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GS-1	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, issues, National issues, boundary and disputes	Post independence society features, issues, globalisation and diversity	Indian society issues and developments	Women - issues and developments	Urbanization - problems and remedies	Distribution of industries and resources - India and world	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc	Culture-Art Forms, Literature and Architecture from ancient to modern times.		
GS-II	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional, non-constitutional, judicial, quasi judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparency, accountability and - governance	Committees and schemes.	Non-government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	International Relation-India and other countries, various India and international agreements, effects of other countries on India and international institutions.	International agreements and works of various international bodies, effort by individuals and misc.	Challenges to internal security, Various Security forces and agencies and their mandate. Cyber security, money laundering and its prevention.
GS-III	Various measures to boost Indian economy-planning, policies, management.	Government budgeting and issues related to budget.	Agriculture, animal husbandry and transport	Food security, measures to boost food security and food processing, issues related to land- land reforms	Industries and infrastructure their growth and investment model	Space and technology, IT and human welfare	Disease, biotechnology and aspects of S&T	Innovations, intellectual property; Awards, POI and other import ant aspects of S&T	Environment and disaster; government initiatives, various judgment, pollution, degradation and conservation efforts	International agreements and works of various international bodies, effort by individuals and misc.	
GS-IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/e-Governance	Ethics in international issues	Personalities and their teachings	Other import ant topics			
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Aadhaar and Other Laws (Amendment) Ordinance, 2019

In News

The Aadhaar and Other Laws (Amendment) Ordinance, 2019 was promulgated recently. It amends the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016, the Indian Telegraph Act, 1885, and the Prevention of Money Laundering Act, 2002.

Key Highlights

1. **Offline verification of Aadhaar number holder:** The Ordinance additionally allows 'offline verification' of an individual's identity, without authentication, through modes specified by the Unique Identification Authority of India (UIDAI) by regulations.

   During offline verification, the agency must (i) obtain the consent of the individual, (ii) inform them of alternatives to sharing information, and (iii) not collect, use or store Aadhaar number or biometric information.

2. **Voluntary use:** The Ordinance states that authentication of an individual's identity via Aadhaar, for the provision of any service, may be made mandatory only by a law of Parliament.

3. **Aadhaar number of children:** The Ordinance specifies that at the time of enrolling a child to obtain an Aadhaar number, the enrolling agency shall seek the consent of his parent or guardian. After attaining 18 yrs, the child may apply for cancellation of his Aadhaar.

4. **Disclosure of information in certain cases:** The Ordinance mentioned to allow disclosure of restrictions on security and confidentiality of Aadhaar related information only for orders by High Courts (or above).

5. **UIDAI Fund:** Under the Act, all fees and revenue collected by the UIDAI will be credited to the Consolidated Fund of India. The Ordinance removes this provision, and creates the Unique Identification Authority of India Fund. All fees, grants, and charges received by the UIDAI shall be credited to this fund.

6. Allows the use of Aadhaar number for authentication on voluntary basis as acceptable KYC document under the Telegraph Act, 1885 and the Prevention of Money-laundering Act, 2002.

7. **Entities using Aadhaar:** Under the Act, usage of Aadhaar number for establishing the identity of an individual, by the State or a body corporate under any law, is permitted. The Ordinance removes this provision. An entity may be allowed to perform authentication through Aadhaar, if the UIDAI is satisfied that it is: (i) compliant with certain standards of privacy and security, or (ii) permitted by law, or (iii) seeking authentication for a purpose specified by the central government in the interest of the State.

8. **Omission of Section 57:** Section 57 of the Act permitted private entities to use Aadhaar number for authenticating identity before disbursement of services. The provision was struck down by the Supreme Court. The Ordinance omits the Section.

> ### Constitution Bench
> Constitution benches normally have five judges, but there have been benches with seven, nine and even 13 judges.
> Article 145(3) says at least five judges need to hear cases that involve "a substantial question of law as to the interpretation" of the Constitution, or any reference under Article 143, which deals with the power of the President of India to consult the Supreme Court.

> ### PEPPER IT WITH
> Swachh Bharat Grameen, Bolo app, PMUY

Impact

● The amendments would enable UIDAI to have a more robust mechanism to serve the public interest and restrain the misuse of Aadhaar. Subsequent to this amendment, no individual shall be compelled to provide proof of possession of Aadhaar number to undergo authentication for the purpose of establishing his identity unless it is so provided by a law made by Parliament.

- It changes definition of 'Aadhaar number' to include 'virtual ID', in addition to the 12 digit number. The Virtual ID enables one to authenticate identity without providing Aadhaar number.
- It clarifies that failure in authentication of Aadhaar number due to old-age, sickness, or technical reasons should not result in denial of any service, benefit or subsidy. It states that alternate means to verify identity should be used in such cases.

National Policy on Software Products 2019

In News

The Union Cabinet has approved the National Policy on Software Products - 2019 to develop India as a Software Product Nation.

The Government shall establish a "**National Software Product Mission (NSPM)**" to be housed in MeitY under a Joint Secretary, with participation from Government, Academia and Industry.

Aim

- To develop India as the global software product hub, driven by innovation, improved commercialisation, sustainable Intellectual property (IP), promoting technology start-ups and specialised skill sets, for development of the sector, based on ICT.
- To align with other Government initiatives such as Start-up India, Make in India and Digital India, Skill India etc so as to create Indian Software products Industry of USD ~70-80 billion with direct & indirect employment of ~3.5 million by 2025.

> **What is Software product ecosystem?**
> The Software product ecosystem is characterised by innovations, Intellectual Property (IP) creation and large value addition increase in productivity, which has the potential to significantly boost revenues and exports in the sector, create substantive employment and entrepreneurial opportunities in emerging technologies and leverage opportunities available under the Digital India Programme, thus, leading to a boost in inclusive and sustainable growth.

5 mission envisioned under NPSP-2019 Policy:

1. To promote the creation of a sustainable Indian software product industry, driven by intellectual property (IP), leading to a ten-fold increase in India's share of the Global Software product market by 2025.

> **PEPPER IT WITH**
> NASSCOM, Soil moisture map, IMPRESS, SWIFT, Train 18, National Mineral Policy

2. To nurture 10,000 technology startups in software product industry, including 1000 such technology startups in Tier-II and Tier-III towns & cities and generating direct and indirect employment for 3.5 million people by 2025.
3. To create a talent pool for software product industry through (i) up-skilling of 1,000,000 IT professionals, (ii) motivating 100,000 school and college students and (iii) generating 10,000 specialized professionals that can provide leadership.
4. To build a cluster-based innovation driven ecosystem by developing 20 sectoral and strategically located software product development clusters having integrated ICT infrastructure, marketing, incubation, R&D/testbeds and mentoring support.
5. In order to evolve and monitor scheme & programmes for the implementation of this policy, National Software Products Mission will be set up with participation from Government, Academia and Industry.

Strategies to achieve it

- Promoting Software Products Business Ecosystem
- Promoting Entrepreneurship & Innovation for Employment
- Skilling and Human Resource Development
- Improving Access to Domestic Market and Cross Border Trade Promotion

Way Ahead

The development of the software product industry will result in positive externalities for the entire spectrum of the Indian IT/ITeS sector, and hence for the overall economy, by facilitating development of platforms that ensure that technology-based solutions are generated for sector-specific areas, that will tap the untapped growth potential of the sector concerned. Further, leveraging new and emerging technologies like **Artificial Intelligence, Internet of Things, Blockchain** etc. to the maximum advantage across sectors of the economy requires higher levels of innovation, keeping pace with the advancement of technology globally.

SEZ (Amendment) Ordinance, 2019

In News

The Special Economic Zones (Amendment) Ordinance, 2019 was promulgated recently. It amends the Special Economic Zones Act, 2005 which provides for the establishment, development and management of Special Economic Zones for the promotion of exports.

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What are SEZs?

Special Economic Zone (SEZ) is a specifically delineated duty-free enclave and shall be deemed to be foreign territory for the purposes of trade operations and duties and tariffs. In order words, SEZ is a geographical region that has economic laws different from a country's typical economic laws. Usually the goal is to increase foreign investments.

Highlights

1. The ordinance seeks to amend the definition of a person under the SEZ Act 2005 which will enable a trust to be considered for grant of permission to setup a unit in these units. The current provisions do not allow trusts to do so.

> ### IRCTC iPay
> IRCTC iPay is payment aggregator system which aims to provide an improved online digital payment convenience to railway passengers who are availing online travel related services through the official website of IRCTC.
> The back-end support will be provided by MMAD communications.
> With the launch of IRCTC iPay, the passengers will not need any third-party platforms.

2. The amendment would also provide flexibility to the central government to include 'trusts' and 'any entity that the central government may notify'
3. The Ordinance adds two more categories to this definition by including a trust, or any other entity which may be notified by the central government.
4. Exports from SEZs grew about 15% to Rs 5.52 lakh crore in 2017-18

Impact

The present provision of the SEZs Act, 2005 do not permit 'trusts' to set up units in SEZs. The amendment will enable a trust to be considered for grant of permission to set up a unit in SEZs. The amendment will also provide flexibility to the Central Government to include in this definition of a person, any entity that the Central Government may notify from time to time. This will facilitate following in SEZ:

- generation of additional economic activity
- promotion of exports of goods and services
- promotion of investment from domestic and foreign sources
- creation of employment opportunities
- development of infrastructure facilities

> **PEPPER IT WITH**
> Thalweg rule,
> International Rice
> Research Institute

Rajasthan Backward Classes Amendment Bill, 2019

In News

The Rajasthan government introduced a bill in the Assembly to give a five per cent quota in jobs and educational institutes to Gujjars and four other communities agitating for it.

Issue

- The Bill passed in the state provides 5 per cent quota in government jobs and educational institutes to the Gujjars and four other communities - Banjaras, Gadia Lohars, Raikas and Gadarias putting them as extremely backward class.

- As per the PIL the quota not only exceeded the 50% limit, but was also not supported by quantifiable data to prove backwardness of Gujjar.

- Before the notification for enforcing the new quota Bill was issued, Gujjars were eligible for 1% reservation in the "most backward" category, in addition to the Other Backward Class (OBC) quota, within the 50% ceiling laid down by the Supreme Court in the Indra Sawhney judgment.

> Tamil Nadu Assembly passed the Tamil Nadu Backward Classes, Scheduled Castes and Scheduled Tribes Act, 1993 to keep its reservation limit intact at **69% violating the 50% rule.** The law was subsequently included into the Ninth Schedule of the Constitution through the 76th Constitution Amendment passed by Parliament in 1994.

Key Highlights of Bill

- The Rajasthan government **has passed** the Rajasthan Backward Classes (Reservation of Seats in Educational Institutes in the State and of Appointments and Posts in Services under the State) Amendment Bill, 2019.

- The bill seeks to increase the backward classes' reservation from the present 21 per cent to 26 per cent with five per cent reservation to Gujjars, Banjaras, Gadia Lohars, Raikas and Gadaria.

- The bill seeks to increase the income limit for defining creamy layer in OBC from Rs. 2.5 lakh to Rs. 8 lakh/annum.

- The Rajasthan government has also passed a resolution requesting the Centre to include the bill in Schedule IX of the Indian Constitution as it breached the 50% cap on reservations set by the Supreme Court.

> ### What is the 50% rule?
> In Indra Sawhney vs Union Of India, 1992, the court capped caste-based reservation, ruling that "no provision of reservation or preference can be so vigorously pursued as to destroy the very concept of equality".
> "Since the Court has consistently held that the reservation under Articles 15(4) and 16(4) should not exceed 50% and the States and the Union have by and large accepted this as correct it should be held as constitutional prohibition and any reservation beyond 50% would liable to be struck down."

Key Judgement of Indra Sawhney Case

1. Backward class of citizen in Article 16(4) can be identified on the basis of the caste system & not only on economic basis.

2. Article 16(4) is not an exception of Article 16(1). It is an instance of the classification. Reservation can be made under article 16(1).

3. Backward classes in Article 16(4) were not similar to as socially & educationally backward in article 15(4).

4. Creamy layer must be excluded from the backward classes.

5. Article 16(4) permits classification of backward classes into backward & more backward classes.

6. Reservation shall not exceed 50%.

> **PEPPER IT WITH**
> Rajasthan Social Accountability Bill, Arundhati scheme, Kanyashree Scheme

7. Reservation can be made by the 'EXECUTIVE ORDER'.
8. No reservation in promotion.
9. Permanent Statutory body to examine complaints of over – inclusion/under – inclusion.
10. Disputes regarding new criteria can be raised only in the Supreme Court.

Mandal Commission Recommendation

- Reservation for SCs and STs is in proportion to their population i.e. 22%. But as there is a legal obligation to keep the reservation under Articles 15(4) and 16(4) of the constitution below 50%, the commission recommends a reservation of 27% for OBCs.
- A roster system for each category of posts should be adopted by the concerned authorities in the same manner as presently done in respect of SC and ST candidates.
- Age relaxation for the backward classes should be the same as it is in the case of the SCs and the STs.
- The reserved quota, if unfilled, should be carried forward for a period of three years and de-reserved thereafter.

Ninth Schedule

It was the First Amendment in 1951 along with **Article 31-B** that marked the addition of the Ninth Schedule to the Constitution. This was intended to protect land reform laws from being challenged in courts on the grounds of violation of fundamental rights. According to Article 13(2) of the Constitution, the state shall not make any law that will be inconsistent with the fundamental rights.

Laws made in contravention of fundamental rights shall be void to the extent of the contravention. Article 31-B gives validation based on **"fictional immunity"** that laws enacted under it and placed in the Ninth Schedule are immune to challenge in a court of law even if such a law violated fundamental rights. The revision was not without challenges.

Conclusion

About 60% of seats are reserved in India – for various sections like ST (7.5%), SC (15%), OBC (27%), and EWS (10%) – with respect to Government jobs and Higher Education Institutions. 3% of seats are also reserved for differently-abled persons across all categories. This also means that only 40% of seats are available under merit. In the merit seats, not only the general category candidates but all other categories like SC, ST, OBC, and EWS can also compete.

Election Commission on Form 26

In News

The Centre has made it mandatory for candidates contesting elections to declare their total income as shown in their Income Tax Returns (ITR) for the last five years, as recommended by the Election Commission of India (EC).

What is Form 26?

Form 26AS is an annual consolidated credit statement issued under Section 203AA of the Income-tax Act, 1961. It contains details of various taxes deducted on your income by deductors: be it your employer, bank, or even a tenant. It also contains details of any advance tax or self-assessment tax that you may have paid during the year.

Highlights of Conduct of Elections (Amendment) Rules, 2019

1. The changes were made to the Conduct of Election Rules, 1961, at behest of the Election Commission's (EC's) seeking amendments to Form 26 for easier verification by the Central Board of Direct Taxes (CBDT). It is now called the Conduct of Elections (Amendment) Rules, 2019.
2. It is mandatory for candidates contesting elections to declare their total income as shown in their Income Tax Returns (ITR) for the last five years along with educational qualification and criminal antecedents.
3. The disclosure will also have to cover the candidate's spouse, members of the Hindu Undivided Family (HUF) and dependents.

4. According to the notification, details to be shared should also include the interest in or ownership of offshore assets held by the candidates, their spouses, dependents and HUFs.

5. It includes information of all deposits or investments in foreign banks and any other body or institution abroad, and details of all assets and liabilities in foreign countries.

6. The Rules further emphasised mentioning the details of Permanent Account Number (PAN).

> **PEPPER IT WITH**
> MCC, silence period, SVEEP, EC& CEC appointment, CVIGIL,

Model Code of Conduct and the 2019 General Elections

Guidelines for Political Parties and candidate

1. All parties and candidates shall avoid scrupulously all activities which are "corrupt practices" and offences under the election law, such as bribing of voters, intimidation of voters, impersonation of voters, canvassing within **100 meters** of polling stations, holding public meetings during the period of **48 hours** ending with the hour fixed for the close of the poll, and the transport and conveyance of voters to and from polling station.

2. The model code of conduct ensures that parties release their manifesto at least **48 hours** prior to polling (or 48 hours prior to polling for first phase in a multi-phase election).

3. **Star campaigners** should desist from addressing press conferences or giving interviews on election matters during silence period. Also, in a multi-phased election, there should be no direct or indirect reference seeking support for parties/candidates in constituencies observing silence period.

Guideline for Media

1. **Section 126 A of the RP Act, 1951** – It prohibits conduct of Exit poll and dissemination of their results during the period mentioned therein, i.e. the hour fixed for commencement of polls in the first phase and half an hour after the time fixed for close of poll for the last phase in all the States.

2. **Section127A (1**) – The printing and publication of election pamphlets, posters, etc. is governed by its provisions, which make it mandatory to bear on its face the names and addresses of the printer and the publisher.

3. **Section127A (2)** – No person shall print or cause to be printed any election pamphlet or poster.

4. **Restriction on Exit Poll and Opinion Poll**

   Ban on Exit Poll

   (a) Ban on exit polls starts from the commencement of the poll and continues till half an hour after closing of the poll in an election held in a single phase; and

   (b) In multi-phased election , and in the case of elections in different States announced simultaneously, the ban on exit polls starts from the date and the time of commencement of the poll on the first day of poll and continues till half an hour after closing of the poll on the last day of poll in all the state.

   Opinion Poll

   Under Section 126(1) (b) of the R P Act, 1951, displaying any election matter including results of any opinion poll or any other poll survey, in any electronic media, is prohibited during the period of 48 hours ending with the hour fixed for closing of poll in any polling area.

5. **Voluntary Code of Ethics**

   The Parliamentary Panel on Information and Technology has directed the Social Media Platforms (Google, Facebook, Twitter, Instagram, WhatsApp, Sharechat, Tiktok) to ensure that their platforms are not used to incite violence or to meddle in the Lok Sabha election.

   Internet and Mobile Association of India (IAMAI) and Social Media have submitted a "Voluntary Code of Ethics" to ensure free, fair & ethical usage of platforms, to maintain integrity of electoral process of general elections 2019.

6. News broadcasters are required to scrupulously maintain a distinction between **news and paid content.** All paid content should be clearly marked as "Paid Advertisement" or "Paid

Content": and paid content must be carried in compliance with the "Norms & Guidelines on Paid News"

Official Secrets Act

In News

Attorney General submission to the government that the Court should not just dismiss the evidence of misconduct in procuring Rafale fighter jets in light of Official Secrets Acts (OSA).

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Official Secrets Act

- The OSA was first enacted in 1923 and was retained after Independence. The law, applicable to government servants and citizens, provides the framework for dealing with espionage, sedition, and other potential threats to the integrity of the nation.

> **PEPPER IT WITH**
> Cooperative & Fiscal Federalism, federation sui generis

- The law makes spying, sharing 'secret' information, unauthorised use of uniforms, withholding information, interference with the armed forces in prohibited/restricted areas, among others, punishable offences. If guilty, a person may get up to 14 years' imprisonment, a fine, or both.
- The Indian OSA, 1904 was enacted during the time of Lord Curzon, Viceroy of India from 1899 to 1905.

Ambit

The secrecy law broadly deals with **two aspects** — spying or espionage, which is dealt with in **Section 3** of the Act, and disclosure of other secret information of the government, which is dealt with in **Section 5**. The secret information can be any official code, password, sketch, plan, model, article, note, document or information. Since the classification of secret information is so broad, it is argued that the colonial law is in direct conflict with the Right to Information Act.

Contentions

1. OSA has become an instrument of oppression at the hands of the establishment to witch-hunt those who dare to ask uncomfortable questions.
2. Another contentious issue with the law is that its **Section 5**, which deals with potential breaches of national security, is often misinterpreted. The Section makes it a punishable offence to share information that may help an enemy state.
3. The OSA is an **anachronism** in this age which has recognized the citizen's right to information as sacrosanct. It is interesting to note that the RTI Act has an overriding power over OSA, as expressly stated in **Section 22**.
4. The OSA has no redeeming provision, which protects disclosure of information in public interest. Such instances will deter whistle-blowers and activists from using information to which they are privy in order to openly question misdeeds of government.
5. The Section comes in handy to book journalists when they publicise information that may cause embarrassment to the government or the armed forces.

Evaluation of Act

- The primary critique of the Act is that it flips the constitutive logic of a democratic republic, where the state is supposed to be transparent to its citizens.
- While the OSA had legally perpetuated a culture of secrecy (and corruption) and denial of any rights against them, the RTI Act ushered India into an era of transparency and accountability. However, the Official Secrets Act has NOT been totally overridden by the Right to Information Act, 2005.
- According to the RTI Act of 2005, in case of a clash with the Official Secrets Act, the public interest will prevail.
- The SARC report states that as the OSA's background is the colonial climate of mistrust of people and the primacy of public officials in dealing with the citizens, it created a culture of secrecy.

- The Administrative Reforms Committee recommended in 2006 that the OSA should be repealed as it was incongruous with the transparency regime. But no further action was taken in that regard.
- The colonial-era law meant for ensuring secrecy and confidentiality in governance, mostly on national security and espionage issues, has often been cited by authorities for refusing to divulge information.

Draft on Reintegration Policy for J&K militants

In News

The Jammu and Kashmir government is considering a new policy to encourage militants from the state to give up arms in order to avoid recent attack like Pulwama.

Key Highlights

1. A new policy to encourage militants from the state to give up arms, including a monthly stipend of **Rs 6,000** for those who surrender. This initiative will not cover militants found to have been involved in **"heinous crimes".**

2. The policy draft "is presently at the **pre-SAC stage"** and is subject to clearance by the state Home Department and the chief secretary. The State Administrative Council (SAC) is the body governing Jammu and Kashmir.

> **PEPPER IT WITH**
> Article 370, Presidential Order 1950, Article 35A

3. According to the draft, the new policy details the need for rehabilitation through a **two-pronged approach** including reformative measures and opportunities of livelihood.

4. The proposed scheme is a revised version of earlier initiatives, but with a fresh focus on socio-economic re-integration. **Jobs and reformative** measures are also part of the new reintegration policy draft.

Past Initiatives

- In 2004, a new **Rehabilitation Policy** was approved and adopted. The policy, applicable on "known militants who surrender with weapons" and "hardcore militants even without weapons", promised a one-time fixed deposit of Rs 1.5 lakh, a monthly stipend of Rs 2,000 and vocational training for self-employment.

- In 2010, another **Surrender Policy** emerged for rehabilitation of those Kashmiris who had gone to Pakistan-occupied Kashmir for training between 1989 and 2009. The policy identified four routes for the return — JCP Wagah, Attari; Salamabad; Chakan-da-bagh crossings on the Line of Control; or Indira Gandhi International Airport, New Delhi.

Significance

The successful implementation of a surrender policy is of utmost importance in J&K as there are a large number of surrendered or released militants (around 25,000). The successful rehabilitation of one hardcore surrendered or released militant will motivate others to follow suit.

Enemy Property

In News

The move comes amid the central government's efforts to sell more than 9,400 enemy properties, worth over Rs 1 lakh crore, and Rs 3,000 crore worth of enemy shares.

The guidelines for disposal of the Enemy Property Order, 2018, has been amended to facilitate "usages of enemy property by the state government exclusively for public use.

Terms of Sale

1. In principle approval has been accorded for sale of enemy shares under the Custody of Ministry of Home Affairs/ Custodian of Enemy Property of India (CEPI).

2. Department of Investment and Public Asset Management has been authorized under the provisions to sell the same.

3. Sale proceeds are to be deposited as disinvestment proceeds in the Government Account maintained by Ministry of Finance.

4. The mechanism will be supported by a high-level committee of officers co-chaired by the secretary in the Department of Investment and Public Asset Management, Home Affairs secretary (**with representatives from DEA, DLA, Corporate Affairs and CEPI**) that would give its recommendations with regard to quantum, price/price-band, principles/ mechanisms for sale of shares.

About Enemy Property 1968

After the Indo-Pakistan War of 1965, the Enemy Property Act was enacted in 1968, to regulate enemy properties and lists the Custodian's powers. The act provided for the continuous vesting of enemy property in the custodian. The possession of enemy properties spread across many states in the country vest with the Union Government through the Custodian of Enemy Property for India.

The Enemy Property (Amendment and Validation) Act, 2017

- **Vesting of enemy property:** The 1968 Act allowed for vesting of enemy properties with the Custodian, after the conflicts with Pakistan and China. The Act 2107 amends the Act to clarify that even in the following cases these properties will continue to vest with the Custodian: (i) the enemy's death, (ii) if the legal heir is an Indian, (iii) enemy changes his nationality to that of another country, etc.

> **PEPPER IT WITH**
> Nyay scheme, FAME, PowerTex India, Digital Disha

- The Act 2107 further provides that vesting of enemy property with the Custodian will mean that all rights, titles and interests in the property will vest with the Custodian. No laws and customs governing succession will be applicable to these properties.

- **Divestment:** The 1968 Act provided that the central government may order for an enemy property to be divested from the Custodian and returned to the owner or other person. The Act 2107 replaces this provision, and allows enemy property to be returned to the owner only if an aggrieved person applies to the government, and the property is found not to be an enemy property.

- **Power of sale**: The 1968 Act permitted sale of enemy property by the Custodian only if it was in the interest of preserving the property, or to secure maintenance of the enemy or his family in India. The Act 2107 expands this power, and allows the Custodian to sell or dispose of enemy property. The Custodian may do this within a time period specified by the central government, irrespective of any court judgements to the contrary.

> Of the total properties left behind by those who took Pakistani citizenship, 4,991 are located in Uttar Pradesh, the highest in the country. West Bengal has 2,735 such estates and Delhi 487.
> The highest number of properties left by Chinese nationals is in Meghalaya (57).West Bengal has 29 such properties and Assam seven.

- **Transfers by enemies:** The 1968 Act prohibited transfer of enemy property by an enemy if: (i) it was against public interest, or (ii) to evade vesting of property in the Custodian. The Act 2107 removes this provision, and prohibits all transfers by enemies. Further, it renders transfers that had taken place before or after the commencement of the 1968 Act as void.

- **Jurisdiction of courts:** The Act 2107 bars civil courts and other authorities from entertaining cases against enemy properties. However, it allows a person aggrieved by an order of the central government to appeal to the High Court, regarding whether a property is enemy property. Such an appeal will have to be filed within 60 days (extendable upto 120 days).

RPA 1951 and Elections

Section 29A

Registration of Political parties is governed by the provisions of Section 29A of the Representation of the People Act, 1951. A party seeking registration under the said Section with the Commission has to submit an application to the Commission within a period of 30 days following the date of its formation as per guidelines prescribed by the Election Commission of India in exercise of the powers conferred by Article 324 of the Commission of India and Section 29A of the Representation of the People Act, 1951.

As per existing guidelines, the applicant association is inter-alia asked to publish proposed Name of the party in two national daily newspapers and two local daily newspapers, on two days in same newspapers, for inviting objections, if any, with regard to the proposed registration of the party before the Commission within a 30 days from such publication.

Section 33(7)

As per section 33(7) of the Representation of Peoples Act 1951, a candidate to any election (parliamentary, the legislative assembly of states, biennial election to legislative councils, or bye-elections) can contest such election from not more than two constituencies. Inserted through an amendment in 1996, the provision aimed at limiting the number of seats from which one could contest elections from. Prior to the amendment, there was no limit on the number of constituencies a person could contest.

> **PEPPER IT WITH**
> EVM, VVPAT, CIC, RTI, NCLAT

Concerns

1. If a person is elected from both seats and has to resign from the other, it calls for bye-election, which is an unnecessary expenditure on the exchequer that could have been avoided.

2. The elections also involve deploying of man-force for conducting it. Bye-elections due to the vacancy by people elected from more than one seats would translate to the unnecessary burden on the government machinery.

3. When a contestant is elected, voters place their trust in him/her to represent them and cater to them. The faith of at least one of the constituencies is shattered in cases where the contestant wins from more than one seat. The constituency then has to settle for someone who was probably not their first choice.

> **Section 70**
> Section 70 of the RPA 1951 provides that if a person is elected to more than one seat in either House of Parliament or in the House or either House of the Legislature of a State, then candidate would have to resign from all but one seat within a prescribed time.

Recommendations made in past

- In 2004, the election commission had pegged 22 poll reforms which included limiting the number of seats to contest elections.

- The ECI has alternatively suggested that if existing provisions are retained then the candidate contesting from two seats should bear the cost of the bye-election to the seat that the contestant decides to vacate in the event of his/her winning both seats. The amount in such an event could be Rs 5 lakh for assembly election and Rs 10 lakh for parliament election.

> **Tashigang,** a small Himachal Pradesh village has got the distinction of the highest polling station in the world.
> Tashigang is located at an altitude of 15,256 feet.
> It is located in **Lahaul-Spiti** and forms part of the **Mandi Lok Sabha seat**, the second largest constituency in India.

- The Law Commission of India in its 255th report submitted in 2015 has also recommended modifying the section. The report states that taking into account the expenditure of time and effort; election fatigue; and the harassment caused to the voters, Section 33(7) needs to be amended and candidates should be permitted to stand from only one constituency.

Criteria for Recognition as a National Party

1. A political party becomes eligible to be recognised as a national party if it has won **2 percent** of seats in Lok Sabha from at least three different states in the latest general election;

2. In a Lok Sabha or Assembly election it has secured **6 per cent** of the total valid votes in **at least four states,** in addition to winning **four Lok Sabha seats**;

3. It has been **recognised as a state party in at least four states**.

Criteria for Recognition as a State Party

1. Secure at least **6%** of the valid vote & **win at least 2 seats** in an Assembly General Election

2. Secure at least **6%** of the valid vote & **win at least 1 seats** in a Lok Sabha General Election

3. Win at least **3%** of the seats or **at least 3 seats** , whichever is more, in an Assembly General Election

4. Win at least 1 out of every 25 seats from a state in a Lok Sabha General Election

5. Secure **at least 8%** of the total valid vote in an Assembly or a Lok Sabha General Election

> VVPAT is designed by electronic corporation of India and Bharat electronics Limited, Conduct of election rules.

> India has **7** recognised national parties - Congress, BJP, BSP, CPI, CPI-M, NCP and All India Trinamool Congress.

Advantages of being recognized as a State or National Party

- reserved symbol
- get land or buildings from the government to set up their party offices
- can have up to 40 'star campaigners'
- entitled for two sets of electoral rolls free of cost at the time of revision of rolls and their candidates get one copy of electoral roll free of cost during General Elections.

Lokpal

In News

President recently cleared the name of former Supreme Court judge, Justice Pinaki Chandra Ghose as first Lokpal or anti-corruption ombudsman of India.

Judicial members- Justice Dilip B. Bhosale, Justice Pradip Kumar Mohanty, Justice Abhilasha Kumari and Justice Ajay Kumar Tripathi.

Non Judicial members -Dinesh Kumar Jain, Archana Ramasundaram, Dr. Indrajeet Prasad Gautam and Mahender Singh.

About Search Committee and Selection Committee

- As per the Lokpal Act, a **search committee** was required to consist of at **least seven persons** of standing and having "**special knowledge and expertise** in matters relating to anti -corruption policy, public administration, vigilance, policy -making, finance, including insurance and banking, law and management or in any other matter which, in the opinion of selection committee, may be useful in making the selection of the chairperson and members of the Lokpal.

- The **Lokpal Search Committee** will be headed by former Supreme Court judge Justice Ranjana Prakash Desai. The committee has former chief of SBI Arundhati Bhattacharya, Prasar Bharati chairperson, ISRO head and 4 other member as per the order by Personnel Ministry.

- The process of Lokpal selection is going as per the guidelines laid down in the Lokpal Act.

- As per the Lokpal and Lokayukta Act, only the leader of the opposition (LoP) in the Lok Sabha is a member of the **selection committee**. A party should have at least 55 seats or 10% of the strength of the Lok Sabha for its leader to get the LoP status.

- The **Lokpal selection committee** a **5 member panel** headed by the **prime minister** has as its members the **Lok Sabha speaker**, **LoP** in the lower house, the **chief justice of**

India or **a judge of the apex court nominated by him** and an **eminent jurist** who could be **nominated by the president or any other member.**

Key Highlights of LOKPAL AND LOKAYUKTAS ACT, 2013

1. The Act allows setting Lokpal at the Centre and Lokayukta at the level of the states.

2. Composition

Lokpal will consist of a chairperson and a maximum of eight members.

Chairperson

The Chairperson should be
- either the former Chief Justice of India
- Or the former Judge of Supreme Court.

Judicial Member

Out of the maximum eight members, half will be judicial members. The judicial member of the Lokpal should be
- either a former Judge of the Supreme Court
- or a former Chief Justice of a High Court

Non Judicial Member

The non-judicial member should be an eminent person with impeccable integrity and outstanding ability, having special knowledge and expertise of minimum 25 years in the matters relating to anti-corruption policy, public administration, vigilance, finance including insurance and banking, law and management.

> **Following persons cannot become chairperson of Lokpal:**
> - MPs and MLAs
> - Persons convicted of any offense involving moral turpitude
> - Less than 45 years
> - Members of Panchayats or Municipality
> - A person who was removed or dismissed from the public service;
> - A person who holds any office of trust / profit; if so, he would need to resign from Lokpal
> - A person who is affiliated to a political party
> - Carries on some business/ profession; if so, he would need to resign from Lokpal

3. Jurisdiction

Lokpal's jurisdiction will cover all categories of public servants. Prime Minister has been brought under the purview of the Lokpal. The armed forces do not come under the ambit of Lokpal.

The Act also incorporates provisions for attachment and confiscation of property acquired by corrupt means, even while the prosecution is pending.

> **PEPPER IT WITH**
> Electoral Bonds, 200 point Roster system, Right to Disconnect

4. Term

The term of office for Lokpal Chairman and Members is 5 years or till attaining age of 70 years.

5. Appointment

The members are to be appointed by President on the recommendations of a selection committee.

6. 50 percent of members of Lokpal shall be from SC/ST/OBCs, minorities and women.

7. The Act also ensures that public servants who act as whistle-blowers are protected.

Sedition law

What is Sedition?

Section 124-A in the Indian Penal Code explains sedition in wide and magnanimous terms as follows:

1. It says 'Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the Government established by law in India shall be punished with life imprisonment

2. It also says that comments expressing strong disapproval of the measures of the Government, with a view to obtain their desired modifications by lawful means, without exciting or attempting to excite hatred, contempt or disaffection, do not constitute an offense under this section.

Facts about Sedition Law

- The law was originally drafted by Thomas Macaulay in 1837.
- British introduced the term "sedition" in the Indian Penal Code 1870 to outlaw speech that attempted to "excite disaffection towards the government established by law in India. The origin of sedition law in India is linked to the Wahabi Movement of 19th century.

PEPPER IT WITH
Seditious Meetings Act, 1911, CrPC 1973, UAPA (Section 2 (o) (iii)

- Bal Gangadhar Tilak: **First** in 1897 for exhorting to act against Rand, the Plague Commissioner and then **again** in 1909 in respect of certain articles published in the "Kesari" in May and June 1908, for which he was deported to Mandalay.
- Gandhiji: In 1922, for three articles published in the magazine Young India.
- In 2016, there were 33 cases reported under Section 124A, 12 of these in Haryana alone. In 2015, 73 were arrested on the charge of sedition, 40 in Bihar alone.

United Kingdom, US and New Zealand have scrapped sedition laws from their law books.

Sedition laws vs Freedom of Speech & Expression

1. Draconian laws such as the Section 124-A only serve to give a legal veneer to the regime's persecution of voices and movements against oppression by casting them as anti-national.
2. **In the Ram Nandan vs. State (1958),** it was held that **section 124-A** to be unconstitutional citing that the section restricts freedom of speech (Article 19) in disregard of whether the interest of public order or the security of the state is involved and is capable of striking at the very root of the Constitution which is free speech.
3. The above mentioned decision was overruled by Supreme Court in the **Kedarnath Singh v State of Bihar (1962).** However, the Supreme Court said that this section should be interpreted as to limit their application to acts involving intention or tendency to create disorder or disturbance of law and order, or incitement to violence. **If used arbitrarily, the sedition law would violate freedom of speech and expression guaranteed by the Constitution under Article 19".**
4. The 267th Report of the Law Commission on ─Hate Speech (2017), distinguished between **sedition and hate speech**, providing that the offence of hate speech affects the State indirectly by disturbing public tranquillity, while the sedition is directly an offence against the State. The Report adds, that to qualify as sedition, the impugned expression must threaten the sovereignty and integrity of India and the security of the State.
5. **Dissent and criticism** are essential ingredients of a robust public debate on policy issues as part of vibrant democracy. Therefore, every restriction on free speech and expression must be carefully scrutinised to avoid unwarranted restrictions.

Efforts to check misuse of Sedition Law

1. In the year 2011, a private member Bill titled the Indian Penal Code (Amendment) Bill, was introduced in the Rajya Sabha. The Bill proposed that section 124A IPC should be omitted. It was reasoned that the British Government used this law to oppress the view, speech and criticism against the British rule. But the law is still being used in independent India, despite having specialised laws to deal with the internal and external threats to destabilise the nation. Thus, to check the misuse of the section and to promote the freedom of speech and expression, the section should be omitted.
2. Another Private member Bill titled The Indian Penal Code (Amendment) Bill, 2015, was introduced in Lok Sabha to amend section 124A IPC. The Bill suggested that only those actions/words that directly result in the use of violence or incitement to violence should be termed seditious. This proposed amendment revived the debate on interpretation of sedition. The courts through various judgments have settled that the language of this section does not imply that only words, either spoken or written, or signs, or visible representation that are likely to incite violence should be considered seditious.

Way Forward

✔ Every irresponsible exercise of right to free speech and expression cannot be termed seditious. For merely expressing a thought that is not in consonance with the policy of the Government of the day, a person should not be charged under the section.

✔ In a democracy, singing from the same songbook is not a benchmark of patriotism. People should be at liberty to show their affection towards their country in their own way. For doing the same, one might indulge in constructive criticism or debates, pointing out the loopholes in the policy of the Government.

✔ Section 124A should be invoked only in cases where the intention behind any act is to disrupt public order or to overthrow the Government with violence and illegal means.

Surveillance vs Privacy

In News

In a decision with wide ramifications, the government has allowed 10 intelligence and investigating agencies and the Delhi Police to intercept, monitor and decrypt "any information" generated, transmitted, received or stored in "any computer", an action that has come under attack from opposition parties.

Key Highlights of the Order:

- The ministry has vested the authority on the agencies under Section 69 of the Information Technology Act, 2000 and Rule 4 of the Information Technology Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009.

- It says surveillance can be done if authorities are satisfied that it is necessary or expedient to do so in the interest of the sovereignty or integrity of India, defence of India, security of state, friendly relation with foreign states or public order or for preventing incitement to commission of any cognizable offence or for investigation of any offences.

> **Section 69**
>
> **Section 69** of the IT Act deals with the "power to issue directions for interception or monitoring or decryption of any information through any computer resource". It provides that the central government or a state government or any of its officers can direct any agency to intercept or decrypt any information for the purpose of national security.

- The order mandates to a subscriber or service provider or any person in charge of the computer resource to extend technical assistance to the agencies.

- The punishment of seven-year imprisonment and fine for non-compliance.

- There is no blanket permission to any agency as per the government explained. Permission for surveillance needs to be availed from the Union Home Secretary. Besides, the law mandates the Centre and States to constitute a review committee with the Cabinet Secretary.

Concerns

1. A surveillance regime cannot have the executive sitting in judgment over the executive: there must be parliamentary oversight over the agencies that conduct surveillance; indeed, the fact that an individual will almost never know that he/she is under surveillance and then challenging it before a court is a near-impossibility. Thus it is violative of Article 14.

2. Providing such wide powers without any safeguard, may lead to dilution of the protection of rights guaranteed by the constitution and may result in impinging of fundamental rights with impunity.

3. It is a violation of the freedom of speech and expression as guaranteed by Article 19(1)(a), and the provision turns India into a "surveillance state".

4. It violates Article 21.

5. There is almost no information available about the bases on which surveillance decisions are taken, and how the legal standards are applied. Indeed, evidence seems to suggest that there are none: a 2014 RTI request revealed that, on an average, 250 surveillance requests are approved every day.

6. This order by govt wanting to snoop on every citizen is unconstitutional and in breach of the telephone tapping guidelines, the Privacy Judgement and the Aadhaar judgement.

Why it is needed?

● Surveillance is necessary "in the modern world where modern tools of information communication, including encryption, is used". Surveillance should be done only in the defence of India, to maintain public order, etc.

● There are grave threats lurking in the country like terrorism, radicalisation, cross border terrorism, cyber-crime, drug cartels", and these cannot be ignored or under-stated. There is a need for "speedy collection of actionable intelligence" to counter threat to national interests.

Agencies

The 10 agencies include Intelligence Bureau, Narcotics Control Bureau, Enforcement Directorate, Central Board of Direct Taxes, Directorate of Revenue Intelligence;, Central Bureau of Investigation, National Investigation Agency Cabinet Secretariat (RAW), Directorate of Signal Intelligence (For service areas of Jammu & Kashmir, North-East and Assam only), and Commissioner of Police, Delhi.

Way Ahead

However, the recent order does not provide the procedure or the object for such an exercise or the quantum of period for which a person's private data could be intercepted. Even these processes do not have adequate safeguards against

| **PEPPER IT WITH** |
| Future of Work in India(WEF), BN Srikrishna Committee, December 20 order |

misuse. The government should come up with clear procedures and exercise which are under the ambit of constitution and there should be parliamentary and judicial supervision to keep check on the power of the executives.

IPU-UN Women map of Women in Politics

In News

IPU-UN Women map of Women in Politics was launched at a press conference during the **Commission on the Status of Women (CSW 63)** at the United Nations headquarters in New York.

Report

● The map, which presents global rankings for women in the executive and parliamentary government branches shows the proportion of women ministers is at an all-time high at 20.7 per cent (812 out of 3922), 2.4 percentage points higher compared to 2017.

● The global share of women Members of Parliament (MPs)—24.3 per cent—has increased by nearly one point compared with 2017.

● The share of women parliamentary speakers also increased by 0.6 percentage points to 19.7 per cent, and the share of women deputy speakers increased by 1.6 percentage points to 28.2 per cent.

| **International Women's Day** |
| It is celebrated on March 8 every year. |
| **Theme::** #BalanceforBetter: Better the Balance, Better the world |

● Women's representation in top-level leadership has decreased from 7.2 percent of elected Heads of State to 6.6 percent and from 5.7 percent of Heads of Government to 5.2 per cent.

● Among countries in Asia, Pakistan progressed from having no women ministers since 2012 to reaching its highest-ever share of women ministers at 12 per cent.

● 30 percent more women ministers cover Defence, 52.9 percent more women cover Finance, and 13.6 percent more women cover Foreign Affairs.

| **Countries with 50% or more in ministerial positions:** |
| Spain 64.7% |
| Nicaragua 55.6% |
| Sweden 54.4% |

Significance

Equal representation in government positions is fundamental for a democracy to be truly representative and effective. Despite some positive movement, the overwhelming majority of government leaders remain male. It is a shared responsibility between men and women to change this and ensure gender equality at all political levels. It is important to identify the main barriers that are stopping women from accessing decision-making positions.

Terror Monitoring Group

In News

The Ministry of Home Affairs (MHA) is keeping a close watch on illegal flow of funds to fuel militancy in Jammu and Kashmir, and announced the setting up of a TMG aimed at taking "coordinated action against terror funding".

Key Features

- The MHA has set up a multi-disciplinary Terror Monitoring Group (TMG) to ensure synergised and concerted action against terror financing and terror-related activities in Jammu and Kashmir.
- It will also take action against hardcore sympathisers among government employees, including teachers, who are providing covert or overt support to terror activities.
- The TMG will investigate networks of various channels being used to fund terror and terror-related activities and take coordinated action to stop flow of such funds.

> **PEPPER IT WITH**
> OIC, Libyan Crisis, Pulwama Attack, Reiwa

- The TMG will take coordinated action in all registered cases relating to terror and terror financing and bring them to logical conclusion.
- TMG shall "identify all key persons including leaders of the organisations who are involved in supporting terrorism in any form and take concerted action against them.
- The seven-member TMG shall be headed by the Jammu and Kashmir additional director general of police (ADGP). It shall also have representatives from the Intelligence Bureau (IB), CBI, NIA, Central Board of Direct Taxes (CBDT), and Central Board of Indirect Taxes and Customs (CBIC). The Jammu and Kashmir police inspector-general shall be the seventh member of the TMG.

Pradhan Mantri JI-VAN yojana

In News

The Cabinet Committee on Economic Affairs has approved "Pradhan Mantri JI-VAN (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran) Yojana".

About Scheme

1. Under the JI-VAN Yojana, 12 Commercial Scale and 10 Demonstration Scale Second Generation (2G) ethanol projects will be provided with a Viability Gap Funding (VGF) support in two phases.
2. The scheme focuses to incentivise 2G Ethanol sector and support this nascent industry by creating a suitable ecosystem for setting up commercial projects and increasing Research & Development in this area.
3. It provides for financial support to Integrated Bioethanol Projects using lignocellulosic biomass and other renewable feedstock.
4. It is being launched as a tool to create 2G Ethanol capacity in the country and attract investments in this new sector.
5. The ethanol produced by the scheme beneficiaries will be mandatorily supplied to Oil Marketing Companies (OMCs) such as Indian Oil, Bharat Petroleum and Hindustan Petroleum to further enhance the blending percentage under EBP Programme.

6. The JI-VAN Yojana will be supported with total financial outlay of Rs.1969.50 crore for the period from 2018-19 to 2023-24.

7. Centre for High Technology (CHT), a technical body under the aegis of MoP&NG, will be the implementation Agency for the scheme.

Benefits

- Meeting Government of India vision of reducing import dependence by way of substituting fossil fuels with Biofuels.
- Achieving the GHG emissions reduction targets through progressive blending/ substitution of fossil fuels.
- Addressing environmental concerns caused due to burning of biomass/ crop residues & improve health of citizens.
- Improving farmer income by providing them remunerative income for their otherwise waste agriculture residues.
- Creating rural & urban employment opportunities in 2G Ethanol projects and Biomass supply chain.
- Contributing to Swachh Bharat Mission by supporting the aggregation of non--food biofuel feedstocks such as waste biomass and urban waste.
- Indigenization of Second Generation Biomass to Ethanol technologies.

Way Ahead

➢ Ministry of Petroleum & Natural Gas has targeted to achieve 10% blending percentage of Ethanol in petrol by 2022. Despite efforts of the Government such as higher ethanol prices and simplification of ethanol purchase system, the highest ever ethanol procurement stands around 150 crore litres during Ethanol supply year 2017-18 which is sufficient for around 4.22% blending on pan India basis.

➢ Therefore, an alternate route viz. Second Generation (2G) Ethanol from biomass and other wastes is being explored by MoP&NG to bridge the supply gap for EBP programme through new initiative "Pradhan Mantri JI-VAN Yojana".

First generation (1G) biofuels are produced directly from food crops to be used as biodiesel or bioethanol through fermentation.

Cellulosic ethanol, also known as **Second generation (2G)** ethanol is not produced from starch or sugar but from cellulose fibers.

Third generation biofuels (3G) on the other hand mostly refers to those derived from algae.

The country's first second-Generation (2G) Ethanol plant is at Kashipur in Uttarakhand.

PEPPER IT WITH
INDMAX, RUCO, Global Nutrition Report, HiRise

Ethanol Blended Petrol (EBP) programme

The Union Government launched the Ethanol Blended Petrol (EBP) programme in 2003 for undertaking blending of ethanol in Petrol to address environmental concerns due to fossil fuel burning, provide remuneration to farmers, subsidise crude imports and achieve forex savings.

Under EBP programme, Oil Marketing Companies are required to blend up to 10 percent of ethanol in Petrol.

The present policy allows procurement of ethanol produced from molasses and non-food feed stock like celluloses and lignocelluloses material including petrochemical route.

EBP is being implemented in 21 States and 4 UTs of the country.

National Common Mobility Card

Features

1. It is the first National Common Mobility Card (NCMC) with which you will be able to make multiple kinds of payments, and has been developed by the **Ministry of Housing and Urban Affairs.**

2. The Indigenous Automatic Fare Collection System based on **One Nation One Card Model** i.e. National Common Mobility Card (NCMC) is the first of its kind in India. This card runs on **RuPay card.**

3. This One Nation One Card is supported by Automatic Fare Collection Gate **SWAGAT** (Swachalit Gate) and an Open Loop Automatic Fare Collection System **SWEEKAR** (Swachalit Kiraya: Automatic Fare Collection System), that was launched under the 'Make in India'.

4. It is to enable seamless travel by different metros and other transport systems across the country besides retail shopping and purchases.

5. Apart from the payment options, this inter-operable transport 'One Nation One Card', will also let you withdraw money from ATM.

Grid connected Rooftop solar programme

Features

1. It aims target of achieving **40 GW** of rooftop solar capacity by 2022 under Phase II of grid connection through central financial assistance.

2. The **Phase II** programme provides for central financial assistance (for residential rooftop solar installations) up to 40% for rooftop systems up to 3kW and 20% for those with a capacity of 3-10kW.

3. The second phase will also focus on increasing the involvement of the distribution companies (**DISCOM**).

4. As per data captured on the **SPIN** portal of the Ministry of New and Renewable Energy (MNRE), a total of 1279 MW capacity grid connected rooftop solar PV systems have been reported installed in the country.

> **PEPPER IT WITH**
> Land degradation Neutrality, UNNATI, Poshan Pakhwada

5. Initiated **Geo-tagging of RTS** project, in coordination with ISRO, for traceability and transparency.

6. Facilitated availability of concessional loans from World Bank and Asian Development Bank (ADB) to SBI and PNB respectively, for disbursal of loans to industrial and commercial sectors for solar energy.

7. **Kisan Urja Suraksha evam Utthaan Mahabhiyan** aimed at providing financial and water security to farmers. Through the scheme, farmers will be given financial assistance to set up solar panels in their unused or fallow land.

8. SPIN-an online platform for expediting project approval, report submission and monitoring progress of implementation of RTS projects.

9. The **National Institute of Solar Energy (NISE)**, an autonomous institution of Ministry of New and Renewable Energy (MNRE), is the **apex** National R&D institution in the field of Solar Energy. NISE is organizing "**Suryamitra**" skill development programmes in collaboration with **State Nodal Agencies**, at various locations across the country.

> **Young Scientist Programme**
> ❖ Indian Space Research Organisation has launched a special programme for School Children called "Young Scientist Programme" **"YUva VIgyani KAryakram" in tune with the Government's vision "Jai Vigyan, Jai Anusandhan".**
> ❖ The Program is primarily aimed at imparting basic knowledge on Space Technology, Space Science and Space Applications to the younger ones with the intent of arousing their interest in the emerging areas of Space activities.
> ❖ The eligibility for being chosen for the programme includes those students who have finished 8th standard and are currently studying in the 9th standard.
> ❖ The students belonging to rural areas have been given special weightage under the selection criteria set by ISRO.

10. The **Suryamitra** aims to develop the skills of youth, considering the opportunities for employment in the growing Solar Energy Power project's installation, operation &

maintenance in India and abroad. The Suryamitra Programme is also designed to prepare the candidates to become new entrepreneurs in Solar Energy sector.

Swachh Survekshan Awards 2019

In News

Uttarakhand's Gauchar was adjudged the 'Best Ganga Town'.

Parameter	National Level	Above 10 Lakh Population	3-10 Lakh Population	1-3 Lakh Population	National Level(UT/Capital)
Cleanest city	Indore(1st) Ambikapur(2nd) Mysuru(3rd)	Ahmedabad	Ujjain	NDMC	Bhopal
Fastest Mover		Raipur	Mathura	Orai	Chennai
Innovation & Best Practices		Jabalpur	Jhansi	Dewas	Greater Mumbai
Solid Waste Management		Surat	Latur	Nagda	Chandigarh

NCGG

● The National Centre for Good Governance (NCGG) and Indian Institute of Corporate Affairs (IICA) have signed MoU with DARPG and Ministry of Corporate Affairs recently.

● The objective of the MoU that IICA will support NCGG for utilization of infrastructure facilities during the training programme of NCGG at Delhi and for academic & intellectual interactions for 5 years.

● NCGG is autonomous body under the aegis of Department of Administrative Reforms and Public Grievances, Ministry of Personnel, Public Grievances and Pensions.

● It aims to promote good governance through Capacity Building on Public Policy and Governance both at National and International Level and carrying out studies/ action research on issues relating to governance

RCS-UDAN

In News

The Cabinet Committee on Economic Affairs (CCEA) has approved the extension of time and scope for revival and development of un-served and under-served air strips of State Governments, Airports Authority of India (AAI), Civil enclaves, CPSUs, helipads and water aerodromes under Regional Air Connectivity Scheme (RCS)-UDAN (Ude Desh Ka Aam Nagarik).

Features

● The RCS-UDAN has been launched to provide connectivity to un-served and under-served airports of the country through revival of existing air-strips and airports.

PEPPER IT WITH
UDAN 2.0 UDAN 3.0, Deendayal Disabled Rehabilitation Scheme

● The revival of these un-served and under-served air strips will be carried out at the total cost of Rs 4500 crore with the budgetary support of the Union Government

- RCS-UDAN is applicable on route length between 200-800 kilometers with no lower limit set for hilly, remote, island and security sensitive regions.
- The airlines are required to commit around 50% of the seats as RCS seats on RCS flights.
- The business model of the scheme is based on Government subsidy and viability gap funding (VGF).
- The fund for this scheme would come from a Regional Connectivity Fund (RCF) created by levying certain charges on certain flights.

Impact

1. Small cities and towns will be connected on commencement of operation of flights to under-served and unserved airports.
2. It will boost the economic development of these areas as well as surrounding areas in terms of job creation and related infrastructure development.

UDAN

UDAN is the Government's initiative to make air travel to India's tier II and tier III cities affordable to the aam aadmi. The idea is to put smaller cities and remote regions on the aviation map, by getting domestic airlines to ply more regional routes.

The UDAN Scheme is a key component of the National Civil Aviation Policy.

India Urban Observatory & Video Wall Inaugurated

In News

The Ministry of Housing and Urban Affairs (MoHUA) has inaugurated India Urban Observatory in New Delhi.

Key Features

1. India Urban Observatory recognises the value of enhancing engagement among all **four stakeholders** — government, citizens, academia, and industry, along with improvements in the internal workflow and decision-making processes of city governments.
2. The initiative, launched in partnership with **Cisco, Quantela Inc, ESRI and AWS**, will leverage data analytics to optimise city operations, improve governance and enhance economic performance of cities across the country.
3. The India Urban Observatory is an important component of the recently launched Data Smart Cities strategy that envisions to create a '**Culture of Data**' in cities, for intelligent use of data in addressing complex urban challenges.
4. It would progressively become the chief data analysis and Management Hub of the Ministry and would enable evidence-based policy formulation, capacity building of ecosystem partners on data-driven governance, foster innovation through development of newer and better use cases thereby enabling solutions at scale and speed.
5. The strategy aims to lay down the basic premise, three foundational pillars *Vis.* **People, Process, Platform,** and a suggested roadmap for cities to improve their readiness for intelligent use of data.
6. 'DataSmart' is key to realizing the full potential of technology interventions and innovation ecosystems in cities.

> **National Knowledge Network**
> ❖ NKN is a multi-gigabit pan-India network which facilitates the development of India's communications infrastructure, stimulates research and creates next generation applications and services.
> ❖ India has decided to extend its NKN to Bangladesh.
> ❖ It enables collaboration among researchers from different educational networks such as TEIN4, GARUDA, CERN and Internet2.

> The **Video Wall** will showcase the insights gained from the Observatory and the various Missions/ offices with the idea to proactively engage with citizens/ visitors in spreading awareness about the various initiatives.

GUO

The Global Urban Observatory (GUO) unit is a specialized statistical unit in charge of global monitoring of the Habitat agenda and other agenda with an urban linkage. This includes building capacities of national governments, establishing local, regional and global mechanisms for urban monitoring, and supporting data collection for urban indicators (covering economic, environment, social, health, transport and urban data that are presented using UrbanInfo Software).

> **PEPPER IT WITH**
> IoT, Online Harms White Paper, Islamic Revolutionary Guard Corps

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Pradhan Mantri Bhartiya Janaushadhi Pariyojana

In News

7th March 2019 to be celebrated as 'Janaushadhi Diwas' across India.

About Scheme

1. 'Pradhan Mantri Bhartiya Janaushadhi Pariyojana' is a campaign launched by the Department of Pharmaceuticals, Govt. Of India, to provide quality medicines at affordable prices to the masses through special kendra's known as Pradhan Mantri Bhartiya Jan Aushadhi Kendra (PMBJK).
2. PMBJK have been set up to provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs.
3. Bureau of Pharma PSUs of India (BPPI) is the implementing agency of PMBJP.

NPPA

- NPPA is an organization of the Government of India which was established, inter alia, to fix/ revise the prices of controlled bulk drugs and formulations and to enforce prices and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995.
- The organization is also entrusted with the task of recovering amounts overcharged by manufacturers for the controlled drugs from the consumers.
- It also monitors the prices of decontrolled drugs in order to keep them at reasonable levels.

Composition

a) Chairman
b) Member Secretary
c) Advisor

> **PEPPER IT WITH**
> Quality Assurance Scheme, JAS, Soil to Silk Project, Eri Spun Silk Mill, KUSUM

Functions

1. To implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it.
2. To deal with all legal matters arising out of the decisions of the Authority.
3. To monitor the availability of drugs, identify shortages, if any, and take remedial steps.
4. To collect/ maintain data on production, exports and imports, market share of individual companies, profitability of companies etc, for bulk drugs and formulations.

7th Regional Comprehensive Economic Partnership (RCEP)

Why in News?

The Ministers from the **16 RCEP Participating Countries** (RPCs) attended the 7th RCEP Intersessional Ministerial Meeting in Siem Reap, Cambodia. The Meeting, which was chaired by Thailand, reviewed the developments since the 2nd RCEP Summit.

Details

- The Ministers recalled the Leaders' determination to conclude a **modern, comprehensive, high quality, and mutually beneficial RCEP in 2019**, and resolved to exert utmost effort to achieve this target.

- They all remained confident that with collective commitment and pragmatism, the chapters and annexes that would comprise the RCEP Agreement can be concluded soon.
- The Ministers reiterated that it is the collective responsibility of all RPCs to ensure progress by overcoming negotiation challenges and finding resolution to the remaining issues through constructive engagement.

RCEP

> RCEP is a proposed free trade agreement between the countries of Association of South East Asian Nations **(ASEAN) and the six states with which ASEAN has free trade agreements** (Australia, China, India, Japan, South Korea and New Zealand).

PEPPER IT WITH
APEC TPP, NATO, Mekong–Ganga Cooperation, SCO

> This means **a zero-customs duty zone** in a geography that contributes 34% of global gross domestic product (GDP) and 40% of world trade. The region is also home to almost half of the world's population.

> It is expected to provide market access for India's goods and services exports and encourage greater investments and technology into India. It would also **facilitate India's MSMEs** to effectively integrate into the regional value and supply chains.

Indo-Pacific Regional Dialogue – 2019

Why in News?

In continuation of the process of engaging the global strategic community in an annual review of India's opportunities and challenges in the Indo-Pacific region, the **second edition of Indo-Pacific Regional Dialogue** (IPRD) - 2019 was held in Delhi.

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Indo-Pacific Regional Dialogue

- The idea of an Indo-Pacific Regional Dialogue (IPRD) was first conceptualised

PEPPER IT WITH
Blue economy, Brown economy, SAGAR,

and conducted in 2018, as the apex level conference of the Indian Navy, organised by the **National Maritime Foundation** as the Navy's Knowledge Partner.

- The permanent theme of this annual dialogue is a review of India's opportunities and challenges in the Indo-Pacific region. The aim is to focus attention on the Indo-Pacific, as a maritime geographical-entity, while deliberating aspects of great relevance to regional geopolitics.
- The 2018 Dialogue was a resounding success, with 15 analytical papers presented by renowned strategists and analysts from across the globe, in five sessions, spread over two days.

Golan Heights

Why in News?

US president announced that the US will recognize Israel's sovereignty over the Golan Heights, captured **from Syria in 1967**. Previous US administrations have treated Golan Heights as occupied Syrian territory, in line with UN Security Council resolutions.

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By defying a **52-year-old unanimously adopted UN resolution** on "inadmissibility of the acquisition of territory by war", US has also broken the postwar norm of refusing to recognise the forcible annexation of territory – which has underpinned western and international opposition to the Russian annexation of Crimea.

Golan Height

- Located in the **southwest tip of Syria**, the Golan heights covers about 1,800 square kilometers (700 square miles), with about two-thirds under Israel's control. **The Golan shares a border with Lebanon, Jordan and Israel**. Its rocky plateau towers over the Israeli valley to the west.
- The area offers expansive views over Syria and Israel, giving it strategic military importance. It was seized by Israel from Syria during the **Six-Day War of 1967**, and since

then, it has been claimed by both countries.

• The Golan Heights is not densely populated. There are around 50,000 people, with Israeli Jewish settlers making up nearly half. **The rest are mostly people of Syrian ancestry who are Druze, a religion that has been described as an offshoot of Ismaili Islam**.

Significance

➢ The Golan Heights' high altitude provides it with observation points deep into Syria, with which Israel has never formally made peace. Israel has long wanted to reach bilateral political settlements with some of its Arab neighbours, and one of its strategies was to occupy territory and return it through negotiation. In the vernacular of Arab-Israeli relations, **this is known as "land for peace".**

➢ The area is a **key source of water** for an arid region. The area is main source of Israel's water supply.

➢ The **land is fertile, with the volcanic soil** being used to cultivate vineyards and orchards and to raise cattle.

PEPPER IT WITH

Sea of Galilee, Jordan River, Yamuk river, United Nations Security Council Resolution 242, Balfour declaration Jamal Khasoggi

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Syrian Response

The Syrian state issued a statement saying Golan Heights remained Arabian and Syrian regardless of US views.

Global response

✓ The new U.S. position has not received support from any other country, including its European allies. While Iran, Russia, Turkey, among others, have been critical, the Arab response has been assessed as insufficiently strident.

✓ This is no doubt a reflection of reduced influence in Washington, with greater U.S. leverage on oil supplies, divisions among Arab countries over Qatar, pressure on Saudi Arabia because of Yemen and the Jamal Khashoggi issue.

✓ India's interests are not directly involved immediately. It has a strong and growing relationship with Israel, and has maintained its relations with Syria. **Indian troops have been a part of UN peacekeeping presence on the Golan Heights**.

✓ The move, however, is indicative of shifting geopolitics in the West Asian region, with long-term implications for India. It also asserts unilateralism, is a challenge to a rules-based international order, and is contrary to positions U.S. has taken elsewhere, as for instance in its response to Russia and Crimea.

BOLD–QIT project

IN News

BOLD-QIT (Border Electronically Dominated QRT Interception Technique) under CIBMS (Comprehensive Integrated Border Management system) on India-Bangladesh border in Dhubri District of Assam was inaugurated recently.

What is BOLD-QIT?

BOLD-QIT is the project **to install technical system**s under the CIBMS, which enables BSF to equip Indo-Bangla borders with different kind of sensors in unfenced riverine area of **Brahmaputra and its tributaries**.

Its Benefits

- Now, the **entire span of River Brahmaputra has been covered with data network** generated by Microwave communication, OFC Cables, DMR Communication, day and night surveillance Cameras and intrusion detection system.
- These modern gadgets provide feeds to BSF Control Rooms on the Border and enable BSF Quick Reaction Teams to thwart any possibility of Illegal Cross Border Crossing/ Crimes.
- The implementation of this project will not only help BSF to curb all type of cross border crimes but **also provide respite to the troops from round the clock human surveillance**.

> **PEPPER IT WITH**
> Chittagong and Mongla port, India-Bangladesh friendship pipeline, Teesta river diapute

Background

➢ BSF is responsible for safeguarding of 4**,096 Km long International Border with Bangladesh**. At various places, it is not possible to erect Border Fence due to the geographical barriers.

➢ The 61 Kms of Border area in District Dhubri, Assam where River Brahmaputra enters into Bangladesh is consisting of vast char lands and innumerable river channels thus making border guarding in this area, a daunting task especially during rainy season.

➢ To overcome this problem, **in the year 2017**, Ministry of Home Affairs decided to go for technological solution besides the physical presence of manpower of BSF.

➢ Information and Technology Wing of BSF undertook the project BOLD-QIT and completed it in record time with the technical support of various manufacturers and suppliers.

Illicit drug trade

In News

India is one of the major hubs of illicit drug trade ranging from age-old cannabis to newer **prescription drugs like tramadol**, and **designer drugs like methamphetamine**, according to report released by United Nations Office of Drugs and Crime (UNODC).

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Highlights of Report

- It says that while the global trend of purchasing drugs over the internet, particularly on darknet trading platforms using cryptocurrencies has already spread across South Asia, it is particularly rampant in India. The study identified more than 1,000 drug listings from India published across 50 online crypto-market platforms.

> **PEPPER IT WITH**
> Golden Crescent, Golden triangle, Directorate of Revenue Intelligence

- The report said India is also a transit country for illicitly produced opiates, in particular heroin. The route used by traffickers to smuggle opiates through South Asia is an **alternative part of the so-called "southern route"**, which runs through Pakistan or the Islamic Republic of Iran, via the Gulf countries, continues to East Africa and on to destination countries.

- India produced 66 tonnes of opium in all forms, including morphine. What is worrisome, according to INCB estimates, is **only 10 per cent of the available morphine was directly consumed for pain management**, and up to 88 per cent was converted into codeine which is used to manufacture cough medication.

- India, Australia, France and Turkey accounted for 83 per cent of global production of morphine-rich opiate raw materials in 2017.

United Nations Office on Drugs and Crime

UNODC is a **global leader in the fight against illicit drugs and international crime**. Established in 1997 through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention, UNODC operates in all regions of the world through an extensive network of field offices. UNODC relies on voluntary contributions, mainly from Governments, for 90 per cent of its budget.

TIR shipment

Why in News?

The first shipment under the United Nations '**Transports Internationaux Routiers**' (TIR) convention arrived in India from Afghanistan through Iran's Chabahar Port.

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TIR convention helps in **fast and easy movement of goods across multiple countries under a common customs document and guarantee.**

TIR Carnets

- **India had joined the TIR Convention** (the United Nations Customs Convention on International Transport of Goods under cover of TIR Carnets) **in 2017**.
- The convention allows goods to be outlined in a TIR carnet and sealed in load compartments.
- Customs officials verify the carnet and check the seals, **with no need for physical checking of the contents**, enabling shipments to pass through countries without being opened at borders.
- Reciprocal recognition of customs controls is at the heart of the Convention. This enables a facilitative and non-intrusive environment for multi-modal transport of goods through several countries.
- The convention will help boost India's exports and enable greater participation in the global value chains.
- TIR will play a pivotal role in improving ease of doing business and pave the way for smoother and safer transport of goods across international borders and will help boost trade between India, Central Asia, Europe and Russia.

> **PEPPER IT WITH**
> Indus Water Treaty, World Government Summit, UNSC resolution 2454, NSG entry, World steel authority

TIR

- ➢ The Customs Convention on International Transport of Goods under cover of TIR Carnets, **1975 (TIR Convention),** is an international transit system under the auspices of the United Nations Economic Commission for Europe (UNECE) to facilitate the seamless movement of goods within and amongst the Parties to the Convention.
- ➢ At present there are 70 parties to the Convention, including the European Union.
- ➢ **FICCI has been appointed** as National Issuing & Guaranteeing Association and system is managed worldwide by the International Road Transport Union (IRTU), Geneva and overseen by the United Nations Economic Commission for Europe (UNECE).
- ➢ The system facilitates and encourages international trade, and thereby provides many advantages and benefits to the national economy by simplifying the movement of national and international transport, giving access to TIR operational countries.

Belt and Road initiative

In News

Italy has become the first member of the Group of Seven (G7) major industrialised nations to join **China's "Belt and Road" infrastructure project (BRI)**, which is inspired by historic, centuries-old trade routes.

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BRI

- The Belt and Road Initiative (BRI) is an ambitious effort to improve regional cooperation and connectivity on a trans-continental scale.
- The initiative aims to strengthen infrastructure, trade, and investment links between China and some 65 other countries that account collectively for over 30 percent of global GDP, 62 percent of population, and 75 percent of known energy reserves.
- The BRI consists primarily of the **Silk Road Economic Belt**, linking China to Central and South Asia and onward to Europe, and the New Maritime Silk Road, linking China to the nations of South East Asia, the Gulf Countries, North Africa, and on to Europe.

- Six other economic corridors have been identified to link other countries to the Belt and the Road. The scope of the initiative is still taking shape—**more recently the initiative has been interpreted to be open to all countries** as well as international and regional organizations.

India

➢ The successful conclusion of the Belt and Road Initiative (BRI) Summit in Beijing earlier has raised a number of questions about India's strategy to counter the Chinese project.

➢ OBOR is primarily aimed at strengthening its economy which was impacted by the global financial crisis of 2008–2009. Through this flagship scheme China will develop large-scale projects in infrastructure such as roads, railway lines, sea ports and airports. Such extensive activity will ensure Chinese influence and clout in different parts of the world.

➢ The expanding role undertaken by Beijing via OBOR especially in South Asia has made India apprehensive. China has even bypassed India's concern and contention on the China–Pakistan Economic Corridor (CPEC) which passes through Pakistan Occupied Kashmir (POK).

PEPPER IT WITH
International Court of Justice, Organisation of Islamic Cooperation, UNSC, FATF, JCPOA

➢ India has made no bones about the fact that big Chinese loans under BRI are pushing countries towards a debt trap. Delhi is also hoping to create connectivity projects in S-E Asia based on requirements of the nations in the region.

Sri Lanka oil refinery

In News

India's Accord Group and Oman's Ministry of Oil and Gas have signed a $3.85 billion deal to build an oil refinery in Sri Lanka, **the biggest single pledge of foreign direct investment ever made in the country**.

Details

- The 200,000 barrel-per-day refinery will be built on 585 acres near the site of the new Hambantota international port and a related industrial zone on the nation's southern coast.

- The refinery, will produce 9 million metric tonnes of refined products a year for export from the Hambantota port, which serves the busiest East-West shipping route.

- Privately owned Accord Group will control 70 percent of the joint venture and the Sultanate of Oman's Ministry of Oil and Gas the rest.

PEPPER IT WITH
Chabahar port, Diego Gracia, Chagos islands,Indian technical and economic cooperation

Significance

The deal represents a challenge to China, which had until recently been on track to be the dominant foreign investor on the island, and a possible coup for New Delhi.

India has been concerned in the past few years about China muscling into Sri Lanka and other countries in the region where India is the traditional power.

Hambantota port

✓ Hambantota port is a deep-water port in the southern tip of Sri Lanka.

KSG – **(DELHI VN)** 9717380832, **(DELHI RN) 9811293743**, **(JAIPUR)** 8290800441, **(BHOPAL)** 7509975361, **(PATNA)** 7463950774, **(INDORE)** 7314977441, **(BENGALURU)** 7619166663,**www.ksgindia.com**

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✓ It is located strategically in Indian Ocean, connecting Middle East and East Asia.
✓ Sri Lanka has signed a deal to sell a 70% stake of the Hambantota port to China. The port is expected to play a key role in China's Belt and Road initiative.
✓ The port's location at the southern extremity of Sri Lanka, overlooking South Asia's vital sea lanes, makes it an important commercial asset for China.

African Union

In News

A Memorandum of Understanding (MoU) on India-Africa Health Sciences Cooperation between the Indian Council of Medical Research (ICMR) and African Union was signed recently.

The MoU will pave the way for the cooperation in the areas of research and development, capacity building, health services, pharmaceutical trade and manufacturing capabilities for drugs and diagnostics.

African Union

African Union (AU), is an intergovernmental organization, **established in 2002**, to promote unity and solidarity of African states, to spur economic development, and to promote international cooperation. The African Union (AU) replaced the Organization of African Unity (OAU). The AU's headquarters are in **Addis Ababa, Ethiopia.**

PEPPER IT WITH
National emergency USA, International IP Index, Macedonia, NATO, Venezuela crisis, Indian technical and economic cooperation

ICMR

The Indian Council of Medical Research (ICMR), the **apex body in India for the formulation, coordination and promotion of biomedical research**, is one of the oldest medical research bodies in the world.

The ICMR is funded by the Government of India through the Department of Health Research, Ministry of Health & Family Welfare.

Otter census

Why in News?

For the first time, Uttar Pradesh took a census of otters in its protected areas. The exercise began in the **Pilibhit Tiger Reserve**.

Pilibhit Tiger Reserve

• Pilibhit Tiger Reserve is in the **foothills of the Himalayas**, south of Nepal. Covering an area of approximately 800 square kilometres, the reserve sprawls across parts of Pilibhit, Lakhimpur Kheri and Bahraich districts.
• With the **Sharda and Ghaghara rivers** encircling a considerable part of the reserve, it is rich in water bodies.
• The forest is home to tigers, leopards, elephants, different species of deer and monkeys and reptiles like snakes, mugger crocodiles and gharials.

Otter

➢ A mammal, an otter spends much of its time in or close to water bodies. Otters live on fish. The den of an otter is known as holt and it is close to water bodies.
➢ Otters are an important part of the forest ecosystem. **A thriving population of otters means a healthy ecosystem.**
➢ Otters are found the world over, except in Australia, New Zealand, Madagascar, and other oceanic islands.
➢ **India is home to 3 of the 13 species** of otters found worldwide. These are - Eurasian Otter (Lutra lutra); Smooth-coated Otter (Lutra perspicillata) and Small-clawed otter (Aonyx cinereus).

➢ The Smooth-coated Otter is distributed throughout the country from the Himalayas southward. But the Common Otter and the Small-clawed Otter are restricted to the Himalayas, to the north of the Ganges and to southern India.

➢ The occurrence of all three species has been reported from **northeast India and the Western Ghats**. In most of their distribution range, otters occur along with gharial, crocodile, Ganges river dolphin, and several species of turtles.

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<tr><td colspan="2">PEPPER IT WITH</td></tr>
<tr><td>Convention on Biodiversity, Horned frogs, Aichi targets, Stockholm convention, UNFCCC</td></tr>
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Asiatic wild dog (Dhole)

In News

A new study has found that expansion of protected areas in the Western Ghats has not helped the lot of **Dhole, commonly known as the Asiatic wild dog**, even while enabling the recovery of populations of tigers and other big carnivores.

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Dhole

• Dhole is an **apex social carnivore** in the **tropical forests** of South and South East Asia. Conservation of such carnivores leads to well-being of the entire ecosystem.

• Generally, dholes hunt in packs and tend to venture into forested landscapes adjoining protected areas. Anthropogenic factors, which fragment and alter landscapes, affected dholes.

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<tr><td>UNCCD, Green climate fund, Adaptation fund, Gangetic dolphins, Snow leapords</td></tr>
</table>

• Range States: Bangladesh; Bhutan; Cambodia; China; India; Indonesia; Kazakhstan; Kyrgyzstan; Lao PDR; Malaysia; Mongolia; Myanmar; Nepal; Russian Federation; Tajikistan; Thailand; Vietnam

IUCN status - Endangered

Shedule II of wildlife act

The hump-backed mahseer

Why in News?

The hump-backed **mahseer—a large freshwater fish also called the tiger of the water and found only in the Cauvery river basin** (including Kerala's Pambar, Kabini and Bhavani rivers)—is now "Critically Endangered", as per the International Union for Conservation of Nature's Red List of Threatened Species.

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Details

The fish is one of the 229 species added to the Red List last November; this update also reveals that the threat status of 12 other Indian species, including great hornbills, has increased.

Five other species have also made it to threatened categories: two wild orchids, the Arabian scad (a marine fish) and two wild coffee species found only in a few localities in the Western Ghats.

The great hornbill (found in India and southeast Asia) was earlier categorised as "Near Threatened". **It is now "Vulnerable" due to high hunting pressure** coupled with habitat loss and deforestation, while the wreathed hornbill has moved from "Least Concern" to "Vulnerable".

IUCN

• The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organisations.

• **Created in 1948**, IUCN has evolved into the world's largest and most diverse environmental network.

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<tr><td>PEPPER IT WITH</td></tr>
<tr><td>Kashmiri red stag, Sangai deer, Silent valley national park, Royal bengal tiger, Fakim Wildlife Sanctuary</td></tr>
</table>

- It harnesses the experience, resources and reach of its 1,300 Member organisations and the input of over 10,000 experts.
- IUCN is the **global authority on the status of the natural world** and the measures needed to safeguard it.

Red sanders

In News

All red sanders farmers, who weren't allowed to export their produce as the foreign trade policy prohibited it, now can.

The **Directorate General of Foreign Trade (DGFT),** an agency of the Ministry of Commerce and Industry, revised its export policy to permit its export if it is obtained from cultivated land. Earlier, only seized logs from smugglers were being exported depending on state government rules.

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Why the restrictions?

- Overexploitation prompted the **Union government in the 1980s to recommend inclusion of red sanders in Appendix II of CITES**, which says "trade must be controlled in order to avoid utilisation incompatible with their survival".

- In 2010, when the CITES was planning to suspend trade of red sanders obtained from India, the government submitted a **Non-Detriment Finding** (NDF) report saying it must be allowed to export from cultivated sources.

> **PEPPER IT WITH**
> Vascular plants, Ganga river dolphin, Wild Buffalo, Manipur Brow Antlered Deer, Great Indian Bustard

- So in 2012, India got an export quota on red sanders from CITES, under which the country could export 310 tonnes of red sanders obtained from "artificially propagated" sources (grown on farms) and 11,806 tonnes of wood from seized sources.

Red sanders

- Red sanders (Pterocarpus santalinus), known for its rich hue and **therapeutic properties**, is high in demand across Asia, particularly in China and Japan, for use in cosmetics and medicinal products as well as for making furniture, woodcraft and musical instruments.
- The tree is endemic to several districts in Andhra Pradesh and some parts of Tamil Nadu and Karnataka.
- The International Union for Conservation of Nature (IUCN), reclassified red sanders as 'near threatened' from the earlier 'endangered'.
- However, **red sanders remains listed in the Appendix II of CITES** (Convention on International Trade in Endangered Species of Wild Fauna and Flora).

Asian rhinos

In News

India will collaborate with Bhutan, Nepal, Indonesia and Malaysia to increase the population of three species of Asian rhinos, including the Greater one-horned rhinoceros found in the Indian sub-continent.

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Details

- The five rhino range nations signed a declaration '**The New Delhi Declaration on Asian Rhinos 2019'** for the conservation and protection of the species at the recently held Second Asian Rhino Range Countries meeting.
- The declaration was signed to conserve and review the population of the Greater one-horned, Javan and Sumatran rhinos **every four years** to reassess the need for joint actions to secure their future.
- The declaration includes undertaking studies on health issues of the rhinos, their potential diseases and taking necessary steps; collaborating and strengthening wildlife forensics for the purpose of investigation and strengthening of transboundary

collaboration among India, Nepal and Bhutan for the conservation and protection of the Greater one-horned rhino.

Indian Rhino

- The greater one-horned rhino (or "Indian rhino") is the largest of the rhino species.
- This species was pushed very close to extinction and by the end of the 20th century, fewer than 200 animals remained.
- The recovery of the greater one-horned rhino is among the greatest conservation success stories in Asia.
- Today populations have increased to around 3,500 rhinos in **northeastern India and the Terai grasslands of Nepal**.
- IUCN Status - Vulnerable
- HABITATS - Tropical and Subtropical Grasslands, Savannas, and Shrublands

> **PEPPER IT WITH**
> IUCN, Asian Rhino Specialist Group, WWF- India, Aaranyak, Kaziranga national park, Orange national park

Javan rhinos

They are the most threatened of the **five rhino species**, with only 58-68 individuals that live only in **Ujung Kulon National Park in Java, Indonesia**. Javan rhinos once lived throughout northeast India and Southeast Asia.

IUCN Status - Critically Endangered

Sumatran rhinos

They are the smallest of the living rhinoceroses and the only Asian rhino with two horns. Two different subspecies, the western Sumatran and eastern Sumatran, cling for survival on the islands of Sumatra and Borneo.

IUCN Status - Critically Endangered

Bandipur reserve

Why in News?

A five-day fire that raged through the Bandipur Tiger Reserve reportedly burnt more than 15,400 acres of forests. Between February 21 and 25, the reserve saw 127 fire counts in various ranges of the 912 sq km forest.

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The worry is the long-term damage to the ecosystem, which is a part of the **Nilgiri Biosphere that hosts the world's largest tiger population**, at more than 575 (2014 census).

Reason

- The 2018 monsoon was particularly strong, but the year-end northeast monsoon has failed. If the monsoon led to dense growth, the blistering heat since September has turned vegetation brittle and dry, with vast swathes becoming tinderboxes. As with most forest fires, it is assumed that Bandipur's ignition was man-made. Forest Department officials believe miscreants set fire in multiple locations.

- **Bandipur is a dry deciduous forest** in the rain shadow region of the Western Ghats, and is no stranger to fires. Periods of drought invariably lead to fires.

> **PEPPER IT WITH**
> Nilgiri biosphere reserve, Nagarhole National Park and Tiger Reserve, Kali tiger reserve, Bhadra Wildlife Sanctuary

- The country's forest policy encourages **a zero forest fire approach** for its protected landscapes — whether it is Bandipur or the rainforests of the upper Western Ghats. Scientific literature have shown this blanket approach may be doing harm to dry, deciduous forests where trees have evolved to co-exist with fire.

- Conversely, when fires are suppressed — including by curbing the tribal practices of controlled fire burning — a greater biomass builds up that can lead to high intensity fires which affect the ecosystem negatively.

- Moreover, there might be a correlation between fire suppression and growth of lantana camara, which has replaced the grassy undergrowth in many areas.

Global Chemicals Outlook

In News

The Global Chemicals Outlook II – From Legacies to Innovative Solutions: Implementing the 2030 Agenda for Sustainable Development, mandated by the UN Environment Assembly in 2016, seeks to alert policymakers and other stakeholders to the **critical role of the sound management of chemicals and waste in sustainable development**.

It takes stock of global trends as well as progress made and gaps in achieving the global goal to minimize the adverse impacts from chemicals and waste by 2020.

Highlights

- The Global Chemicals Outlook II finds that the global goal to minimize adverse impacts of chemicals and waste will **not be achieved by 2020**. Solutions exist, but more ambitious worldwide action by all stakeholders is urgently required.

- Chemical production across the world will double by 2030. **Chemical industry is the world's second largest manufacturing sector**. There were 40,000-60,000 chemicals being commercially used globally. And 6,000 of them account for 99 per cent of the total volume.

- The **report stresses on the threats to the ecosystem from use of chemicals**. Further, it indicates that developing countries which already suffer from poor monitoring and regulations are emerging as the biggest users of chemicals.

- Chemical production and consumption is shifting to emerging economies, in particular China. The Asia-Pacific region is projected to account for more than two-thirds of global sales by 2030. Cross-border e-commerce is growing at 25 per cent annually.

- Projected growth will be highest in Asia, with China estimated to account for almost 50 per cent of global sales by 2030.

Global Chemicals Outlook report (GCO-I)

The **first Global Chemicals** Outlook report (GCO-I) was **released in 2013**. Since then, instead of reducing the use of chemicals to meet the agreed target, its use has gone up.

SDG Target 12.4 mandates, "By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment."

> **PEPPER IT WITH**
> Inclusive Internet Index, Velayat 97, Military space force, World Employment and Social Outlook Trends

SMCW

➢ The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) were adopted by the General Assembly of the United Nations in 2015.

➢ Sound management of chemicals and waste (SMCW) is a specific target under **SDG 12 on Sustainable Consumption and Production**. It is also referred to under SDG 3 on Good Health and Well-being and SDG 6 on Clean Water and Sanitation.

➢ However, given that chemicals and waste affect almost all aspects of development, SMCW is relevant for, and supports the implementation of, many of the SDGs, if not all.

➢ SMCW is therefore of significant relevance for implementing the 2030 Agenda for Sustainable Development.

Global Environment Outlook

Details

- The Global Environment Outlook (GEO) is often referred to as **UN Environment's flagship environmental assessment**. The first publication was in 1997 and was originally requested by Member States.

- It is a flagship report because it fulfills the core functions of the organization, which date back to the UN General Assembly resolution that established the UN Environment

Programme in 1972.

- GEO is a consultative and participatory process to prepare an independent assessment of the state of the environment, the effectiveness of the policy response to address these environmental challenges and the possible pathways to achieve various internationally agreed environmental goals.

The sixth edition of the report on the theme "Healthy Planet, Healthy People" highlights:

1. GEO-6 identifies population, urbanisation, development, technology, and climate change as key drivers of environmental problems.
2. A quarter of all premature deaths and diseases worldwide are due to manmade pollution and environmental damage.
3. Deadly emissions, chemicals polluting drinking water, and the accelerating destruction of ecosystems crucial to the livelihoods of billions of people are driving a worldwide epidemic that hampers the global economy, it warned.
4. As greenhouse gas emissions continue to rise amid a preponderance of droughts, floods and super storms made worse by climbing sea levels, there is a growing political consensus that climate change poses a future risk to billions.
5. Poor environmental conditions "cause approximately 25% of global disease and mortality" -- around 9 million deaths in 2015 alone. Lacking access to clean drinking supplies, 1.4 million people die each year from preventable diseases such as diarrhoea and parasites linked to pathogen-riddled water and poor sanitation. The report says air pollution causes 6-7 million early deaths annually.
6. Chemicals pumped into the seas cause "**potentially multi-generational**" adverse health effects, and land degradation through mega-farming and deforestation occurs in areas of Earth home to 3.2 billion people.

Suggestions

> The report called for a root-and-branch detoxifying of human behaviour while insisting that the situation is not unassailable.

> Food waste for instance, which accounts for 9% of global greenhouse gas emissions, could be slashed. **The world currently throws away a third of all food produced**. In richer nations, 56% goes to waste.

> It also called for a rapid drawdown in greenhouse gas emissions and pesticide use to improve air and water quality.

PEPPER IT WITH
Green-Ag project, Norway deforestation rule, Sixth mass extinction, Mangroves, Coral reefs

Way forward

- There are some targeted interventions that only require the resolve to reduce air and water pollution, and which in turn promise early population-level benefits.
- Aggressive monitoring of air quality in cities through scaled-up facilities would bring about a consensus on cutting emissions of greenhouse gases, and provide the impetus to shift to cleaner sources of energy.
- It is significant that **GEO-6 estimates that the top 10% of populations globally, in terms of wealth, are responsible for 45% of GHG emissions**, and the bottom 50% for only 13%. Pollution impacts are, however, borne more by the poorer citizens.
- Combating air pollution would, therefore, require all older coal-based power plants in India to conform to emission norms at the earliest, or to be shut down in favour of renewable energy sources. Transport emissions are a growing source of urban pollution, and a quick transition to green mobility is needed.
- In the case of water, the imperative is to stop the contamination of surface supplies by chemicals, sewage and municipal waste. **As the leading extractor of groundwater, India needs to make water part of a circular economy** in which it is treated as a resource that is recovered, treated and reused.

A climate vulnerability index for India

Why in News?

After the first-ever vulnerability assessment of 12 Himalayan states to climate risks, the Department of Science and Technology **has now decided to carry out a climate vulnerability assessment of all states and union territories (UTs)**.

The assessment would be based on the global methodological framework of 2014 Intergovernmental Panel on Climate Change (IPCC), where vulnerability is defined by how 'sensitive' a specific eco-system is to climate change risks and what is the current adaptive capacity to mitigate the risks.

Vulnerability assessment of 12 Himalayan

- Last year the Indian Institutes of Technology (IIT) at Mandi and Guwahati, and the Indian Institute of Science (IISc), Bengaluru, coordinated with 12 Himalayan State authorities, to evolve a common methodology, and determine how districts there are equipped to deal with the vagaries of climate change.

- The researchers prepared a **'vulnerability index'** of each of these States based on district-level data. Vulnerability would be a measure of the inherent risks a district faces, primarily by virtue of its geography and socio-economic situation.

Climate sensitive — Assam and Mizoram have been identified as most vulnerable to climate change in a study done by various IITs and IISc, Bengaluru

Low female literacy was key in Arunachal Pradesh, while loss of forest cover & steep slope factored in Nagaland's vulnerability

- The scientists conducted workshops with the States and culled **eight key parameters on the basis of which a vulnerability score could be generated**. They included: percentage of area in districts under forests, yield variability of food grain, population density, female literacy rate, infant mortality rate, percentage of population below poverty line (BPL), average man-days under MGNREGA, and the area under slope > 30%.

PEPPER IT WITH
Environmental Performance Index, Climate Change Performance Index, Green index,

- On a scale ranging 0-1, 1 indicating the highest possible level of vulnerability, **at the top of the scale were Assam** with a score of 0.72 and Mizoram at 0.71, whereas Sikkim, with an index score of 0.42 was relatively less vulnerable.

- Different factors contributed to a State's vulnerability. In Arunachal Pradesh, the key factors are low female literacy and high percentage of population above BPL whereas in Nagaland the key issues are loss of forest cover, steep slope and high yield variability.

Significance

It would be the **first-such climate vulnerability index for all states**, as there is no such national rating at present to determine which states are more vulnerable to climate risks based on a common set of indicators — socio-economic, demographic, health, sensitivity of agricultural production, forest-dependent livelihood and access to information.

WEF's global Energy Transition index

In News

Global Energy Transition index is an **annual publication of World Economic Forum (WEF)**. The index ranks 115 economies on their ability to balance energy security and access with environmental sustainability and affordability.

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India

- India has moved **up two places to rank 76th** on a global energy transition index. It is amongst the countries with high pollution levels & has a relatively high CO2 intensity in its energy system.
- Despite this, India has made significant strides to improve energy access in recent years, and currently **scores well in the area of regulation and political commitment towards energy transition**.
- It suggested there was a ground for optimism regarding India despite the current outdated energy system not being ready for transition, because an enabling environment is being built to support future transition.
- While India has scored low in terms of system performance (ranking 97 and 86, respectively), it ranks considerably higher when it comes to readiness (45 and 61, respectively). Overall, India has moved up two places from 78th last year.
- Despite its low ranking, India is the second best in the BRICS block of emerging economies, with Brazil being the best at 46th place globally. However, India is the only amongst the five economies to improve its rank since last year.

Performance

- ✓ **Sweden remains on the top** on this annual list and is followed by Switzerland and Norway in the top three.
- ✓ Within Asia, Malaysia is ranked highest at 31st, Sri Lanka is 60th, Bangladesh 90th and Nepal 93rd. China is ranked even lower than India at 82nd position, though it ranks very high at seventh place in the world for regulation and political commitment.

> **PEPPER IT WITH**
> Earth System Governance Project, Global Green Growth Institute, KIMO, IPCC

- ✓ Small economies have achieved higher scores on readiness, **with the UK being the only G7 economy in the top 10.**

Highlights

- o The WEF said energy systems have globally become less affordable and less environmentally sustainable **than they were five years ago**, though access to energy has improved with less than 1 billion now living without access to electricity.
- o The index considers both the current state of the countries' energy system and their structural readiness to adapt to future energy needs.
- o The biggest challenge facing attempts to future proof global energy is the **lack of readiness among the world's largest emitters.** The 10 countries that score the highest in terms of readiness account for a mere 2.6 per cent of global annual emissions.
- o The world's transition to secure, affordable and sustainable energy has stagnated, with little or no progress achieved in the past five years.
- o Across 115 economies, more people than ever before now have access to energy. However, this is offset by reduced affordability and almost no progress in making energy systems environmentally sustainable.
- o Continued use of coal for power generation in Asia, increasing commodity prices and slower-than-needed improvements in energy intensity have contributed to this year's stagnation in performance.
- o Fossil fuels' share of total primary energy supply at 81 per cent has been constant over the past three decades. Also, the global CO2 emissions are expected to have increased by more than 2 per cent in 2018, the highest since 2014. Consumption of coal increased in 2018, after declining for three consecutive years.

Global Energy & CO2 Status Report

Why in News?

Global Energy and CO2 Status Report **by IEA** provides a picture of recent global trends and developments across fuels, renewable sources, and energy efficiency and carbon emissions.

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India

- India's energy demand outpaced global demand growth in 2018. The higher energy demand was driven by a global economy that expanded by 3.7 per cent in 2018, a higher pace than the average annual growth of 3.5 per cent seen since 2010. **China, USA, and India together accounted for nearly 70 per cent of the rise in energy demand**.

- India saw primary energy demand increase 4 per cent or over 35 million tonne of oil equivalent. **This accounts for 11 per cent of global demand growth**. The growth in India was led by coal for power generation and oil for transport.

- Indian oil demand grew 5 per cent in 2018 compared to 2017, a year when demand was lower due to the impact of the implementation of the Goods and Service Tax and demonetisation.

- The sharp increase in oil prices in 2018, amplified by currency deterioration, contributed to slowing growth in the second half of the year.

- Rapid industrialisation and the fast pace of growth in vehicle fleets have caused severe air quality problems, and policies are being put in place to try to tackle the problem.

- But **despite the growth in fossil fuel demand, per capita emissions in India remain low at 40 per cent of the global average**. India saw a rise in emissions by 4.8 per cent, or 105 million tonnes, with the growth split evenly between power and other sectors such as transport and industry.

World scenario

- Energy consumption **worldwide grew by 2.3 per cent in 2018**. This is nearly twice the average rate of growth since 2010. Global energy demand growth was driven by a robust economy as well as higher heating and cooling needs in some parts of the world.

- The global oil demand rose by 1.3 per cent in 2018. This has been led by strong growth in the United States. The start-up of large petrochemical projects drove product demand, which partially offset a slowdown in growth in gasoline demand. The United States and China showed the largest overall growth. Demand fell in Japan and Korea and was stagnant in Europe.

- Due to higher energy consumption, the global energy-related CO_2 emissions increased to 33.1 gigatonnes (Gt) of CO_2 in 2018. This is 1.7 per cent higher than the emission in 2017.

- Coal-fired power generation continues to be the single largest emitter, accounting for 30 per cent of all energy-related carbon dioxide emissions.

> **PEPPER IT WITH**
> UNDP, International Whaling Organization, World Nature Organisation, Bio-carbon Fund initiative

- While emissions from all fossil fuels increased, the power sector accounted for nearly two-thirds of emissions growth. Coal use in power alone surpassed 10 Gt CO_2, mostly in Asia. China, India, and US accounted for 85 per cent of the net increase in emissions, while it declined for Germany, Japan, Mexico, France and the United Kingdom.

IEA (International Energy Agency)

IEA is a Paris-based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.

In March 2017, India joined the IEA as an Association country.

Nitrogen pollution

In News

The **annual Frontiers report 2019 published by the United Nations (UN), has included a chapter on nitrogen pollution** in its latest edition, in a sign that pollution caused by the reactive forms of nitrogen is now being recognised as a grave environmental concern on a global level.

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The report highlights that "growing demand on the livestock, agriculture, transport, industry and energy sector has led to a sharp growth of the levels of reactive nitrogen — ammonia, nitrate, nitric oxide (NO), nitrous oxide (N_2O) — in our ecosystems."

Nitrogen pollution

- Some of these forms of nitrogen like N_2O can have far reaching impacts for humanity. **N_2O is 300 times more potent as a greenhouse gas than carbon dioxide (CO_2)**. The
- Frontiers report claims that the total annual cost of nitrogen pollution to eco system and healthcare services in the world is around $340 billion.
- Nitrogen is essential to all life on Earth as it forms an important component of life-building and propagating **biochemical molecules like proteins**. But overuse in agriculture in the form of fertilisers and other fields have made this important element more bane than boon.
- This is why many scientists, have called **nitrogen the "new carbon".** They also want the international community to work on both issues simultaneously.

India

➢ In 2017, a large team of Indian scientists, had come out with The Indian Nitrogen Assessment (INA). With the Assessment's publication, India had become the third country/entity after the United States and the European Union **to have assessed the environmental impact of nitrogen** on their respective regions comprehensively.

> **PEPPER IT WITH**
> Nitrogen fixation, Ozone layer depletion, Eutrophication, Bio-magnification, Bio-accumulation

➢ The INA shows that agriculture is the main source of nitrogen pollution in India. **Within agriculture, cereals pollute the most**. Rice and wheat take up the maximum cropped area in India at 36.95 million hectares (ha) and 26.69 million ha respectively;

➢ India consumes 17 Mt (million tonnes) of nitrogen fertiliser annually as per the data of the Fertiliser Association of India. Only 33 per cent of the nitrogen that is applied to rice and wheat through fertilisers is taken up by the plants in the form of nitrates (NO_3). **This is called Nitrogen Use Efficiency or NUE.**

➢ The remaining 67 per cent remains in the soil and seeps into the surrounding environment, causing a cascade of environmental and health impacts. The European assessment puts an even higher number on such wasted agricultural nitrogen resources at 80 per cent.

Efforts towards nitrogen pollution

o Governments are taking steps towards dealing with nitrogen pollution. Recently, the United Kingdom invested of £20 million for research on nitrogen pollution and its consequences for the South Asian region.

o The Indian government is also leading a resolution on nitrogen pollution **in the UNEA in Nairob**i. This is a historic event as India has never pushed for a resolution of such importance at any UN congregation before.

Way forward

✓ But more needs to be done. For example, in India, "nitrogen pollution in water is already monitored, but it would be nice to have tighter regulations on nutrient effluents, especially from livestock farms, municipalities and hotels near water bodies, keeping in mind that different ecosystems have different levels of sensitivities to nutrient pollution.

✓ The Frontiers report also says that the past efforts to engage with all forms of reactive nitrogen have been fragmented, which can also be seen in the policies promulgated by various countries regarding nitrogen pollution.
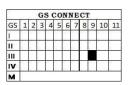
✓ **Bringing together nitrogen pollution and benefits under one framework** will help in calculating the tradeoffs between the two and informing governments and the public about the total societal cost of using nitrogen.

✓ For this, the authors of the Frontiers report suggest that all the policy frameworks, which deal with nitrogen, should be studied and a single framework like the one that exists for carbon should be built. They also call for an international convention and forum for the discussion on nitrogen.

IQAir AirVisual 2018 World Air Quality Report

In News

India's pollution crisis is not getting any better and continues to remain in the country with worst polluted air, according to a study. The IQAir AirVisual 2018 World Air Quality Report showed that **Delhi remains the most polluted capital city across the world last year**. The study was conducted by IQAir AirVisual and Greenpeace.

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It was not just Delhi, but the entire national capital region (NCR) emerged as the most polluted region in the world, with Gurugram being the worst affected, followed by Ghaziabad, Faridabad, Noida, and Bhiwadi in the top six.

Highlights

• Faisalabad in Pakistan, Hotan in China and Lahore were the only three non-Indian cities in the top 10.

• As a region, **South Asia suffers from the worst air quality in the world**.

• Out of the over 3000 cities included, 64% exceeded the WHO's annual exposure guideline for fine particulate matter, also known as PM2.5. 100% of measured cities within the Middle East and Africa exceeded this guideline, while 99% of cities in South Asia, 95% of cities in Southeast Asia, and 89% of cities in East Asia also exceed this target.

• It noted that at a country level, **weighted by population, Bangladesh emerges as the most polluted country on average**, closely followed by Pakistan and India.

• The report also highlights **how Beijing**, once considered the most polluted city in the world, has shown remarkable improvement.

Way forward

🞥 Air pollution will take an estimated seven million lives globally in the next year, while costing the world's economy nearly $225 billion.

PEPPER IT WITH
Air quality index, PM 2.5, Odd-Even formula, SAFAR, National clean air program, Smog, BS norms

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🞥 As far as India is concerned, the report said the actions taken so far has been ineffective to control the toxic air pollution.

🞥 If we want India to breathe clean air, **it's high time that our plans such as NCAP, GRAP, CAP etc. become much more stringent, aggressive, legally binding and most of all implementable at ground** rather than being just used a political statement without much happening at ground.

Crop burning

Why in News?

The burning of agricultural residue — **a contributor to north India's winter pollution** — increases the risk of respiratory illnesses threefold for those who experience it. It may also be responsible for an annual $30 billion loss in terms of days of work lost in States affected by crop burning, according to a study by the **International Food Policy Research Institute (IFPRI).**

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Highlights

1. In Haryana, 5.4% of surveyed individuals reported suffering from ARI (**Acute Respiratory Infection**) whereas the reported ARI symptoms in southern States was only 0.1%.

2. Among those who reported suffering from ARI, 83% also reported receiving treatment for ARI at a private or public medical facility.

3. Whereas high-intensity fire exposure was virtually absent in south India, 17.5% of individuals in Haryana lived in a district where 100 or more fires per day were observed by the satellite.

> Crop-burning fires detected by the Moderate-Resolution Imaging Spectroradiometer (**MODIS**) Terra satellite, managed by the National Aeronautics Space Administration (NASA) was used for the study.

4. It is not only the residents of Delhi, but also women, children and men of rural Haryana who are the first victims of crop residue burning. Much of the public discussion on the ill-effects of crop residue burning ignores this immediately affected vulnerable population.

'Zero tolerance'

In 2013, the National Green Tribunal (NGT) issued a directive to Punjab, Haryana and Uttar Pradesh, asking them to ban stubble burning. The Environment Ministers of these States as well as top officials at the Centre declared a "**zero tolerance" policy on the burning of stubble**, which has been estimated to contribute anywhere from 7% to 78% of the particulate matter-emission load in Delhi during winter.

> **PEPPER IT WITH**
> CGIAR, International Rice Research Institute, National Green Tribunal, SAFAR, Methanol economy

IFPRI

The International Food Policy Research Institute (IFPRI) provides research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition in developing countries. Established in 1975, it is a research center of CGIAR, a worldwide partnership engaged in agricultural research for development.

Star rating programme

Why in News?

Ministry of Power, Government of India expanded its ambitious Standards & Labelling (Star Rating) program for Energy Efficient for Appliances to cover the **Microwave Ovens and Washing Machines in the country**.

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Details

- The Star Labelling Programs has been **formulated by Bureau of Energy Efficiency** as part of its mandate, under the Energy Conservation Act, 2001.

- The program will now include these two appliances for grant of Star Rating **in terms of their energy performance**. Initially, the program for above two appliances will be implemented on a voluntary basis and will be valid up to 31st December 2020.

- As a major step towards faster adoption of Standards & Labelling program and with the objective of "Ease of implementation", BEE has developed an online registration platform for expeditious registration & approval under this initiative.

- The manufacturers will be able to register products online for availing appropriate star rating for respective Models / products. Any model / brand of Washing Machine or a Microwave Oven can avail Star Rating on a scale of 1 to 5 based on test report from NABL or equivalent labs subsequent to scrutiny by BEE.

Significance

The size of Indian Microwave Oven market stood at 1.21 million units in year FY 2017-18 and is projected to grow at a Compound Annual Growth Rate (CAGR) of around 2%. Whereas, the size of Indian Washing Machine market stood at 6.1 million units in year FY 2017-18 and is projected to grow at a CAGR of around 8% fuelled by a growth in urbanization. Therefore, it is important to optimize energy performance of Microwave Ovens and Washing Machines.

This will **create awareness amongst the domestic consumers to encourage transition towards energy efficient** microwave ovens and Washing machines.

Unlocking National Energy Efficiency potential (UNNATEE)

✓ Bureau of Energy Efficiency (BEE) has developed a national strategy document for accelerating energy efficiency in India. The strategy document titled UNNATEE describes a plain framework and implementation strategy to establish a clear linkage between energy supply-demand scenarios and energy efficiency opportunities.

✓ The document offers a comprehensive roadmap to address India's environmental and climate change mitigation action through energy efficiency measures. The document has now been released for larger public consultation and seeking comments/ valuable inputs from all the stakeholders.

> **PEPPER IT WITH**
> Standards and Labeling by BEE, Energy Conservation Building Codes, National Mission for Enhanced Energy Efficiency, GRIHA,

✓ This exercise is first of its kind, clearly delineating the energy efficiency targets for the respective demand sectors up to the state levels. Developing India's blueprint of effective energy efficiency strategy is a leap towards stimulating energy efficiency ecosystem and enabling reduction of the pressure on demand.

✓ **PwC India has assisted BEE** in executing this assignment. This document has been prepared after extensive discussion with various departments, organisations and authorities.

BEE

The BEE is a statutory body under the Ministry of Power, which assists in developing policies and strategies **with the primary objective of reducing the energy intensity of the Indian economy**. BEE coordinates with designated consumers, designated agencies, and other organizations to identify and utilize the existing resources and infrastructure, in performing the functions assigned to it under the Energy Conservation Act.

India Cooling Action Plan Launched

Why in News?

India is one of the first countries in the world to develop a comprehensive Cooling Action plan which has a long term vision **to address the cooling requirement across sectors** and lists out actions which can help reduce the cooling demand.

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Cooling requirement is cross sectoral and an essential part for economic growth and is required across different sectors of the economy such as residential and commercial buildings, cold-chain, refrigeration, transport and industries

Details

Union Minister for Environment, Forest and Climate Change released the India Cooling Action Plan (ICAP). The thrust of the India Cooling Action Plan (ICAP) is to look for synergies in actions for securing both environmental and socio-economic benefits. The overarching goal of ICAP is to provide sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society. **This will also help in reducing both direct and indirect emissions**.

ICAP

India Cooling Action Plan (ICAP) provides an integrated vision towards cooling across sectors encompassing inter alia reduction of cooling demand, refrigerant transition, enhancing energy efficiency and better technology options with a 20 year time horizon.

The India Cooling Action seeks to

- Reduce cooling demand across sectors by 20% to 25% by 2037-38
- Reduce refrigerant demand by 25% to 30% by 2037-38
- Reduce cooling energy requirements by 25% to 40% by 2037-38

- Recognize "cooling and related areas" as a thrust area of research under national S&T Programme
- Training and certification of 100,000 servicing sector technicians by 2022-23, synergizing with Skill India Mission.

PEPPER IT WITH
CFC's, HFC's, Vienna Convention, Montreal protocol, UN Solar Project, National Wind-Solar Hybrid Policy

Significance

The following benefits would accrue to the society over and above the environmental benefits:

(i)   **Thermal comfort for all** – provision for cooling for EWS and LIG housing

(ii)   **Sustainable cooling** – low GHG emissions related to cooling

(iii)   **Doubling Farmers Income** – better cold chain infrastructure – better value of produce to farmers, less wastage of produce

(iv)   **Skilled workforce for better livelihoods** and environmental protection

(v)   **Make in India** – domestic manufacturing of air-conditioning and related cooling equipment's

(vi)   **Robust R&D on alternative cooling technologies** – to provide push to innovation in cooling sector.

Way Forward

Cooling is also linked to human health and productivity. **Linkages of cooling with Sustainable Development Goals (SDGs) are well acknowledged**. The cross-sectoral nature of cooling and its use in development of the economy makes provision for cooling an important developmental necessity.

Project Varshadhari

Why in News?

Karnataka government pushed a tender call for cloud seeding operations to enhance rainfall during the monsoons of 2019 and 2020.

Cloud seeding **uses planes** to spray clouds with chemicals to condense smaller particles into larger rain droplets.

Varshadhari

The department is aiming to replicate the ₹35-crore 'Varshadhari' project two years ago that was called a success by an independent evaluation committee. Its report, submitted to the State government in 2018, estimated that rainfall was enhanced by 27.9% and there was an extra inflow of 2.5 tmcft into Linganamakki reservoir. Despite the positive response, the department could not obtain approvals in time for cloud seeding in 2018.

Cloud Seeding

- Cloud seeding or weather modification is an artificial way to induce moisture in the clouds so as to cause a rainfall.

- In this process, either **silver iodide or dry ice is dumped onto the clouds** by using an aircraft or an artillery gun which leads to a rain shower.

- After some research, hygroscopic materials **like table salt** are being increasingly used. Water managers are also seeing cloud seeding as one way of increasing winter snowfall.

- At least 56 countries have used some sort of cloud seeding, according to the World Meteorological Organization. These efforts range from the United Arab Emirates trying to meet an increasing demand for water, to China using cloud seeding in an effort to fight pollution before the 2008 Summer Olympics opening ceremony.

- In United States, cloud seeding is occasionally used by ski resorts to induce snowfall. China frequently uses weather modification system to create rainfall during droughts. China is set on seeding more clouds as it grapples with the problem of pollution and inadequate rainfall.

Indian Forest Act amendment

In News

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has finalised the first draft of the comprehensive amendments to the Indian Forest Act, 1927 (IFA). The draft has been prepared based on the inputs of a **core committee** constituted by the ministry.

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Highlights

The amendment defines community as "a group of persons specified on the basis of government records living in a specific locality and in joint possession and enjoyment of common property resources, without regard to race, religion, caste, language and culture".

Forest is defined to include "any government or private or institutional land recorded or notified as forest/forest land in any government record and the lands managed by government/community as forest and mangroves, and also any land which the central or state government may by notification declare to be forest for the purpose of this Act."

> **PEPPER IT WITH**
> The Indian Forest Act, 1927, Draft National Forest Policy, 2018, 324th report on status of forests in India, Community forest rights, MB Shah report, TSR Subramanian report

While the preamble of IFA, 1927, said the Act was focused on laws related to transport of forest produce and the tax on it, the amendment has increased the focus to "conservation, enrichment and sustainable management of forest resources and matters connected therewith to safeguard ecological stability to ensure provision of ecosystem services in perpetuity and to address the concerns related to climate change and international commitments".

The amendments specifically deal with the Forest Rights Act, 2006 (FRA). The amendments say if the state government, after consultation with the central government, feels that the rights under FRA will hamper conservation efforts, then the state "may commute such rights by paying such persons a sum of money in lieu thereof, or grant of land, or in such other manner as it thinks fit, to maintain the social organisation of the forest dwelling communities or alternatively set out some other forest tract of sufficient extent, and in a locality reasonably convenient, for the purpose of such forest dwellers".

The amendment also introduces **a new category of forests — production forest**. These will be forests with specific objectives for production of timber, pulp, pulpwood, firewood, non-timber forest produce, medicinal plants or any forest species to increase production in the country for a specified period.

Forest-certification scheme

Why in News?

India now has a globally recognised forest-certification scheme developed specifically for Indian forests. Recently, a Geneva-based non-profit decided to endorse the Certification Standard for Sustainable Forest Management (SFM) developed by Network for Certification and Conservation of Forests (NCCF), an Indian non-profit.

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The council of Programme for Endorsement of Forest Certification (PEFC), the **international non-profit** that provides independent third-party certification for sustainable forest management, took this decision through a postal ballot.

NCCF

The **NCCF was set up in 2015** by representatives of forest-based industries, non-profits, forest auditors and government forest departments with an aim to set standards for certifying India's forests, their products and their sustainable management.

Forest certification

Forest certification, **a global movement initiated in 1990s after Rio Earth Summit**, is a market-based non-regulatory conservation tool designed to promote sustainable management of forests and trees outside forests by an independent third party.

Significance

- As several developed countries have put trade restrictions on import of non-certified timber, non-timber forest products and wood-based goods into their countries, getting sustainable forest management certificates has become mandatory for exports.

- Forest-based industries in India, **particularly those for paper, boards, plywood, medium density fiber board, furniture and handicrafts** etc, have been pushing for forest certification to enhance their market accessibility to western markets including European Union and USA.

> **PEPPER IT WITH**
> Compensatory afforestation fund, Indian Council of Forestry Research and Education, REDD, REDD+

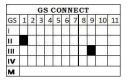- The NCCF's forest certification scheme is aimed to improve India's forest management regime that is often criticised for various issues ailing the sector such as forest rights, forest degradation, biodiversity losses, encroachments, lack of manpower, etc.

- It is an appropriate time to find the causes of these chronic problems through the lens of forest certification and third-party monitoring to suggest suitable and sustainable solutions to Indian forest management.

Indian Forest Act, 2019

In News

The Indian Forest Act, 2019 is envisaged as an amendment to the Indian Forest Act, 1927 and is an attempt to address contemporary challenges to India's forests.

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A proposed legislation accords significant powers to India's forest officers — including the power issue search warrants, enter and investigate lands within their jurisdictions, and to provide indemnity to forest officers using arms to prevent forest-related offences.

Highlights

1. Amendment proposed to provide indemnity to Forest-officer using arms etc, to prevent the forest offence. Forest-officer not below the rank of a Ranger shall have power to hold an inquiry into forest offences, and shall have the powers to search or issue a search warrant under the **Code of Criminal Procedure, 1973**.

> **PEPPER IT WITH**
> Ganga Vriksharopan Abhiyan, CAMPA bill, Perform Achieve and Trade (PAT) Scheme, separate Forest Survey

2. "**Village forests**", according to the proposed Act, may be forestland or wasteland, which is the property of the government and would be jointly managed by the community through the Joint Forest Management Committee or Gram Sabha.

3. The legislation also proposes a forest development cess of up to 10% of the assessed value of mining products removed from forests, and water used for irrigation or in industries. This amount would be deposited in a special fund and used "**exclusively for reforestation**; forest protection and other ancillary purposes connected with tree planting, forest development and conservation.

Significance

Recently Supreme Court stayed its own controversial order, directing State governments to evict nearly a million forest dwellers who couldn't prove their title claims to forest land. **This was after it emerged that several States had high rejection rates and due process in checking claims wasn't always followed**.
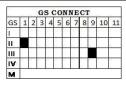
In effect, the aim of the amendment is to strengthen the forest bureaucracy in terms of deciding on how to decide on title claims over forest land, what parts to declare off-limits for conservation, checking encroachments, etc.

Island protection zone (IPZ) 2019 for Andaman and Nicobar

Why in News?

The union environment ministry has notified island protection zone (IPZ) 2019 for Andaman and Nicobar, which allows eco-tourism projects 20 metres from the **high tide line** (HTL) in smaller islands and at 50 metres in **larger ones**, and relaxed other norms, triggering concern among some green activists.

Highlights

- It allows for eco-tourism activities like mangrove walks, tree huts and nature trails in island coastal regulation zone IA (**classified as the most eco-sensitive region of the islands which includes turtle nesting grounds, marshes, coral reefs etc**).

- The notification also allows for construction of roads, roads on stilts by reclaiming land in exceptional cases for defence installations, public utilities or strategic purposes in eco-sensitive zones.

- It states that in case construction of such roads pass through mangroves, **a minimum three times the mangrove area destroyed during the construction process shall be taken up for compensatory plantation of mangroves elsewhere**. These were not allowed under the **IPZ 2011 notification which only permitted pipelines**, transmission lines, trans-harbor links to be laid in the eco-sensitive zone.

> **PEPPER IT WITH**
> CRZ notification 2018, Floor Space Index for CRZ, The Waigani convention, Pamban or Rameshwaram Island

- The new notification also allows a number of new activities in the inter-tidal zone between low tide line and HTL This includes land reclamation and bunding for foreshore facilities like ports, harbours, jetties, wharves, quays, sea links etc, transfer of hazardous substances from ships to ports, manual mining of atomic minerals, and mining of sand for construction purposes with permission from local authorities in non-eco-sensitive sites.

- The 2011 notification allowed a few activities in the inter-tidal zone like construction of huts for fisher folk and other public facilities required for traditional inhabitants.

Concerns

- ✓ The notification relaxes development norms in the islands compared to the IPZ notification of 2011, which stipulated a no-development zone (NDZ) of 200 metres from the HTL for all islands.

- ✓ This brings the norms for **Andaman and Nicobar at par with coastal regulation zone** (CRZ) norms for other islands close to the mainland and backwater islands where an NDZ only 20 metres from HTL has been stipulated.

- ✓ Experts said the new notification was in line with the government's plans of opening up the "**blue economy**."

- ✓ The amendments are considered dangerous by activists. It will have an impact on the fragile ecology of this region like our marine biodiversity including corals and turtle nesting sites.

Hazardous Waste (Management& Transboundary Movement) Rules, 2016

Why in News?

In order to strengthen the implementation of environmentally sound management of hazardous waste in the country, the Ministry of Environment, Forest and Climate Change has amended the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.

The amendment has been done keeping into consideration the "**Ease of Doing Business" and boosting "Make in India" initiative** by simplifying the procedures under the Rules, while at the same time upholding the principles of sustainable development and ensuring minimal impact on the environment.

Some of the salient features of the Amendment Rules, 2019:

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- Solid plastic waste has been prohibited from import into the country including in Special Economic Zones (SEZ) and by Export Oriented Units (EOU).
- **Exporters of silk waste** have now been given exemption from requiring permission from the Ministry of Environment, Forest and Climate Change.
- Electrical and electronic assemblies and components manufactured in and exported from India, if found defective can now be imported back into the country, **within a year of export**, without obtaining permission from the Ministry of Environment, Forest and Climate Change.

> **PEPPER IT WITH**
> BASEL Convention, Stockholm Convention, REDD+, Kigali agreement, Aichai targets

- Industries which do not require consent under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981, are now exempted from requiring authorization also under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016, provided that hazardous and other wastes generated by such industries are handed over to the authorized actual users, waste collectors or disposal facilities.

Measures to promote Hydro Power Sector

Why in News?

The Union Cabinet has approved Measures to promote Hydro Power Sector. These include Declaring Large Hydropower Projects (HPO) as part of non-solar Renewable Purchase Obligation (RPO).

India is endowed with large hydropower potential of 1,45,320 MW, of which only about 45,400 MW has been utilized so far. The hydropower sector is currently going through a challenging phase and the share of hydropower in the total capacity has declined from 50.36% in the 1960s to around 13% in 2018-19.

Details:

- Large Hydropower Projects to be declared as Renewable Energy source (as per existing practice, **only hydropower projects less than 25MW are categorized as Renewable Energy**).
- HPO as a separate entity within non-solar Renewable Purchase Obligation to cover LHPs commissioned after notification of these measures (**SHPs are already covered under Non-Solar Renewable Purchase Obligation**).
- Tariff rationalization measures including providing flexibility to the developers to determine tariff by back loading of tariff after increasing project life to 40 years, increasing debt repayment period to 18 years and introducing escalating tariff of 2%;
- Budgetary support for funding flood moderation component of hydropower projects on case to case basis
- Budgetary support for funding cost of enabling infrastructure i.e. roads and bridges on case to case basis as per actual, limited to Rs. 1.5 crore per MW for upto 200 MW projects and Rs. 1.0 crore per MW for above 200 MW projects.

> ### Kiru Hydro Electric Project
> ❖ The Cabinet Committee on Economic Affairs has approved the investment sanction for construction of Kiru Hydro Electric Project by Chenab Valley Power Projects Private Limited in Jammu & Kashmir.
> ❖ The project is located on River Chenab in Kishtwar district of Jammu & Kashmir. It envisages construction of a 135 m high concrete **gravity Dam above deepest foundation level.**
> ❖ It will provide much needed power in northern grid and shall accelerate process of development of remote areas of Jammu and Kashmir.
> ❖ Kiru HE Project is envisaged as a **Run of River (RoR) Scheme**, designed complying with the requirements of Indus Water Treaty 1960, with installed capacity 624 MW (4 x 156 MW).

Significance

1. As most of the hydro power potential is located in the higher reaches of Himalayas and North- East Region, **it will result in overall socio-economic development of the region by providing direct employment** in the power sector.

2. It will also provide indirect employment/ entrepreneurial opportunities in the field of transportation, tourism and other small scale businesses.

3. Another benefit would be of having a stable grid considering 160 GW capacity addition by 2022 from infirm sources of power like solar and wind.
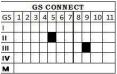
> **PEPPER IT WITH**
> Tehri Dam, Sardar Sarovar Dam, Bhakra Nangal Dam (Gobind Sagar), Teesta dam,

4. Besides being environment friendly, hydropower has several other unique features like **ability for quick ramping, black start, reactive absorption etc**. which make it ideal for peaking power, spinning reserve and grid balancing/ stability.

5. The importance of hydropower is increasing even more as the country has targeted to add 160 GW of intermittent Solar and Wind power by 2022 and 40% of the total capacity from non-fossil fuel sources by 2030 **to honour its Nationally Determined Contribution for Climate Change.**

6. However, DISCOMS are reluctant to sign **Power Purchase Agreements** (PPAs) Hydro Power due to higher tariff, particularly, in the initial years. One of the reasons for high tariff of hydropower is the loading of cost of flood moderation and enabling infrastructure in the project cost.

7. In this backdrop, the decision has been taken to adopt measures to promote hydropower sector including providing budgetary support for flood moderation cost and enabling infrastructure cost and tariff rationalization measures to reduce tariff and thus the burden on the consumer.

Dam Rehabilitation and Improvement Project (DRIP)

Why in News?

The World Bank, the Government of India and representatives of 5 States of Government of India and Implementing Agencies signed the Loan Agreement for Additional Financing of $137 Million for the DRIP that will help rehabilitate and modernize over 220 selected large dams in the **States of Karnataka, Kerala, Madhya Pradesh, Odisha, Tamil Nadu and Uttarakhand.**

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The additional funding will be used for construction of an additional spillway for Hirakud Dam in Odisha State as well as continue to help in rehabilitation and improvement of other dams including strengthening the institutional, legal and technical framework for dam safety assurance within the GoI and in the participating States.

Background

India is home to more than 5200 large dams and another 400 that are under construction having a total storage capacity of more than 300 billion cubic meters. Rainfall, which occurs mainly in intense and unpredictable downpours within short monsoon seasons, is of high temporal and spatial variability and does not meet year-round irrigation and other water demands. Considering this, storage of water is essential for India. The dams play a key role in fostering rapid and sustained agricultural and rural growth and development – a key priority for the Government of India since independence.

These dams benefit millions of people who rely on their waters for livelihood, and therefore need to be strengthened with more investment in their operations and maintenance. Flood protection measures in many dams need to be supported as well, as their failure could pose serious risks to downstream communities.

DRIP

- GoI has taken up DRIP with the financial assistance of the World Bank for the repair and rehabilitation of initially about 225 dam projects across the seven states of India, namely Jharkhand (DVC), Karnataka, Kerala, Madhya Pradesh, Odisha, Tamil Nadu, and Uttarakhand (UJVNL).

- The **Central Dam Safety Organisation of Central Water Commission is coordinating and supervising the Project implementation**.
- The objectives of DRIP is to improve the safety and operational performance of selected existing dams and associated appurtenances in a sustainable manner, and to strengthen the dam safety institutional setup of participating States / Implementing Agencies.

PEPPER IT WITH
Shahpurkandi dam, Sardar Sarovar Dam, Narmada bachao andolan, Renukaji dam, Mandal dam

- It is an externally-aided project. 80% of the total project is provided by the World Bank as loan/credit and remaining 20% is borne by the States / Central Government (for CWC). Govt. of India has not sought funding from any internal agency for this project.

UN Environment Assembly

In News

The fourth session of the UN Environment Assembly (UNEA-4) took place in Nairobi, Kenya, as agreed during UNEA-3 in December 2017. UNEA-4 was presided by Estonia.

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Under the overall theme, '**Innovative Solutions for Environmental Challenges and Sustainable Consumption and Production**,' UNEA-4 delibrated upon

- environmental challenges related to poverty and natural resources management, including sustainable food systems, food security and halting biodiversity loss;
- life-cycle approaches to resource efficiency, energy, chemicals and waste management; and
- innovative sustainable business development at a time of rapid technological change.

UNEP

- It is the world's highest-level decision-making body on the environment and addresses the critical environmental challenges facing the world today. Understanding these challenges and preserving and rehabilitating our environment is at the heart of the 2030 Agenda for Sustainable Development.
- The Environment **Assembly meets biennially** to set priorities for global environmental policies and develop international environmental law.
- It was created in 2012, when world leaders called for UN Environment to be strengthened and upgraded during the United Nations Conference on Sustainable Development, also referred to as RIO+20.
- The first and second sessions of the UN Environment Assembly tackled and adopted resolutions on major issues of illegal trade in wildlife, air quality, environmental rule of law, financing the Green Economy, the Sustainable Development Goals, and "delivering on the environmental dimension of the 2030 Agenda for Sustainable Development".
- The Third Environment Assembly took place in Nairobi in 2017, under the overarching theme "Towards a pollution-free planet". The Assembly addressed five sub-themes: Water Pollution, Land Pollution, Marine Pollution, Air Pollution, and Sound Management of Chemicals and Waste.

India

- In a significant first, India piloted resolutions on two important global environment issues relating to **Single-use Plastics and Sustainable Nitrogen management** at the fourth session of UNEA.

PEPPER IT WITH
Green climate fund, Agenda 20, Rio +20, Bali Agreement

- UNEA adopted both the resolutions with consensus. The theme of the UNEA this year was Innovative Solutions for environmental challenges and sustainable production and consumption.
- India also hosted, in the High-Level Segment of UNEA, a session on "**Global Partnerships: Key to Unlocking Resource Efficiency and Inclusive Green Economies**".
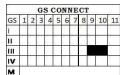
- ✓ India highlighted that climate finance is an important lever for climate action related to both mitigation and adaption in the developing countries.
- ✓ The contributions to climate finance need to be in consonance with the basic principles of common but differentiated responsibility and respective capabilities (CBDR-RC). Climate finance is more of an obligation of the developed countries, based on their historical emissions.

IEA Bioenergy TCP

Why in News?

Ministry of Petroleum & Natural Gas, Government of India joined IEA Bioenergy TCP **as its 25th member**.

IEA Bioenergy TCP

International Energy Agency's Technology Collaboration Programme on Bioenergy (IEA Bioenergy TCP) is an **international platform for co-operation among countries** with the aim of improving cooperation and information exchange between countries that have national programmes in bioenergy research, development and deployment.

IEA Bioenergy TCP works under the framework of International Energy Agency (IEA) to which India has "Association" status.

Significance

- The primary goal of joining IEA Bioenergy TCP by Ministry of Petroleum & Natural Gas (MoP&NG) is to **facilitate the market introduction of advanced biofuels** with an aim to bring down emissions and reduce crude imports.

- IEA Bioenergy TCP also provides a platform for international collaboration and information exchange in bioenergy research, technology development, demonstration, and policy analysis with a focus on overcoming the environmental, institutional, technological, social, 'and market barriers to the near-and long-term deployment of bioenergy technologies.

- The benefits of participation in IEA Bioenergy TCP are **shared costs and pooled technical resources**. The duplication of effort is avoided and national Research and Development capabilities are strengthened. There is an information exchange about best practices, network of researchers and linking research with practical implementation.

> **PEPPER IT WITH**
> National policy on Biofuels 2018, Generation of biofuels, Ethanol blending, Mission Innovation

- Engagement with International Agencies will also apprise the Ministry of the developments taking place Worldwide in Biofuel sector, provide opportunity of personal interaction with innovators/ Researchers and help in bringing suitable policy ecosystem.

- In addition, after becoming member, **India can participate in other related Tasks** focusing on Biogas, Solid waste Management, Biorefining etc. which could be participated by relevant Ministries/ Departments/ Organizations of the Country.

IEA

- ✓ It is an autonomous, intergovernmental organisation. The IEA family of 30 Member countries and 8 Association countries **accounts for almost 75% of global energy consumption and more than half of global energy production**.
- ✓ It works on energy policies, hold training around the world, collaborate with experts from government, industry & research, host leading speakers for talks on the future of energy, and much more.
- ✓ Located in Paris, It was established in 1974 in the wake of the 1973 oil crisis. India is an associate member of IEA.

KSG

Ice Stupa

Why in News?

Indian Post released a special cover on Ice Stupa.

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Ice Stupa

- The **idea behind artificial glaciers is to freeze** and hold the water that keeps flowing and wasting away down the streams and into the rivers throughout the winter. Instead, **this ice will melt in the springtime, just when the fields need watering.**

- This is achieved by freezing the stream water vertically in the form of huge ice towers or cones of 30 to 50m height that look very similar to the **local sacred mud structures called Stupa or Chorten**. These ice mountains can be built right next to the village itself where the water is needed.

- Very little effort or investment would be needed except for laying one underground pipeline from a higher point on the stream to the outskirts of the village. Normally the head difference is easily 100m over a distance of roughly one to three kilometers.

- Water maintains its level. Therefore water piped from 60m upstream would easily rise close to 60m up from ground when it reaches the village. Then it is made to fall from that height in cold Ladakhi winter nights when it is -30 to -50°C outside (with wind **chill factor**).
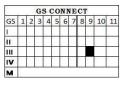
> **PEPPER IT WITH**
> Sujlam Suflam Yojna, Atal bhujal yojana, 2030 Water Resources Group, Jal kranti abhiyan

- The water would freeze by the time it reaches the ground and slowly form a huge cone or Ice Stupa roughly 30 to 50m high.

- In reality it won't even need a tower structure since the piped water first freeze at the ground level and then mount higher meter by meter as the thickness of the ice grows, finally reaching close to the height of the source.

- The idea is also to conserve this tower of ice as long into the summer as possible so that as it melts, it feeds the fields until the real glacial melt waters start flowing in June.

- Since **these ice cones extend vertically upwards towards the sun, they receive fewer of the sun's rays per the volume of water stored**; hence, they will take much longer to melt compared to an artificial glacier of the same volume formed horizontally on a flat surface.

International Workshop on Disaster Resilient Infrastructure

Why in News?

An International Workshop on Disaster Resilient Infrastructure (IWDRI) was organised by the National Disaster Management Authority (NDMA) in collaboration with United Nations Office for Disaster Risk Reduction (UNISDR), and in partnership with the Global Commission on Adaptation, United Nations Development Programme and the World Bank.

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The workshop aimed to

(i) Identify good practices of disaster risk management in key infrastructure sectors,

(ii) Identify specific areas and pathways for collaborative research on DRI (Transport, Energy, Telecom and Water),

(iii) Discuss and co-create the broad contours of the Coalition for Disaster Resilient Infrastructure (CDRI) as well as a notional roll-out plan for the next three years, and

(iv) Build a forum for members to work on areas of common interest and make specific commitments.

NDMA

In 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA**), headed by the Prime Minister**, and State Disaster Management Authorities (SDMAs) **headed by respective Chief Ministers**, to spearhead and implement a holistic and integrated approach to Disaster Management in

India. It is apex statutory body for disaster management in India, under control of Ministry of Home Affairs (MHA).

NDMA is mandated to lay down the policies, plans and guidelines for Disaster Management to ensure timely and effective response to disasters. Towards this, it has the following responsibilities:-

PEPPER IT WITH
Sendai Framework for Disaster Risk Reduction, Hyogo framework, Coalition for Disaster Resilient Infrastructure, National Institute of Disaster Management

- Lay down policies on disaster management ;
- Approve the National Plan;
- Approve plans prepared by the Ministries or Departments of the Government of India in accordance with the National Plan;
- Lay down guidelines to be followed by the State Authorities in drawing up the State Plan;
- Lay down guidelines to be followed by the different Ministries or Departments of the Government of India for the Purpose of integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and projects;
- Coordinate the enforcement and implementation of the policy and plans for disaster management;
- Recommend provision of funds for the purpose of mitigation;
- Provide such support to other countries affected by major disasters as may be determined by the Central Government;
- Take such other measures for the prevention of disaster, or the mitigation, or preparedness and capacity building for dealing with threatening disaster situations or disasters as it may consider necessary;
- Lay down broad policies and guidelines for the functioning of the National Institute of Disaster Management.
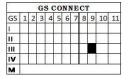
UNISDR
- ✓ It **was established in 1999** as a dedicated secretariat to facilitate the implementation of the International Strategy for Disaster Reduction (ISDR).
- ✓ It is mandated by the United Nations General Assembly to serve as the focal point in the United Nations system for the coordination of disaster reduction and to ensure synergies among the disaster reduction activities of the United Nations system and regional organizations and activities in socio-economic and humanitarian fields.
- ✓ **It is an organisational unit of the UN Secretariat** and is led by the UN Special Representative of the Secretary-General for Disaster Risk Reduction (SRSG).

Flood Management Works in entire country and River Management Activities

Why in News?

The Union Cabinet approved the "**Flood Management and Border Areas Programme** (FMBAP)" for Flood Management Works in entire country and River Management Activities and works related to Border Areas for the period 2017-18 to 2019-20.

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Details

The FMBAP Scheme **will be implemented throughout the country** for effective flood management, erosion control and anti-sea erosion. The proposal will benefit towns, villages, industrial establishments, communication links, agricultural fields, infrastructure etc. from floods and erosion in the country. The catchment area treatment works will help in reduction of sediment load into rivers.

Salient features

- The Scheme "FMBAP" has been framed by merging the components of **two continuing XII Plan schemes titled "Flood Management Programme (FMP)" and "River Management Activities and Works related to Border Areas (RMBA)"**.

- The aim of the Scheme is to assist the State Governments to provide reasonable degree of protection against floods in critical areas by adopting optimum combination of structural and non-structural measures and enhancing capabilities of State/Central Government officials in related fields.

- The works under the scheme will protect valuable land from erosion and flooding and help in maintaining peace along the border. The Scheme aims at completion of the on-going projects already approved under FMP.
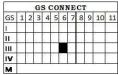
PEPPER IT WITH
Pancheshwar Multipurpose Project, Sapta Kosi-Sun Kosi Projects, Brahmaputra River

- Further, the scheme also caters to Hydro-meteorological observations and Flood Forecasting on common rivers with the neighbouring countries. The Scheme also includes survey and investigations, preparation of DPR etc. of water resources projects on the common rivers with neighbouring countries like **Pancheshwar Multipurpose Project, Sapta Kosi-Sun Kosi Projects in Nepal which would benefit both countries**.

SPACE

ARTEMIS mission

- Data from NASA's ARTEMIS mission suggests that the solar wind and the Moon's crustal magnetic fields work together to give the Moon a distinctive pattern of **darker and lighter swirls**.

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- The Sun releases a continuous outflow of particles and radiation called the solar wind, which spreads over the planets, Moons and other bodies in our solar system.

- NASA has now analysed data to show that these are a result of interactions between the **Sun's damaging radiations with pockets of lunar magnetic field**.

- The Sun releases a continuous outflow of particles and radiation called the solar wind. Because the solar wind is magnetised, **Earth's natural magnetic field deflects the solar wind particles so that only a small fraction of them reach the planet's atmosphere**. But the Moon has no global magnetic field; magnetised rocks near the lunar surface do create small, localised spots of magnetic field.

- ARTEMIS (Acceleration, Reconnection, Turbulence and Electrodynamics of the Moon's Interaction with the Sun) is made up of two probes P1 and P2. They were originally members of the successful mission THEMIS in Earth orbit studying Earth's aurora, but were redirected to the moon in an effort to save the two probes from losing power in Earth's shade.

- Through this new mission scientists look to learn more about the **Earth-moon Lagrange points, the solar wind, the Moon's plasma wake and how the Earth's magneto tail** and the moon's own weak magnetism interact with the solar wind.

Atmospheric Waves Experiment (AWE) mission

- The mission will help scientists understand and, ultimately, forecast the vast space weather system around our planet.

- Space weather is important because it can have profound impacts --affecting technology and astronauts in space, disrupting radio communications and, at its most severe, overwhelming power grids.

- The Atmospheric Waves Experiment (AWE) mission will cost USD 42 million and is **planned to launch in 2022**, attached to the exterior of the Earth-orbiting International Space Station (ISS).

- From its space station perch, AWE will focus on colourful bands of light in Earth's atmosphere, **called airglow**, to determine what combination of forces drive space weather in the upper atmosphere.

- AWE is a Mission of Opportunity under NASA's **Heliophysics Explorers Program**, which conducts focused scientific research and develops instrumentation to fill the scientific gaps between the agency's larger missions.

AstroSat

The Indian multi-wavelength space observatory **AstroSat**, launched in 2015, continues to yield exciting results. Using this observatory, astronomers from Thiruvananthapuram and Mumbai have identified a new population of ultraviolet stars in the globular cluster NGC 2808.

NGC 2808 is one of the most massive globular clusters that is know of, and is located at a distance of 47,000 light years from us.

Globular clusters

- **Globular clusters are collections of thousands to millions of stars, moving as one unit**. These stars are tightly held together by gravity of the cluster itself, and are believed to have formed together at roughly the same time.
- Some globular clusters could be among the oldest objects in our Milky Way, which hosts over 150 of them.
- Since a globular cluster contains stars with a variety of masses but with similar chemical composition, a snapshot of it could reveal stars of different masses at different stages of their evolution. The Sun will, **after 5 billion years, expand to become a red giant star and go through some of these stages.**
- Stars which are more massive than the Sun will undergo different evolutionary paths, and will be much brighter in the ultraviolet range since they are hotter. Hence globular clusters are good laboratories to test theories of stellar evolution.

Pulsar

- NASA has discovered a pulsar hurtling through space at nearly four million kilometres an hour — so fast that it could travel the distance between Earth and the Moon in just six minutes.
- It was dubbed as PSR J0002+6216 (J0002 for short), sports a radio-emitting tail pointing directly toward the expanding debris of a recent supernova explosion.

- **Pulsars are among the strangest objects in the universe**. They are superdense, rapidly spinning neutron stars left behind when a massive star explodes.

- A pulsar is formed **when a massive star collapses exhausts its supply of fuel**. It blasts out in a giant explosion known as a supernova, the most powerful and violent event in the universe. **Without the opposing force of nuclear fusion to balance it, gravity begins to pull the mass of the star inward until it implodes**.

PEPPER IT WITH
Hayabusa-2, NovaSAR, Space Elevator, Remove DEBRIS, Yaogan – 30 project, Aditya-L1, Proxima Centauri, Bennu, Stratolaunch, Supernova

- In a pulsar, gravity compacts the mass of the star **until it forms an object composed primarily of neutrons** packed so tightly that they no longer exist as normal matter.

PRISMA Satellite

- A European Vega rocket carried a new Earth-observation satellite into orbit for the Italian Space Agency. The PRISMA Earth observation satellite will operate in **a sun-synchronous orbit.**
- PRISMA (an Italian acronym for Hyperspectral Precursor of the Application Mission) is designed to provide information about environmental monitoring, resources management, pollution and crop health.
- The satellite includes a medium resolution camera that can view across all visual wavelengths, as well as a hyperspectral imager that can capture a wider range of wavelengths between 400 and 2500 nanometers.
- The mission can provide a unique contribution to the observations of natural resources and in the study of key environmental processes, such as interaction between atmosphere, biosphere and hydrosphere, observation of global climate change and effects of human activities ecosystems.
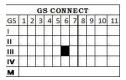
GRAPES-3

The GRAPES-3 experiment located at Ooty in India started as a collaboration of the Tata Institute of Fundamental Research, Mumbai, India and the Osaka City University, Osaka, Japan.

GRAPES-3 (Gamma Ray Astronomy PeV EnergieS phase-3) is designed **to study cosmic rays with an array of air shower detectors and a large area muon detector**.

Ooty's muon detection facility

Why in News?

For the first time in the world, researchers at the GRAPES-3 muon telescope facility in Ooty have **measured the electrical potential, size and height of a thundercloud that passed overhead**.

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Cloud structure

Clouds have negative charges along their lower side and positive charges on top and can be several kilometres thick. If balloons are used to measure the potential difference between the top and bottom, they will take hours to traverse the distance. Unfortunately, thunderstorms last only for about 15-20 minutes, and this method fails.

Threshold of detection

- Muons and other particles are produced **when cosmic rays bombard air particles surrounding the earth**.

> **PEPPER IT WITH**
> Kessler effect, World Meteorological Day, Charge-parity (CP) violation,

- The muons produced can have positive or negative charge. When a positively charged muon falls through a cloud, it loses energy. If its energy falls below 1 giga electron volt (GeV), **which is the threshold of detection of the GRAPES-3 muon telescope, it goes undetected**.

- On the contrary, a negatively charged muon gains energy when falling through the cloud and gets detected. Since there are more positive than negative muons produced in nature, the two effects don't cancel out, **and a net change in intensity is detected**.

- Using a computer simulation and the observed muon intensity variations, the group worked out the relationship with the electric potential of the cloud.
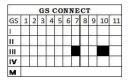
Significance

This method can be used to solve a year-old puzzle of **terrestrial gamma ray bursts** — huge flashes of light that accompany lightnings, but which have not been explained in theory until now.

Learning about the properties of thunderclouds **can be useful in navigation of aircraft and preventing short circuits**. This serendipitous discovery might provide the means to making headway in this direction.

WHO strategy to fight flu pandemics

Why in News?

The World Health Organization recently launched a strategy to protect people worldwide over the next decade against the threat of influenza, warning that new pandemics are "inevitable".

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Details

Influenza epidemics, **largely seasonal**, affect around one billion people and kill hundreds of thousands annually. WHO describes it as one of the world's greatest public health challenges.

WHO's new strategy, for 2019 through 2030, aims to prevent seasonal influenza, control the virus's spread from animals to humans and prepare for the next pandemic.

Strategy

- The new strategy called for every country to **strengthen routine health programmes** and to develop tailor-made influenza programmes that strengthen disease surveillance, response, prevention, control, and preparedness.

- WHO recommends **annual flu vaccines as the most effective way to prevent the spread of the disease**, especially for healthcare workers and people at higher risk of influenza complications.
- It also called for the development of more effective and more accessible vaccines and antiviral treatments.
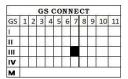
PEPPER IT WITH
Atal innovation mission, Quality Assurance Scheme for Basic Composite Medical Laboratories, H1N1, Rare disease day

- Due to its mutating strains, vaccine formulas must be regularly updated and only offer limited protection currently.

West Nile Virus

In News

A seven year old boy from Malappuram District of Kerala died from **West Nile Virus (WNV), a mosquito-borne disease**, mostly reported in the continental United States. Union Ministry of Health and Family Welfare is closely monitoring the situation.

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West Nile fever

1. It is **a zoonotic disease** (an animal disease affecting humans). Disease is caused by West Nile virus (WNV), which is a flavivirus related to the viruses that cause **St. Louis encephalitis, Japanese encephalitis, and yellow fever**.
2. West Nile virus is mainly transmitted to people through the **bites of infected mosquitoes**. WNV is maintained in nature by transmission between birds and mosquitoes; as birds are the natural hosts of the virus. **Humans, horses and other mammals can be infected**.
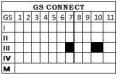
PEPPER IT WITH
Human development report, SATH-E program, Hamburg action plan, Swachh Swasth Sarvatra

3. West Nile fever can cause severe neurological illness and death in people, however about 80% of people who are infected show no symptoms.
4. It was **first isolated in the West Nile district of Uganda in 1937** & is now widely reported from Canada to Venezuela.
5. Outbreak sites are on major birds' migratory routes. WNV is commonly found in Africa, Europe, the Middle East, North America and West Asia.
6. Presence of **WNV was documented in north- eastern region of India during the year 2006** from four districts (Japanese encephalitis (JE) endemic areas) of Assam.

Lancet study on tuberculosis

In News

Of the 10 million new tuberculosis (TB) cases reported globally in 2017 by the World Health Organisation, 2.74 million were from India, **showing a marginal** reduction from 2.79 million in 2016.

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Despite TB incidence in the country being 204 cases per 1,00,000 in 2017, the government has set a highly ambitious target of "**eliminating TB by 2025", five years ahead of the Sustainable Development Goals (SDGs) target.**

The Lancet Global Health article

- The article based on modelling for three high-burden countries, including India, compared with 2015 data, 57% reduction in incidence and 72% reduction in mortality **will been seen only by 2035.**
- The India report card says **diagnosis and treatment for drug-sensitive and drug-resistant TB need improvement.** Modelling suggests that lives of eight million people with TB can be saved over the next 30 years **if tests are subsidised and patients are supported to complete the treatment.**

- India has set an ambitious goal of eliminating TB by 2025, but integration of TB services with the primary health system to reduce diagnostic delays is not happening. **Patients are not diagnosed and treated at the primary level**, which is the first point of contact.

- 10% of individuals with TB die or self-cure before presenting for care. Patient delay before first presentation for care is 4.1 months. Even initiation of treatment after diagnosis happens after 2.1 days.

- The proportion of people with TB completing treatment is 85%. But it says systematic efforts to screen high-risk populations have already begun in India.

PEPPER IT WITH

Global Digital Health Partnership, Drug controller general of India, e-cigarettes, Pradhan Mantri Surakshit Matritva Abhiyan
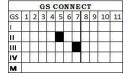
Way forward

India has the highest number of multidrug-resistant TB (MDR-TB) cases in the world. According to The Lancet Commission report, increasing evidence shows that the majority of MDR-TB cases in India are **due to direct transmission**. Hence, **early diagnosis and prompt initiation of effective treatment should be high priority to curb MDR-TB transmission**.

The Lancet Commission recommends that India should scale up access to TB services for all those seeking them, optimise engagement of private sector providers and guarantee universal access to drug susceptibility testing and second line TB drugs.

New rules for drugs, clinical trials

Why in News?

The Union Health Ministry has notified the Drugs and Clinical Trials Rules, 2019 with the aim to promote clinical research in the country. **The rules will apply to all new drugs, investigational new drugs for human use, clinical trials, bio-equivalence studies and ethics committees.**

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Highlights

- The highlights of the notification includes reduction in time for approving applications, which has now come down to **30 days for drugs manufactured in India and 90 days for those developed outside the country**.

- As per the new rule the requirement of a local clinical trial may be waived for approval of a new drug if it is approved and marketed in any of the countries (EU, UK, Australia, Japan and US) specified by the Drugs Controller General with the approval of the government.

- The new rules will ensure patient safety and an **ethics committee will monitor the trials and decide on the amount of compensation in cases of adverse events.**

Significance

PEPPER IT WITH

National Health Resource Repository Project, Ayushman Bharat, Laqshya program, WHO-SEARO

- India has the second largest population in the world and the **highest disease burden but does less than 1.2% of global clinical trials**.

- The new Clinical Trial Rules are well balanced and will **further the conduct of ethical and quality clinical trials in the country,** which, in turn, will benefit patients.
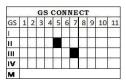
- The new rules protect the rights, safety and well-being of patients while ensuring a strong scientific base for the conduct of clinical trials.

- It is hoped that, this will lead to more stability and growth in clinical research being done in India, which will ultimately ensure that our patients have access to faster and more effective treatment.

Biomedical Research Career Programme

Why in News?

The Union Cabinet has approved the continuation of the Biomedical Research Career Programme (BRCP), and Wellcome Trust (WT) / DBT India Alliance beyond its initial 10-year term (2008-09 to 2018-29) to a new five year phase (2019-20 to 2023-24) with Department of Biotechnology (DBT) increasing its commitment to two times that of WT.

Significance

- Over its 10 years life, the **Programme has fulfilled its objectives of building and nurturing talent of highest global standards** in cutting-edge biomedical research in India, which has led to important scientific breakthroughs and applications to meet societal needs.

- BRCP has made it attractive for high quality Indian scientists working abroad to return to India, and has increased the number of locations geographically within India where world-class biomedical research is undertaken.

- In the extending phase, the Programme would continue to build this capacity as also strengthen clinical research and work towards addressing important health challenges for India. Continuation of the Programme with increased stake from the Government of India is important to bring about these returns.

Wellcome Trust

The Wellcome Trust is a biomedical research charity **based in London**, United Kingdom.
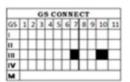
PEPPER IT WITH
Indian health fund, Polio, Unicef, Immune checkpoint therapy

The aim of the Trust is to "achieve extraordinary improvements in health by supporting the brightest minds", and in addition to funding biomedical research it supports the public understanding of science.

WHO Panel Calls For a Registry of Gene-Editing Research in Humans

Why in News?

An advisory panel to the World Health Organization has called for the creation of a global registry **to monitor gene-editing research in humans**. The recommendations of the 18-person committee, which was established following news late last year that Chinese scientist He Jiankui had carried out human gene editing in secret, are aimed at improving transparency and responsibility in the field.

Gene editing holds incredible promise for health, but it also poses some risks, **both ethically and medically**. The committee agreed that, it is irresponsible at this time for anyone to proceed with clinical applications of human germline genome editing.

CRISPR

- The technology is a simple yet powerful tool for editing genomes. It allows researchers to easily alter DNA sequences and modify gene function.

PEPPER IT WITH
USAID, HIV (Prevention and Control) Act, 2017, Horizon 2020, Ebola virus, Nipah virus

- Its many potential applications include correcting genetic defects, treating and preventing the spread of diseases and improving crops. However, **its promise also raises ethical concerns**.

- In popular usage, "CRISPR" is shorthand for CRISPR-Cas9. **CRISPRs are specialized stretches of DNA**. The protein Cas9 is **an enzyme** that acts like a pair of molecular scissors, capable of cutting strands of DNA.

Concerns with gene editing

- This is a technology that could have profound implications for permanent alteration of the human genome. The widely held ethical consensus is that, it is too early for germline editing, for we simply don't know enough yet about the risks of such fiddling.
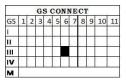
- One pitfall of embryo gene-editing is that it is not as precise as we need it to be today. Studies have shown that the technology can result in unintended mutations, which in turn can cause cancers. Then there is the **danger of mosaicism**, in which some cells inherit the target mutation, while others don't.

- Even when gene-editing becomes fool-proof, the decision to edit embryos will still be a weighty one. This is because, today, scientists are far from understanding how exactly individual genes influence phenotypes, or the visible traits of people.

- Every gene likely influences multiple traits, depending on the environment it interacts with. This makes it hard to predict the ultimate outcome of an embryo-editing exercise without decades of follow-up.

- In a 2017 report, the U.S.'s National Academies of Sciences, Engineering, and Medicine said such an intervention would be defensible only in very rare situations, where no alternative exists.

Smart India Hackthon 2019

In News?

Smart India Hackathon 2019 is a nationwide initiative to provide students a platform to solve some of pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem solving.

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In SIH 2019, the students also had the opportunity to work on challenges faced within the private sector organisations and create world class solutions for some of the top companies in the world, thus helping the Private sector hire the best minds from across the nation.

SIH

- An **initiative by Ministry of HRD**, **AICTE**, **Persistent Systems, i4c and Rambhau Mhalgi Prabodhini**
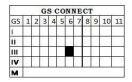
> **PEPPER IT WITH**
> ICAR, CSIR, IMD, DD Science, India Science, Farmer Zone

- Involves 1 Lakh+ technical students, 3000+ technical institutions, 200+ organizations from across India

- **World's biggest Software and Hardware hackathon**

- Technology Students across India compete to creatively solve problems and offer technical solutions

- Harness expertise of students from IISc, IITs, NITs and AICTE/UGC approved institutions

National Supercomputing Mission

In News

IIT Kharagpur has signed an MoU with Centre for Development of Advanced Computing (C-DAC) to set up **a Petaflop high performance computing facility and data center** funded under the National Supercomputing Mission.

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The C-DAC is a **premier R&D organisation of the Ministry of Electronics and Information Technology (MeitY).**

National Supercomputing Mission

- This is a visionary program to enable India to leapfrog to the league of world class computing power nations.

- The Mission would be implemented and steered **jointly** by the Department of Science and Technology (DST) and Department of Electronics and Information Technology (DeitY).

- The Mission envisages empowering our national academic and R&D institutions spread over the country by installing a **vast supercomputing grid comprising of more than 70 high-performance computing facilities.**

- These supercomputers will also be networked on the **National Supercomputing grid over the National Knowledge Network (NKN).** The NKN is another programme of the government which connects academic institutions and R&D labs over a high speed

network. Academic and R&D institutions as well as key user departments/ministries would participate by using these facilities and develop applications of national relevance.

- The Mission also includes development of highly professional High Performance Computing (HPC) aware human resource for meeting challenges of development of these applications.

Significance

PetaFlop is the measurement of computing power based on the frequency of mathematical calculations that can be done per second.

Setting up of the 1.3 PetaFlop high performance computing facility and data center is going to change the face of computation-based research and development in India.

Aurora Borealis

In News

A geostorm may give people in the Northern United States and Canada a chance to witness the aurora borealis.

Aurora

- At the center of the sun, the temperature is 27 million degrees Fahrenheit (**15 million degrees Celsius**). As the temperature on its surface rises and falls, the sun boils and bubbles.

- Particles escape from the star from the sunspot regions on the surface, hurtling particles of plasma, known as solar wind, into space. **It takes these winds around 40 hours to reach Earth**. When they do, they can cause the dramatic displays known as the aurora borealis.

- Auroras occur **not only on Earth, but also on other worlds in our solar system**. The gas giants in our solar system (**Jupiter, Saturn, Uranus and Neptune**) each have thick atmospheres and strong magnetic fields, and each have auroras — although these auroras are a little different from Earth's, given they are formed under different conditions.

- The colors most often associated with the aurora borealis are pink, green, yellow, blue, violet, and occasionally orange and white. Typically, when the particles collide with oxygen, yellow and green are produced. Interactions with nitrogen produce red, violet, and occasionally blue colors.

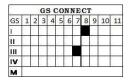- The type of collision also makes a difference to the colors that appear in the sky: atomic nitrogen causes blue displays, while molecular nitrogen results in purple. **The colors are also affected by altitude.** The green lights typically in areas appear up to 150 miles (241 km) high, red above 150 miles; blue usually appears at up to 60 miles (96.5 km); and purple and violet above 60 miles.

El Nino and disease outbreaks

In News

Global climatic disruptions due to the strong and extended positive phase of the ENSO conditions, or simply El Nino in 2015-16 **increased the outbreak of diseases in the regions of its influence**, according to a study published in the journal Nature.

Highlights of study

- Major diseases like chikungunya, dengue, malaria, hantavirus, rift valley fever, cholera, plague and zika are affected by the weather events induced by El Nino.

- In regions like Southeast Asia, Tanzania, western United States and Brazil — which are generally affected by the El Nino — the spread of diseases came after shifts in rainfall, temperature and vegetation.

- There was either excess of droughts or floods in this period which created the environmental conditions that favoured the growth and propagation of disease causing micro organisms and their carriers.
- The study's analysis indicates that the intensity of disease activity **increased by 2.5-28 per cent during El Nino events** than in other periods in the affected regions. For instance, plague in regions like Colorado and New Mexico and cholera in Tanzania were impacted by above normal rainfall.
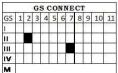
PEPPER IT WITH
ENSO, ITCZ, Jet streams, Monsoon winds, Chiknook, La Nina

- Similarly, excess land surface temperatures in Brazil and Southeast Asia aided the spread of dengue. El Nino, in itself, is a difficult phenomenon to track and study, which makes its consequences even more difficult to understand.

Quality Assurance Scheme for Basic Composite Medical Laboratories

Why in News?

For sensitizing small laboratories to basic doable quality practices, **NABL has launched voluntary scheme called Quality Assurance Scheme for Basic Composite Medical Laboratories**.

The laboratories performing only basic routine tests like blood glucose, blood counts, rapid tests for common infections, liver & kidney function tests and routine tests of urine will be eligible to apply under this scheme.

Details

Successful laboratories will be issued a certificate of compliance to QAS BC scheme by NABL and they will be allowed to use a distinct symbol on the test reports as a mark of endorsement to the basic standard for a defined time frame before which they will have to transition to full accreditation as per **ISO 15189**.

PEPPER IT WITH
National Assessment and Accreditation Counci, AICTE, International Laboratory Accreditation Co-operation, Asia Pacific Laboratory Accreditation Co-operation, Indian Museum of Natural history

Significance

The scheme will help to bring quality at the grass root level of India's health system where laboratories follow the imperatives of quality in all their processes. This will inculcate the habit of quality and facilitate the laboratories to achieve benchmark accreditation of ISO 15189 over a period of time.

NABL

National Accreditation Board for Testing and Calibration Laboratories (NABL), **a Constituent Board of Quality Council of India** has been established with the objective of providing Government, Industry Associations and Industry in general with a scheme of Conformity Assessment Body's accreditation which involves third-party assessment of the technical competence of testing including medical and calibration laboratories, proficiency testing providers and reference material producers. NABL is a full member to International Laboratory Accreditation Co-operation as well as Asia Pacific Laboratory Accreditation Co-operation.

Only 26% of rural toilets use twin-leach pits

In News

- A government-commissioned survey shows that just over a quarter of rural toilets use twin-pit system. Septic tanks are the most popular option, with 28% of toilets connected to a septic tank with a soak pit and 6% to a tank without a soak pit.
- With the government intensively promoting twin pits over the last two years, the highest ratio of twin pits are found in States which have only recently completed toilet construction.

- Uttar Pradesh, which tops the list with 64% of toilets with twin pits, had made the technology mandatory for anyone who wanted to avail the government's ₹12,000 subsidy to build toilets.

Twin-Pit system

Under the twin-pit system, two pits are dug with honeycombed walls and earthen floors which allow liquid to percolate into the surrounding soil. When one pit is filled and closed off, waste flow is transferred to the second pit, allowing waste in the first pit to be converted into manure after a year or two.

The twin pit has been promoted by the Ministry of Drinking Water and Sanitation as well as the World Health Organisation as an **in-situ sanitation** system which claims to bypass thorny issues such as caste purity, as owners will be dealing with manure, not excreta.

PEPPER IT WITH
Swachh Pakhwada, ODF states, Swachh Bharat fund, WHO's Report on Swachh Bharat Mission

Significance

The waste from the remainder of rural toilets could create a new sanitation nightmare — harmful to health and the environment, and even pushing a new generation into manual scavenging.

For the more than 70% of toilets without twin pits, a faecal sludge management system is desperately needed. A 2018 survey of 30 cities and towns in Uttar Pradesh by the Centre for Science and Environment found that 87% of toilet waste is dumped into water bodies and farm lands.
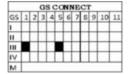
Swachh Bharat Mission

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014. The Mission Coordinator for SBM is Secretary, Ministry of Drinking Water and Sanitation (MDWS) with two Sub-Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission (Urban). Together, they aim to achieve Swachh Bharat by 2019, as a fitting tribute to Mahatma Gandhi on his 150th Birth Anniversary.

Easing of Norms for White Label Automated Teller Machines (ATM)

Why in News?

The Reserve Bank of India recently **relaxed the guidelines for white label ATMs** (WLA). It allowed companies that manage these machines to source cash directly from the central bank and offer non-bank services like bill payments.

Details

- WLA operators can now source cash directly from RBI offices and currency chests, and will no longer be dependent on sponsor banks for procurement of cash.
- They can buy wholesale cash, above a threshold of 1 lakh pieces of any denomination, directly from the central Bank and Currency Chests against full payment.
- The RBI has allowed the operators to **source cash from any scheduled bank including rural and cooperative banks**.
- They **can now advertise even non-financial products in their premises**, increasing the revenue earning scope for these companies.
- All guidelines, safeguards, standards and control measures applicable to banks relating to currency handling and cyber-security framework for ATMs shall also be applicable to the WLA operators.
- Banks **can issue co-branded ATM cards** in partnership with the authorised WLA Operators, and may extend the benefit of **'on-us'** transactions (where the customer or cardholder and ATM are of the same bank) to their WLAs as well.

What is an Automated Teller Machine (ATM)?

It is a computerized machine that provides the customers of banks the facility of accessing their account for dispensing cash and to carry out other financial & non-financial transactions without the need to visit a bank branch. **Around 1987-88 ATMs were brought to India by HSBC**.

PEPPER IT WITH
Merger of Dena Bank, BoB and Vijaya banks, NBFCs, Holding companies, operating companies, Mutual Benefit Society, Aadhar Payment Bridge Sysytem

Labels of ATM

● ATMS in India are generally of 3 types:
  i. **Bank's own ATM:** They are owned and operated by banks and carry their logo.
  ii. **Brown Label ATM:** When a bank outsources ATM operations to any third entity, these are called brown label ATMs. The **RBI** doesn't provide any separate license for such entities. In the case of Brown Label ATM, the ATM machine is owned and operated by the private entity while cash is provided by the bank which outsources it.
  iii. **White Label ATMs:** These are **owned and operated by a third party** (a non-banking firm) and don't bear the logo of the bank they serve (Brown label ATMs carry the logo of the bank).

● The rationale of allowing non-bank entity to set up WLAs has been **to increase the geographical spread** of ATM for increased/enhanced customer service, especially in rural areas.

● Non-bank entities proposing to set up WLAs have to make an application to RBI for seeking authorization under the **Payment and Settlement Systems Act 2007**.

● Brown and White Label ATMs **cut the operational cost of running** and also provides the objective of financial inclusion.

Some other types of ATMs

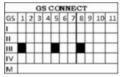**Green Label ATMs:** They are used for agricultural transactions.

Orange Label ATMs: These are used for transacting shares.

Yellow Label ATMs: These are used for E-commerce.

Pink Label ATMs: These are used for women banking.

RBI Plans Regulatory Sandbox

Why in News?

In the recently organised **FinTech conclave-2019 by Niti Aayog**, RBI governor announced that RBI will release guidelines for creation of a regulatory sandbox for the fintech sector in a couple of months.

What is Regulatory Sandbox?

● It is a framework set up by a financial sector regulator to allow small scale, live testing of innovations by private firms in a controlled environment (operating under a special exemption, allowance, or other limited, time-bound exception) under the regulator's supervision.

● The concept, which was developed in a time of rapid technological innovation in financial markets, **is an attempt to address the frictions between regulators' desire to encourage and enable innovation** and the emphasis on regulation following the financial crisis of 2007–2008.

● The regulatory sandbox **will aid in innovation and new product development** which can then be of use for consumers as well.

● It promotes competition and efficiency in financial services market through innovation.

● It benefits fintech companies by way of reduced time to launch innovative products at a lower cost.

● A sandbox acts as a layer between banks and their innovation initiatives and facilitates smooth collaboration between FinTech companies and incumbents.

Need for Regulation

➤ According to NITI Aayog, **India is one of the fastest growing fintech markets globally**, and industry research has projected that $1 trillion, or 60% of retail and SME (small and medium sized enterprises) credit, will be digitally disbursed by 2029.

➤ The Indian fintech ecosystem is the third largest in the world, attracting nearly $6 billion in investments since 2014, according to NITI Aayog.

➤ RBI has encouraged banks to explore the possibility of establishing new alliances with fintech firms, which would further drive the agenda of financial inclusion through innovation.

➤ A recent global survey said India ranked second in terms of fintech adoption, with an adoption rate of 52%.

PEPPER IT WITH
IMPS, NEFT, Niti Aayog, UPI, BHIM, Demonetisation, Financial Conduct Authority (UK)

Background

RBI is not the first one to consider regulatory sandbox. **In fact the Insurance Regulatory and Development Authority of India** (IRDAI) has also considered allowing companies to test products as part of its regulatory sandbox approach to test new digital and tech-based innovations before launching them in the market.
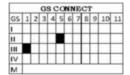
About Fintech

✔ The term "Fintech" is a contraction of the words "**finance**" and "**technology**". It refers to the technological start-ups that are emerging to challenge traditional banking and financial players and cover an array of services.

✔ Some of the major Fintech products and services currently used in the marketplace are **Peer to Peer** (P2P) lending platforms, **crowdfunding**, blockchain technology, distributed ledgers technology, Big Data, smart contracts, Robo advisors, E-aggregators etc.

✔ These Fintech products are currently used in international finance, which bring together the lenders and borrowers, seekers and providers of information, with or without a nodal intermediation agency.

✔ Fintechs are attracting interest **both from users of banking services and investment funds**, which see them as the future of the financial sector. Even retail groups and telecom operators are looking for ways to offer financial services via their existing networks.

India Accounting Standards

Why in News?

The Reserve Bank of India again deferred the implementation of the Indian Accounting Standards (Ind AS) by banks as the requisite legislative amendments are still under consideration.

Background

● Earlier in April 2018, the central bank had postponed the implementation of the Indian Accounting Standards (Ind AS) by the banks by one year. **This time the postponement is indefinitely**.

● The RBI in 2016 had proposed implementation of new accounting standards for financial sector, all scheduled commercial banks (**excluding regional rural banks**) for both standalone financial statements and consolidated financial statements with effect from April 1, 2018.

● The move will bring huge relief to the banks which are yet to recognise stressed assets and make necessary provisions as that would require higher capital.

● The move will spare the country's banks from adding another layer to the $190 billion pile of bad loans on their books.

● Ind AS for non-banking financial companies came into effect last year.

● The implementation of IndAS for public sector banks requires **an amendment to the Banking Regulation Act 1949 (Section 29).**

What is Ind AS

- ➢ Since Indian companies have a far wider global reach now as compared to earlier, the need to converge reporting standards with international standards was felt, which has led to the introduction of Ind AS.

- ➢ Ind AS or Indian Accounting Standards **govern the accounting and recording of financial transactions** as well as the presentation of statements such as profit and loss account and balance sheet of a company.

- ➢ The Ind AS are basically standards that have been harmonised with the International Financial Reporting Standards (IFRS) to **make reporting by Indian companies more globally accessible**.

- ➢ If Ind AS become applicable to any company, then Ind AS shall automatically be made applicable to all the subsidiaries, holding companies, associated companies, and joint ventures of that company, irrespective of individual qualification of such companies.

International Financial Reporting Standards (IFRS)

- ❖ IFRS set common rules so that financial statements can be consistent, transparent and comparable around the world.

- ❖ IFRS are issued by the Intrnational **Accounting Standards Board** (IASB). They specify how companies must maintain and report their accounts, defining types of transactions and other events with financial impact.

- ❖ IFRS were established to crete a common accounting language, so **that businesses and their financial statements can be consistent and reliable from company to company and country to country**.

Impacts of Ind AS

Ind AS will not just change the way companies present their numbers, but **may also bump up or knock down the profits/losses of firms**. Here are a few instances.

- o Under the existing rules, incentives, discounts or rebates given to customers by a firm can be shown as part of advertising, sales promotion or marketing expenses, which figure in the costs. But under Ind AS, these will have to be deducted from sales (revenues).

- o Excise duties which are currently netted off from revenues to show 'net sales', will have to be shunted under 'expenses' under Ind AS.

PEPPER IT WITH

Economic Capital Framework, Fair Value Method of Accounting, RBI working group chaired by PR Ravi Mohan, Regional Rural Banks

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- o **Intangible assets such as goodwill** had to be amortised, or written off as expenses over a period of time until now. Ind AS treats such items as having an indefinite life and hence they need not be amortised. This can lift the profits of firms.

- o Ind AS advocates the **'fair value' method of accounting**.

- o The new Ind AS also promises clearer disclosures to investors in certain cases like, segments reported to investors are the same as the firm uses for the purpose of assessing performance and allocating resources.

- o Under the proposed norms, financial institutions like banks will have to calculate **expected credit losses (ECL)** on their loans during each reporting period and make necessary adjustments to their profit-and-loss account even before a borrower may default on a certain loan.

- o This is in contrast to the present accounting norms wherein banks incur credit losses in their books only after outstanding loans have been in a state of default over a certain number of days as stated in the rules laid down by the RBI.

Conclusion

For now, Indian banks burdened by sour loans will not have to admit the true size of their likely losses. This does not bode well for the health of the banking system because **banks need to recognise their problems to resolve them**.
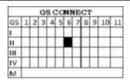
To adjust to the new norms, banks will have to improve their ability to forecast future credit losses with precision. Until this happens, bank earnings could experience volatility.

Ombudsman Scheme for Digital Transactions

Why in News?

The Reserve Bank of India recently launched the **Ombudsman Scheme for Digital Transactions**. It was earlier announced in the Monetary Policy Statement.

Details of the Scheme

- The Scheme was launched under **Section 18 of the Payment and Settlement Systems Act, 2007** and came into force from 31st January, 2019.
- It will provide a **cost-free and expeditious complaint redressal mechanism** relating to deficiency in customer services in digital transactions conducted **through non-bank entities regulated by RBI**.
- Complaints relating to digital transactions conducted through banks will continue to be handled under the Banking Ombudsman Scheme.
- The offices of Ombudsman for Digital Transactions will function from the existing 21 offices of the Banking Ombudsman and will handle complaints of customers from their respective territorial jurisdiction.
- The Scheme provides for an **Appellate mechanism** under which the complainant / System Participant has the option to appeal against the decision of the Ombudsman before the Appellate Authority within 30 days.
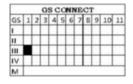
> **PEPPER IT WITH**
> Monetary Policy Statement, Payment and settlement Act 2007, Mutual Agreement

Background

Banking ombudsman does not have the power to issue an award where the **compensation to the complainant is above Rs 20 lakh**. The compensation can also not be more than the actual loss suffered by the complainant. However, **in addition, the ombudsman can award a compensation of up to Rs 1 lakh** to the complainant for loss of time, expenses incurred and harassment and mental agony.

Voluntary Retention Route (VRR) for Foreign Portfolio Investors (FPIs)

Why in News?

Reserve Bank of India recently introduced the **VRR for investment by FPIs**. This new investment route was proposed in 2018 by the central bank by the central bank at a time the rupee was weakening against the dollar very sharply.

RBI's decision to infuse rupee liquidity through long term foreign exchange swap, a first of its kind in liquidity management policy, is **likely to boost investments by FPIs**.

Details

- RBI will conduct dollar-rupee buy/sell swap action of $5 billion for **a three-year tenor**. Such a swap route has been explored by various emerging market economies as an effective tool to manage liquidity.
- Apart from liquidity infusion, the move will boost the **country's foreign exchange reserves and is likely to support the exchange rate**.
- During this period, FPIs shall maintain a minimum of 75% of the allocated amount in India.
- Investments under VRR (by all FPIs taken together) **are capped at ₹40,000 crore** for government securities and ₹35,000 crore for corporate debt securities.

What is VRR?

- ➤ It is a **new channel of investment available to FPIs** to encourage them to invest in debt markets in India over and above their investments through the regular route.
- ➤ **The objective** is to attract long-term and stable FPI investments into debt markets while providing FPIs with operational flexibility to manage their investments.
- ➤ Investments through VRR will be free of the **macro-prudential and other regulatory prescriptions** applicable to FPI investments in debt markets, provided FPIs voluntarily

commit to retain a required minimum percentage of their investments in India for a period of their choice. But the minimum retention period shall be three years, or as decided by RBI.

➢ Any entity registered as a foreign portfolio investor with SEBI is eligible to participate through VRR.

What is Foreign Portfolio Investment?

✔ It is **investment by non-residents in Indian securities including shares, government bonds, corporate bonds, convertible securities, infrastructure securities** etc. The class of investors who make investment in these securities are known as Foreign Portfolio Investors.

✔ FPI is influenced by differences in equity price scenario, bond yield, growth prospects, interest rate, dividends or rate of return on capital in India's financial assets.

✔ The criteria for FPI according to SEBI is, **any equity investment by non-residents which is less than or equal to 10% of capital in a company** is portfolio investment. While above this the investment will be counted as Foreign Direct Investment (FDI).

✔ All FPI taken together **cannot acquire more than 24 per cent** of the paid up capital of an Indian Company. As per SEBI regulations, **FPIs are not allowed to invest in unlisted shares** and investment in unlisted entities will be treated as FDI.

Who are Foreign Portfolio Investors?

Foreign Portfolio Investors includes investment groups of Foreign Institutional Investors (FIIs), Qualified Foreign Investors (QFIs) (Qualified Foreign Investors) and subaccounts etc. NRIs don't come under FPI.

The portfolio investors registered in accordance with the SEBI guidelines are called registered foreign portfolio investors. The existing portfolio investor class, namely, FII and QFI registered with SEBI are subsumed under it.

> ### Usha Thorat panel on Offshore ruppee markets
> ❖ RBI recently announced a **task force headed by Usha Thorat to examine issues related to offshore rupee markets** and recommend policy measures to ensure stability of the external value of the domestic currency.
> ❖ It will **assess the causes behind the development of the offshore rupee market** and study the effects of the offshore markets on the rupee exchange rate and market liquidity in the domestic market.
> ❖ It would also **recommend measures to address concerns, if any**, arising out of offshore rupee trading besides proposing measures to generate incentives for non-residents to access the domestic market.
> ❖ Another point of reference for the task force is to **examine the role international financial services** centres can play in addressing the concerns.

Who is a Foreign Institutional Investor (FII)?

FII is an institution established or incorporated outside India which proposes to make investments in India in securities.

FII is an institution who is registered under the Securities and Exchange Board of India (Foreign Institutional Investors) Regulations, 1995. FIIs comprise of a pension fund, a mutual fund, investment trust, insurance company or a reinsurance company.

> ### PEPPER IT WITH
> NRI Bond Scheme, Foreign Exchange Management Regulation 2000, Electronic Trading Platforms, Over the counter markets, Participatory Notes, Offshore non-deliverable forwards, Exchange Traded Fund (ETF)

Who is a Qualified Foreign Investor (QFI)?

QFI is an **individual, group or association which is a resident in a foreign country**. The QFI should compliant with the Financial Action Task Force standard and should be a signatory to the International Organisation of Securities Commission.
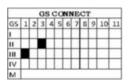
The FIIs are big and hence they have the capacity to make large-scale investment. On the other hand, small investors and individuals under QFI category can't match FIIs in terms of business volume.

India Needs a Watchdog for Fiscal Discipline

Why in News?

There has been **a regular call for institutional mechanism like fiscal council** to enforce fiscal rules and keep a check on fiscal consolidation of union government.

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Recently, **chairman of the 15th finance commission NK Singh** has also pitched for a fiscal council to enforce fiscal rules and better manage public debt.

Why do we Need a Fiscal Council?

- The rules of the game should be same for both (states and Centre). For state government liabilities, **Article 293 (3) provides** a constitutional check over borrowings. But there are no such restriction on the Centre.

- An institutional mechanism for sound fiscal practices is a good idea. It will bring in transparency, instil confidence among domestic and foreign investors and improve policy outcomes.

- It would **prevent practices such as accounting jugglery** to show the Centre's finances in a better shape, undermining the sanctity of the budget numbers.

- India must act now, emulating many countries across the world that have set up such councils for better oversight and to build public opinion that veers towards to greater fiscal discipline.

- Our **debt-to-GDP** ratio of the states and the Centre combined is way too high at 70%. Reviewing fiscal discipline rules should aim at lowering the level to 60% of GDP by 2023.

> **Deficit financing:**
> ❖ It is the **budgetary situation where expenditure is higher than the revenue**.
> ❖ It is a practice adopted for financing the excess expenditure with outside resources.
> ❖ The expenditure revenue gap is financed by eiter printing of currency or through borrowing.
>
> **Various Indicators of deficit in Budget are as under:**
> (i) **Budget Deficit:** Total expenditure – Total receipt;
> (ii) **Revenue Deficit:** Revenue expenditure – revenue receipts;
> (iii) **Fiscal Deficit:** Total expenditure – total receipts except borrowings;
> (iv) **Primary Deficit**: Fiscal deficit- interest payments;
> (v) **Effective revenue Deficit:** Revenue Deficit – grants for the creation of capital assets;
> (vi) **Monetized Fiscal Deficit:** That part of the fiscal deficit covered by borrowing from the RBI;

What the council will do?

It can include preparing multi-year fiscal forecasts, recommending changes to fiscal strategy, improving the quality of fiscal data and advising the government if conditions exist to deviate from the fiscal target and advising the government to take corrective action for non-compliance with the Bill. Of course, there is nothing cast in stone. More thought can go into the structure of the Council and the functions that it performs.

It has Widely Been Recommended by Various Experts and Committees

➤ The idea has also found resonance with eminent economists like Raghuram Rajan who reckons **that an independent fiscal council will make the budget-making process more 'honest'**.

➤ The Comptroller and Auditor General of India had also underscored the need for proper disclosures, saying that budgets often understate fiscal deficits by misusing accounting loopholes.

> The recommendation to set up an autonomous council featured prominently in the **Fiscal Responsibility and Budget Management Review Committee, chaired earlier by NK Singh.**

> **D.K. Srivastava committee** on fiscal statistics established by the National Statistical Commission (NSC) also suggested the establishment of a fiscal council that could coordinate with all levels of government to provide harmonized fiscal statistics across governmental levels and provide an annual assessment of overall public sector borrowing requirements.

> The **13th and 14th finance commissions** too had favoured the setting up of a Council to keep tabs on budget forecasts and their veracity.

PEPPER IT WITH

GST council, FRBMA, Article 293(3), Debt to GDP ratio, MPC Framework

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Way Forward

Given the growing demand for accurate and transparent fiscal statistics, the incoming government can consider to establish such an institutional mechanism so that the budget numbers meet with less scepticism.

Enhance Access & Service Excellence (EASE) Reforms Index

Why in News?

Government recently released the **first report on EASE Reforms Index** that independently measures progress on the Public Sector Banks (PSB) Reforms Agenda announced last year.

Punjab National Bank has been **ranked first** among public sector banks in the implementation of 'reforms agenda', followed by Bank of Baroda and State Bank of India.

Details

- The independent report was commissioned through **Indian Banks' Association** and authored by BCG with Forrester Inc., Kantar IMRB and TransUnion CIBIL as knowledge partners.

- The Index measures performance of each PSB on **140 objective metrics across 6 themes** and provides all PSBs a comparative evaluation showing where banks stand vis-à-vis benchmarks and peers on the Reforms Agenda.

- There has been a measurable progress in all 6 EASE reform themes over three quarters ending December 2018. The report shows visible progress made on each elements of **Government's 4R's strategy** (recognition, recovery, recapitalisation and reforms).

- The Index follows a fully transparent scoring methodology, which enables banks to identify precisely their strengths as well as areas for improvement.

What is SWIFT?

- ❖ SWIFT stands for the Society for Worldwide Interbank Financial Telecommunications & **was formed in 1970's**.

- ❖ It is a **messaging network** that financial institutions use to securely transmit information and instructions through a standardized system of codes.

- ❖ SWIFT assigns each financial organization a unique code that has **either eight characters or 11 characters**.

- ❖ The code is interchangeably called the bank identifier code (BIC), SWIFT code, SWIFT ID, or ISO 9362 code.

- ❖ It is only a messaging system and **does not hold any funds or securities**, nor does it manage client accounts.

- ❖ There are other message services like Fedwire, Ripple, and CHIPS but SWIFT has dominant position in the market.

- ❖ Prior to SWIFT, **Telex** was the only available means of message confirmation for international funds transfer.

- Through periodic updates and by providing bank-specific scorecards and inter-bank comparisons, all PSBs are enabled to keep track of their progress on key reform priorities across time.

- The goal is to continue driving change by spurring healthy competition among PSBs and also by encouraging them to learn from each other.

The six themes EASE Reform are:

i. Customer responsiveness;
ii. Responsible banking;
iii. Credit off take;
iv. PSBs as Udyami Mitra;
v. Deepening financial inclusion & digitalisation and
vi. Developing personnel for brand PSB.

PEPPER IT WITH
Prompt Corrective Action Plan, Insolvency and Bankruptcy Code, NPA, Clean and Smart Banking, IBAN

The overarching framework for the reforms agenda is "**Responsive and Responsible PSBs**".

Real Estate Investment Trust

Why in New?

The **first REIT initial public offering** (IPO) by Embassy Office Parks, a Bangalore-based real estate developer backed by Blackstone Group LP, a global private equity firm, is open for investment. India's first REIT will soon be a reality.

While REITs have been a popular product worldwide for many decades, guidelines in India were formalized only recently by the market regulator SEBI.

What are REITs?

- REITs are securities linked to real estate that **can be traded on stock exchanges once they get listed**.

- The structure of REITs is similar to that of a mutual fund. Just like mutual funds, there are sponsors, trustees, fund managers and unit holders in REITs.

PEPPER IT WITH
RERA Act-2016, Indian Infrastructure Debt fund

- However, unlike mutual funds, where the underlying asset is bonds, stocks and gold, **REITs invest in physical real estate**.

- The money collected is deployed in income-generating real estate. This income gets distributed among the unit holders.

- Besides regular income from rents and leases, gains from capital appreciation of real estate also form an income for the unit holders.

- One can invest in REITs in primary and secondary market and exit any time. But they will have a minimum **investment requirement of Rs 2 lakh**. Also, the minimum offer size of an REIT is Rs 250 crore.

Initial Public Offerings

An initial public offering, or IPO, is the very first sale of stock issued by a company to the public.

Generalised System of Preferences (GSP)

Why in News?

As part of its ongoing protectionist spree, United States recently announced that **it intends to terminate preferential trade treatment for India and Turkey** which is being extended under its GSP programme.

What is GSP?

- It is **a U.S. trade program designed to promote economic growth in the developing world** by providing preferential duty-free entry for up to 4,800 products from 129 designated beneficiary countries and territories.

- GSP was **instituted in 1976** by the Trade Act of 1974. It is the largest and oldest trade preferences programme.
- The GSP program has effective dates which are specified in relevant legislation, thereby requiring **periodical reauthorization in order to remain in effect**.
- Retroactive extension of GSP benefits can also be given through relevant legislations.

PEPEPR IT WITH
Reciprocal Tax, Federation of Indian Export Organisation, Apparel Export Promotion Council, USTR

Reasons behind the Downturn

According to WTO data, India's average applied tariff is around 13 per cent, and it plans to move towards the ASEAN tariff rates progressively (**approximately 5 per cent on average**). Despite the fact that India is working on an "extensive and reasonable" trade package, the US has decided to go ahead with its decision to scrap the preferential trade benefit after 60 days of the official announcement. Following are some of the issues which may have led to this scenario:

➢ The trigger for the latest downturn in trade ties was **India's new rules on e-commerce** that restrict the way Amazon.com Inc and Walmart-backed Flipkart do business in a rapidly growing online market set to touch $200 billion by 2027.

➢ The steps to force global card payments companies such as Mastercard and Visa to move their database to India through rules on **data localisation**.

➢ The US is also unhappy with India **imposing import duties on smartphones and some other electronic and telecom equipment**.

➢ There were also issues on sectors including **medical devices, dairy products and agricultural goods**.

Special and Differential Treatment

❖ The WTO Agreements contain special provisions which give developing countries special rights and which give developed countries the possibility to treat developing countries more favourably than other WTO Members. These provisions are referred to as **"special and differential treatment"** (S&D) provisions and include:

❖ Longer time periods for implementing Agreements and commitments,

❖ Measures to increase trading opportunities for developing countries,

❖ Provisions requiring all WTO members to safeguard the trade interests of developing countries,

❖ Support to help developing countries build the capacity to carry out WTO work, handle disputes, and implement technical standards, and

❖ Provisions related to least-developed country (LDC) Members.

Benefits of GSP

✔ GSP benefits are envisaged as **non-reciprocal and non-discriminatory to be extended by developed countries to developing economies**.

✔ The programme, which allows duty-free entry for certain products into the U.S. market, **has benefited both the importing and exporting countries**.

✔ India has been the biggest beneficiary of the GSP regime and accounted for over a quarter of the goods that got duty-free access into the US in 2017.

✔ Exports to the US from India under GSP- at $5.58 billion - was over 12 per cent of India's total goods exports of $45.2 billion to the US that year. The US goods trade deficit with India was $22.9 billion in 2017.

✔ No other country's export value under the GSP exceeded India's in the last two decades cumulatively.

Impacts on India

Though India has played down the GSP benefits, some sectors such as **gem and jewellery, engineering, apparel and intermediate goods** are bound to take a hit and will have a big blow on India's competitiveness on theses goods.

Way Forward

- Removal of GSP indicates a tough trade position by the US, **especially for countries like India** who benefited much from the scheme.
- Centre should help the industry, which will see price increase if the US decide to withdraw the status**, by way of incentives**.
- The Government should also look at learning from the US on how they are helping domestic industries, through **protectionism approach**.

Most Favoured Nation Status

Why in News?

India announced that it would revoke the most favoured nation (MFN) status given to Pakistan.

Following this announcement, India, under the **Customs Tariff Act**, increased customs duty to 200 percent on all Pakistani imports to India.

What is MFN Status?

- The MFN provision, **given in Article I of the General Agreement on Tariffs and Trade (GATT)** is a principle of non-discrimination, which prohibits WTO member countries from discriminating between their trading partners subject to certain exceptions.
- It obligates all WTO member countries to treat all other member countries **equally as 'most favoured' trading partners**. **It does not offer preferential treatment**.
- For India to justify deviation from the MFN obligation, it will have to make a case under one of the GATT exceptions. One such exception, which will be relevant in the current scenario, is the **national security exception given in Article XXI of GATT**.

Tarde Relations between India and Pakistan

- India has been honouring its MFN obligation towards Pakistan **since 1996** i.e. after the formation of the WTO. However, **Pakistan has not done so**.

- ❖ The **General Agreement on Tariffs and Trade (GATT)** covers international trade in goods. The workings of the GATT agreement are the responsibility of the Council for Trade in Goods (**Goods Council**) which is made up of representatives from all WTO member countries.
- ❖ The **Goods Council has 10 committees** dealing with specific subjects (such as agriculture, market access, subsidies, anti-dumping measures and so on). Again, these committees consist of all member countries.
- ❖ **'beggar-thy-policy'**, often used in international trade is a policy through which one country tries to resolve its economic problems by means that worsen the economic problems of its neighbours or trade partners.
- ❖ The SAARC Preferential Trading Arrangement **(SAPTA**) came into force in 1995. It aimed at promoting mutual trade and economic cooperation among the member countries through exchange of concessions.
- ❖ However, the member countries recognized the need to progress beyond a preferential trading arrangement and move towards a higher level of trade and economic cooperation in the region. As a result, the SAARC Council of Ministers signed a framework Agreement on South Asian Free Trade Area **(SAFTA)** in 2004 in Islamabad. The SAFTA entered into force on 1st January, 2006.

- Till 2011, Pakistan allowed only 1,946 items to be imported from India. All other items were prohibited.
- After 2011, Pakistan moved from **a 'positive list' to a 'negative list' approach** where it permitted all imports from India barring 1,209 items that remained on the banned list.

- While this was a step forward in normalising trade relations, it still fell short of **fully honouring MFN obligation** towards India because Pakistan does not impose such restriction on imports from other countries.
- Bilateral trade between India and Pakistan stands at $2.61 billion. Pakistan is relatively closed in terms of trade.
- The **major commodities and goods** in which both countries trade include cement, sugar, organic chemicals, cotton, man-made filaments, vegetables and certain fruits and tubers, mineral fuels, mineral oils, salts, earths, stone, lime, dry fruits, steel and plastering material.

> **PEPPER IT WITH**
> Article XXXV and Article XIII of GATT, Non-Tariff Measures, National Treatment, Non-Discriminatory Market Access

- Although **Pakistan had agreed to grant MFN status** during a secretary-level agreement in 2012, **it later changed its mind**. The translation of most-favoured nation into Urdu (sabse pasandida mulk), Pakistan's official language, was also said to be a problem among others.
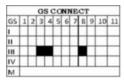
Way Forward

Increasing the custom duty will only increase the informal trade between the two countries, which is almost double the formal trade. **Deeper economic integration through trade will create vociferous constituencies** that would demand and lobby for peace as it would serve their interests. The overall net-effect would be fewer conflicts and thus more peaceful relations.

Organic Farming and Organic Food

Why in News?

The Food Safety and Standards Authority of India (FSSAI), recently wrote to various designated food safety officials to ensure **that food business operators adhere to the regulations pertaining to organic food**.

What is Organic Food?

The term "organic" refers to the process of how certain foods are produced. **Organic food is food produced by methods that comply with the standards of organic farming**.

In order to be labelled organic, a food product **must be free of artificial food additives**. This includes **artificial sweeteners, preservatives, coloring, flavoring and monosodium glutamate** (MSG).

Organic Farming

Organic farming is a form of agriculture that relies on ecosystem management and attempts to reduce or **eliminate external agricultural inputs, especially synthetic ones**. It focuses on holistic development and interrelationship of the soil, plants, and animals as a self-sustaining systems.

> **Types of Organic Farming:**
> (i) Biodynamic farming
> (ii) Panchagavya farming
> (iii) Rishi Krishi
> (iv) Natural farming
> (v) Homa organic farming

Principles of Organic Farming:

Cyclical principle - Promotion of collaboration with nature through the recycling and use of renewable resources.

Precautionary principle - Use of known and well-functioning technologies than risky technologies like GM technologies etc.

> **PEPPER IT WITH**
> NPOP, APEDA, PGS-India, CODEX, FSSAI, NCOF, ZBNF

Nearness principle -Using experience based knowledge and local interest concerning the development of cultural and social value leading to closer association and trust building between producer and consumer.

Approaches to Organic Farming:

- Management of the entire surrounding systems to ensure biodiversity and sustainability of the system.

- Crop production with the use of alternative source of nutrients such as crop rotations, residue management, organic manures and biological inputs
- Better plant protections practice by physical cultural and biological control systems.
- Maintenance of live-stock with organic concepts and make them an integral part of entire system.

Benefits of Organic Farming

Environmental Benefits:

1. It emphasizes preservation of a land's natural ecosystem, while consuming less energy and reducing the risks of pollution. **Organically managed soils** demonstrate better organic content and moisture-retention capacity, reducing the risk of desertification in arid climate.

2. Organic farms **use no/less synthetic products**. So, the risk of water pollution is greatly diminished. Moreover, they are also found to be more **energy-efficient** in terms of fossil fuel consumption. Also, as per IPCC report, **organic farming leads to lesser GHG emission, higher carbon fixation in the soil**.

3. It **promotes biodiversity** and also rejects the use of genetically modified organisms or products.

4. Organic farming provides for a more **ecological approach to livestock farming through integrated development** and interrelationship of the soil, plant and animals.

> **Initiatives in India**
> National Program for Organic Production (2000), APEDA (Agricultural and Processed Food Products Export Development Authority), Organic Farming Technology Package by ICAR, Organic labelling and claims, National accreditation and certifications.
>
> **Recent initiatives-** Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development for North Eastern Region (MOVCDNER), Food Safety and Standards (Organic Foods) Regulations 2017, 'Jaivik Bharat' Logo and 'Indian Organic Integrity Database Portal'

Social Benefits:

1. It leads to **improved employment opportunities** in local communities (more requirement of manual labour, diversified cropping and planting schedule generating year-round employment). It enhances and democratizes rural development.

2. It leads to **consumer health protection** through lesser synthetic/chemical inputs.

3. Organic farming, being a more accessible means for rural farmers to become self-sufficient can also **contribute to food security**.

Economic Benefits:

1. It is one of the fastest growing food sector in the world with huge economic potential.

2. Organic farming provides **better remuneration to the farmers**.

3. It can be used to produce **non-wood forest products** (NWFP).

Issues with Organic farming

1. Harmonisation of various standards and certification process-**too many international standards** (IFOAM, CODEX etc.) and **certification agencies**.

2. Inevitability of certain level of chemical input to ensure profitable production.

3. It alone cannot address the food security challenges.

4. High cost of organic food product, poor inspection performance.

5. Inadequacies in regulatory and marketing structures **(e.g. labelling).**

6. Developing locally applicable **agronomic solutions** to production constraints, such as weeds, animal health and soil fertility.

7. **Incomplete or unscientific basis for including/excluding materials** from organic standards (GMOs etc).

National Guidelines on Responsible Business Conduct

Why in News?

Ministry of Corporate Affairs (MCA) has revised the National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business, 2011 (NVGs) and **formulated the National Guidelines on Responsible Business Conduct (NGRBC)**. These guidelines urge businesses to actualise the principles in letter and spirit.

These principles are:

1. Businesses should conduct and govern themselves with **integrity in a manner that is Ethical, Transparent and Accountable;**

2. Businesses should provide goods and services in a manner that is **sustainable and safe;**

3. Businesses should respect and promote the **well-being of all employees**, including those in their value chains;

4. Businesses should respect the interests of and be **responsive to all their stakeholders;**

5. Businesses should **respect and promote human rights**;

6. Businesses should **respect and make efforts to protect and restore the environment;**

7. Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is **responsible and transparent**;

8. Businesses should promote **inclusive growth and equitable development**;

9. Businesses should engage with and provide value to their consumers in a responsible manner;

> ### UNGPs
> The UNGPs are grounded in recognition of, **a)** the State's existing obligations to respect, protect and fulfil human rights and fundamental freedoms; **b)** the requirement of business enterprises to respect human rights, and **c)** the need for access to effective remedy for those who are affected by adverse business related human rights impacts or abuse. Since their release, the **UNGPs have become the authoritative global standard for Business and Human Rights**.

Applicability

The NGRBC **are designed to be used by all businesses, irrespective of their ownership, size, sector, structure or location**. It is expected that all businesses investing or operating in India, including foreign multinational corporations (MNCs) will follow these guidelines.

Background

MCA has been taking various initiatives for ensuring responsible business conduct by companies.

- As a first step towards mainstreaming the concept of business responsibility, the '**Voluntary Guidelines on Corporate Social Responsibility**' were issued in 2009. These guidelines were subsequently revised as NVGs.

- SEBI through its '**Listing Regulations' in 2012** mandated the top 100 listed entities by market capitalisation to file Business Responsibility Reports (BRRs) from an environmental, social and governance perspective.

> ### What is Circular Economy?
> This is an **alternative to a traditional linear economy** (make, use, dispose), in which resources are used for as long as possible, the maximum value is extracted from them whilst in use, after which products and materials are recovered and regenerated at the end of each service life. **The idea of a circular economy is called circularity**. It is also referred to as "**cradle-to-cradle**".

- BRR was further extended to top 500 companies in 2015-16. This, for the first time, introduced voluntary sustainability reporting among companies in India which is still in a nascent stage.
- In furtherance to updation of NVGs and formulation of the NGRBCs, **MCA has constituted the Committee on BRR** to develop BRR formats for listed and unlisted companies.
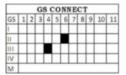
> **PEPPER IT WITH**
> Indian Institute of Corporate Affairs, Global Reporting Initiatives, Integrated reporting, SDGs, Zero Draft

- MCA is also in the process of developing India's **National Action Plan on Business & Human Rights** (NAP) in consultation with various Ministries and State Governments by 2020.
- There have been various national and international developments in the past decade like **United Nations Guiding Principles on Business & Human Rights** (UNGPs) that have nudged businesses to be sustainable and more responsible.
- There was also a need to demonstrate more visibly India's implementation of the UNGPs based on **UNHRC's 'Protect, Respect & Remedy' Framework** and also make evident India's commitment to Sustainable Development Goals (SDGs).

TMA for Specified Agriculture Products

In News

Department of Commerce of the Ministry of Commerce & Industry has notified a scheme for Transport and Marketing Assistance (TMA) for Specified Agriculture Products.

Aim

The "Transport and Marketing Assistance" (TMA) for specified agriculture products scheme aims to **provide assistance for the international component** of freight and marketing of agricultural produce which is likely to mitigate disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment and to promote brand recognition for Indian agricultural products in the specified overseas markets.

Key Highlights

1. The scheme would be suitably included in the **Foreign Trade Policy (2015-20).**
2. All exporters, duly registered with relevant Export Promotion Council as per Foreign Trade Policy, of eligible agriculture products shall be covered under this scheme.

> **PEPPER IT WITH**
> Kisan Credit Card. Green India Mission, Central Water Commission

3. The assistance will be provided on export of **all agriculture products** mentioned in the policy including **marine and plantation products** except those which are prohibited.
4. Assistance under TMA would be provided in **cash through direct bank transfer** as part reimbursement of freight paid. Free on board (FOB) supplies where no freight is paid by Indian exporters are not covered under this scheme.
5. The scheme shall be admissible for exports made through **EDI** (Electronic Data Interchange) ports only.
6. The scheme covers **freight and marketing assistance** for export by air as well as by sea.
7. The defaulters shall be liable for penal action under the provisions of Foreign Trade (Development & Regulation) Act, 1992, Rules and orders.
8. The assistance is available for most agricultural product exports with some exceptions.

> The arecanut sector, **'Sirsi Supari'** grown in Uttara Kannada has received the Geographic Indication (GI) tag. It is cultivated in Yellapura, Siddapura and Sirsi taluks. Totgars' Cooperative Sale Society Ltd., Sirsi, is the registered proprietor of the GI.

9. Products which will not avail these benefits include whey, rice, wheat, cane or beet sugar and raw sugar, molasses, gums, resins, butter and other fats, live animals meat, -

products of animal origin like milk, cream, curd, butter, buttermilk,, beverages, spirits and vinegar, garlic and tobacco and manufactured tobacco substitutes.
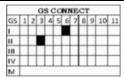
Significance

● The scheme is likely to mitigate disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment and to promote brand recognition for Indian agricultural products in the specified overseas markets.

● India has huge potential to boost agriculture exports and this scheme will help in exploring that potential.

● It will help boosting exports of agriculture commodities such as tea, coffee and rice and increase the country's share in global agri-trade.

Periodic Labour Force Survey by NSSO

In News

NSSO launched a nationwide Labour Force Survey called **Periodic Labour Force Survey (PLFS) from 2017**. It is aimed to provide quarterly employment and unemployment data. Its report was expected in December 2018 but was postponed.

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About PLFC

● The primary aim of PLFC **is to generate reasonably accurate indicators of labour market** at a short span for every quarter for which speed of quality data collection and processing are important.

● It is also aimed at **quarterly changes of various indicators** of the labour market in urban areas as well as to generate the annual estimates of different labour force indicators both in rural and urban areas.

● Results of the PLFS will be brought out in the form of an **Annual Key Report**, which would contain detailed tables for both rural and urban sectors, and **Quarterly Bulletins**, which would contain, for the urban sector, estimates of the changes in key labour force parameters like Labour Force Participation Rate, Worker Population Ratio, Unemployment Rate, in the current weekly status.

● The PLFS is designed to generate the indicators of labour market operations using two approaches:

  i. Usual Status (US) approach and

  ii. Current Weekly Status (CWS) approach.

● **Computer Assisted Personal Interviewing (CAPI)** Method has been adopted to get quick data. World Bank CAPI software (Survey Solutions) has been customised to the Indian requirement to conduct the survey.

About NSSO

➢ The National Sample Survey Office (NSSO) headed by a Director General is **responsible for conduct of large scale sample surveys in diverse fields** on All India basis.

➢ Primarily data are collected through nation-wide household surveys on various socio-economic subjects, Annual Survey of Industries (ASI), etc.

> ### Pew Research Centre
> It recently released a study of India, based on a survey. Among the findings were 27 countries' public views on India's rise. There was a perception that **India played a more important role in the world compared to 10 years ago** in North America, Europe, Northeast Asia, and Australia.
>
> **Pew Research Center** is a nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping the world. It conducts public opinion polling, demographic research, content analysis and other data-driven social science research.

> ### PEPPER IT WITH
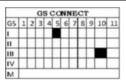> Central Statistical Organisation (CSO), Special Data, Confederation of Indian Industry Dissemination Standards

➢ Besides these surveys, NSSO collects data on rural and urban prices and plays a significant role in the improvement of crop statistics through supervision of the area enumeration and crop estimation surveys of the State agencies.

➢ NSSO which comes under Ministry of Statistics and Programme Implementation also maintains a frame of urban area units for use in sample surveys in urban areas.

➢ The **NSSO has four Divisions**:
   1. Survey Design and Research Division
   2. Field Operations Division
   3. Data Processing Division
   4. Coordination & Publication Division

Oxfam report on women labour force participation

Why in News?

According a report by Oxfam, **Irrespective of employment category** (casual and regular/salaried), organised or unorganised sector, and location (urban and rural), **women workers in India are paid a lower wage rate**. The report was titled **Mind the Gap, The State of Employment in India.**

The report is based on its estimates on **employment unemployment survey (EUS) 2011-12**, done by the National Sample Survey Organisation (NSSO), International Labour Organization (ILO) studies, and also builds on the first inequality report launched by Oxfam in 2018.

Highlights of the Report

● The gender pay gap **was 34 per cent in India**, that is, women get 34 percent less compared to men for performing the same job with same qualifications.

● In the organised sector, the gender pay gap is lowest as they are aware of their rights. **But it says that there is gender pay gap even in the highest ranks of labour** (legislators, senior officials, and managers).

● The **wage difference is lesser for more skilled workers** and more for semi-skilled or unskilled workers. Across enterprise type, wage difference is less for government/public sector and public/private limited company.

● **Large pay gaps in terms of average daily wages** exist in male and female wage rates of casual and regular workers in rural and urban areas and the gap is narrower for regular workers in urban areas. On the other hand, for casual workers, wage gap is narrower in rural areas.

> ### Monster Salary Index (MSI)
> ❖ According to a report prepared by monster.com, Gender parity still looks like a faraway dream in India with women of the country earning 19 per cent less than the men.
> ❖ The disparity was found in the survey conducted for the year 2018 and it stood just 1 per cent lower than the 20 per cent pay gap in 2017.
> ❖ The index showed that the gender pay gap is high in terms of jobs that require higher skill levels. The gap also widens with years of experience.
> ❖ The data indicate that men (Rs 242.49) earned Rs 46.19 more in comparison to women (Rs 196.3). The index calculated the median gross hourly salary.
> ❖ A/t report there is no gender pay gap in semi-skilled work, whereas the gap touches 20 per cent for skilled women and 30 per cent for highly-skilled occupations.

● The report stresses that while inequality in jobs has increased, **inequality in education has decreased between boys and girl**s. But this situation further exacerbates the crisis in jobs when it comes to women. Even as girls frequently outperform boys in school examinations, they are not finding suitable jobs for the skills that they have.

- The report also talks about the **'feminisation of agriculture'** and how it should not be celebrated. The report says that while both men and women are diversifying out of agriculture, almost 75 percent of rural women are still engaged in it.

- A **casual labourer is a person** who is casually engaged in others' farm or non-farm enterprises (both household and non-household) and, in return, receives wages according to the terms of the daily or periodic work contract.

PEPPER IT WITH
Caste Determined Occupation in India, Maternity Leave

Oxfam

It is an international **non-profit organisation**.

Issues

Women's labour force participation in India is **one of the lowest in the world**. Women comprise half of the Indian population but **make up less than a quarter of the labour force**. Three in four Indian women do not work in the country. Looking at the extremely low levels of participation of women in the labour market makes one wonder whether the phenomenal success of India's economic transition forgot about its women and left them behind.

World Happiness Report

In News

India **dropped 7 ranks to 140th** place while Finland topped the global happiness ranking for the second time in the row.

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The results are based on an average of three years of surveys taken by Gallup World Poll between 2016 and 2018 and include factors such as gross domestic product, social support from friends and family, healthy life expectancy, freedom to make life choices, generosity, perceived corruption and recent emotions — both happy and sad.

Highlights of the Report

- This year's happiness report focuses on happiness and the community: how happiness has evolved over the past dozen years, with a focus on the technologies, social norms, conflicts and government policies that have driven those changes.

- WHR 2019 ranks 156 countries by how happy their citizens perceive themselves to be, according to their evaluations of their own lives. The report was produced in partnership with The Ernesto Illy Foundation.

- Released on the **International Day of Happiness on March 20**, the report warned that world happiness has declined in recent years, driven by a sustained fall in India.

- The unhappiest country was **South Sudan**, where the UN recently said 60 percent of people face food insecurity following a bloody civil war which has claimed the lives of an estimated 400,000 people. Other conflict-ridden countries, such as Yemen, Afghanistan and the Central African Republic also featured at the bottom of the table.

- The report says the large gaps in happiness between countries **will continue to create pressure to migrate**. Further, the report also noted that there has been an increase in negative emotions, including worry, sadness and anger.

What is Dystopia?
Dystopia is an imaginary country that has the world's least-happy people. The purpose in establishing Dystopia is to have a benchmark against which all countries can be favourably compared. The lowest scores observed for **the six key variables**, therefore, characterize Dystopia. Since life would be very unpleasant in a country with the **world's lowest incomes**, **lowest life expectancy**, **lowest generosity**, **most corruption**, **least freedom**, and **least social support**, it is referred to as "Dystopia," in contrast to Utopia.

- This is the **7ᵗʰ edition of the report** which was first published in 2012 (It was not published in 2014). It is published by **United Nations Sustainable Development Solutions Network (UNSDN).**

PEPPER IT WITH

Bhutan, Human Development Index, Sustainable Development Index,Grand Cross of the Order of Civil Merit Medal, Swami Vivekanand Cultural Centre

Conclusion

The data offers the world's governments and individuals the opportunity to rethink public policies and individual life choices, to raise happiness and well-being. We are in an era of rising tensions and negative emotions and these findings point to underlying challenges that need to be addressed.

50ᵗʰ raising day celebration of CISF

Why in News?

Honourable Prime Minister of India recently attended the **50th Raising Day celebrations of Central Industrial Security Forces** (CISF), at Indirapuram in Ghaziabad, Uttar Pradesh.

The role of CISF has increased, due to the challenges posed by terrorism.

About CISF

- **Established in 1969**, the Central Industrial Security Force (CISF) is the central government's dedicated multi-skilled security agency **primarily providing infrastructure protection services**.
- It is under the control of the Union Ministry of Home Affairs. The organization is divided **into six sectors, each led by an inspector general**.

PEPPER IT WITH

National Police Memorial, AFSPA

- **Initially raised** for the protection of Public Sector Undertakings (PSUs) and governmental installations, CISF today provides security for a wide variety of infrastructure, including airports, ports, heritage monuments, private companies, and natural resource fields.
- Like all armed forces under the control of the Home Ministry, CISF's duties are not limited to its original mandate, and now include internal security, VIP protection, firefighting, training, security consulting as well as protecting UN missions.

Various Military Exercises

TROPEX-19

- The Annual Integrated Theatre Level Operational Readiness Exercise - in short TROPEX - **the largest maritime exercise of the Indian Navy was** conducted recently in the **Arabian Sea and North Indian Ocean.**
- TROPEX 2019 was thus far the largest in terms of geographical extent covering the IOR, and also with regard to number of units participating.
- The exercise also included a **Tri-services Amphibious Exercise** that saw the participation of Army and Air Force personnel and assets.
- Overall, the exercise validated the Navy's readiness and capability to meet various mandated roles, in support of national objectives.

Exercise Sampriti 2019

- The **8ᵗʰ edition of joint military exercise 'Sampriti'**, aiming to increase mutual cooperation, bonhomie and camaraderie between the armies of **India and Bangladesh** was held recently.
- The exercise originally started as a platoon-level exercise and graduated to company-level in 2015 onwards, both sides jointly train, plan and execute a series of well-developed tactical drills for neutralisation of likely threats that may be encountered during simulated UN peace keeping operations.

- Conducted in Tangail, Bangladesh, the exercise is a part of the India-Bangladesh defence cooperation.
- The exercise strengthens and broadens the aspects of inter-operability and cooperation between the Armies of both countries. It involves tactical-level operations in a counter-insurgency and counter-terrorism environment under the UN mandate.

Mainamati Maitree exercise

- **Border Security Force (BSF) and Border Guards Bangladesh (BGB) recently concluded a three-day 'Mainamati Maitree Exercise 2019'** as a part of 'Confidence Building Measures' between the two border guards.
- The exercise was named after a hill range situated 8 km west of Comilla Township in Bangladesh, which is home to an ancient Buddhist archaeological site in the region.
- The main objective of this exercise was to **plan and conduct anti-smuggling and anti-criminal activity related operations** with ultimate aim of achieving better joint operational efficiency and border management.

Al Nagah-III

- The **third edition of joint military training exercise between Indian Army and Royal Oman Army**, Exercise AL NAGAH 2019 concluded recently at Jabel AI Akhdar training camp, Oman. It was a two-week long exercise.
- Exercise AL NAGAH will go a long way in further cementing relationship between the nations and will act as a catalyst in bringing synergy and cooperation while undertaking such operations under the United Nations mandate.

Pinaka Rocket System

In a boost to artillery capability of the army, the **indigenously developed Pinaka guided rocket system** was successfully test fired at Pokhran desert in Rajasthan.

The weapon system is equipped with state-of-the-art guidance kit comprising of an **advanced navigation and control system**.

Exercise Mitra Shakti-VI

- It is a joint training exercise between **Indian army and Sri Lankan army**. The 6th edition of the exercise was held recently.
- The primary focus of the exercise is to train and equip the contingents to undertake joint counter insurgency and counter terrorist operations in urban/ rural environment under the United Nations flag.
- The exercise provides an ideal platform for both contingents to share their operational experience and expertise while being instrumental in broadening interoperability and cooperation between the armies of India and Sri Lanka.

Ind-Indo CORPAT

- The IND-INDO CORPAT Series of bilaterals seek to underscore India's peaceful presence and solidarity with friendly **Maritime neighbours countries** to ensure good order in the maritime domain, consolidate interoperability and strengthen existing bonds of friendship between India and Indonesia.
- The **33rd IND-INDO CORPAT**, also coinciding with 70 years of India-Indonesia diplomatic ties, contributes towards the Indian Navy's efforts to consolidate inter-operability and forge strong bonds of friendship across the seas.

MPATGM

- In a major boost for Army, Defence Research and Development Organisation (DRDO) successfully test fired **indigenously developed, low weight, fire and forget Man Portable Anti-Tank Guided Missile** (MPATGM).
- MPATGM is incorporated with advanced features including state-of-the-art Imaging Infrared Radar (IIR) Seeker with integrated avionics.
- The critical IIR seeker has been **designed and developed** at the Hyderabad-based Research Centre Imarat.

- The Indonesian Navy and the Indian Navy have been participating in coordinated patrol (CORPAT) **twice a year since 2002** to keep this vital part of the Indian Ocean Region safe and secure for commercial shipping and international trade.

- The CORPAT thus reflects the shared concern between the two countries for a peaceful Indian ocean for the benefit of international community.

Red Flag-19

- Red Flag is **US Air Force's premier air-to-air combat training exercise**. Participants often include both US and allied nations' combat air forces.

- The exercise gives pilots the experience of multiple, intensive air combat sorties in the safety of a training environment.

- It is overseen by the USAF 414th Combat Training Squadron, & was established in 1975.

> **PEPPER IT WITH**
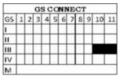> Exercise Sea Vigil, LANGKAWI INTERNATIONAL MARITIME AND AEROSPACE EXHIBITION (LIMA)

Africa India Field Training exercise

- The inaugural Africa-India Field Training Exercise, **AFINDEX-19** was held recently at Pune**.**

- A number of activities in planning and conduct of **Humanitarian Mine Assistance has been undertaken** by all 18 participating nations including India.

- The exercise is focused on exchange of best practices amongst the participating nations, team building and tactical level operations in conduct of Humanitarian Mine Assistance and Peace Keeping operations based on the guidelines issued by the United Nations.

- AFINDEX-19 will go a long way in further cementing relationship amongst the nations and will act as a catalyst in bringing synergy and cooperation while undertaking such operations under the United Nations mandate.

SCO joint anti-terror exercise

Why in News?

SCO members, including India and Pakistan will participate in the joint anti-terrorism exercise '**Sary-Arka-Antiterror 2019**' to be held this year.

The decision to hold the joint exercise was announced during the 34th meeting of the SCO's Regional Anti-Terrorist Structure (RATS) council held in Tashkent, Uzbekistan.

About SCO

Shanghai Cooperation Organisation (SCO) is a Eurasian political, economic and military organisation, founded in Shanghai by the leaders of China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan in the year 2001. **India and Pakistan became full-members of the SCO, headquartered in Beijing, in 2017**.

Objectives of SCO is to establish cooperation between member nations on:

- Security-related concerns
- Resolving border issues
- Military cooperation
- Intelligence sharing
- Countering terrorism

RATS:

Regional Anti-Terror Structure is a permanent organ of the SCO **which serves to promote cooperation of member states in the areas of terrorism, separatism and extremism. Established in 2004, it is headquartered in Tashkent**. The next meeting of the Council of the RATS SCO is scheduled to be held in Russia in September 2019.

> **United Nations Office of Counter-Terrorism**
> The United Nations Office of Counter-Terrorism **was established in 2017**. The Office aims to have a close relationship with Security Council bodies and Member States, strengthening existing and developing new partnerships through regular travel and attendance at counter-terrorism-related meetings.
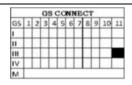
> **PEPPER IT WITH**
> New Development Bank, AIIB, Exercise RIMPAC, OBOR, South China Sea

Trends in International Arms Transfers-2018

- The volume of international transfers of major arms in 2014–18 was **7.8 percent higher** than in 2009–13 and 23 per cent higher than in 2004–2008.
- The five largest exporters in 2014–18 were the **United States, Russia, France, Germany and China** while five largest importers **were Saudi Arabia, India, Egypt, Australia and Algeria.**

- The flow of arms to the Middle East increased by 87 percent between 2009–13 and 2014–18, while there was a decrease in flows to all other regions.
- The main recipient region in 2014–18 was **Asia and Oceania** (accounting for 40 per cent of global imports), followed by the Middle East (35 per cent), Europe (11 per cent), Africa (7.8 percent) and the Americas (6.2 per cent).
- US exports accounted for 36 per cent of the global total in 2014–18 and grew by 29 per cent compared with 2009–13. Russian arms exports decreased by 17 per cent between 2009–13 and 2014–18.
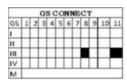
Oceania

- ❖ **Oceania** is a collective name for the islands scattered throughout most of the Pacific Ocean.
- ❖ The term, in its widest sense, embraces the **entire insular region between Asia and the Americas**. A more common definition excludes the Ryukyu, Kuril, and Aleutian islands and the Japan archipelago.
- ❖ The most popular usage delimits Oceania further by **eliminating Indonesia, Taiwan, and the Philippines**, because the peoples and cultures of those islands are more closely related historically to the Asian mainland.
- ❖ The IUCN Oceania region is comprised of the 24 countries and territories of **Polynesia, Micronesia, Melanesia, Australia and New Zealand**.

- It was released by **Stockholm International Peace Research Institute** (SIPRI)**.**

Mission Shakti

Why in News?

India has become the **fourth country after the US, Russia and China** to acquire the capability of space warfare.

Indian scientists successfully conducted Mission Shakti shooting down a live satellite target in the **low earth orbit** (LEO). **The entire effort was indigenous**.

Details

- It is a joint programme of the **Defence Research and Development Organisation (DRDO) and the Indian Space Research Organisation** (ISRO).
- The test was done in the **lower atmosphere** to ensure that there is no space debris. Whatever debris that is generated will decay and fall back onto the earth within weeks.
- The **United States was the first nation to build space warfare capability that it developed in late 1950s**. The erstwhile USSR followed the US and had acquired this capability by early 1960s. China was the third country to launch A-SAT. China conducted its first A-SAT test in 2007.

Anti-satellite (ASAT) weapons

They are missile-based systems to attack moving satellites. They hav the ability to shoot down space objects from ground or airborne sources. The development of such systems has a long history — fueled by the Cold War between the United States and the former Soviet Union — with a waxing or waning of funding. There are different kinds of systems — those that can be launched from the ground or those vaulted from planes.

Low-Earth Orbit satellites

KSG – **(DELHI VN)** 9717380832, **(DELHI RN) 9811293743**, **(JAIPUR)** 8290800441, **(BHOPAL)** 7509975361, **(PATNA)** 7463950774, **(INDORE)** 7314977441, **(BENGALURU)** 7619166663,**www.ksgindia.com**

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- The Indian satellite that was shot down was a Low-Earth Orbit (LEO) satellite. **These are satellites roughly at an altitude of 2,000 kilometers** from the earth and that's the region where majority of satellites are concentrated.
- **Low earth orbit refers to an altitude up to 2,000 km**. A satellite in the LEO can monitor activities on the ground and water surfaces. Such a satellite can be used for **espionage and pose serious threat to the country's security in the instances of war**.
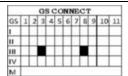
Space weaponisation

There are concerns that, the test will spur space weaponisation. India, while announcing the success of the test, was clear that it wanted to maintain peace rather than indulge in warmongering. And, by targeting a low-orbit satellite, the missile test did the utmost possible to minimise space debris, which is an issue of international concern.

Coffee

In News

The **Department for Promotion of Industry and Internal Trade**, has recently awarded Geographical Indication (GI) to five varieties of Indian coffee.

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They are:

1. **Coorg Arabica coffee** is grown specifically in the region of Kodagu district in Karnataka.
2. **Wayanaad Robusta coffee** is grown specifically in the region of Wayanad district which is situated on the eastern portion of Kerala.
3. **Chikmagalur Arabica coffee** is grown specifically in the region of Chikmagalur district and it is situated in the Deccan plateau, belongs to the Malnad region of Karnataka.

> **The Monsooned Malabar Robusta Coffee**, a unique specialty coffee from India, was given GI certification earlier.

4. **Araku Valley Arabica coffee** can be described as coffee from the hilly tracks of Visakhapatnam district of Andhra Pradesh and Odisha region at an elevation of 900-1100 Mt MSL. The coffee produce of Araku, by the tribals, **follows an organic approach** in which they emphasise management practices involving substantial use of organic manures, green manuring and organic pest management practices.

5. **Bababudangiris Arabica coffee** is grown specifically in the birthplace of coffee in India and the region is situated in the central portion of Chikmagalur district. Selectively hand-picked and processed by natural fermentation, the cup exhibits full body, acidity, mild flavour and striking aroma with a note of chocolate. This coffee is also called high grown coffee which slowly ripens in the mild climate and thereby the bean acquires a special taste and aroma.

> **Blockchain-based coffee e-marketplace**
> - Blockchain-based coffee e-marketplace was recently launched by commerce ministry **to help farmers integrate with markets** so that they can realise fair prices for the commodity.
> - It will **bring transparency in coffee** trade and maintain the traceability of Indian coffee from bean to cup so as the consumer tastes real Indian coffee and the grower is paid fairly for his produce
> - It will also **reduce the number of layers between coffee growers and buyers** and help farmers double their income.
> - This pilot project will help integrate the farmers with markets in a transparent manner and lead to realisation of fair price for the coffee producers
> - Indian coffee is highly valued in the world market and sold as premium coffees. The share of farmers in the final returns from coffee is very meagre.

Coffee

- In India, coffee is cultivated in about 4.54 lakh hectares by 3.66 lakh coffee farmers of which 98% are small farmers. Coffee cultivation is mainly done in the Southern States of India:
    - **Karnataka – 54%**
    - **Kerala – 19%**
    - **Tamil Nadu – 8%**
- Coffee is also grown in non-traditional areas like Andhra Pradesh and Odisha (17.2%) and North East States (1.8%).
- India is the only country in the world where the entire coffee cultivation is grown under shade, hand-picked and sun dried. India produces some of the best coffee in the world, grown by tribal farmers in the Western and Eastern Ghats, which are the two major bio-diversity hotspots in the world. Indian coffees are highly valued in the world market and sold as premium coffee in Europe.

> **PEPPER IT WITH**
> Government e-marketplace, Bannerghatta National Park (Karnataka)
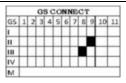
- The recognition and protection that comes with GI certification **will allow the coffee producers of India to invest in maintaining the specific qualities of the coffee grown in that particular region**. It will also enhance the visibility of Indian coffee in the world and allow growers to get maximum price for their premium coffee.

Intellectual Property

Why in News?

The Union Cabinet has approved the proposal for accession of India to

(i) **The Nice Agreement** - The Nice Agreement establishes a classification of goods and services for the purposes of registering trademarks and service marks (the Nice Classification).

(ii) **The Vienna Agreement -** The Vienna Agreement establishes a classification (the Vienna Classification) for marks that consist of, or contain, figurative elements.

(iii) **The Locarno Agreement -** The Locarno Agreement establishes a classification for industrial designs.

Significance

- Accession to the Nice, Vienna and Locarno Agreements will help the Intellectual Property Office in India to harmonise the classification systems for examinational of trademark and design applications, in line with the classification systems followed globally.

- It would give an opportunity to include Indian designs, figurative elements and goods in the international classification systems.
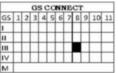
> **PEPPER IT WITH**
> WIPO, CIPAM, DIPP, Special 301 Report

- The accession is expected to instill confidence in foreign investors in relation to protection of IPs in India.

- The accession would also facilitate in exercising rights in decision making processes regarding review and revision of the classifications under the agreement.

Festival of Innovation and Entrepreneurship

Why in News?

Festival of Innovation and Entrepreneurship was recently inaugurated by President of India in Gandhinagar, Gujarat. **Till 2018, it had been hosted at Rashtrapati Bhavan**.

The President's Secretariat in association with Department of Science & Technology/ **National Innovation Foundation**-India is organizing Festival of Innovation for the last three years at Rashtrapati Bhavan in the month of March.

Details

- It has become a national celebration of creativity and innovation at and for grassroots.

- The Festival of Innovation & Entrepreneurship (FINE) {previously known **as Festival of Innovation FOIN**} is a unique initiative of the Office of the President of India to recognise, respect and reward grassroots innovations and foster a supportive ecosystem.
- **It is a celebration of country's Innovation potential**, particularly those ideas which stem from grassroots level including the citizen at the last mile and also a reflection of power of children's creativity.
- It is aimed at providing platform to the innovators for building the linkages with potential stakeholders whose support can improve their prospects in coming years for the larger social good.

> **PEPPER IT WITH**
> Incredible India 2.0

- It will also help in **promoting lateral learning and linkages among the innovators to enrich the ecosystem for new India**. It would also be a great opportunity to create awareness about the importance attached by various Ministries of Government of India to their effort and participation in the FINE.

National Innovation Foundation

The National Innovation Foundation **was established in year 2000**, with the assistance of Department of Science and Technology, GoI. Ever since, it has made a big contribution to strengthen the grassroots technological innovations and outstanding traditional knowledge in the country. NIF has created a huge database of ideas, innovations and traditional knowledge practices from all over the country.
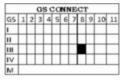
Way Forward

It is imperative that India becomes a growth engine for the world and provides a new model of inclusive development by providing a large number of open technological and other solutions for the developing and developed world.

Conclusion

In sync with the policies of the government of India, FINE will provide a window to the creative and innovative solutions for social development through grassroots innovations, student ideas and other technologies for agriculture, rural development, sanitation, health, women and child development, biotechnology and medical innovation for grassroots.

Awards and Prizes

Shanti Swarup Bhatnagar (SSB): Prime Minister conferred Shanti Swarup Bhatnagar (SSB) prizes for the years 2016, 2017 and 2018 recently. The SSB prize is awarded each year on the basis of conspicuously important and outstanding contributions to human knowledge and progress, made through work done primarily in India during the five years, preceding the year of the prize. People are selected for the award in the following disciplines viz. Biological sciences, Chemical Sciences, Medical Sciences, Physical Sciences, Mathematical Sciences, Engineering Sciences and Earth, Atmosphere, Ocean and Planetary Science.

Nari Shakti Puraskar 2018: President of India presented the Nari Shakti Puraskar 2018, **the highest civilian honour for women in India**, at a special ceremony held at Rashtrapati Bhavan, New Delhi, on International Women's Day. To acknowledge women's achievements, the Ministry of Women and Child Development confers Nari Shakti Puraskar on women and institutions in recognition of their relentless service towards the cause of women empowerment and social welfare.

International Golden City Gate tourism Award 2019: The Ministry of Tourism, Government of India has won the **First Prize** in the category of TV Cinema Spot at the prestigious international **Golden City Gate Tourism Awards 2019**. It is given annually in various categories related to the Tourism and Hospitality sectors.

The 'Golden City Gate' is a creative multimedia international competition for countries, cities, regions and hotels. The entries received for the awards are judged by an international jury comprising film and tourism experts. The annual award ceremony takes place at **ITB Berlin, the world's leading tourism trade show.**

A.M. Turing Award: Turing Award, in full A.M. Turing Award, annual award given by the Association for Computing Machinery (ACM), a professional computing society founded in 1947, to one or more individuals "**selected for contributions of a technical nature made to the computing community**." The Turing Award is often referred to as the computer science equivalent of the Nobel Prize. This year it was awarded to Yoshua Bengio, Geoffrey Hinton and Yann LeCun for the innovations they've made in AI.

Abel Prize

- American mathematician Karen Uhlenbeck won the Abel Prize in mathematics for her work on partial differential equations.
- **She is the first woman to win the prize**, which comes with a cheque for six million kroner (620,000 euros, $703,000). She is also an advocate for gender equality in science and mathematics.
- The Abel Prize is a Norwegian prize awarded annually by the King of Norway to one or more outstanding mathematicians. It is named after Norwegian mathematician Niels Henrik Abel (1802–1829) and directly modeled after the Nobel Prizes.
- Only one woman has won the other major international mathematics prize - the Fields Medal - Maryam Mirzakhani of Iran in 2014. She died in 2017.

Sharada Peeth Corridor

Why in News?

The Pakistan government recently approved a proposal to establish a corridor that will allow Hindu pilgrims from India to visit **Sharada Peeth, an ancient Hindu temple** and cultural site in Pakistan-controlled Kashmir (PcK).

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Some sections of Indian society like Kashmiri Pandit organisations have been demanding opening of the Sharada Peeth corridor for many years now because it is one of the three famous holy sites for Kashmiri Pandits, the other two being the **Martand Sun Temple in Anantnag and the Amarnath temple**.

About Sharada Peeth

- Established in **237 BC during the reign of Ashoka**, the 5,000-year-old Sharada Peeth is an abandoned temple and ancient centre of learning dedicated to the Hindu goddess of learning.
- Between the **6th and 12th centuries CE**, Sharada Peeth was one of the foremost temple universities of the Indian subcontinent. In the period it hosted scholars such as Kalhana, Adi Shankara, Vairotsana, Kumarajiva and Thonmi Sambhota.
- The Sharda Peeth corridor, when opened, will be the second religious tract after Kartarpur corridor in Pakistan-controlled territory that will connect the two neighbouring nations.
- Sharada Peeth translates to '**the seat of Sharada**' — the Kashmiri name for the Hindu goddess Saraswati. It is one of 18 Maha Shakti Peethas or "**Grand Shakti Peethas**" — highly revered temples in South Asia that commemorate the location as per the legend of the fallen body parts of the Hindu deity Sati.

UNSC resolution 1267

The UNSC resolution 1267 was adopted **unanimously in 1999**. It is a consolidated list of people and entities it has determined as being associated with Al Qaeda or the Taliban, and laws which must be passed within each member nation to implement the sanctions.

Significance

China blocked fresh proposal to designate JeM chief Masood Azhar. India is not a member of UNSC and, therefore, technically not privy to UNSC deliberations. But, Masood Azhar has been linked to Osama bin Laden and, hence, can be sanctioned under 1267 sanctions committee.

India Pride Project

India Pride Project is a volunteer-network spread across the globe, that tracks and brings back India's stolen heritage.
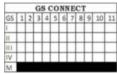
- The ancient temple of Sharada (also spelt Sharda or Sarada) and the adjacent ruins of Sharada University lie in **Neelam Valley, Shardi or Sardi, where the river Neelam (Kishanganga)** converges with the **Madhumati and Sargun** streams.

Dictionary of Martyrs

In News

The govt released the Dictionary of Martyrs of India's Freedom Struggle recently.

Facts

- The project for compilation of "Dictionary of Martyrs" of India's Freedom Struggle was commissioned by the Ministry of Culture, to the Indian Council of Historical Research (ICHR) to commemorate the 150th anniversary of uprising of 1857.

- This five-volume dictionary contains an account of the martyrs from India's First War of Independence in 1857, to India's Independence in 1947.

- It includes ex-INA or ex-military personnel who died fighting the British, the martyrs of 1857 Uprising, Jallianwala Bagh Massacre (1919), Non-Cooperation Movement (1920-22), Civil Disobedience Movement (1930-34), Quit India Movement (1942-44), Revolutionary Movements (1915-34), Kisan Movements, Tribal Movements, Agitation for Responsible Government in the Princely States (Prajamandal), Indian National Army (INA, 1943-45), Royal Indian Navy Upsurge (RIN, 1946), etc. Information of about 13,500 martyrs has been recorded in these volumes.

> **World Water Day 2019**
> **Theme:** 'Leaving no one behind
> SDG 6 aims to ensure availability and sustainable management of water for all by 2030.

Notes verbale

In News

India raised with Pakistan an incident of alleged abduction of two Hindu teenaged girls and their forcible conversion to Islam in Sindh province.

What is Notes verbale?

1. *Notes verbale* are the commonest method of formal diplomatic communication. They are used to convey information or requests of all kinds.
2. A note verbale is written on the sending entity's letterhead, and stamped with that entity's seal, but not signed. It is written in the third person.
3. A note verbale is also much less formal than a demi official (DO).

What is demarche?

A *demarche* is a more formal type of communication of one government's official position, views, or wishes on a given subject to an appropriate official in another government. Demarches generally seek to persuade, inform, or gather information from a foreign government. Governments may also use a demarche to protest or object to actions by a foreign government.

What is demi official?

A *demi official (DO)* is a first person communication that begins with a "Dear…" and is signed by the writer, usually a high representative of the sending entity. DOs are used only when the addressee and the representative know each other extremely well and occupy high office.

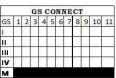### What is Non-papers and aide-memoires?

Non-papers and aide-memoires, which are summaries of discussions between two countries. A non-paper is written on a blank sheet of paper with no signatures and is addressed to no one, giving those party to the discussions deniability; an aide-memoire has to have an addressee, and indicates the sender's identity, usually with an initial. There are less formal kinds of communication between governments.

Miscellaneous

IT corridor in China

♣ India has launched its third IT corridor in China that will facilitate partnerships between Indian and Chinese companies. The National Association of Software and Services Companies (NASSCOM) entered into a partnership with China's Xuzhou city from Jiangsu Province in China to help develop the IT corridor.

♣ The IT industry body has already launched such corridors at Dalian and Guiyang cities to cash in on the burgeoning Chinese IT industry market.

♣ The primary aim of this IT corridor will be to facilitate partnerships between Indian and Chinese companies.

ICC

♣ Malaysia ratified the **Rome Statute** and thus becoming the 124th State party to the International Criminal Court (ICC).

♣ The International Criminal Court (ICC) located in Hague, is a court of last resort for the prosecution of serious international crimes, including genocide, war crimes, and crimes against humanity. Its treaty, the Rome Statute, was adopted in July 1998.

Worldwide Cost of Living Survey

Worldwide Cost of Living Survey was released by **the Economist Intelligence Unit** (EIU).

Highlights

♣ Some of India's biggest cities are among the cheapest in the world to live in.

♣ Cities of Bengaluru—India's technology capital, the southern city of Chennai, and the country's capital city New Delhi ranked among the world's ten cheapest cities.

♣ Amongst the most expensive cities in the world, Singapore and Hong Kong topped the rankings, along with Paris, followed by Zurich and Geneva.

International Air Transport Association (IATA)

Low cost carrier Spice Jet recently said it has become a member of global airlines' grouping International Air Transport Association (IATA). **SpiceJet is the first Indian budget carrier to join the IATA.**

About IATA

The International Air Transport Association (IATA) is the trade association for the world's airlines, representing some 290 airlines or 82% of total air traffic. It support many areas of aviation activity and help formulate industry policy on critical aviation issues.

Nursultan

Kazakhstan has renamed its capital **Astana to Nursultan to honour outgoing leader Nursultan Nazarbayev.**

India Energy Modelling Forum

♣ The NITI Aayog and the United States Agency for International Development (USAID) organized the first workshop on development of the India Energy Modelling Forum (IEMF), which has been envisaged as a **pan-stakeholder platform for debating ideas, scenario-planning & discussing the India's energy future**.

♣ The IEMF seeks to provide a platform for leading experts and policy makers to study important energy and environmental issues and ensure induction of modelling and analysis in informed decision making process.

* The Forum **aims to improve cooperation and coordination between modeling teams**, the Government of India, knowledge partners and think-tanks, build capacity of Indian institutions, and identify issues for joint modeling activities and future areas of research.

Croatia honours President Kovind

* Honourable President of India, Shri Ram Nath Kovind was honoured with **Croatia's highest civilian award - the Grand Order of the King of Tomislav.**
* The civilian order is awarded to heads of state for their important contribution towards the development of state relations between Croatia and their respective countries.

Mercer Quality of Living

* Global consulting firm Mercer has released its Mercer Quality of Living Survey. **It ranks 231 cities around the world on factors including political stability, crime, personal freedoms, healthcare, education, housing, recreation and public transport**.
* **Vienna** (Austrian capital) topped the new Mercer Quality of Living Survey, whose 2019 ranking was dominated by European cities. Thirteen out of the world's 20 best places to live are in Europe.
* **Luxembourg** was named as the safest city in the world, followed by Helsinki in Finland and the Swiss cities of Basel, Bern and Zurich.
* In terms of overall quality of living, Singapore (25), Montevideo in Uruguay (78) and Mauritius's Port Louis (83) were the highest ranking cities in Asia, South America and Africa respectively.

UN World Food Programme

* Japan has donated 69 million dollars to **the United Nations World Food Programme** to provide vital aid to 28 countries in the Middle East, Africa, and Asia, with the biggest shares of the money earmarked for Yemen and Iraq.
* Japan is one of WFP's top donors and has contributed $$958 million to the UN agency since 2014.

About UN WFP

↔ Assisting 91.4 million people in around 83 countries each year, the World Food Programme is the **leading humanitarian organization** saving lives and changing lives, delivering food assistance in emergencies and working with communities to improve nutrition and build resilience.

↔ WFP is governed by a 36-member Executive Board. It works closely with its two Rome-based sister organizations, the **Food and Agriculture Organization of the United Nations and the International Fund for Agricultural Development**.

↔ WFP partners with more than 1,000 national and international NGOs to provide food assistance and tackle the underlying causes of hunger.

Transformative Mobility and Battery Storage mission

* The Union Cabinet approved the **National Mission on Transformative Mobility and Battery Storage.**
* The Mission will have an **Inter-Ministerial Steering Committee** chaired by Chief Executive Officer (CEO), NITI Aayog to promote clean, connected, shared, sustainable and holistic mobility initiatives. The Mission will also launch the **Phased Manufacturing Programmes (PMP) for Batteries and for Electric Vehicle components**.
* The Mission will finalise the details of PMP for Electric Vehicle ecosystem and drive its implementation. The details of the value addition that can be achieved with each phase of localisation will be finalised by the Mission with a clear '**Make in India' strategy for EV components as well as battery technologies.**
* A phased roadmap to implement battery manufacturing at giga-scale will be an initial focus on large-scale module and pack assembly plants by 2019-2020. This will be followed

by integrated cell manufacturing by 2021-2022. The Mission will ensure holistic and comprehensive growth of the battery manufacturing industry in India.

Bomb Cyclone
- Storm intensity is measured by central pressure: the lower the pressure, the stronger is the storm.
- A storm is **considered a "bomb cyclone," or "bombogenesis," event when the pressure drops rapidly at least 24 millibars in 24 hours**. Bomb cyclones draw air from polar regions after they leave.

Grey hypocolius
- The Grey Hypocolius (Hypocolius ampelinus), **a small migratory bird that usually makes its home in West Asia and North Africa** and is a regular visitor to Kutch, has been sighted in Western Rajasthan for the first time.
- IUCN Status: Least Concern

Parrotfish
- Coral cover protection along the existing protected marine areas in Andaman and Nicobar islands is necessary for conservation of the endangered bumphead parrotfish, a new study has suggested.
- Bumphead parrotfish (Bolbometopon muricatum) is an **important component of coral reef ecosystem, but is highly endangered globally**. It is categorized as 'vulnerable' by IUCN.
- Parrotfish is a highly prized resource, but is threatened due to limited knowledge about its distribution and abundance in Indian waters.

Pulse polio program 2019
- In order to sustain polio eradication drive from the country, government launched Pulse Polio programme for 2019. More than 17 crore children of less than five years across the country will be given polio drops as part of the drive.
- The polio eradication programme in India **aims to protect children from the crippling disease by conducting two nationwide mass polio vaccination campaigns and two to three sub-national campaigns each year**.
- The last reported cases of wild polio in India were in West Bengal and Gujarat on 13 January 2011. In 2014, the World Health Organization (WHO) declared India a polio free country.

Global Fund for the treatment of HIV/AIDS
- Hyderabad-based pharma company Laurus Labs Limited recently announced that it has entered into a strategic partnership agreement with Global Fund for a period of 3.5 years.
- The **Global Fund is a 21st-century partnership organization designed to accelerate the end of AIDS, tuberculosis and malaria as epidemics**.
- Founded in 2002, the Global Fund is a partnership between governments, civil society, the private sector and people affected by the diseases. It raises and invests nearly US$4 billion a year to support programs run by local experts in countries and communities most in need.
- It have saved millions of lives and provided prevention, treatment and care services to hundreds of millions of people, helping to revitalize entire communities, strengthen local health systems and improve economies.

World Wide Web

- Google celebrates the **30th anniversary of the World Wide Web** or WWW with a GIF doodle.
- The World Wide Web (WWW) is a network of online content that is formatted in HTML and accessed via HTTP.
- The term refers to all the interlinked HTML pages that can be accessed over the Internet.
- The World Wide Web was originally designed in 1991 by **Tim Berners-Lee while he was a contractor at CERN**.

> **PEPPER IT WITH**
> World Consumer Day, World gold council, UNSC reforms, International Day of Forests, G.B. Pant National Institute of Himalayan Environment & Sustainable Development, Ethanol, Cool spots, World Wildlife Day,

BARC

Distinguished scientist **Ajit Kumar Mohanty** was appointed Director of Bhabha Atomic Research Centre (BARC), the country's premier multi-disciplinary nuclear research facility based in Mumbai. It is a multi-disciplinary research centre with extensive infrastructure for advanced research and development covering the entire spectrum of nuclear science, engineering and related areas.

'Black hole' coin

The UK's Royal Mint unveiled a new commemorative 50 pence coin inspired by the late legendary British physicist Stephen Hawking's seminal work on black holes. Hawking, one of the world's best-known theoretical physicists who died aged 76 last year, joins the ranks of other eminent scientists such as Isaac Newton and Charles Darwin to have a commemorative coin in honour of one of his greatest discoveries that black holes should not be all black.

Idukki's Marayoor Jaggery

The Marayoor Jaggery, the traditional and handmade product from **Idukki district of Kerala**, received the Geographical Indication (GI) tag from the Central Government.

It is made from sugarcane and no chemicals are added during the manufacturing process. It is dark brown in colour, high in sweetness and iron, with less sodium content and insoluble impurities.

Concept Clearing Assignment

1. The government of India is committed towards ensuring the safety of its security forces. In this context, discuss the initiatives of the Government to modernize the forces and the actions taken for their welfare.

2. For long, there has been a heated debate about Indian companies moving to the globally accepted International Financial Reporting Standards (IFRS) for their accounts. But firms have resisted this shift, stating that this will lead too many changes in the capture and reporting of their numbers. Discuss the impacts of Ind AS to the scheduled commercial banks and what its importance to a country like India is.

3. There has been a regular concern with the credibility of the budget numbers. Various projections tend to be unduly optimistic. Do you think the formation of fiscal council will solve these problems? Discuss the regulation of fiscal consolidation in India on both the state and the central level.

4. Discuss the impacts of introduction of real estate investment trusts (REITs). Will it attract small investors to make investments in the Indian Property market.

5. India and United States (US) have developed close bilateral and security ties but their bilateral trade is not at its full potential. Suggest measures to improve bilateral trade between India and US. Also discuss the impacts of removal of Generalised System of Preferences on their bilateral trade.

6. Should sedition be not redefined in a country like India – the largest democracy of the world, considering that right to free speech and expression is an essential ingredient of democracy ensured as a Fundamental Right by our Constitution? Comment.

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7. Bring out the key features of Aadhaar and Other Laws (Amendment) Ordinance. Discuss the impact of the ordinance on the privacy of citizens.

8. Edward Snowden a former CIA employee, left the US after leaking to the media details of extensive internet and phone surveillance by American intelligence. This incident opened the debate on the ethics of surveillance not followed by country against its own citizen violating their right to privacy. Critically analyse the situation in India in light of this event.

9. The Rajasthan government has passed a resolution requesting the Centre to include the bill in Schedule IX as it breached the 50% cap on reservations set by the Supreme Court. What is 50% rule? Discuss it in light of Indra Sawhney case verdict.

10. Briefly discuss Voluntary Code of Ethics. Bring out the key guideline and features of this code.

11. India is one of the major hubs of illicit drug trade ranging from age-old to newer prescription drugs and designer drugs like methamphetamine as per report released by UNODC. Highlight the cause for the rise in drug trade in India and also suggest steps to curb it.

12. Throw a light on Nitrogen Pollution in India discussing the cause and problems faced by it. Mention the initiatives by GoI to put a check on Nitrogen pollution.

13. India is endowed with large hydropower potential of 1,45,320 MW of which only about 45,400 MW has been utilized so far. The hydropower sector is currently going through a challenging phase and the share of hydropower in the total capacity has declined from 50.36% in the 1960s to around 13% in 2018-19. Bring out the measures taken by GoI to promote Hydro Power Sector.

14. Briefly discuss BOLD-QIT project. Discuss the impact of this project between the India-Bangladesh relations across border.

15. Bring out the salient features of Flood Management and Border Areas Programme. Critically analyse the impact of the scheme to counter effect of horrendous floods in the disaster prone areas.

P.T Oriented Questions

1. Asia's first Export Processing Zone was set up in Kandla in 1965. With a view to overcome shortcomings, Special Economic Zone (SEZ) Act was passed. Which among the following are objectives of the act?
   1. Promotion of export of goods and services
   2. Creation of employment opportunities
   3. Promotion of investment from domestic and foreign sources
   Code:
   (a) 1 and 2 only
   (b) 2 and 3 only
   (c) 1 and 3 only
   (d) All of the above

2. The Aadhar and Other Laws (Amendment) Ordinance, 2019 was promulgated recently. Consider following statements regarding this:

   1. Ordinance additionally allows 'offline verification' of an individual's identity
   2. It adds provision for private entities to use Aadhar number for authenticating identity before disbursement of services
   3. All fees, grants, and charges received by the UIDAI shall now be credited to Public Account of India fund
   4. It also amends the Prevention of Money Laundering Act, 2002
   Select the correct statements from above:
   (a) Only 1
   (b) 1 and 4
   (c) 1 and 3
   (d) 1, 2 and 3

3. Which among the following committee is not related to the Economic Capital Framework

1. Y.H Malegam committee
2. Bimal Jalan Committee
3. Usha Thorat Committee

Code:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) All of the above

4. Bandipur Tiger Reserve is situated in:
(a) Tamil Nadu
(b) Karnataka
(c) Madhya Pradesh
(d) Maharashtra

5. Which among the following is correct about Foreign Portfolio Investment (FPI)
1. It is investment by people not living in India but hold the passport of India
2. These can be done in share market or government bond or corporate bond
3. All Foreign portfolio investment taken together cannot acquire more than 24 per cent of the paid up capital of an Indian Company

Code:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) All of the above

6. Regional Anti-Terrorist Structure (RATS) Council is an organ of which among the following
(a) Organisation of Islamic Corporation
(b) Shanghai Cooperation Organisation
(c) The International Criminal Police Organization (INTERPOL)
(d) Federal Bureau of Investigation

7. BOLD-QIT, recently in news is?
(a) A project to achieve the quality product in time especially in MSME sector
(b) A programme to commemorate brave freedom fighters during Quit India Movement

(c) A project to install technical systems to enhance border management
(d) None of the above

8. Consider the following statements about special and differential treatment of World Trade Organisation and choose the correct one/ones
1. It gives developed countries the possibility to treat developing countries more favourably than other WTO Members
2. It also have provisions requiring all WTO members to safeguard the trade interests of developing countries

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

9. Which among the following are correct about Election Commission of India (ECI)
1. President from time to time can fix the number of election commissioners
2. The tenure of chief election commissioner is independent of the executive discretion
3. Lee committee recommended for the formation of election commission of India
4. Members of the election commission are appointed for a period of 6 years or until they attain the age of 70 years

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

10. Consider the following statements and choose the correct one
1. Most Favoured Nation(MFN) Status gives preferential treatment
2. MFN status provisions are mentioned in General Agreement and Tariff and Trade

3. A country can deviate from the MFN obligation on the basis of national security concerns

Code:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) All of the above

11. Global Environment Outlook (GEO) is published by:
(a) IPCC
(b) UNFCCC
(c) UNEP
(d) UNDP

12. Consider the following statements and choose the incorrect one
(a) Official Secret act is applicable to the government servants as well as citizens
(b) The Indian Official Secret Act was adopted during the tenure of Lord Hardinge
(c) If Right to Information Act and Official Secrets act clash then public interest will prevail
(d) None of the above

13. Consider following statements about African Union (AU):
1. It is an intergovernmental organization, established in 2002, to promote unity and solidarity of African states
2. The African Union (AU) replaced the Organization of African Unity (OAU)
3. The AU's headquarter is in Harare, Zimbabwe

Which of the above statements are correct?
(a) Only 1
(b) 2 and 3 only
(c) 1 and 2 only
(d) All of the Above

14. Which among the following is INCORRECT
(a) Primary Deficit is the sum of Fiscal deficit- Interest payments and developmental expenditure

(b) Revenue Deficit is Revenue expenditure – Revenue receipts
(c) Fiscal Deficit is Total expenditure – Total receipts except borrowings
(d) Budget Deficit is Total expenditure – Total receipt

15. Voter Verified Paper Audit Trail is designed by which among the following
1. Bharat Electronics Limited
2. Electronic Corporation of India Limited

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

16. The Druze are the people of which among the following region
(a) Golan Heights
(b) Sinai peninsula
(c) Tribal group of the Andaman Island
(d) African people who migrated to the South China Sea

17. Which country has become the first member of the Group of Seven (G7) major industrialised nations to join China's "Belt and Road Initiative" infrastructure project?
(a) France
(b) Japan
(c) Canada
(d) Italy

18. Consider the following statements about World Happiness Report (WHR) which was recently in new.
1. It is published by United Nations sustainable development solutions network
2. The surveys for the report is taken by Gallop world poll
3. It was first published in 2012
Which among the following is/are correct?
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) All of the above

19. The Cabinet Committee on Economic Affairs has approved "Pradhan Mantri JI-VAN Yojana". It is related with:
    (a) Enhancing the quality of life of rural women
    (b) Improving green cover through afforestation
    (c) Enhancing production of ethanol as bio-fuel
    (d) None of the Above

20. Who among the following cannot become a non-judicial member of the Lokpal?
    1. Members of Panchayat or Municipality (if she/he crosses the age of 45 then they can become the member)
    2. A person who is affiliated to a political party (if she/he crosses the age of 45 then they can become the member)
    3. A person who carries some business profession (they can only become non judicial member)
    Code:
    (a) 1 and 2 only
    (b) 2 and 3 only
    (c) 1 and 3 only
    (d) All of the above

21. Consider the following statements about white label ATM and choose the correct one/ones
    1. These are owned by the bank but are operated by a third party
    2. They don't bear the logo of the bank they serve
    Code:
    (a) 1 only   (b) 2 only
    (c) Both 1 and 2 (d) Neither 1 nor 2

22. Consider the following statements
    1. EASE reforms Index is released by Reserve Bank of India
    2. The index measures the progress of the public sector bank reform agenda
    Code:
    (a) 1 only   (b) 2 only
    (c) Both 1 and 2 (d) Neither 1 nor 2

23. Consider following statements regarding the Lokpal and Lokayukta Act:
    1. The Act provides for appointment of Lokpal at centre and Lokayuktas in states respectively
    2. There is no minimum age limit for Lokpal
    3. The Lokpal selection committee consists of a 3 member panel having Prime Minister, Leader of Opposition in the lower house and the chief justice of India or a judge of the apex court nominated by him
    4. The term of office for Lokpal Chairman and Members is 5 years or till attaining age of 65 years
    Which of the above statements are correct:
    (a) 1 only
    (b) 1 and 3
    (c) 2, 3 and 4 only
    (d) All of the above

24. Which among the following is correctly matched

1.	Exercise Sampriti	India-Sri-Lanka
2.	Exercise Mainamati Maitree	India-Bangladesh
3.	Exercise Al-Nagah	Indian-Oman
4.	Exercise Tropex	India-Africa

    Code:
    (a) 1,2 and 3 only
    (b) 2,3 and 4 only
    (c) 1,3 and 4 only
    (d) All of the above

25. Consider following statements about Dhole:
    1. It is commonly known as the Asiatic wild dog
    2. It is an apex social carnivore in the tropical forests of South and South East Asia
    3. Dholes don't hunt in packs, but tend to venture into forested landscapes adjoining protected areas

4. Its IUCN status is Critically Endangered

Which of the above statements are correct:

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

26. Which of the following leaf modifications occur(s) in the desert areas to inhibit water loss? (CSE-2018)

1. Hard and waxy leaves
2. Tiny leaves
3. Thorns instead of leaves

Select the correct answer using the code given below:

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

27. Consider the following statements: (CSE-2018)

1. The Parliament of India can place a particular law in the Ninth Schedule of the Constitution of India
2. The validity of a law placed in the Ninth Schedule cannot be examined by any court and no judgement can be made on it

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only

(c) Both 1 and 2
(d) Neither 1 nor 2

28. He wrote biographies of Mazzini, Garibaldi, Shivaji and Shrikrishna; stayed in America for some time; and was also elected to the Central Assembly. He was (CSE-2018)

(a) Aurobindo Ghosh
(b) Bipin Chandra Pal
(c) Lala Lajpat Rai
(d) Motilal Nehru

29. Which of the following has/have shrunk immensely/dried up the recent past due to human activities? (CSE-2018)

1. Aral Sea
2. Black Sea
3. Lake Baikal

Select the correct answer using the code given below:

(a) 1 only
(b) 2 and 3
(c) 2 only
(d) 1 and 3

30. "Rule of Law Index" is released by which of the following? (CSE-2018)

(a) Amnesty International
(b) International Court of Justice
(c) The Office of UN Commissioner for Human Rights
(d) World Justice Report