Producer Responsibility (EPR) Plan during 2017-18, with a 10% increase every year until 2023. After 2023 onwards, the target has been made 70% of the quantity of waste generation as indicated in the EPR Plan.
- Separate e-waste collection targets have been drafted for new producers, i.e., those producers whose number of years of sales operation is less than the average lives of their products.
- Reduction of Hazardous Substances (RoHS): Under this, cost for sampling and testing shall be borne by the government for conducting the RoHS test and if the product does not comply with RoHS provisions the cost will be borne by the Producers.
- Producer Responsibility Organizations (PROs) shall apply to the Central Pollution Control board (CPCB) for registration to undertake activities prescribed in the Rules. PROs are organisations that helps producers meet their EPR targets through various recyclers and dismantlers.

### About E-waste (Management) Rules, 2016

- It is applicable to all the stakeholders such as Producer Responsibility Organisations, Consumers, Dismantlers, Recyclers, Dealers, Manufacturers etc.
- It adopted **collection mechanism-based approach** which includes collection centre, collection point, and take back system etc. for collection by Producers under EPR.
- It covered even components and spare parts of electric & electronic equipments. Mercury containing lamps like CFLs were also included.
- It has the **interest-bearing Deposit Refund Scheme** charged by the producer to the consumer at the time of purchase.
- It introduced Pan India EPR Authorization by CPCB replacing the state wise EPR authorization.

### What is e-waste?

• E-waste" is a popular, informal name for electronic products nearing the end of their "useful life.

- It includes computer and its accessories, monitors, printers, keyboards, central processing units; typewriters, mobile phones and chargers, remotes, compact discs, headphones, batteries, LCD/Plasma TVs, air conditioners, refrigerators and other household appliances.
- India is 5<sup>th</sup> largest producer of e-waste.
- The main sources of electronic waste in India are the government, public and private (industrial) sectors, which account for almost 71% of total waste generation.
- About 90.5% of the e-waste in India is being handled by the informal sector.

### Effects of E-Waste

Source of e- wastes	Constituent	Health effects
Solder in printed circuit boards, glass panels and gaskets in computer monitors		Damage to central and peripheral nervous systems, blood systems and kidney damage. Affects brain development of children.
Chip resistors and semiconductors	Cadmium (CD)	Toxic irreversible effects on human health. Accumulates in kidney and liver. Causes neural damage. Teratogenic.
Relays and switches, printed circuit boards	Mercury	Chronic damage to the brain. Respiratory and skin disorders due to bioaccumulation in fishes. It causes Minamata disease.
Corrosion protection of untreated and galvanized steel plates, decorator or hardner for steel housings	Hevavalent	Asthmatic bronchitis. DNA damage.
Cabling and computer housing	Plastics including PVC	Burning produces dioxin. It causes Reproductive and



		developmental problems; Immune system damage; Interfere with regulatory hormones
Plastic housing of electronic equipments and circuit boards.	flame retardants	Disrupts endocrine system functions
Front panel of CRTs	Barium (Ba)	Short term exposure causes: Muscle weakness; Damage to heart, liver and spleen.
Motherboard	Beryllium (Be)	Carcinogenic (lung cancer) Inhalation of fumes and dust. Causes chronic beryllium disease or beryllicosis. Skin diseases such as warts.

### Efforts at international level

- The fundamental aims of the **Basel Convention** are the control and reduction of transboundary movements of hazardous and other wastes including the prevention and minimization of their generation, the environmentally sound management of such wastes and the active promotion of the transfer and use of technologies.
- The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes aims to protect human health and environment from dangers posed by hazardous wastes by reducing their generation to a minimum in terms of quantity and/or hazardous potential.
- Rotterdam Convention on the Prior Informed Consent (PIC) Procedure for Certain Chemicals and Pesticides in International Trade regulates trade in hazardous wastes but contains no commitment to reduce their use and release
- The Waste Electrical and Electronic Equipment (WEEE) Directive is the European Community directive on waste electrical and electronic equipment which aims at setting

collection, recycling and recovery targets for all types of electrical and electronic goods.

 Global E-waste Monitor 2017 report was released by United Nations University (UNU), the International Telecommunication Union (ITU), and the International Solid Waste Association (ISWA) which suggests countries should come up with legislation to promote circular economy models in which the ewaste is treated as resource rather than waste.

# 4.14. BIO-MEDICAL WASTE MANAGEMENT RULES, 2018

### Why in news?

Recently, Ministry of Environment, Forest and Climate Change released the amendments to Biomedical Waste Management Rules.

What is Bio-medical Waste?

- Bio-medical waste consists of any waste which is generated during diagnosis, treatment or immunisation of human beings or animals or in research activities.
- It includes syringes, needles, cotton swabs, vials that may contain bodily liquids and spread infections.
- It has been found that only 15% of the biomedical waste that is generated is hazardous. However, all the waste needs to be treated.

### Context

- Government had notified Bio-medical Waste Management Rules in 1998 under the Environment Protection Act 1986 which were later amended twice in 2000 and 2003.
- In 2016 government notified revamped Biomedical Waste (BMW) Management Rules 2016 to enhance, widen and bring a comprehensive regime for bio-waste management.
- The latest amendments have been further introduced to improve compliance and strengthen the implementation of environmentally sound management of biomedical waste.

# Features of Bio-medical Waste Management (Amendment) Rules 2018

 Bio-medical waste generators i.e. hospitals, clinics, vaccination camps etc. will now be required to phase out the use of chlorinated plastic bags and gloves by March 2019.



- Common biomedical waste treatment facility (CBMWTF) shall establish GPS and Bar coding facility in accordance with guidelines issued by the CPCB.
- Pre-treatment of Bio-medical waste Every occupier of health care facility needs to pre-treat the laboratory waste, microbiological waste, blood samples etc. on-site in accordance with guidelines on safe management of wastes from health care activities by WHO and WHO Blue Book 2014 and then send it to CBMWTF for final disposal.
- All healthcare facilities shall provide **annual report on its website** within two years of the publication of the amended rules.

Features of Bio-medical Waste Management Rules 2016

- Widened jurisdiction The ambit of the rules was widened to include vaccination camps, blood donation camps, surgical camps etc.
- Better segregation Bio-medical waste has been classified into 4 categories instead of 10 namely – Untreated human anatomical waste, Animal anatomical waste, Soiled waste and Biotechnology waste.
- **Bar-code system** for bags or containers to be established containing bio-medical waste for disposal.
- **Training and Immunisation** Regular training to all its health care workers and immunising all health workers.
- Stringent pollution norms for incinerator to reduce the emission of pollutants in environment including the emission limits for Dioxins and furans.
- Phasing out of use of chlorinated plastic bags, gloves and blood bags within 2 years.
- Procedure of Disposal –The biomedical waste must be segregated in coloured bags according to the category of the waste. It can be stored up till 48hrs after which it is either needed to be treated at in-situ site or collected by the worker from CBMWTF.

# 4.15. PLASTIC WASTE MANAGEMENT (AMENDMENT) RULES, 2018

### Why in News?

• Recently, Ministry of Environment, Forest and Climate Change (MoEF&CC) amended the Plastic Waste Management Rules, 2016.

#### About Plastic Waste Management Rule 2016

- It defines the minimum thickness of plastic carry **bags** i.e. 50 microns. This would increase the cost and the tendency to provide free carry bags would come down.
- **Responsibility of local bodies**: Rural areas are brought under the rules.
- Extended Producer Responsibility: Producers and brand owners are responsible for collecting waste generated from their products.
- **Record Keeping:** Producers are to keep a record of their vendors to whom they have supplied raw materials.
- Responsibility of waste generator: All institutional generators of plastic waste shall segregate and store their waste as per Waste Management Rules, and handover segregated wastes to authorized waste disposal facilities.
- **Responsibility of street vendors and retailers**: they shall not sell commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked.
- Road Construction: Local bodies shall encourage the use of plastic waste (preferably the plastic waste which cannot be further recycled) for road construction.

### **Highlights of the New Rule-**

- New Central registration system- shall be established by Central Pollution Control Board (CPCB) for the registration of the producer/importer/brand owner.
- Automated- It provides that any mechanism for the registration should be automated and should take into account ease of doing business for producers, recyclers and manufacturers
- Pricing Mechanism- The rule for providing the plastic waste management fee, by the vendors/shopkeepers who are willing to provide plastic bags, has been removed.
- Non-recyclable multi-layered plastic- The 2016 Rules state that the manufacture and use of non-recyclable multi-layered plastic should be phased out in two years. In the 2018 Rules, non-recyclable multi-layered plastic has been replaced with multi-layered plastic which is non-recyclable or nonenergy recoverable or with no alternate use.



### 4.16. NATIONAL BIOGAS AND MANURE MANAGEMENT PROGRAMME

### Why in news?

Recently, **Ministry of New and Renewable Energy** (MNRE) has fixed a target to set up 65,180 biogas plants in current year under the National Biogas and Manure Management Programme (NBMMP).

### Background

- Biogas Plant generates biogas from organic substances such as cattle dung, and other bio-degradable materials such as biomass from farms, gardens, kitchens and night soil wastes etc. through anaerobic digestion (AD).
- As per Census 2011, about 65.9 percent of households depend on solid biomass, including firewood, crop residue and cow dung as primary fuel for cooking in India.
- Bio-fuels are expected to contribute 5000 MW to the overall renewable energy target of 175,000 MW by 2022.

### About the programme

- It is a Central Sector Scheme, which aims at setting up of family type biogas plants for providing biogas as clean cooking fuel and a source of lighting in rural and semi-urban areas of the country.
- The programme is being implemented under ministry of New and Renewable energy by the State Nodal Departments/State Nodal Agencies and Khadi and Village Industries Commission (KVIC), Biogas Development and Training Centers (BDTCs).

### 4.17. FLOATING LABORATORY OVER LOKTAK LAKE

### Why in news?

- Institute of Bioresources and Sustainable Development (IBSD), Imphal has started a project to record changes in the temperature, acidity, conductivity and dissolved-oxygen in the 300-sq km Loktak lake.
- Biochemical Oxygen Demand: It is the amount of O2 required by aerobic organisms to break down organic materials present in a given water sample. A higher BOD means means higher

quantity of organic matter available for oxygen consuming bacteria.

• Chemical Oxygen Demand: It measures the capacity of water to consume O2 during the decomposition of organic matter and oxidation of Inorganic Chemical such as Ammonia and Nitrite. The COD test is often used as an alternative to BOD due to shorter length of testing time.

### More on news

- This initiative is a part of bigger project which plans to have multiple floating boats cruising the 3,500-km Brahmaputra river and collecting water samples to track its health.
- Various tests (for nitrogen, chlorine etc.) and calculations (for Biochemical Oxygen demand and Chemical oxygen demand) are also being done.
- Water temperature affects nearly every other watery quality parameter – Total dissolved solids (TDS), Salinity, Conductivity, Dissolved oxygen, Density, Metabolic rate & photosynthesis, carbon dioxide, Ph, and compound toxicity.

### 4.18. CLIMATE RESILIENT AGRICULTURE

### Why in news?

 Recently, Government of India, Government of Maharashtra and the World Bank signed a US\$ 420 million loan for Maharashtra Project for Climate Resilient Agriculture.

# National Innovations on Climate Resilient Agriculture (NICRA)

 It's a network project of the Indian Council of Agricultural Research (ICAR) launched in 2011.

### Objectives

- To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies
- To demonstrate site specific technology packages on farmers' fields for adapting to current climate risks
- To enhance the capacity building of scientists and other stakeholders in climate resilient agricultural research and its application
- The project consists of **four components** viz. Strategic Research, Technology Demonstration, Capacity Building and Sponsored/Competitive Grants.

365 - Polity & Constitution



### **Climate Smart Agriculture (CSA)**

 Food and Agricultural Organisation of the United Nations (FAO), which defines CSA as "agriculture that sustainably increases productivity, enhances resilience (adaptation), reduces/removes GHGs (mitigation) where possible, and enhances achievement of national food security and development goals".

# 4.19. QUAKE PRONE INDIAN CITIES

### Why in News?

 Latest studies conducted by National Centre for Seismology (NCS) state that 29 Cities and towns in India which also include Delhi and Capital of 9 States, fall under "severe" to "very severe" seismic zone category.

### **National Centre for Seismology**

- NCS comes under the India Meteorological Department (IMD).
- NCS, records earthquakes and carries out studies pertaining to microzonation of cities to analyse the possible impacts of earthquake.
- NCS has carried out Microzonation studies of cities like **Delhi and Kolkata**.

#### Seismic microzonation

 It is the process of subdividing a region into smaller areas which have different potential for hazardous earthquake effects.

#### India Quake

 It is a Mobile App which has been developed by the NCS for automatic dissemination of earthquake parameter (location, time and magnitude) after the occurrence of earthquakes.

#### Earthquake Prone Zone

- Bureau of Indian Standards, based on the past seismic history, grouped the country into four seismic zones, viz. Zone-II, -III, -IV and –V.
- Zone II is considered **the least seismically active**, while Zone V is the **most active**.
- The **Himalayan arc**, stretching from the upper Assam region to Jammu and Kashmir, is known to be a high seismic zone.
- Zone IV and V fall under "severe" to "very severe" categories respectively.

- Zone V includes-
  - Entire north-eastern region,
  - Parts of Jammu and Kashmir,
  - o Himachal Pradesh,
  - $\circ$  Uttarakhand,
  - The Rann of Kutch in Gujarat,
  - Parts of north Bihar and
  - $\circ$  ~ The Andaman and Nicobar archipelago.
- Zone IV includes-
  - Parts of Jammu and Kashmir,
  - o Delhi,
  - o Sikkim,
  - o Northern Uttar Pradesh,
  - West Bengal,
  - $\circ \quad \text{Gujarat and} \quad$
  - A small part of Maharashtra.

# 4.20. FOREST FIRES AND THEIR MANAGEMENT IN INDIA

#### Why in news?

National Green Tribunal has directed the Ministry of Environment, Forests and Climate Change to finalise the National Policy on Forest Fire.

### **Related information**

- According to Global Forest Watch, India has witnessed a 125% spike in forest fires between 2015 and 2017. In 2017, 23 out of 33 states and union territories reported an increase in forest fires with maximum number of forest fires were reported in Madhya Pradesh (4,781) followed by Odisha (4,416) and Chhattisgarh (4,373).
- According to India State of Forest Report (ISFR) maximum number of forest fires occurs in Open Forest (OF) followed by Moderately Dense Forests (MDF). About 70% forest fires in India occur in the tropical dry forests encompassing scrub, savanna grassland, dry and moist-deciduous forests.
- Fire prone region: Himalayan regions and the dry deciduous forests of India, particularly in Andhra Pradesh, Assam, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra and Odisha are ecologically sensitive areas and are most affected by these fires.
- According to **State of India's Environment report**, budget to fight forest fires has been reduced by 14-72% in 13 states in 2017.
- A report titled Forest Fire Disaster Management, prepared by the National Institute of Disaster Management, about half of India's forests were prone to fires. 43%



were prone to occasional fires and 5% to frequent fires, and 1% were at high or very high risk.

Steps taken by the government for Forest Fire Management in India

### • National Plan for forest fire management

Forest Survey of India role in Forest Fire Monitoring

- Near real time forest fire Alerts through Forest Fire Alert System 2.0: It uses NASA's MODIS (Moderate Resolution Imaging Spectroradiometer) and VIIRS (Visible Infrared Imaging Radiometer Suite) satellites, data to pinpoint the location of forest fire boundary.
- Pre warning Alerts to State Nodal officer: It uses short term weather variable like forest cover, forest type, climate variables and recent fire incidences over the area for generating warning data.
- Burnt Scar Assessment: It's done to assess forest area affected measures by forest fires to assess damage to forest and bio-diversity as well as to plan restoration.
- Forest Fire Prevention & Management Scheme (FFPMS)
  - Intensification of Forest Management Scheme was revised and replaced as Forest Fire Prevention & Management Scheme in December 2017.
  - It's a centrally sponsored scheme with an aim to focus solely on the issue of forest fire prevention & management and related activities, to address growing concern over adverse effects of forest fire.
  - Objective of scheme
    - Long Term Objectives:
      - ✓ To minimise forest fire incidences, develop knowledge on impacts and dynamics of forest fire and assist in restoring productivity of forests in affected areas
      - ✓ To institutionalise the partnership with forest fringe communities for forest protection
      - ✓ To prepare fire danger rating system and devise forest fire forecasting system.
      - ✓ To encourage the states/UTs for optimal use of modern technology (such as Remote

Sensing, GPS and GIS) in planning, developing and operationalising Fire prevention and management system.

- To contribute to the larger goal of maintaining environmental stability.
- Short Term Objectives:
  - ✓ To carry out effective awareness campaign for prevention of forest fire
  - To effectively prevent and control forest fires by improving the traditional practices and employing available modern methods
  - ✓ To impart suitable training to the field staff and forest fringe communities on fire fighting with help of prescribed means and methods in the forest areas
  - ✓ To encourage community participation in prevention and control of forest fire
  - ✓ To develop and strengthen Forestry Infrastructure of the States and UTs that are required for effective prevention and management of forest fire.
- Monitoring and Evaluation
  - At National level, MoEFCCC will review the scheme and will also carry out third party evaluation after every 3 years.
  - At State Level: State Forest Department will be responsible for regular monitoring and review of achievement under the scheme.

# 4.21. REGIONAL INTEGRATED MULTI-HAZARD EARLY WARNING SYSTEM

### Why in news?

Odisha government will collaborate with RIMES for strengthening its early warning services and enhancing preparedness for management of hazards in the State.

### About RIMES

 Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), an inter-governmental body registered under



**the United Nations**, is owned and managed by 45 collaborating countries in Asia Pacific and African Region.

- Objective: to establish a regional early warning system within a multi-hazard framework for the generation and communication of early warning information, and capacity building for preparedness and response to trans-boundary hazards
- The programme unit of the agency is located in Thailand. India is the chairman of the body
- RIMES is already working with the Tamil Nadu State Disaster Management Authority.

# 4.22. SWELL WAVES

### Why in News?

Recently, Indian National Centre for Ocean Information Services (INCOIS) forecasted about the high energy **swell waves** on coastal states.

Indian National Centre for Ocean Information Services (INCOIS)

- INCOIS was established as an autonomous body in 1999 under the Ministry of Earth Sciences (MoES) and is a unit of the Earth System Science Organization (ESSO).
- It functions include:
  - It is Regional Tsunami Service Provider (RTSP) to provide tsunami warnings to countries on the Indian Ocean Rim.
  - It issues Potential Fishing Zone Advisories, provides training courses in Operational Oceanography.

### About Swell Waves

- Swell Waves are collections of waves produced by storm winds raging hundreds of miles out to sea, rather than the product of local winds along the beaches.
- It is formed through a combination of wind strength, wind duration and fetch. The present event is associated with massive ripples that form on the sea due to winds coming from as far away as Madagascar.
- The low-pressure system named 'Cut off Lows' blocked the normal course of westerly winds present in the southern Indian ocean during the period causing propagation of high swell waves towards Indian coasts.
- Low-pressure areas or stronger weather systems here send out high waves, with no signs in the local winds along the south-west coast of India, in a phenomenon locally known as 'Kallakkadal' (the naughty seas).

 'Kallakkadal' phenomenon has been formally approved by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2012.

# 4.23. WESTERN GHATS REVEAL WORLD'S SMALLEST LAND FERN

### Why in news?

Recently, Indian researchers have discovered a fingernail-sized fern named Malvi's adder's-tongue fern.

Fern - a flowerless plant which has feathery leaf (fronds) and reproduces by spores released from the undersides of its leaf-like parts.

### About the discovery

- It is the world's smallest land fern discovered measuring only 1–1.2 cm.
- It was discovered in the Ahwa forests of the Western Ghats in Gujarat's Dang district.
- It belongs to a group known as the adder'stongue ferns, named after their resemblance to a snake's tongue.
- It has a unique thick outer layer around its spores and dome shaped stomata which similar species lack.
- The ferns are seasonal and grow with the first monsoon rains.

# 4.24. REPORTS

- Recently UN World Water Development Report 2018 was released titled Naturebased solutions (NBS) for water.
- Birdlife International recently released 2018 State of the World's Birds report which contains a five-year compendium of population data of birds.
- World Meteorological Organization (WMO) recently released its State of the Global Climate in 2017.
  - 2017 was 2<sup>nd</sup> warmest year on record after 2016, and the warmest non-EL Nino year.
  - Total global disaster losses from climaterelated events in 2017 stood at US\$ 320 billion making 2017 the most expensive year on record.
  - **Cryosphere** continued to shrink, with Artic and Antartic sea ice well below average. Cryosphere is the frozen water



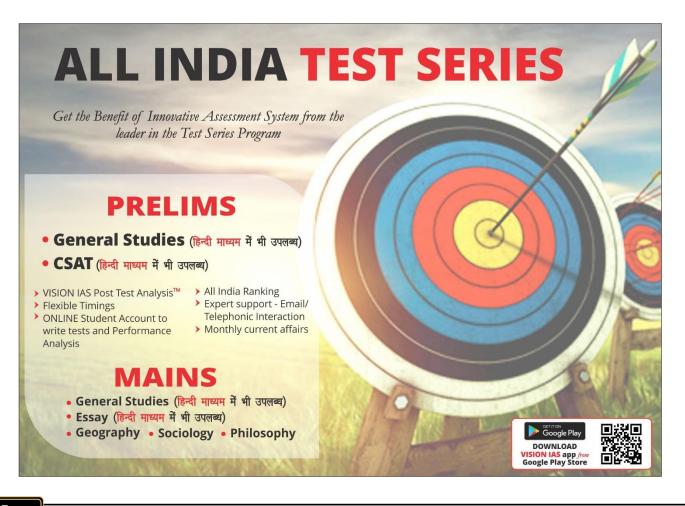
part of the Earth which includes the continental ice sheets found in Greenland and Antarctica, as well as ice caps, glaciers, and areas of snow and permafrost. It also includes frozen parts of the ocean, such as waters surrounding Antarctica and the Arctic and frozen rivers and lakes, which mainly occur in polar areas.

# **4.25. MISCELLANEOUS TITBITS**

- Recently, Diu became India's first union territory to run 100% on solar power.
- IMPPAT (Indian Medicinal Plant, Phytochemistry and Therapeutics), the largest database of Indian medicinal plants and phytochemicals released by them, has been built by a team of the Institute of Mathematical Sciences, Chennai through literature mining from several texts.
- Recently, world's largest solar park Shakti Sthala was launched in Karnataka with a capacity of 2,000 MW.

### 4.26. ERRATA

**Article 3.6.4.: India Awarded by Cites:** Olive Ridley Turtle, Leatherback Turtle and Loggerhead Turtle all are vulnerable.





# **5. SCIENCE AND TECHNOLOGY**

# **5.1. E-CIGARETTES**

### Why in news?

The government recently quoted a WHO report to state that there is **sufficient evidence** to warn children, adolescents, pregnant women, and women of reproductive age against use of ecigarettes.

### **About E-Cigarettes**

- E-cigarettes are a type of Electronic Nicotine Delivery Systems (ENDS) which claims to emit nicotine without other harmful chemicals that are present in normal cigarettes.
- They aim to provide a similar sensation to inhaling tobacco smoke, without the smoke and are sold as aids to reduce or quit smoking.
- They produce an aerosol by heating a fluid that usually contains nicotine, flavorings, and other chemicals which is then inhaled by users of e-cigarettes.
- Smoking e-cigarettes is also called vaping.

# 5.2. ASSISTED REPRODUCTIVE TECHNOLOGY (REGULATION) BILL

### Why in news?

Recently, Draft Assisted Reproductive Technology (ART) (Regulation) Bill, 2017 was released by Department of Health Research under **Ministry of Health & Family Welfare.** 

### More on news

Assisted reproductive treatment (ART), also known as assisted reproductive technology, refers to treatments used to assist people in achieving a pregnancy. Common methods of ART include-

 In vitro fertilization (IVF) means fertilization outside of the body. In IVF, the woman's eggs are collected, along with sperm from the male partner or donor. The egg and sperm are left in a culture dish in the laboratory to allow the egg to be fertilised. If fertilisation occurs and an embryo develops, the embryo is then placed into the woman's uterus in a procedure called an embryo transfer.

- Gamete intrafallopian transfer (GIFT) involves transferring eggs and sperm into the woman's fallopian tube. So fertilization occurs in the woman's body.
- Surrogacy is a form of ART in which a woman (the surrogate) carries a child for another person or couple with the intention of giving the child to that person or couple after birth.
- Artificial insemination involves insertion of a male partner's semen through the female's cervix and into the uterus at or just before the time of ovulation.

# 5.3. PROJECT DHOOP

### Why in news?

Recently the Project Dhoop has been launched by Food Safety and Standards Authority (FSSAI).

### About the Project Dhoop

- It is a nationwide campaign launched by FSSAI along with NCERT, New Delhi Municipal Council and North MCD Schools to spread awareness about consumption of Vitamin D through natural sun light and consuming fortified food among school going children.
- The project urges the schools to shift their morning assembly timing to noon time so that children are able to absorb optimum levels of Vitamin D through natural sunlight.
- It will ensure that the children are exposed to sun light that will give them the required 90% of Vitamin through sun light.
- The sunshine from 11AM to 1PM is most beneficial for bones of human body because during that time the best UVB radiation is received during this time. Thus the innovative Noon Assembly is very beneficial for the children.

### Vitamin D and its importance for the body

- Vitamin D is essential for the development of human bones. It facilitates absorption of calcium and phosphorus by intestines and their retention in the body and deposition in bones and teeth.
- When skin is exposed to sun, the cholesterolin in the skin converts the cholesterol to Vitamin D via additional conversions in the liver and kidneys.



- The deficiency of Vitamin D can cause Rickets in children and Osteomalacia in adults, whereas acute deficiency could lead to brain, cardiovascular and kidney damage.
- Source of Vitamin D Fish liver oil, egg yolk, milk, liver etc.

# 5.4. EARTH BIO-GENOME PROJECT (EBP)

### Why in news?

Recently, Earth Bio-Genome Project was announced through a paper titled- "Earth Bio-Genome Project: Sequencing life for the future of life".

### **About Earth Genome Project**

- It is an international consortium of scientists which will undertake the project that aims to sequence, catalogue, and characterize the genomes of every eukaryotic biodiversity on Earth over a period of 10 years to sequence 1.5 million species in three phases.
- There are about 8 million eukaryotic species and only 0.2% of eukaryotic genome have been sequenced so far which are still in the crudest form.
- However the EBP project will help to create a detailed genetic sequence and reveal evolutionary connections among genus, orders and families that will make up the Digital Library of life.

**Eukaryotic** – These organisms whose cells are organized into complex structures by internal membranes and a cytoskeleton. E.g. Humans, animals and plants

**Prokaryotic** – these are the organisms with single cell nucleus bacteria and archaea

# **5.5. IRRADIATION OF FOOD**

### Why in news?

Department of Atomic Energy (DAE) & Bhabha Atomic Research Centre (BARC) in particular is engaged in extensive research on use of radiation processing for extending shelf life of food products.

### **Radiation process**

 Radiation is a physical process in which food and agricultural commodities are exposed to controlled doses of radiant energy to achieve desirable effects such as inhibition of sprouting and ripening, and destroying insect pests, parasites, pathogenic and spoilage bacteria

- Gamma rays from radioisotope cobalt-60 and electron beams or X-rays from machine based radiation sources can be used for processing food commodities.
- Radiation processed foods are those that have been exposed to radiation to bring about the desired effect in food. Radioactive foods, on the other hand, are those that become contaminated with radionuclides.

### Advantages of radiation processing are:

- Significant increase in shelf life for many products including fruits, vegetables, cereals, pulses, spices, sea foods and meat products.
- Effective elimination of harmful bacteria, viruses and insects/pests.
- Cold (no temperature increase) and clean process (no chemical residue)
- Treatment after final packaging to avoid recontamination
- Destruction of microbes responsible for food spoilage
- Elimination of parasites and pathogens of public health importance in food.

# **5.6. FOSCORIS SYSTEM**

### Why in News?

- Food Safety and Standards Authority of India (FSSAI) has directed states to implement a web-based real-time inspection platform for food safety officers (FSOs).
- FoSCoRIS will bring together all key stakeholders- food businesses, food safety officers (FSOs), designated officers, state food safety commissioners, on a nation-wide IT platform.

### About Food Safety Compliance through Regular Inspections and Sampling' (FoSCoRIS) system

- FoSCoRIS system uses time stamping, geotagging, real-time data collection and multiple levels of verifications.
- This system can be used through **Mobile Phones and Tablets** and requires internet connectivity.
- FoSCoRIS will replace the current system of ad hoc and subjective inspection and sampling.
- Through FoSCoRIS, details of the food safety officer's location and the area of FSO will be collected on a real-time basis.



- Details of every Login and Logout time and location will be collected on the central server of the system.
- FoSCoRIS result can be used as **an evidence under IPC**, thus it has legal implications.

### 'One Nation One Food Law' initiative

- Despite a single nationwide Act, (Food Safety and Standards Act) implementation across individual states and UTs remains fragmented and inconsistent, which has been an area of deep concern.
- To address the concern, FSSAI has launched **One Nation One Food Law' initiative.**
- This will also help in enhancing Ease of Doing Business in India.

#### Food regulatory portal

- This has been based upon the principle of One Nation One Food Law.
- A single interface for food businesses to cater to both domestic operations and food imports, portal will help in effective implementation of Food Safety Laws.
- Food Regulatory Portal for food businesses focuses on six key areas
  - $\circ$  Food standards,
  - o Consistent enforcement,
  - $\circ \quad \text{Hassle free food imports,} \\$
  - $\circ \quad \text{Credible food testing,} \\$
  - $\circ \quad \mbox{Codified food safety practices, and} \\$
  - Training and capacity building.

# 5.7. INTERSTITIUM

### Why in news?

A new human organ called Interstitium has been identified by the scientists. Excluding Interstitium, **79 organs** have been identified within human body by now.

### **Details about Interstitium**

- They are fluid filled compartments found beneath the skin, as well as lining the gut, lungs, blood vessels and muscles, and join together to form a network supported by a mesh of strong, flexible proteins.
- They were earlier considered as dense connective tissue.
- They may act as "shock absorbers" that protect body tissues from damage.
- This newly discovered organ may help in understanding of the spread of cancer in human body.
- Interstitium is among one of the largest organs of human body.

### Why the organ was not located earlier?

The traditional methods for examining body tissues had missed the interstitium because the "fixing" method for assembling medical microscope slides involves draining away fluid - therefore destroying the organ's structure.

### 5.8. DISEASE 'X'

### Why in news?

The World Health Organisation (WHO) has issued a global alert for 'Disease X'.

#### More about the news

- WHO in its 2018 annual review of the Blueprint priority diseases has listed this new and potentially dangerous pathogen along with eight better-known diseases such as MERS and Marburg Virus, that could possibly spark an international epidemic.
- The Blueprint review lists diseases and pathogens to prioritise for research and development. These diseases pose major public health risks, and further research and development is needed, including surveillance and diagnostics.

### What is Disease X?

- "Disease X" is not a newly identified killer pathogen. It's a so called "known unknown" — that could be created by different reasons like biological mutation such as Spanish Flu or HIV or it might be spawned by a terror attack, or simply an accident.
- Disease X represents the knowledge that a serious international epidemic could be caused by a currently unknown pathogen.

# 5.9. MOBILE ENZYME LINKED IMMUNOSORBENT ASSAY (MELISA)

### Why in news?

Scientists have developed a new portable blood testing technology called MELISA.

### More about MELISA

- It is a new miniature mobile phone-based system for ELISA (Enzyme Linked Immunosorbent Assay).
- ELISA is an important technology for biochemical analysis of proteins and hormones and is critical for the diagnosis of



many diseases, such as HIV and Lyme Disease. Traditional systems for ELISA incubation and reading are expensive and bulky, thus cannot be used at point-of-care or in the field.

 The MELISA allows patients to undergo testing and obtain results at point-of-care. It weighs just 1 pound, can be fabricated at low cost, portable, and can transfer test results via mobile phone.

# 5.10. BAN ON OXYTOCIN

### Why in News?

 The Union government restricted the manufacture of Oxytocin formulations for domestic use to public sector only. The government has also banned imports of the oxytocin.

### About Oxytocin

 Oxytocin is a hormone produced in humans by the hypothalamus (a part of brain) and secreted by the pituitary gland. It is also produced in animals naturally.

### Usage of Oxytocin-

- During Childbirth- The hormone stimulates the uterine muscles to contract, so labor begins. It is also used to control post-delivery bleeding
- **Breastfeeding-** It promotes lactation by moving the milk into the breast during feeding.
- **Human bonding activities** released naturally during sex, it is also known as 'love hormone'.
- It has been misused for increasing milk production in animals, increasing size of vegetables, accelerate puberty among trafficked girls etc.

# 5.11. IRNSS-1I SATELLITE

### Why in news?

ISRO launched the IRNSS-1I satellite from Satish Dhawan Space Centre, Sriharikota, through its PSLV-C41.

### **Details about IRNSS-1I**

- It is the **eighth satellite** to join the IRNSS satellite constellation.
- IRNSS-1I will **replace IRNSS-1A**, the first of the seven navigation satellites, which has

become ineffective after its three rubidium atomic clocks failed.

- It will be placed in a sub-geosynchronous transfer orbit and at its closest point will be 284 km above the Earth and at its farthest will be 20,650 km above the Earth.
- Like all other IRNSS satellites, IRNSS-11 will also carry two payloads - navigation payload (determines position, velocity and time) and ranging payload (determines the frequency range of the satellite).

### 5.12. GSAT-6A

### Why in news?

Recently, GSAT-6A was launched on board the GSLV F08, from the Satish Dhawan Space Centre at Sriharikota.



The GSAT-6A is scheduled to be launched from Sriharikota in Andhra Pradesh on march 29. (ISRO)

# **AIMING HIGH**

- GSAT-6A, similar to GSATis a high power S-band communication satellite
   It is designated for the use of the Armed Forces
   Mission Life: 10 years
- The satellite will help demonstrate to and develop technologies like: • Unfurling of a 6 metre S-Band antenna
- Network management technique useful in satellite based mobile
- Handheld ground terminals

### Highlight

- Launch marked the 12th flight of Geosynchronous Satellite Launch Vehicle GSLV-F08 and sixth flight with the indigenous Cryogenic upper stage.
- GSAT-6A, similar to GSAT-6, is a highpowered S-band communication satellite which would help improve mobile communications to handheld devices, as well as network management techniques useful in satellite- based mobile communication applications.
- However, ISRO lost contact with its communication satellite GSAT-6A.



# 5.13. SOUNDING ROCKET: RH-300 MKII

### Why in News?

Recently, Vikram Sarabhai Space Centre (IRSO) successfully launched **RH-300 MKII sounding rocket** from Thumba Equatorial Rocket Launch Station (TERLS).

### About TERLS

- TERLS is an Indian spaceport operated by the Indian Space Research Organisation.
- It is located in Thumba, Thiruvananthapuram which is near the southern tip of mainland India, very close to earth's magnetic equator.
- It is currently used by ISRO for launching sounding rockets.

### About the sounding rocket

- They take their name from the nautical term "to sound," which means to take measurements.
- They are one or two stage solid propellant rockets with a payload of 60kg, and altitude capacity of 160km, used for **probing the upper atmospheric** regions and for **space research**.
- Objective is to measure neutral wind in the dynamo region (80-120 km) of equatorial ionosphere using the indigenously developed Electron Density and Neutral Wind Probe (ENWi) and perform cross-validation using an independent Tri Methyl Aluminium (TMA) release technique.
- They also serve as easily affordable platforms to test or prove prototypes of new components or subsystems intended for use in launch vehicles and satellites.

The study will enrich available atmospheric data and refine the models used for tropical weather prediction.

### **Related Information**

- In 1975, all sounding rocket activities were consolidated under the Rohini Sounding Rocket (RSR) Programme.
- RH-75, with a diameter of 75mm was the first Indian sounding rocket, which was followed by RH-100 and RH-125 rockets.
- Currently, operational sounding rockets- include three versions namely RH-200, RH-300-Mk-II and RH-560-Mk-III.

# 5.14. VERY SHORT-RANGE AIR DEFENCE SYSTEMS (VSHORAD)

### Why in news?

Recently, Army has begun contract negotiations for the very short-range air defence system or VSHORAD.

### More on news

- VSHORAD system should have a maximum range of 6 km, an altitude of 3 km and allweather capability.
- It will replace IGLA (russian made), currently deployed by army.
- IGLA is a man-portable air defence missile system.
- IGLA is a new-generation system featuring considerably extended firing range and enhanced kill probability against aerial targets and possessing a new quality for this class of systems high engagement effectiveness against small-size targets like cruise missiles and UAVs.

### Other Air Defence Systems in India

- Quick reaction Range Surface to Air Missile (QRSAM)
- Short Range Surface to Air Missile (SRSAM) like Akash Missile
- Medium Range Surface to Air Missile (MRSAM) and
- Long Range SAM (LRSAM) which can handle multi-threat level and also more robust to deal with various types of Aerial Threat.

# **5.15. EINSTEIN RING**

### Why in news?

Recently, the Hubble Telescope discovered a light bending Einstein Ring in space.

### What is an Einstein Ring?

- According to the General Relativity theory of Albert Einstein, light can get deflected when passing through gravitational field of a massive body. Therefore, a massive object would warp space and time.
- When light from a distant object/source (e.g. a galaxy), pass by an extremely large mass/lens (e.g. another galaxy or galaxy cluster), it gets diverted and distorted around the massive intervening cluster and is forced to travel along many different light paths toward Earth, making it seem as



though the galaxy is in several places at once. This is called Gravitational Lens effect.

- Einstein Ring is a kind of gravitational lens which is formed when the galaxy cluster is so closely aligned that the otherwise divergent light is focussed as a visible ring by them.
- The rings and lenses **magnify objects** that otherwise would be too distant and dim to see in today's telescopes.
- When the amount of bending of light is analyzed and the required bending mass is greater than the visible mass of the cluster, it shows the presence of Dark matter.

### 5.16. PROGRAMME

### **COPERNICUS**

### Why in News?

India and the European Union recently signed an agreement that will enable them to share earth observation data from each other's satellite.

### About the Arrangement

- **Copernicus Programme** is Earth observation programme headed by the European Commission (EC) in partnership with the European Space Agency (ESA).
- India will get free, full and open access to the data from the Copernicus Sentinel family of six satellites.
- Reciprocally India will provide free, full and open access to the data from ISRO's land, ocean and atmospheric series of civilian satellites (Oceansat-2, Megha-Tropiques, Scatsat-1, SARAL, INSAT-3D, INSAT-3DR) with the exception of commercial high-resolution satellites data.
- The services address **six thematic areas**: land, marine, atmosphere, climate change, emergency management, and security.

# 5.17. AIR-BREATHING ELECTRIC THRUSTER

### Why in news?

Recently European Space Agency (ESA) fired world's first ever air-breathing electric thruster which could keep satellites in low orbit for longer time.

What is Air-Breathing Electric Thruster or Ion Thruster?

 It is an ion thruster which uses Air Breathing Electric Propulsion (ABEP) or RAM electric propulsion method.

### How does ABEP works?

- ABEP sucks in air molecules from top of the atmosphere instead of using on-board propellant.
- Then it gives these molecules an electric charge and accelerates them.
- Finally, it ejects the ionized molecules back into space which causes thrust.

### Significance of ABEP

- The new system is very significant as it reduces the weight of the satellite, thus reducing the consumption of fuel.
- It extends the stay of satellites in space to almost indefinite time and also opens the doors for deep space exploration.

### 5.18. STEPHEN HAWKING

### Why in news

- Recently, a known theoretical physicist of his time, Stephen Hawking passed away at the age of 76.
- He suffered from amyotrophic lateral sclerosis, or ALS (also known as Lou Gehrig's disease).

### Amyotrophic Lateral Sclerosis (ALS)

- ALS is a neurodegenerative condition, that attacks the motor nerve cells in the brain and spinal cord, hampering their ability to communicate with muscles and control voluntary movements, leading to eventual paralysis.
- ALS is very rare, occurring on average among two new cases per 100,000 people every year, most typically among individuals aged between 55 and 65.
- There is currently no cure or treatment that halts or reverses ALS

**Singularities:** Points where space time appeared to be infinitely curved.

Albert Einstein's in his Theory Of General Relativity 1915, suggested the existence of black holes — an object whose gravitational pull is so intense that once something passes a region known as the event horizon, there's no escape.

Quantum theory: It describes the behaviour of very small particles, those smaller than an atom, like



protons or electrons, or the even smaller ones like quarks.

**General relativity**: It describes how gravity works around massive objects like planets, stars and Black Holes.

### **Contribution of Stephen Hawking**

### Hawking-Penrose theorem / Big Bang Theory

 Sir Roger Penrose and Stephen Hawking in 1970 proved in a theorem that Einstein's General Relativity must break down at a certain point in Space-time under certain generic physical conditions. This point is called 'Singularity' which inside a Black Hole indicate towards the beginning of the Universe. Big Bang is now the most widely accepted theory of the origin of the universe.

#### Information Paradox, or Hawking Paradox,

- By using Quantum Mechanics in the General Relativistic realm, he showed that Black Holes can radiate and has temperature. Emission is similar to something escaping from Black Holes. He also showed that because of the emission of this thermal radiation or Hawking Radiation, the black hole would lose energy and eventually disappear or "evaporate".
  - If the paradox is true, it would require some radical revision of physics as it left two pillars of modern physics quantum mechanics and Einstein's general theory of relativity irreconcilable.
  - This could also open a path towards the final unified theory of Physics called 'Quantum Gravity' or more popularly 'The Theory of Everything'.

#### Hawking-Hurtle state

 Hawking with colleague James Hurtle developed a Quantum Mechanical model of the Universe that says the Universe is selfcontained (like Earth surface which has no starting point) but has No Boundary (We can't fall from the edge of Earth). So Universe is finite but boundary-less (Like Earth surface having finite area but no edge).

### **Breakthrough Initiative**

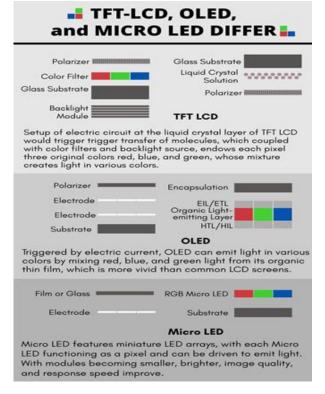
 It was launched by Russian tech investor Yuri Milner and cosmologist Stephen Hawking, to explore the Universe, seek scientific evidence of life beyond Earth. Various component of initiative are:

- Breakthrough Listen Project: It's a \$100 million program of astronomical observations to survey one million stars, the galactic plane and 100 neighbouring galaxies in the search for intelligent life.
- Breakthrough Message: It's a \$1 million competition to design a message representing Earth, life and humanity that could potentially be understood by another civilization.
- Breakthrough Watch: It's multi-million dollar astronomical progam to develop Earth- and space-based technologies that can find Earth-like planets in our cosmic neighborhood – and try to establish whether they host life.
- Breakthrough Starshot: It's a \$100 million research and engineering program aiming to demonstrate proof of concept for a new technology, enabling ultra-light unmanned space flight at 20% of the speed of light and to lay the foundations for a flyby mission to Alpha Centauri within a generation.

# 5.19. MICRO-LED: THE NEXT-GEN DISPLAY TECHNOLOGY

#### Why in news?

Samsung recently demonstrated a prototype MicroLED based TV of 146 inches display.





### About MicroLED

- It is an emerging flat panel display technology in which displays consist of arrays of microscopic LEDs forming the individual pixel elements.
- These are simply traditional LEDs shrunk down and placed into an array. The LED technology is not new but manufacturing a panel array using such tiny components is very difficult and currently not commercially viable over OLED.

### **OLEDs and MicroLEDs**

- OLEDs are self-emissive, which means they requires no backlight; instead, it lights each individual pixel as needed. Like OLED, Micro LED too don't need backlight.
- OLEDs are made of organic materials that age, resulting in a decrease in luminance over time, with the potential for uneven ageing. MicroLEDs being inorganic (gallium nitride) are not as susceptible to ageing.
- This switch from organic to inorganic also reduces the need for a polarizing and encapsulation layer, making panels thinner.
- The OLED manufacturing process also limits the possible screen shapes and sizes. The MicroLED technology are "modular" in nature which are flexible to configure any size.
- MicroLEDs are more power-efficient than OLEDs.

### **5.20. COLD FUSION REACTOR**

### Why in News?

India is taking steps to start research into **Cold Fusion Reactor**.

### **Cold Fusion Reactor**

- Cold Fusion Reaction or Low Energy Nuclear Reaction (LENR) technology is nuclear fusion supposedly occurring at or close to room temperature and is still in research phase.
- It is a form of energy generated when hydrogen interacts with various metals like nickel and palladium.
- Cold fusion seeks to produce nuclear energy without harmful radiation, complex equipment and the application of very high temperatures and pressures.

Comparision Between	Cold Fusion Reactor and		
Nuclear Fusion/ Fission Reactor			
<b>Cold Fusion Reaction</b>	Nuclear Fission/Fusion		
No radioactive material	Radioactive material is used		
is used as raw material			
Uses weak nuclear	Uses Strong Nuclear Force		
forces			
Uses slow neutrons	Uses fast neutrons with		
with energy below 1 eV	energy 1 MeV		
No radioactive waste	Radioactive waste and		
or radiation is	radiation		
generated			

#### **Potential Benefits**

- LENR technology could be used to **build** vehicular and at-home nuclear reactors that provide both heat and electricity.
- Radioactive materials can be transmuted to benign elements, promising a path to ridding the planet of thousands of tons of radioactive waste.
- Ultra-clean and Energy Dense: Cold fusion energy generators will not need to be connected to an electrical grid. Small and portable power units will provide energy ondemand in any location.

### 5.21. VATERITE - RARE MINERALS IN PLANTS

### Why in News?

 Vaterite, a rare and unstable mineral, was found on the leaves of a number of alpine plants. This is the first-time rare minerals have been found to be associated with the plants.

### **About Vaterite**

- Vaterite is a mineral, a polymorph (a solid chemical compound that exists in more than one crystalline form) of calcium carbonate (CaCO<sub>3</sub>).
- Being unstable in Earth's humid atmosphere, it often reverts to more common forms of calcium carbonate, such as calcite.
- Vaterite is often associated with outer space and on earth it is found in some sea and freshwater crustaceans, bird eggs, the inner ears of salmon, meteorites and rocks.
- Its special properties make it a potentially superior carrier for medications due to its high loading capacity, high uptake by cells and its solubility properties that enable it to



deliver a sustained and targeted release of therapeutic medicines to patients.

# 5.22. GALLENENE

### Why in news?

Researchers have isolated a 2D form of soft metal gallium, called "gallenene," which could make thin and efficient metallic contacts in electronic devices.

### More about news

- Reducing a regular three-dimensional material in two dimensions can fundamentally change its electrical, magnetic, physical or chemical properties.
- Apart from graphene scientists have created 2D versions of materials such as black phosphorus, molybdenum disulfide and chromium trichloride.
- Gallenene is first metal to be created in 2D. Near 2D metals are difficult to extract, since these are mainly high-strength, uncoated and layered structures. So Gallenene is an exception that could save the need for metals in the 2D world.
- As Gallenene binds semiconductors well and can now be created using a relatively simple technique, it could be used as an efficient nanoscale electronic metal contact, a field that currently does not have many 2D metal options for this type of applications.

# 5.23. RYDBERG POLARONS: A NEW STATE OF MATTER

### Why in news?

An international team of physicists have successfully created a "giant atom" and filled it with ordinary atoms, creating a new state of matter termed "**Rydberg polarons**".

### How was the new polaron created?

- It uses ideas from two different fields: Bose Einstein Condensation and Rydberg atoms.
- A BEC (Bose Einstein Condensate) is a liquidlike state of matter that occurs at very low temperatures. A BEC can be perturbed to create excitations which are akin to ripples on a lake.
- A 'Rydberg atom' is an atom in which an electron has been kicked out to a very large orbit.

- In this work, Laser light on a BEC of strontium atoms is used. This excites an electron into a large orbit, forming a Rydberg atom. This orbit is large enough to encircle many other strontium atoms inside it.
- As the electron moves around many strontium atoms, it generates ripples of the BEC. The Rydberg atom becomes inextricably mixed with these ripples and forms a new super-atom called a 'Rydberg polaron'.

### 5.24. SCIENTISTS FOUND RARE 'ICE-VII' ON EARTH

### Why in news?

Scientists detected the first ever samples of naturally occurring ice-VII on Earth inside Diamonds.

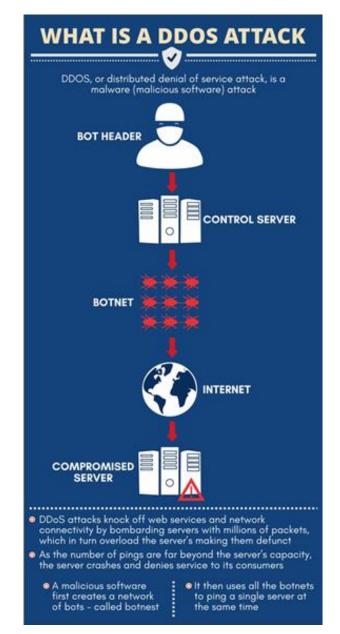
### More about ice-VII

- The common ice is called ice-I, which has hexagonal crystal arrangement that causes it to have lower density than water. Compressing ice can change the shape of the crystals, turning ice-I into ice-II (rhombusshaped crystals), ice-III (tetragonal crystals), and so on.
- Ice-VII has cubic crystal arrangement with 1.5 times denser than ice-I.
- It requires both low temperature and high pressure exceeding 30,000 atmospheres (3 gigapascals) for ice-VII to form. The only place such pressure can be achieved is deep in the Earth's mantle, but the temperature is very high for ice to form there.
- Diamonds often pick up molecules during their formation deep in the Earth. The trapped water inside can become super-rare ice-VII in such high pressure.

### 5.25. MALWARES

### Why in News?

 'Saposhi', a new malware which can create botnet and launch Distributed Denial of Service (DDoS) attack, was detected by the security agencies.



### Cyber Swachhta Kendra to Tackle Malware

- Government has established the "Cyber Swachhta Kendra" which is a Botnet Cleaning and Malware Analysis Centre.
- It is part of Digital India initiative to create a secure cyber space by detecting botnet infections and providing information and enabling citizens for removal of BOTs/malware.
- It is being operated by CERT-In
- Also, the Kendra will strive to create awareness among citizens to secure their data, computers, mobile phones and devices such as home routers.
- It also collaborates with Department of Telecommunications, Internet Service Providers, Antivirus companies and academia to carry out its work.

# 5.26. DATA ENCRYPTION

### Why in news?

Facebook data leak and questions over security of Aadhaar data has raised many concerns about data security in India.

### What is Encryption?

Schedule V of the Information Technology Rules, 2000, defines encryption as- "The process of transforming plaintext data into an unintelligible form (cipher text) such that the original data either cannot be recovered (one-way encryption) or cannot be recovered without using an inverse decryption process (two-way encryption)."

- Asymmetric Encryption (public-key cryptography): It uses separate keys for encryption and decryption. Although, encryption key (public key) can be used by anyone decryption keys (private keys) are kept secret so that only the intended receiver can decrypt the message.
- Symmetric Encryption (or pre-shared key encryption): Such encryption uses a single key for both encryption and decryption of data. Here, both the sender and the recipient need the same key to make a communication.

# 5.27. CRYPTO-CURRENCY AS LEGAL TENDER

- Marshall islands became the first country in world to create crypto-currency as its legal tender.
- the digital currency will be called as 'Sovereign' with the symbol SOV.
- It will have equal status with US dollar as a mode of cash payment.
- Venezuela became the first country to launch its own crypto-currency (virtual Petro) backed by crude oil reserves. But, it is different from SOV because SOV is a legal tender backed by the Government.

### What is a crypto-currency?

- Cryptocurrency is a type of digital currency that uses cryptography (block-chain technology) for security and anticounterfeiting measures.
- Public and private keys are often used to transfer cryptocurrency between individuals.



- It is essentially a fiat currency i.e. users must reach a consensus about cryptocurrency's value and use it as an exchange medium. Its value is determined by market supply and demand, meaning that it behaves much like precious metals, as silver and gold.
- The first cryptocurrency to capture the public imagination was Bitcoin, which was launched in 2009 by an individual or group known under the pseudonym Satoshi Nakamoto. Bitcoin's success has spawned a number of competing cryptocurrencies, such as Ethereum, Litecoin, Ripple and Monero.

Benefits		Drawbacks
•	Based on strong cryptography, these funds are highly secure. Fast transactions and confirmation within minutes with minimal processing fees. Provides anonymity. Also, Government do not have any control over it. The account can not be freezed or seized. Block chain might have	<ul> <li>Anonymity can lead to money laundering and tax evasion.</li> <li>Once a transaction is confirmed, no body can reverse it.</li> <li>the value of crypto- currency depends upon Demand and Supply, hence is volatile.</li> <li>they are not immune to theft and hacking.</li> </ul>
	important uses in online voting and crowd funding.	

Global stand on Crypto-currencies in 2018:

China has blocked crypto exchanges, U.S. banks are steadily declining cryptocurrency purchases. EU and UK are trying to regulate it. Meanwhile, Indian finance minister during the national finance budget 2018-19 said that the country does not recognize Bitcoin as legal tender and steps would be taken to penalize crypto payments.

# 5.28. INDIA'S FIRST BLOCKCHAIN-BASED NETWORK

### Why in news?

Recently, three platforms that offer **Trade Receivables Discounting System (TReDS)** implemented the use of blockchain in the enterprise financial segment. **Trade receivables** are amounts billed by a business to its customers when it delivers goods or services to them.

**Discounting** is the process by which an accepted draft or bill of exchange is sold for early payment to a bank or credit institution at less than face value after the bank deducts fees and applicable interest charges. The bank or credit institution then collects full value on the draft or bill of exchange when payment comes due.

**TReDS** is a scheme of RBI for setting up and operating the institutional mechanism for facilitating the financing of trade receivables of MSMEs from corporate and other buyers through multiple financiers.

**Cryptography** involves creating written or generated codes that allow information to be kept secret.

**Receivables Exchange of India (RXIL)** is promoted by the National Stock Exchange and Small Industries Development Bank of India (Sidbi).

### Details of the news

• All the three platforms- Receivables Exchange of India, A.TReDS, and M1xchange - work independently and are interlinked with blockchain and share data.

# 5.29. DEFENCE PLANNING COMMITTEE

### Why in news?

Recently, government has established a Defence Planning Committee (DPC) under the chairmanship of the National Security Adviser (NSA).

**Chiefs of Staff Committee (CoSC)** – It comprises the Army, Navy and IAF chiefs, with the senior-most of them acting as the "rotational" chairman till he retires.

### Salient feature of DPC

- **Nature:** DPC is a will be a permanent interministrial body.
- Composition: DPC will consist of the Chairman of the Chiefs of the Staff Committee (COSC), other service chiefs, Defence Secretary, Foreign Secretary and Secretary (expenditure) in the Finance Ministry.
  - NSA is also empowered to co-opt other members as and when required
- Committee will operate through four subcommittees: on Policy and Strategy, Plans and Capability Development, Defence Diplomacy, and Defence Manufacturing Ecosystem



 Chief of Integrated Staff in the Defence Ministry will be the member secretary of the DPC, and his headquarters will be the secretariat.

### Functions

- Formulation of national security strategy, strategic defence review and doctrines; international defence engagement strategy; roadmap to build defence manufacturing eco-system; strategy to boost defence exports; and prioritised capability development plans for the armed forces over different time-frames in consonance with the overall priorities, strategies and likely resource flows
- Analysis and Evaluation of national defence and security priorities, foreign policy imperatives, operational directives and associated requirements, relevant strategic and security-related doctrines, defence acquisition and infrastructure development plans, including the 15-year Long-Term Integrated Perspective Plan (LTIPP), defence technology and development of the Indian defence industry and global technological advancement.
- It will identify the "means" and "ways" across ministries, obtain Cabinet Committee on Security approval for a capability development plan & guidance for budgetary support etc to achieve it's objective.
- DPC will submit all its reports to the defence minister.

# 5.30. DEFENCE INDUSTRIAL CORRIDOR

### Why in News?

The Government initiated work for preparing a Detailed Project Report (DPR) to set up a defence production corridor in Tamil Nadu.

### **About Defence Industrial Corridors**

- The government, in Budget 2018, announced establishment of two defence corridors-
  - One in **Uttar Pradesh** which will run from Agra to Chitrakoot.
  - Another in Tamil Nadu called Tamil Nadu
     Defence Production Quad connecting
     Chennai, Hosur, Salem, Coimbatore and
     Tiruchirappalli to Bengaluru.

- The draft defence production policy, 2018 provides that these defence industry Corridors will be set up in collaboration with States. Govt of India will contribute 50% of assistance subject to a ceiling of Rs 3000 Crores to the SPV set up for development of each defence corridor.
- Government has also announced the creation of a dedicated defence and aerospace small and medium enterprises (SME) fund, registered with the Securities and Exchange Board of India (SEBI), where a minority stake could be taken by investors. This fund would help channelise investments into the two defence corridors.

# 5.31. PROTECTED AREA PERMIT

### Why in News?

The Government has decided to relax Protected Area Permit for foreign tourists.

#### **Inner Line Permit System**

- The Inner Line Permit regulates the entry of nondomicile Indian citizens into a restricted region.
- The British used this to safeguard their revenuegenerating regions in the Northeast against raiding tribal communities from the hills.
- Today, ILP is seen as a way to protect the demographic, cultural, political and social integrity of the small tribal populations in the hill states.
- At present, it is imposed in Arunachal Pradesh, Mizoram and Nagaland.

### About Protected Area Permit (PAP)

- Due to security reasons, certain areas have been declared as Protected Area/Restricted Areas where no foreigner can enter or stay without obtaining permit from the competent authorities.
- Under the Foreigners (Protected Areas) Order, 1958, all areas falling between the 'Inner line' and the International Border of the State have been declared as 'Protected Areas4'.
- Currently Protected Areas are located in- all of Arunachal Pradesh and Sikkim, parts of Himachal Pradesh, Jammu and Kashmir, Manipur, Mizoram, Nagaland, Rajasthan and Uttarakhand.
- Under the Foreigners (Restricted) Areas Order, 1963, parts of Sikkim and entire

365 - Polity & Constitution



Andaman & Nicobar Islands have been declared as `Restricted' Areas.

 Relaxing PAP will increase tourism and create job opportunity and revenue for the state.

### 5.32. LEFT WINGE EXTREMISM

### Why in news?

A recent report released by **Ministry of Home Affairs (MHA)** has claimed success in tackling Left Wing extremism.

### More about the news

- MHA has recently redrew the red corridor by bringing down the number of districts affected with Naxal violence from 106 to 90, spread across 11 states and worst-affected district to 30 from 36. Chhattisgarh, Jharkhand, Odisha and Bihar are declared severely affected by LWE.
- The prime criteria for removing the districts and including new ones was "Incidents of violence".
- Incidents of violence have seen a 20% decline with a 34% reduction in related deaths in 2017 as compared to 2013 indicating success of government efforts.

### Important Initiatives for LWE affected states

Police' and 'Public order' being State subjects, the primary responsibility of meeting the challenge of Left Wing Extremism (LWE) lies with the State Governments. However, the MHA and other central ministries supplement the security efforts of the State Governments through various schemes such as:

 National Policy and Action Plan implemented by MHA since 2015 is a multipronged strategy in the areas of security, development, ensuring rights & entitlement of local communities etc. to combat Left Wing Extremism (LWE).

### National Policy and Action Plan, 2015

- Security related measures include assistance to LWE affected States by providing CAPF Bns, helicopters, UAVs, construction of fortified police stations, funds for modernization of State Police forces, arms and equipment, training assistance, sharing of intelligence etc.
- **Development related measures:** Apart from flagship schemes of the Central Government several initiatives have been taken for development of LWE affected areas.

These include focused schemes for development of roads, installation of mobile towers, skill development, improving network of banks and post offices, health and education facilities, particularly in the 35 worst affected districts.

- Rights and Entitlements related measures
- Major Sub –Schemes under Scheme Modernization of Police Forces for 2017-20
  - Security Related Expenditure (SRE) Scheme (approved in 2017):
    - It aims at strengthening the capacity of the LWE affected States to fight against the LWE problem in an effective manner.
    - Under the Scheme, the central Govt. reimburses Security Related Expenditure of 106 districts relating to ex-gratia payment to the family of civilians/security forces killed in LWE violence, training and operational needs of security forces, compensation to LWE cadres who surrendered, community policing, Security related infrastructure for village defence committees and publicity materials.
  - Special Central Assistance (SCA) for 35 most LWE affected districts which have the main objective of filling the critical gaps in Public Infrastructure and Services, which are of emergent nature.
  - Special Infrastructure Scheme (SIS) including construction of 250 Fortified Police Stations in LWE affected states. The Scheme aims at capacity building of states by strengthening the security apparatus of the States.
  - Assistance to Central Agencies for LWE management Scheme:- assistance is provided to Central Agencies like CAPFs, Commando Battalions for Resolute Action (CoBRA), Indian Air Force for anti LWE Operations where the States have constraints.
  - Civic Action Programme (CAP): being implemented since 2010-11 to bridge the gaps between Security Forces and local people through personal interaction and bring the human face of SFs before the local population. Under the Scheme, funds are released to the CAPFs, deployed in LWE affected areas, for



conducting various civic activities in welfare of the local people.

- Media Plan Scheme: to counter the Maoist propaganda of misguiding and luring the innocent tribals/local population by their so called poorfriendly revolution.
- Road Requirement Plan-I (RRP-I): being implemented by Ministry of Road Transport & Highways, since 2009 for improving road connectivity in 34 LWE affected districts of 8 States. The scheme envisages construction of 5,422 km road lengths and 08 Critical bridges in LWE affected States.
- Road Connectivity Project for LWE affected areas (RRP-II): It was approved in 2016 for further improving road connectivity in 44 districts of 9 LWE affected States. Ministry of Rural Development is the nodal Ministry for this project.
- **LWE Mobile Tower Project** to improve mobile connectivity in the LWE areas
- The National Technical Research Organization (NTRO) is assisting the Security Forces in anti-Naxal operations by providing Unmanned Aerial Vehicles (UAVs).
- Besides, two Skill Development related Schemes, namely, 'ROSHNI' and 'Skill Development in 34 Districts affected by Left Wing Extremism' are also being implemented by the Ministry of Rural Development and Ministry of Labour and Employment respectively.
  - ROSHNI is a special initiative under, Pandit Deen Dayal Upadhyaya Grameen Kaushalya Yojana which envisages training and placement of rural poor youth from 27 LWE affected districts.
  - Skill Development in 34 Districts affected by Left Wing Extremism" under implementation from 2011-12 aims to establish ITIs and Skill Development Centres LWE affected districts.

### SAMADHAN

It is a strategy of MHA to frame short term and long term policies to tackle LWE S- Smart Leadership

- A- Aggressive Strategy
- M- Motivation and Training
- A- Actionable Intelligence
- D- Dashboard Based KPIs (Key Performance Indicators) and KRAs (Key Result Areas)
- H- Harnessing Technology
- A- Action plan for each Theatre
- N- No access to Financing

# 5.33. NEWTON-BHABHA FUND

### Why in news?

An India-UK Joint Team has won the Newton-Bhabha Fund for a project on **Groundwater Arsenic Research in Ganga River Basin.** 

### Newton-Bhabha Fund

- The Fund aims to bring together the UK and Indian scientific research and innovation sectors to find joint solutions to the challenges facing India in economic development and social welfare.
- The scheme is part of the UK's £375 million Newton Fund to support science and innovation partnerships between the UK and emerging powers.
- In India, the Fund is worth £50 million over five years and is supported by the UK and Indian governments through a ministerial agreement.

# 5.34.INDIANSCIENCE,TECHNOLOGYANDENGINEERING FACILITIESMAP(I-STEM)

### Why in the news?

Recently, the government has issued a directive to institutions with R&D facilities funded by government to be listed on the I-STEM Portal.

### About the portal

- The web Portal is a gateway for users to locate the specific facility they need for their R&D work and identify the one that is either located closest to them or available the soonest.
- It will enable researchers in any institution to check, reserve and have easy access to research equipment and facilities anywhere in India

# 5.35. VIRTUAL LIBRARY

### Why in News?

 Centre for Development of Advanced Computing (C-DAC), will launch the National Virtual Library of India.



### **About National Virtual Library**

- It will be a **multi-lingual online platform**, of the collection of documents, books, audio-visual of different subjects.
- This programme is a part of the National Mission on Libraries.
- The platform will be freely accessible for editing or contributions from outsiders or subject experts, making it more user-friendly.

# About Centre for Development of Advanced Computing

- Centre for Development of Advanced Computing (C-DAC) is R&D organization of the Ministry of Electronics and Information Technology (MeitY).
- Its projects include; Supercomputer PARAM, Indian Language Computing Solutions with setting up of GIST group (Graphics and Intelligence based Script Technology) etc.

#### **National Mission on Library**

- It is an initiative of the Ministry of Culture to modernise and digitally link public libraries.
- The ideas was mooted by National Knowledge

Commission.

- The scheme consists of four components;
  - Creation of National Virtual Library of India (NVLI)
  - Setting up of NML Model Libraries,
  - $\circ \quad \mbox{Quantitative \& Qualitative Survey of Libraries}$
  - Capacity Building

### **5.36. MISCELLANEOUS TITBITS**

- Lyrid 2018 meteor shower, caused by remains of the C/1861 Thatcher comet, was visible across the Northern hemisphere.
- Recently, Union Home Ministry sanctioned the launch of the India's first National Academy of Coastal Policing (NACP) at a campus of Gujarat's Fisheries Research Centre, Dwarka.
- Recently, top 34 global technology and securities firms, led by Microsoft and Facebook, have signed a "Cybersecurity Tech Accord" to defend people from malicious attacks by cybercriminals and nation-states.



Besides appearing for All India Open Tests you can also attempt previous year's UPSC Civil Services Prelims papers on VisionIAS Open Test Platform PT 365 - Polity & Constitution



# 6. SOCIAL

# 6.1. RASHTRIYA UCHCHATAR SHIKSHA ABHIYAN

### Why in news?

Recently Cabinet Committee on Economic Affairs (CCEA) approved continuation of centrallysponsored Rashtriya Uchchatar Shiksha Abhiyan (RUSA) till 2020.

### **Important Initiatives under RUSA 2.0**

With a view to ensure greater resource flow to the State higher education sector, RUSA 2.0 will encourage states and institutions to undertake projects in a public-private partnership mode based on viability gap funding:

- It seeks to increase gross enrolment ratio by 30 per cent during this period, creation of 70 new model degree colleges and 8 new professional colleges.
- Besides, it seeks to enhance quality and excellence in 10 select State universities and 70 autonomous colleges, providing infrastructural support to 50 universities and 750 colleges.
- An **on-line virtual platform of infrastructure** and equipment (inventory) will be created so that institutions can share these resources.
- The scheme will give priority to the Aspirational Districts, identified by the NITI Aayog to improve access and equity through improved enrolment and retention.
- Creation of National Higher Education Resource Centre (NHERC) to be a resource centre for Research, Policy Advocacy, Capacity Building and providing wellinformed policy and evidence-based research inputs.
- It will enhance ongoing mechanisms for Monitoring and Evaluation and look at innovative ways of scaling up Monitoring and Evaluation, such as Fund Tracker, Reform Tracker, Bhuvan-RUSA and PFMS, so that projects can be completed by their scheduled time.

# 6.2. NIRF INDIA RANKINGS 2018

### Why in News?

 Union HRD Minister released 'NIRF India Rankings 2018' for Higher Education Institutions.

### **About NIRF India Rankings**

- Ministry of HRD launched National Institute Ranking Framework in 2015 which outlines a methodology to rank institutions across the country.
- NIRF 2018 gave rankings for 9 different categories of institutions- Overall Rankings, Universities, Engineering, Colleges, Management, Pharmacy, Medical, Architecture and Law
- NIRF 2018 ranked institutions on following five parameters:
  - **o** Teaching, Learning and Resources
  - Research and Professional Practices
  - Graduation outcomes
  - $\circ \quad \text{Outreach and Inclusivity} \\$
  - $\circ$  Perception

# 6.3. SUSTAINABLE ACTION FOR TRANSFORMING HUMAN CAPITAL- IN EDUCATION (SATH-E) PROJECT

### Why in news?

NITI Aayog has released the roadmaps for SATH-E project.

### **Related facts**

- In 2017, SATH program was launched by NITI Ayog to initiate transformation in the education and health sectors.
- To select the three model states, NITI defined a three-stage process expression of interest, presentations by the states and assessment of commitment to education/health sector reforms.

### Details

- These roadmaps will be for 2018 to 2020
- Jharkhand, Madhya Pradesh and Odisha are the **three participating states** (selected through challenge method).

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- There will be a cost sharing arrangement between NITI Aayog and the participating States.
- It will be a **Public-Private- Philanthropic Partnership (PPPP)** experimentation.
- SATH-E aims to create role model States for quantitative and qualitative transformation of elementary and secondary school education all across India, and aspires to be a 'saathi', to the educational system with the student and the teacher at its center.
- the whole process would be done in consultation with the states and MHRD.

# 6.4. UNNAT BHARAT ABHIYAN 2.0

### Why in news?

Recently Human Resource Development Ministry today launched Unnat Bharat Abhiyan 2.0 in New Delhi.

### Unnat Bharat Abhiyaan 2.0

It is **stage 2 of Unnat Bharat Abhiyaan** where students of premier institutions will help in solving the problems faced by rural population across the country. Under the Unnat Bharat Abhiyan 2.0:

- The institutions have been selected on a **Challenge Mode**.
- The scheme has been extended to 750 reputed Higher Educational Institutes (both public and private) of the country.
- IIT Delhi has been designated to function as the National Coordinating Institute for this programme.

### How it Works?

- Each selected institute would adopt a cluster of villages / panchayats and gradually expand the outreach over a period of time.
- Institutes through their faculty and students, will carry out studies of living conditions in the adopted villages. The focus will be on:
  - o assess the local problems and needs
  - workout the possibilities of leveraging the technological interventions in implementation of various government schemes
  - prepare workable action plans for the selected villages.
- The Institutes will work in close coordinatation with the district

administration, elected public representatives of panchayat / villages and other stakeholders.

 Also, scope for providing Subject Expert Groups and Regional Coordinating Institutes to handhold and guide the participating institutions has been strengthened.

# 6.5. NATIONAL ACADEMIC DEPOSITORY (NAD)

### Why in news?

The recently launched NAD has been integrated with the e-SANAD portal.

### About NAD

NAD will be a 24x7 online store house of academic awards digitally lodged by various academic institutions/school boards/eligibility assessment bodies. Employers and other person with prior approval of the concerned student can verify the authenticity of any academic award.

### **Other Details**

- All the Central and State Universities, deemed to be Universities, CBSE, State School Education Boards will participate in the depository.
- The UGC will be authorised body to operationalise the NAD.
- It will comprise of two inter-operable digital depositories i.e. NSDL Database Management Ltd (NDML) and CDSL Venture Ltd (CVL).
- NAD being an online, permanent and safe record will eliminate the need for issuing duplicate academic awards and any risk of losing, spoiling, damaging or forging the awards, will provide convenience in the availability of academic awards.

**e-Sanad** is a project aimed at online submission/ verification of documents with an ultimate object to extend contactless, cashless, faceless and paperless document attestation service for apostille and normal attestation to applicants in India (to be extended to Indians residing abroad as well in a phased manner). It is designed and developed by **NIC**. The e-Sanad service will start with CBSE depository.

### Parinam Manjusha

- It is **CBSE's digital repository** of academic records
- Employers and Educational Institutions can use this repository to verify academic records of CBSE students online.
- The digital academic records of this repository will also be available to students through **Digi Locker**.



# 6.6. CHILD MARRIAGE NUMBERS DROP SHARPLY

### Why in news?

- The proportion of girls getting married in India has nearly halved in a decade, the United Nations children's agency UNICEF said recently.
- 25 million child marriages were prevented worldwide in the last decade, with the largest reduction seen in South Asia — where India was at the forefront.

### Efforts to reduce child marriage

- The Women and Child Development Ministry has taken a number of steps to enhance the status of girl child and to address the problem of child marriage:
  - Every year, State Governments are requested to take special initiative to delay marriage on AkhaTeej—the traditional day for such marriages, by coordinated efforts.
  - It has developed a convergent national strategy- "National Strategy Document on Prevention of Child Marriage" and is currently drafting a plan of action on child marriage to guide all states in the implementation of strategies to prevent the problem. The suggested strategic areas of intervention to prevent child marriage are-

### The Prohibition of Child Marriage Act

- It defines child, child marriage, minor, etc. and declares all the marriages void, after or even before the passing of the act at the option of the contracting party who was a child at the time of the marriage, in which one of the two parties is a minor.
- The district court shall have the power to add to, modify or revoke any order made for maintenance and custody of child, and if there is any change in the circumstances at any time during the pendency of the petition and even after the final disposal of the petition.
- It lays down punishment for an adult male marrying a minor or someone who promotes or solemnizes such a marriage.
- Notwithstanding anything contained in the Code of Criminal Procedure, an

offence punishable under this Act shall be cognizable and non-bailable.

- The State Government shall, by notification, appoint for the whole State, or part of state, an officer or officers to be known as the Child Marriage Prohibition Officer having jurisdiction over the area or areas specified in the notification.
- Other laws that may provide protection to a child bride include the Juvenile Justice (Care and Protection of Children) Act, 2000, the Domestic Violence Act, 2005, and the Protection of Children from Sexual Offences Act, 2012.

# 6.7. PARTNERSHIP FOR MATERNAL, NEWBORN AND CHILD HEALTH (PMNCH) FORUM

### Why in news?

PMNCH delegation invited Prime Minister to be its patron in **Partners' Forum 2018**, to be held in New Delhi in December.

### 2018 Partners' Forum

- The goal of the forum includes greater consensus among PMNCH partners, greater knowledge of best practices, improved political attention and concrete commitment towards EWEC (Every Woman Every Child) priorities.
- It will also emphasize the importance of peoplecentered accountability bringing forward the voices and lived realities of women, children and adolescents through innovative programming and creative projects.

### Every woman every child movement

- It was a movement launched by **UN Security General** in MDG summit 2010.
- The movement puts into action the "Global strategy for women's, children and adolescent's health" which presents a roadmap to ending all preventable deaths of women, children and adolescents within a generation and ensuring their well-being.

### About PMNCH

- It is an alliance of more than 1000 organizations from 10 constituencies in 77 countries from the sexual, reproductive, maternal, newborn, child and adolescent health communities.
- The constituencies include NGOs, Healthcare Professional Associations, Academic Research



and Training Institutes, Adolescent & Youth, Private sector, Participating Countries, UN agencies, etc.

 The Partnership enables partners to share strategies, align objectives and resources, and agree on interventions to achieve more together (Partner-Centric approach) than they would have been able to achieve individually.

# 6.8. LAQSHYA PROGRAM

### Why in news?

Ministry of Health and Family Welfare recently launched 'LaQshya' Program.

### More about the Program

- 'LaQshya' will improve quality of care during delivery and immediate post-partum period thus providing Respectful Maternity Care (RMC) to all pregnant women attending public health facilities. This will reduce maternal and newborn morbidity and mortality.
- It aims at implementing 'fast-track' interventions for achieving tangible results within 18 months.
- A multi-pronged strategy has been adopted such as improving infrastructure upgradation, ensuring availability of essential equipment, providing adequate human resources, capacity building of health care workers and improving quality processes in the labour room.
- It is being implemented at all Medical College Hospitals, District Hospitals and First Referral Unit (FRU), and Community Health Center (CHCs).
- The Quality Improvement in labour room and maternity OT will be assessed through NQAS (National Quality Assurance Standards).

# 6.9. SUVIDHA

### Why in news?

Recently, Ministry of Chemicals & Fertilizers has launched 100% Oxo-biodegradable sanitary napkin, under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana.

Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)

It is a campaign launched by the **Department of Pharmaceuticals**, to provide quality medicines at affordable prices to the masses through special kendra's known as Janaaushadhi Kendra. Bureau of Pharma PSU of India

- It was established in 2008 comprising all the Pharma CPSUs under the Department of Pharmaceuticals.
- It brings about effective collaboration and cooperation in furthering the working and resources of these organizations.

### About SUVIDHA

- It is an affordable sanitary napkin launched to ensure 'Swachhta, Swasthya and Suvidha' for the underprivileged Women of India.
- The initiative has been taken by Department of Pharmaceutical and has been manufactured by Bureau of Pharma Public Sector Undertaking of India.
- It has been launched on World Women's Day and is currently available at 3200 Janaushudhi Kendras.

### 6.10. GENDER VULNERABILITY INDEX

### Why in news?

Recently, first-ever gender vulnerability index (GVI) was released by Child development NGO Plan India.

### Highlight

- Index is aimed at comprehensively understanding the dimensions of various problems affecting children, particularly girls, in difficult circumstances.
- It identifies the challenges women face with respect to four parameters — education, health, poverty and protection against violence.
- Goa, Kerala and Mizoram are among the top three while Bihar, UP and Delhi are the bottom three states.

# 6.11. UN COMMISSION ON STATUS OF WOMEN (CSW)

### Why in news?

UN General Assembly President in the annual meeting of CSW held up Sunita Kashyap, the founder of Umang, as an example of women empowering themselves and coming up with solutions to their problems.



#### About Commission on the Status of Women (CSW)

- The CSW is the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the empowerment of women. A functional commission of the Economic and Social Council (ECOSOC).
- The CSW is instrumental in promoting women's rights, documenting the reality of women's lives throughout the world, and shaping global standards on gender equality and the empowerment of women.
- The Commission take a leading role in monitoring and reviewing progress and problems in the implementation of the Beijing Declaration and Platform for Action, and in mainstreaming a gender perspective in UN activities.
- The Commission also contributes to the follow-up to the **2030 Agenda for Sustainable Development** so as to accelerate the realization of gender equality and the empowerment of women.

#### More about the news

- Sunita Kashyap founded Mahila Umang Producers Co., an organisation in Uttarkhand run by women farmers and producers. Besides marketing their products, it runs a micro-credit programme. Her organisation supports 3,000 women farmers in India to grow and sell their own crops.
- The Priority theme of 2018 annual meeting of CSW is "Challenges and opportunities in achieving gender equality and the empowerment of rural women and girls."

# 6.12. WOMEN ENTREPRENEURSHIP PLATFORM (WEP)

#### Why in news?

Recently, **NITI Aayog** launched Women Entrepreneurship Portal (WEP) and **Ministry of MSME** launched Udyam Sakhi Portal on World Women's Day.

#### About the Women Entrepreneurship Portal

- It will provide vibrant entrepreneurial ecosystem free of gender-based barriers and cater to all age-groups along with women who take break in their career and prepare them for the next wave of New India.
- It aspires to substantially increase the number of women entrepreneurs by providing them opportunities through services such as credit evaluation of women-led startups by CRISIL

and potential equity investments through an INR 10 crore fund established by DICE Districts

 Some aims of WEP includes - industry linkages, increasing visibility of existing schemes, identify and address issues, developing a centralised national database for registering women entrepreneurs etc.

### About Udyam Sakhi Portal

- The portal has been launched for nurturing social entrepreneurship creating business models revolving around low-cost products and services to resolve social inequitiesand make women self-sufficient and self-reliant.
- It will provide assistance for entrepreneurial learning tools, incubation facility, training programs for fund raising, providing mentors, one-to-one investor meet, providing market survey facility and technical assistance.
- The initiative is in sync with the Make in India and Start up India Initiative and will provide benefits to around 8 million women entrepreneurs in India.

### 6.13. VAN DHAN SCHEME

#### Why in news?

Ministry of Tribal Affairs recently launched Van Dhan Scheme.

### Background

- Minor Forest Produce (MFP) is a major source of livelihood for tribals living in forest areas.
- Around 100 million forest dwellers depend on MFPs for food, shelter, medicines and cash income.
- Tribals derive 20-40% of their annual income from MFP and activity has strong linkage to women's financial empowerment as most of the MFPs are collected and used/sold by women.
- MFP sector has the potential to create about 10 million workdays annually in the country.
- The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, defines a Minor Forest Produce (MFP) as all non-timber forest produce of plant origin and includes bamboo, brushwood, stumps, canes, Tusser, cocoon, honey, waxes, Lac, tendu/kendu leaves, medicinal plants and herbs, roots, tuber and the like.
- Government had earlier launched a scheme named "Minimum Support Price (MSP) for



**Minor Forest Produces (MFP) scheme** for safeguarding the remuneration of tribal population.

 However, most of the trade related to the MFPs remained unorganized in nature, which has led to low returns to the gatherers and high wastages due to limited value addition. Thus, a more holistic approach with robust institutional mechanisms is required for strengthening the backward and forward linkages of MFP supply chain.

### Van Dhan Scheme

- Under the scheme 10 Self Help Groups of 30 Tribal gatherers (Van Dhan Vikas Samuh) will be constituted. They will then be provided with working capital to add value to the products which they will collect from the jungle.
- A cluster of ten such SHGs within the same village shall form a Van Dhan Vikas Kendra.
- Van Dhan Vikas Kendra are multi-purpose establishments for providing skill upgradation, capacity building training and setting up of primary processing and value addition facility.
- The stock after primary processing shall be supplied by these SHGs to the State Implementing Agencies or direct tie up for supply to corporate secondary processor.
- For creation of secondary level value addition facility at district level and tertiary level value addition facility at State level, Big Corporates shall be involved under PPP model.
- The scheme will be implemented through Ministry of Tribal Affairs as Nodal Department at the Central Level and TRIFED as Nodal Agency at the National Level.
- At State level, the State Nodal Agency for MFPs and the District collectors are envisaged to play a pivot role in scheme implementation at grassroot level.
- The First model Van Dhan Vikas Kendra is being set up in Bijapur District of Chattisgarh which will train 300 beneficiaries.

# 6.14. GRAM SWARAJ ABHIYAN

### Why in news?

The Prime Minister has announced that on the occasion of Ambedkar Jayanti that "Gram Swaraj Abhiyan" would be organised.

### About Gram Swaraj Abhiyan

- This Abhiyan (campaign) is being undertaken for reaching out to poor households, spreading awareness about government welfare schemes and other people centric initiatives.
- During the Gram Swaraj Abhiyan, universal coverage under seven welfare programmes in 21058 identified villages with large number of underprivileged households across the country has been contemplated.
  - The seven welfare programmes are:
    - o Pradhan Mantri Ujjwala Yojana
    - o Saubhagya
    - o Ujala scheme
    - o Pradhan Mantri Jan Dhan Yojana
    - o Pradhan Mantri Jeevan Jyoti Bima Yojana
    - o Pradhan Mantri Suraksha Bima Yojana
    - Mission Indradhanush

# 6.15. PASSIVE EUTHANASIA

### Why in News?

The Supreme Court has recently given judgement on Passive Euthanasia.

### More about the Judgement

- The bench upheld that the fundamental right to life and dignity includes right to refuse treatment and die with dignity because the fundamental right to a "meaningful existence" includes a person's choice to die without suffering (including terminally ill).
- The judgment includes specific guidelines to test the validity of a living will, by whom it should be certified, when and how it should come into effect, etc.
- The guidelines also cover a situation where there is no living will and how to approach a plea for passive euthanasia. But the judgement held that active euthanasia is unlawful.

### **Related terms**

- Euthanasia, also known as assisted suicide, and more loosely termed mercy killing, means to take a deliberate action with the expressed intention of ending a life to relieve intractable (persistent, unstoppable) suffering.
- In active euthanasia a person directly and deliberately causes the patient's death. In



**passive euthanasia** they don't directly take the patient's life, they just allow them to die.

 A 'living will' is a concept where a patient can give consent that allows withdrawal of life support systems if the individual is reduced to a permanent vegetative state with no real chance of survival. It is a type of advance directive that may be used by a person before incapacitation to outline a full range of treatment preferences or, most often, to reject treatment.

# 6.16. WORLD HAPPINESS REPORT 2018

### Why in news?

Recently World Happiness Report was released by United Nations Sustainable Development Solutions Network in which India has been ranked at 133<sup>rd</sup> position.

# United Nations Sustainable Development Solutions Network

It has been operating since 2012 under UN Secretary-General.

It mobilizes global scientific and technological expertise to promote practical solutions for sustainable development, including the implementation of SDG and the Paris Climate Agreement.

### About World Happiness Report, 2018

- It is an **annual publication** which ranks countries based on their **level of happiness**.
- Key variables of well-being are GDP per capita, social support, healthy life expectancy, social freedom, generosity, and absence of corruption.
- The main **focus of this year's survey** apart from the above-mentioned variables is **migrations** within and between countries.
- Finland has topped the report replacing Norway followed by Denmark. Burundi is the unhappiest country preceded by Central African Republic.



# 7. CULTURE

# 7.1. MADHUBANI PAINTING

### Why in News?

 Recently, Madhubani/Mithila Painting was used to decorate Madhubani railway station in Bihar which also became one of the cleanest railway stations in India.

### About Madhubani Paintings

- It derives its name from the **Madhubani town** in Bihar where this art form was done traditionally.
- Its origin is believed to be during the period of Ramayana.
- Characteristic features
  - **line drawings** filled in by **bright colours** and contrasts or patterns.
  - Major theme: geometric patterns; religious motifs of Hindu such as Krishna, Rama, Tulasi plant, Durga, Sun and Moon etc.; auspicious occasions like marriages, birth etc.
  - Floral, animal and bird motifs are also drawn and symbolic in nature, for example- fish depicts good luck and fertility.
  - commonly includes double line border, bold use of colours, ornate floral patterns and exaggerated facial features.
  - Two-dimesional with no shading.
- It is done on freshly plastered using rice paste and vegetable colours on a base of cow dung and mud. For commercial purposes, the work is now being done on paper, cloth, canvas etc. and men have also got involved along with women.
- It has been given Geographical Indication (GI) tag.

# 7.2. SAORA PAINTINGS

### Why in news?

Recently, it was reported that the demand for Saora paintings of Odisha has been rising in international and domestic markets.

Saura Tribe

• Saura (also called Saora or Lanjia Saora) are one of the tribal communities who inhabit remote ranges near Bansadhara River in **southern Odisha.** 

- They have their racial affinity with the proto-Australoid.
- They speak an ancient Mundari dialect of their own called 'saora'.
- Saoras depend on land and forest for their subsistence and practice shifting cultivation.
- They are enumerated as one among the 13 Particularly Vulnerable Tribal Groups in Odisha.

### Saora Paintings

- Saora Paintings are **traditional murals** (made on walls) and are locally called as **Idital** and the painters are known as **iditalmar**.
- Features of Saora Paintings
  - They are painted with figurative patterns and figures which are drawn in stylized manner.
  - Each painting has a **rectangular frame** and has icons of **deities and motifs from nature**.
  - Purpose of the painting to please Gods and ancestors, averting diseases, promoting fertility, honour deceased etc.
  - Central theme Idital is a house which is represented by a circle. The figures are placed in panels like circles, triangular around the Idital.

### Process of making Saora Painting

- Before painting the walls are cleaned and smeared with locally available red soil and the rice paste is applied as white colour. The Iditalmars follow a stringent ritual by eating one meal a day for 10-15 days till the painting is complete.
- For paintings, a brush is made from a bamboo split, black color from soot generated from the lamp. Sun dried rice powder for white, all these are mixed with water and juice from roots and herbs to make a paste.

# 7.3. KONARK TEMPLE

### Why in News?

• A state-of-the-art interpretation and tourist facilitation centre was recently inaugurated at the Sun temple at Konark, Odisha.

### About Sun Temple, Konark

• The Temple was built in the 13th century by King Narasimhadeva I of the Ganga dynasty.



- It has a gigantic chariot of the Sun god, with 12 pairs of exquisitely ornamented wheels pulled by seven horses.
- It is a UNESCO World Heritage site under Cultural category.
- It is the third link of Odisha's Golden Triangle. The first link is Jagannath Puri and the second link is Bhubaneswar (Capital city of Odisha).
- It is also known as 'Black Pagoda' due to its dark color.

Other Famous Sun Temples in India		
Name of Temple	Other Details	
Sun Temple, Modhera	<ul> <li>Gujarat</li> <li>Situated on the bank of the Pushpavati river</li> </ul>	
Surya Narayan Temple, Arasavalli	<ul> <li>Andhra Pradesh</li> <li>Constructed during 7<sup>th</sup> Century by Kalinga king Devendra Varma</li> </ul>	
Sun Temple, Martand	<ul> <li>Jammu and Kashmir</li> <li>Listed as national importance in Jammu and Kashmir and protected monuments of India</li> </ul>	
Sun Temple, Gwalior	<ul> <li>Madhya Pradesh</li> <li>Architecture is inspired by the Sun temple in Konark</li> </ul>	
Brahmanya Dev Temple, Unao	<ul> <li>Madhya Pradesh</li> <li>known for unique architecture and design</li> </ul>	
Sun Temple, Ranchi	Jharkhand	
Sun Temple, Khatarmal	<ul> <li>Uttrakhand</li> <li>Noted for its magnificent carved pillars and wooden doors</li> </ul>	
Surya Pahar Temple, Assam	<ul> <li>Assam</li> <li>Has rock-cut Shivalingas, sculpture of twelve-armed Vishnu and remains of the Ganesha and Hari Hara</li> </ul>	
Surya Narayan Temple, Domlu	• Karnataka	
Dakshinaarka Temple, Gaya	<ul> <li>Bihar</li> <li>Images of Sun God Aditya are found here</li> </ul>	
Suryanar Temple, Kumbakonam	<ul> <li>Tamil Nadu</li> <li>One of the nine Navagraha temples in Tamil Nadu</li> </ul>	

# 7.4. KUTHIYOTTAM

### Why in news?

• Kerala State Commission for the Protection of Child Rights registered a suo motu case in connection with the **Kuthiyottam ritual**.

### Background

- The Kuthiyottam ritual has been under scanner for violating child's rights and not taking child's consent into account.
- Kerala State Commission for Protection of Child Rights (KSCPCR) banned the ritual at Chettikulangara temple in Alappuzha district in 2016 citing violation of child rights.

### About Kuthiyottam Ritual

- The Kuthiyottam ritual is usually performed every year during the Pongala festival at the Attukal Bhagavathy Temple in Thiruvananthapuram, Kerala.
- Nearly 1,000 young boys undertake a sevenday penance before Pongala day. These boys are said to represent the wounded soldiers of the goddess.
- The boys have to observe strict discipline and stay inside the temple for seven days. They are made to wear **thin towels (thorthu).**
- They have to sleep on the floor, have measly meals and bathe three times a day. They also have to prostrate 1,008 times before the deity
- The ritual also involves piercing the child's side with a small hook and knotting a thread through it to symbolise their bond with the Goddess.
- This ritual is performed at various temples all across Kerela. It is also called **choral muriyal** in several parts of the state.

**Pongala is a harvest festival of Tamil Nadu and Kerela.** One of the most famous of them is Attukal Pongala. It is also considered as **the largest religious congregation of women in the world.** 

Pongala meaning 'to boil over', is a ritual in which women prepare a pudding made from rice, jaggery, coconut and plantains cooked together, and offer it to the goddess. The ritual can only be performed by women.

# 7.5. MADHAVPUR MELA

### Why in news?

Recently, the famous Madhavpur Mela saw its first-ever cultural integration with the North-East.

### About the Mela

 The Madhavpur Mela is an annual event at Madhavpur Ghed of Porbandar district in Gujarat.



- Madhavpur in Gujarat has its historical identity as a place where Lord Krisha married Rukmini.
- Madhavpur Mela shares its connect to the Mishmi Tribe of Arunachal Pradesh. The Mishmi Tribe traces its ancestry to the legendary King Bhishmak and through him to his daughter Rukmini.
- During the event, a jatha (group of people) of 150 people from North-East will visit the Mela as representatives of Rukmini's family.

# 7.6. ADILABAD DOKRA AND WARANGAL DURRIES

### Why in news?

Recently, Adilabad Dokra and Warangal Durries have been issued GI tag.

#### Lost wax technique:

In this technique a clay model of the sculpture to be created is designed. This clay model is wrapped with wax threads and kept in the mould, which is baked to allow the wax to flow out and then molten metal is poured into the mould to get the desired sculpture.

### About Adilabad Dokra

- It is an ancient **bell metal craft** popular in the tribal regions of **Adilabad district in Telangana.**
- The Dokra craftsmen belong to the Woj community, called Wojaris/Otaris/Ohjas.
- It is unique because **no two pieces are alike** in shape as well as in size and hence replica of the bell is nearly impossible.
- The craftsmen make brass objects by an ancient casting technique called **cire perdue** (french term for lost wax technique)
- The product mainly includes idols of local deities, bells, dancing figures, jewellery, statues and many other decorative items.

### **About Warangal Durries**

- In this style of durries, weavers create beautiful patterns and dye them using vegetable colours, which are washed in flowing water after the printing process.
- The Nizam of Warangal had established **Azam Jahi Mills in 1934**, which created an ecosystem for cotton based weaving industry, especially of durries in the area.

# 7.7. KREM PURI CAVES

### Why in News?

The length of Krem Puri caves has been measured to be 24,583 metres making it the **world's longest sandstone cave**.

### About Krem Puri Caves

- Krem Puri caves, discovered in 2016, are situated near the village of Laitsohum in the Mawsynram area of East Khasi Hills district of Meghalaya.
- The cave system has **fossils of dinosaurs**, especially the **Mosasaurus**, a giant reptile that lived 66-76 million years ago.
- This cave is more than 6,000 metres longer than the world's previous record holder- the Cueva Del Saman in Edo Zulia, Venezuela a quartzite sandstone cave measuring 18,200 metres.
- This cave has also become India's second longest cave in the general category after the limestone Krem Liat Prah-Umim-Labit system measuring a little over 31km in Jaintia Hills in Meghalaya.

# 7.8. INCREDIBLE INDIA 2.0 CAMPAIGN

### Why in news?

 The Ministry of Tourism has launched the Incredible India 2.0 campaign to promote various destinations and tourism products of the country in important and potential source markets overseas.

### More on news

- The Incredible India campaign was first conceptualized in 2002 with the primary objective of creating a distinctive identity of the country.
- The new campaign has been launched with the objective of doubling tourism traffic from both foreign and domestic tourists.
- The campaign will mark a shift from generic promotions across the world to market specific promotional plans, content creation and use of thematic creatives.
- Incredible India 2.0 campaign will focus on developing at least 10 cities where it will promote their spirituality quotient and also develop their medical and wellness potential.



 The campaign will include sites like monasteries in Lahaul Sipti, Ayodhya as well as usual pilgrimage centres like Varanasi, Ajmer and Mathura.

# 7.9. NATIONAL MISSION ON MANUSCRIPTS

### Why in news?

• The government has increased the budget allocation for **National Mission for Manuscripts** for the FY 2018-19.

### **National Mission for Manuscripts**

- The National Mission for Manuscripts was established in February 2003, by the Ministry of Tourism and Culture, Government of India.
- Need: India possesses an estimate of ten million manuscripts, probably the largest collection in the world. They cover a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations and illustrations. However, a lot of them are in poor state of preservation and can be lost if not conserved.
- The objective of NMM is to survey, document, and conserve/preserve, digitize and publish the Indian Manuscripts and establish a digital manuscripts library at Indira Gandhi National Centre for the Arts (IGNCA).

# 7.11. ADARSH MONUMENTS

### Why in news?

 Archaeological Survey of India has identified 100 monuments as "Adarsh Smarak" for upgradation of existing tourist facilities/ amenities.

### Adarsh Smarak Scheme

- The scheme was launched in 2015 for conservation of monuments.
- The salient features of the scheme are as under:
  - To make monument visitor friendly.
  - To upgrade/provide wash rooms, drinking water, signages, cafeteria and wi-fi facility.
  - To provide Interpretation and audiovideo centres.
  - To streamline waste water and garbage disposal and rain water harvesting system.

- To make monument accessible to differently abled.
- o To implement Swachh Bharat Abhiyan.

# 7.12. DEENDAYAL HASTKALA SANKUL

### Why in News?

• Recently, Deendayal Hastkala Sankul, a trade facilitation centre and **Craft Museum** were inaugurated in **Varanasi, Uttar Pradesh.** 

### About Deendayal Hastkala Sankul

- It would help the **artisans and weavers** showcase their skills to the world and facilitate a brighter future for them.
- Provide **supply chain linkages** to the domestic and foreign buyers.
- Give thrust to the domestic tourism potential and increase the demand of handicrafts and carry forward the rich tradition of handloom in Varanasi.
- The **Crafts Museum** in the Sankul will **preserve the traditional handloom**/ handicrafts products of Varanasi.

### 7.13. INDIAN COUNCIL OF HISTORICAL RESEARCH CONFERENCE

### Why in news?

• The Indian Council of Historical Research (ICHR) hosted a three-day conference to correct "distortions" in Indian history.

### About ICHR

- Indian Council of Historical Research is an autonomous organization which was established under Societies Registration Act in 1972
- The objectives of the Indian Council of Historical Research are:
  - to bring historians together and provide a forum for exchange of views between them
  - to give a national direction to an objective and scientific writing of history and to have rational presentation and interpretation of history
  - to promote, accelerate and coordinate research in history with special emphasis on areas which have not received adequate attention so far



- to promote and coordinated a balanced distribution of research effort over different areas
- to elicit support and recognition for historical research from all concerned and ensure the necessary dissemination and use of results.

# 7.14. NATIONAL CULTURE FUND

### Why in News?

 A total of 34 projects have been successfully completed under National Culture Fund (NCF) scheme since its inception.

### About National Culture Fund

- It was established as a funding mechanism distinct from the existing sources and patterns of funding for the arts and culture in India.
- It was created as a **Trust** under the Charitable Endowment Act, 1890.
- It aims at inviting individuals as well as private institutions in the task of promoting, protecting and preserving India's cultural heritage.
- A council headed by Union Culture Minister manages and administers the Fund and decides the policies while an Executive Committee headed by Secretary, Culture actualizes those policies.
- The Government granted a one-time corpus fund to NCF. Apart from this, there is no fund allocated by the Government to National Culture Fund. It receives contributions and voluntary donations as endowments from many other sources.
- All the projects undertaken by the NCF are completed within a specified period, in accordance with an MoU signed by NCF with the concerned donor organization.

# 7.15. WORLD HERITAGE SITES

### Why in news?

6 monuments/historical sites in the North Eastern states have been **identified tentatively** for listing under World Heritage Site.

### Details

- Apatani Cultural Landscape, Arunachal Pradesh:
  - Apatani civilisation existed in Zero Valley, Arunachal Pradesh.

- The hallmark of the valley is judicious utilization of limited land area. The relatively flat land in the valley is used for wet-rice cultivation where fish is also reared.
- The Apatanis are also known for their effective traditional village council called **bulyañ**, which supervises, guides and have legal oversight over the activities of individuals that affect the community as a whole.
- Iconic Saree Weaving Clusters of India: This pan-India cluster comprises of sites from five Indian states: Madhya Pradesh (Chanderi, the 13th cent. Moroccan traveler Ibn Batuta also visited here), Uttar Pradesh (Banaras and Mubarakpur), Maharashtra (Paithan and Yeola), Andhra Pradesh (Koyyalagudem and Pochampalli, the silk city of India famous for Ikat sarees) and Assam (Sualkuchi for muga and mulberry silk).
- Moidams the Mound Burial System of the Ahom Dynasty, Assam
  - Moidams are vaulted chamber (chowchali), often double storied entered through an arched passage, used for burying the royals in Choraideo landscape of the foothill of Patkai hills. The Changrung Phukan (canonical text developed by the Ahoms) discusses that Moidams were made of woods, and later of burnt bricks.
- Namdapha National Park, Arunachal Pradesh
  - It is only park in the World to have the four Feline species of big cat namely the Tiger, Leopard, Snow Leopard and Clouded Leopard. The area lies close to the Indo-Myanmar-China tri-junction.
- River Island of Majuli in midstream of Brahmaputra River in Assam
  - The Majuli Island is a fluvial landform (a riverine delta). The formation of islets locally called as Chaporis around the majuli island is its another significant feature. It is the largest mid river delta system in the world.
- Thembang Fortified Village, Arunachal Pradesh
  - Thembang bears an exceptional testimony to the living cultural traditions of the Monpa tribe, which depicts influences of diverse cultures - the Bhutanese, the Tibetans and the



indigenous North East Indian. This includes their social structure and practices, rites, rituals and their vernacular building knowledge systems such as Dzongs or the fortress which are also found in Bhutan and Tibet.

# 7.16. UNESCO ATLAS OF THE WORLD'S LANGUAGES IN DANGER

#### Why in News?

• Recently, first ever dictionary of Gondi language was launched.

#### More on news

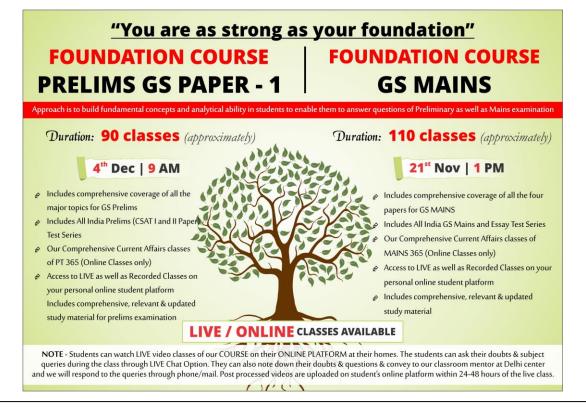
- The project aims to create a standardized and unified language and was supported by Indira Gandhi National Centre for the Arts, an autonomous body under ministry of culture.
- At present, Gondi is spoken by two million people in 6 states (Madhya Pradesh, Gujarat, Telangana, Maharashtra, Chhattisgarh and Andhra Pradesh). It has six different dialects but can be written by only 100 people.
- UNESCO has put it in the 'vulnerable' category in its Atlas of the World's Languages in Danger.

# UNESCO's Atlas of the World's Languages in Danger

- The Atlas aims to raise awareness about language endangerment and the need to safeguard the world's linguistic diversity.
- It also serves as a **tool to monitor the status** of endangered languages and the **trends in linguistic diversity** at the global level.
- It segregates language based on Degree of Endangerment as Safe, Vulnerable, Definitely endangered, Severely endangered, Critically endangered and Extinct.

### 7.17. MISCELLANEOUS TITBITS

- Kerela has declared Jackfruit, known as 'plavu' in local parlance, the largest tree borne fruit as it state fruit.
- State Govt in Goa restored Coconut Palm as the tree and declared the same as the **state tree of Goa**.
- Balkrishna V. Doshi is the first Indian who won the prestigious Pritzker Prize for his innovative work of designing low-cost housing. It is an international prize which is awarded each year to a living architect for his/her significant achievements and is also referred to as Architecture's Nobel and the profession's highest honour.



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