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I. POLITY & GOVERNANCE

TOPIC: GS II, ASPECTS OF GOVERNANCE

1. Issue related to NRC

Source: The Hindu

Why in news:

- The Supreme Court has recently allowed the people left out of the draft National Register of Citizens (NRC) in Assam to use five additional documents to claim their Indian legacy and extended the last date for filing of claims and objections from November 25 to December 15.
- Some Bengali speaking people have been killed near Tinsukia in Assam which shows the deepened fault lines between the Assamese and Bengali communities because of the ongoing exercise to update the National Register of Citizens as the Centre's plan to secure parliamentary passage for the Citizenship (Amendment) Bill, 2016.

Causes of communal divide in Assam:

- Lakhs of people have been eventually out by the updated NRC.
- Two types of divide have emerged in Assam i.e. on one hand native Assamese and immigrants including both Hindus and Muslims and on the other hand between Hindus and Muslims among the immigrants due to the Citizenship amendment bill.
- Presence of militant groups like ULFA has further worsened the issue.

Note: NRC has been explained in earlier weekly magazine.

Citizenship (Amendment) Bill, 2016 and issues related to it:

- The bill grants residence and citizenship to illegal migrants belonging to the Hindu, Sikh, Buddhist, Jain, Parsi, Christian or other religious communities coming from neighbouring countries (Afghanistan, Bangladesh or Pakistan)
- According to the bill, the migrants who came to India before December 31, 2014, cannot be deported or imprisoned.
- It makes the required changes so that these people can be made eligible for citizenship by reducing the minimum time period of residency in India to apply for citizenship from eleven years to six years.
- The bill does not include illegal Muslim migrants or communities like Jews, Bahais, etc.
- The citizenship act empowers the central government to regulate the entry, exit and residence of foreigners within the territory of India.

- It bars the illegal migrants from acquiring Indian citizenship. An illegal immigrant is one who enters the country without valid travel documents or stay beyond the permitted time period. Foreigners Act, 1946, and the Passport (Entry into India) Act, 1920 has the provision for imprisonment or deportation of illegal migrants.

TOPIC: GS II, JUDICIARY

2. Concerns regarding vacancy in High Courts

Source: The Hindu

Why in news:

The Supreme Court has recently cautioned the States and the High Courts regarding thousands of vacant posts in the high courts and the lower judiciary and gave a time frame of one year for completing the recruitment of additional district judges and nine months for civil judges, junior division.

Issues related to shortages of judges in India:

- According to the data released by home ministry, the judiciary faces a combined shortage of over 6,000 judges, including over 5,000 in the lower courts as the working strength of the lower judiciary is 16,726, while the approved strength is much higher at 22,474.
- Judge-population ratio in India is 19.49 per million (10 lakh) people.
- Impact:
 1. Delay in justice delivery and erosion of rule of law.
 2. Increase pendency of cases which ultimately harms most the poor section of the society.
 3. Decline in faith of common people on the institutions which compels them to rely on traditional, often undemocratic and irrational justice delivery systems like Khap panchayat.
 4. Increase in the number of undertrials.
- Law commission recommendations:
 1. In 1987, the Law Commission had recommended an increase in the number of judges upto 50 judges per million.
 2. The 245th Law Commission report dealt with the arrears and backlog of cases largely on poor judicial infrastructure and suggested for creation of additional courts for speedy clearance of cases and deduction in costs.

Way forward:

- Indian Judiciary Annual Report 2015-2016 highlighted that nearly 15,000 more judges would

be required in next three year to overcome the consequences of shortage of judges.

- The need of the hour is to implement the recommendations Law commission recommendations regarding shortages of judges and increase the judge people ratio in the country.

TOPIC: GS II, ASPECTS OF GOVERNANCE

3. Temple entry and gender discrimination

Source: The Hindu

Why in news:

- The Delhi high court has recently dismissed a petition seeking a direction to ensure that women of all ages and religions to be allowed to enter and pray at temples, mosques and Zoroastrian fire temples expressing its lack of territorial jurisdiction.
- The petition also urged the court to direct the Centre to declare discriminatory practices towards women by virtue of their menstruating cycles as unconstitutional. A similar order was sought in favour of the entry of men in women-only temples.

Earlier verdict by the Supreme Court:

- The Supreme Court has recently abolished the ban on women entry in Sabrimala temple on the basis of violation of constitutional right to equality.
- Hindu religion would not be fundamentally altered by allowing women to enter the temple.

Constitutional basis for upholding temple entry ban for Women:

- The temple enjoys the denominational status under Article 26 of the Constitution, which allows it to determine the manner in which it managed its religious affairs.
- Prohibiting women of menstruating age is supported by the temple's long-honoured custom for the deity's celibacy concern.
- The ban was supported by various other rules like Kerala Hindu Places of Public Worship (Authorisation of Entry) Rules, 1965 in case of Sabrimala. However this law has been repudiated by the court as the core of discrimination.
- The issue of what constitutes an essential religious practice is for the religious community to decide.

Way forward:

- If a religious practice sponsors discrimination on the basis of gender or other ground denying equal status in society and notions of purity and pollution are employed to perpetuate discrimination, the Constitutional mandate must prevail.

- It is important to assess whether an exclusion founded on religious belief, essential or otherwise, encroaches on a person's basic right to dignity
- Belief by the community cannot be allowed to undermine the Constitution's basic quest for equality.

TOPIC: GS III, ISSUES RELATED TO BORDER SECURITY

4. Security of India's North East

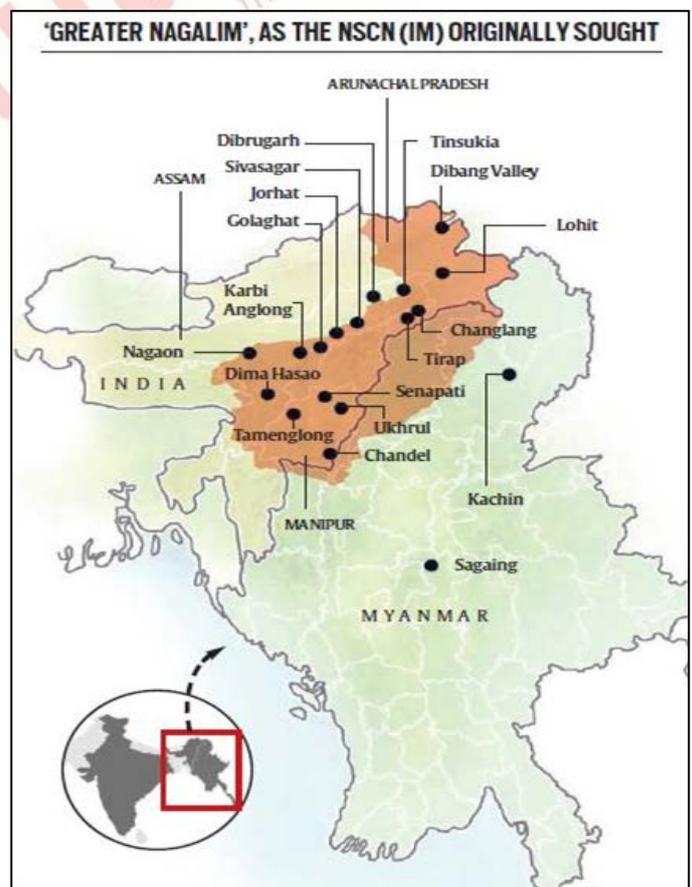
Source: The Hindu

Why in news:

The army officials have recently highlighted the advantages of the hilly terrain and porous border with Myanmar for the insurgent groups to carry out attacks.

What is insurgency?

- An insurgency is an armed rebellion against a constituted authority when those taking part in the rebellion are not recognized as belligerents. In case of Indian scenario it can be seen as armed rebellion and violent protests against Indian government or authority.



Causes of insurgency in North-East:

- Most of the North east region remained immune from freedom movement in India due to which they could not inculcate the nationality feeling in themselves.

- The north eastern states have predominantly tribal population with huge forest cover.
- The forest laws since the British times became intrusive & drastically affected their livelihoods & culture.
- They are reluctant to accommodate the diversity in their territories which led them to demand for autonomy and sometimes complete independence.
- The Bengali migration from present day Bangladesh to the north-east during 1947 & later around Bangladesh liberation war also added considerable resentment which can be seen in electoral & militant modes
- Support advanced by neighbouring countries such as China.

Active militant groups in the north-east:

1. **ULFA:** The United Liberation Front of Assam aims to establish a sovereign Assam through an armed struggle. It was banned in 1990s & a severe crackdown was launched in 2010 which considerably brought down their numbers.
2. **NSCM:** Nationalist Socialist Council of Nagaland, was formed to advance the Naga cause for sovereignty which operates mainly in the Naga inhabited regions of India & Myanmar with the help of easy cross border access. Its splinter group- Issac-Muivah faction (NSCN – IM) is currently involved in peace talks with the Indian government, while the Kaplang faction with its major operations in Myanmar is designated as a terror outfit by India. NSCN-IM has been fighting for 'Greater Nagaland' or Nagalim. It wants to extend Nagaland's borders by including Naga-dominated areas in neighbouring Assam, Manipur and Arunachal Pradesh, to unite 1.2 million Nagas.
3. Some other insurgent organisations are Mizo National Front and National Liberation Front of Tripura.

Peace agreements with these insurgent groups:

- It was signed on 3rd August 2015 between India and Issac-Muivah faction (NSCN – IM) of Nationalist Socialist Council of Nagaland to bring down the oldest separatist movement in the country.
- 213th report on the security situation in the north-eastern States, tabled by the Parliamentary Standing Committee on Home Affairs in the Rajya Sabha said the NSCN-IM had agreed for a settlement within the Indian federation with a special status.

TOPIC: GS II, GOVERNMENT POLICIES AND INTERVENTION

5. Water ATM

Source: The Hindu

Why in news:

- Water vending machines or water ATMs are mushrooming in the country especially in the metro cities and railway platforms.
- With 82 crore people who still do not have access to piped water and 70% of water in the country being contaminated, the government is increasingly starting to accept small water enterprises such as water ATMs and community purification plants as an alternative solution to the safe drinking water challenge.
- Comptroller and Auditor General of India (CAG) in its recent report has pointed out that only 18% of the rural population has access to potable piped water, failing to meet the 2017 target of 50%.
- India is ranked at 120 out of 122 countries on the Water Quality Index, said Niti Aayog, adding that 70% of the country's water supply is contaminated.

What is a Water ATM?

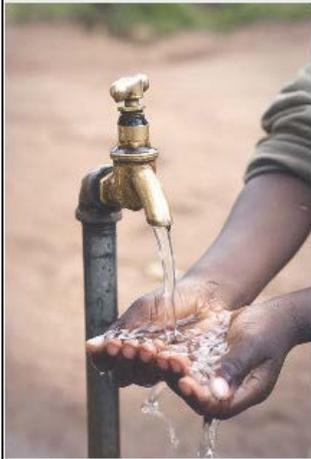
- A water ATM is an automated water vending machine that dispenses pure drinking water.
- It can be installed in urban and rural localities which do not have access to clean and pure drinking water.
- A water vending machine works like any regular bank ATM, the only difference being that it provides water instead of money.

Advantages of a Water ATM:

- It dispenses safe and pure water 24/7 round the year. People can purchase water on the 'pay per use' basis as and when they want.
- It can be installed in - schools, hospitals, bus/railway stations or community meeting places.
- It saves the time and efforts that people spend on travelling or standing in queues to fetch safe and pure drinking water.
- It inculcate the water saving habit in people as they will have to pay for it.
- It reduces the dependence of people on packaged drinking water, which otherwise is an expensive option, especially for poor people.

Dire situation

Close to 82 crore people do not have access to piped water. 70% of water in the country is contaminated



Performance vs Targets of NRDWP# as reported by the CAG

Issue	Achieved	NRDWP Target*
Access to drinking water in rural habitations	44%	100%
Access provided to drinking water by govt. schools & anganwadis	85%	100%
Population provided with potable water through pipes	18%	50%
Households given water connections	17%	50%

Presence of **Districts affected by ground water contamination**

Nitrate	386	21
Fluoride	335	20
Iron	301	26
Salinity	212	15
Arsenic	153	21
Lead	93	14
Chromium	30	10
Cadmium	24	9

■ No. of affected districts
● Affected State/UTs
 * (2012-17)
 # National Rural Drinking Water Programme

2.2 lakh small water enterprises to provide safe drinking water to about 37 crore people, mostly in urban slums where piped water infrastructure is difficult to build, and in rural areas with contaminated water sources.

- The report highlights that while such enterprises cost only a fraction of piped water infrastructure, policy changes and at least a doubling of tariffs are needed to help them bridge the safe water gap.

Other steps of government to provide safe drinking water:

- The National Water quality sub mission aims to cover all rural population in Arsenic/Fluoride affected habitations with clean drinking water on a sustainable basis by March 2021.
- National Rural Drinking Water Programme:
 - It aims to provide every rural person with adequate safe water for drinking, cooking and other basic domestic needs on a sustainable basis, with a minimum water quality standard, which should be conveniently accessible at all times and in all situations.
 - It will be continued with 14th Finance Commission cycle till March 2020.
 - It will enable the country to reach the goal of increasing coverage of sustainable piped water supply as its focus will be on piped water supply, increase level of service delivery, thrust on coverage of water quality affected habitations, coverage of Open Defecation Free (ODF) declared villages etc.
- As per the Integrated Management Information System (IMIS) of the Ministry of Drinking Water and Sanitation, about 77% of rural habitations in India have achieved a fully covered (FC) status and 56% of the rural population have access to tap water through public stand posts within which 16.7% have household connections.
- Government has aimed at Har Ghar Jal target of 100% piped water by 2030.

Way forward:

- A report by Safe Water Network (SWN) states that the government needs to spend ₹44,000 crore on

TOPIC: GS II, GOVERNMENT POLICIES AND INTERVENTION

6. Health insurance policies Reform

Source: The Hindu

Why in news:

The committee appointed to look into standardisation of exclusions under health insurance policies has recently submitted its report to the Insurance Regulatory and Development Authority of India.

About the committee:

There is significant increase in the number of companies providing health insurance but they often differ in terms of exclusions. Hence for bringing uniformity and scaling down the number of exclusions IRDAI (Insurance Regulatory and Development Authority of India) constituted a 10 member committee for:

- Examining the existing exclusions.
- Studying the "wordings/language of the exclusions and standardizing the wordings" in a simple and easily understandable language.
- Examining the scope for allowing individual specific and/or ailment/disease specific permanent exclusions at the time of underwriting so that the policyholders are not denied health insurance claims unrelated to the exclusions
- Minimising the number of illness/diseases which are not covered under the health insurance policies.

Suggestions of the committee:

- All health conditions acquired after policy inception, other than those that are not covered

under the policy contract (such as infertility and maternity) should be covered under the policy and cannot be permanently excluded so that exclusion of diseases contracted after taking the policy cannot be permitted.

2. Exclusions for specific disease should be highlighted.
3. There should not be any permanent exclusions in the policy wordings for any specific disease condition, whether they are degenerative, physiological, or chronic in nature.

IRDAI (Insurance Regulatory and Development Authority of India):

1. It is an autonomous, statutory body tasked with regulating and promoting the insurance and re-insurance industries in India.
2. It was constituted by the Insurance Regulatory and Development Authority Act, 1999, an Act of Parliament passed by the Government of India.
3. It's headquarter is in Hyderabad, Telangana.
4. It is a 10-member body including the chairman, five full-time and four part-time members appointed by the government of India.

TOPIC: GS II, INTERNAL SECURITY

7. India's nuclear triad

Source: The Hindu

Why in news:

India has recently declared its nuclear triad operational after its indigenous ballistic missile nuclear submarine INS Arihant conducted its first deterrence patrol.

Nuclear Triad:

- Nuclear triad is a three-pronged military force structure that consists of land-launched nuclear missiles, nuclear-missile-armed submarines and strategic aircraft with nuclear bombs and missiles.
- India has nuclear-capable fighter aircraft such as the Dassault Mirage 2000H, Dassault Rafale, Sukhoi Su-30 MKI, MIG-29 and SEPECAT Jaguar.
- The purpose of having a nuclear triad capability is to significantly reduce the possibility that an enemy could destroy all of a nation's nuclear forces in a first-strike attack which in turn ensures a credible threat of a second strike and thus increases a nation's nuclear deterrence.

INS Arihant:

- It is nuclear submarine capable of carrying nuclear tipped ballistic missiles

and belongs to class referred to as Ship Submersible Ballistic Nuclear (SSBN).

- Its design is based on the Russian Akula-1 class submarine. It was built with Russia's help under Advanced Technology Vessel (ATV) project started in the 1980s.
- It is powered by 83 MW pressurised light water nuclear reactor with enriched uranium fuel.
- It will be armed with the K-15 Sagarika missiles with a range of 750 km and later, with a longer range K-4 missiles (3,500 km range) which is being developed by DRDO.
- It is comparatively difficult to be detected than India's nuclear weapons platforms on land and in the air which gives it a "second-strike" capability.

Other countries with Nuclear triad capabilities:

- India became the 5th member with a nuclear triad capability after USA, Russia, China and France.

II. ECONOMY

TOPIC: GS III, EFFECTS OF LIBERALIZATION ON THE ECONOMY, CHANGES IN INDUSTRIAL POLICY

8. India moves up to 77th rank in Ease of Doing Business Index

Source: The Hindu

Why the news:

The World Bank has released its latest Doing Business Report (DBR, 2019).

- India jumped 23 ranks in the World Bank's Ease of Doing Business (EODB) Index 2018 to 77. It ranked



100 in the 2017 report.

- The Index ranks 190 countries across 10 indicators ranged across the lifecycle of a business from 'starting a business' to 'resolving insolvency'.
- The first report was published in 2003.

Performance of various countries:

- EODB 2018 was topped by New Zealand (consecutive for third time), followed by Singapore, Denmark, and Hong Kong.
- US was placed at eighth and China was ranked 46th while Pakistan is placed at 136th.
- As per the latest report, Afghanistan had moved up the most, by 16 spots, from 183th in last year's ranking to 167th this year.
- China and India — two economies with the largest populations — are among top 10 improvers this year.
- Afghanistan, Djibouti, Azerbaijan, Togo, Kenya, Côte d'Ivoire, Turkey and Rwanda rounded out the top 10 most improved list. In addition, Djibouti and India are the only economies to make the 10 top most improved list for the second consecutive year.

Performance of India:

- India jumped 23 spots from a year ago to rank 77 out of 190 countries in the World Bank's latest report on the ease of doing business.
- It was also among the top 10 most improved economies along with countries such as China, Djibouti and Azerbaijan.
- The ease of doing business in India improved notably after a series of reforms made it easier for companies to get construction permits, pay taxes and trade across borders.

contracts, 158 to 137 in starting a business, and 36 to 22 in getting credit.

- Entrepreneurs were able to start a business more easily after India integrated multiple application forms into a general incorporation form. Reforms also "streamlined the process of obtaining a building permit and made it faster and less expensive to obtain a construction permit."
- Last year, the country amended its insolvency and bankruptcy code which prevented willful defaulters from buying up any of their own troubled assets at discounted rates. That strengthened access to credit as "secured creditors are now given absolute priority over other claims within insolvency proceedings".
- Other areas of improvement included simplifying India's complex tax structure that made it easier to pay taxes. Initiatives implemented under the National Trade Facilitation Action Plan 2017-2020 improved the efficiency of cross-border trading and reduced the time taken to meet compliance requirements.
- It made starting business easier by integrating multiple application forms into general incorporation form. India also replaced value-added tax (VAT) with GST for which registration process is faster.

TOPIC: GS III, INDIAN ECONOMY AND ISSUES RELATING TO PLANNING, MOBILIZATION OF RESOURCES, GROWTH, DEVELOPMENT AND EMPLOYMENT

9. Commercial Papers

Source: The Hindu

Why in news:

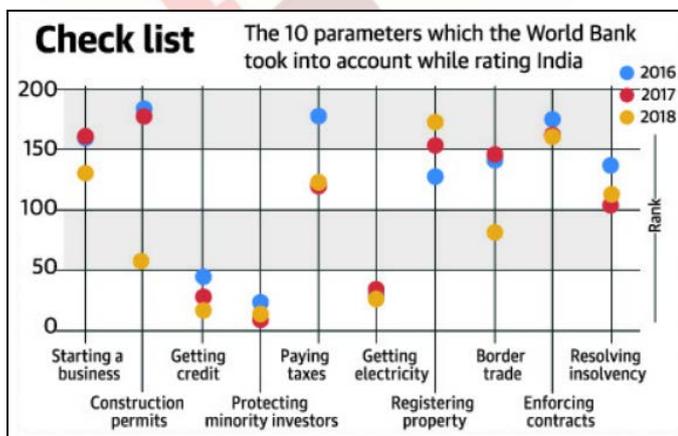
Commercial papers have become one of the popular routes for corporates to raise funds when compared with loans from banks in recent times.

What is a commercial paper?

- A commercial Paper (CP) is an unsecured loan raised by firms in money markets through instruments issued in the form of a promissory note. CPs can be issued for maturities between a minimum of 7 days and a maximum of up to one year from the date of issue.

Why are CPs popular?

- Because of surplus liquidity, short-term borrowing rates in money markets have significantly declined post demonetisation and are much lower than the lowest benchmark lending rates of the banks.



Areas of improvement:

- India moved from rank 184 in 2014 to 52 in 2018 in the construction permits category, 137 to 24 in getting electricity, 126 to 80 in trading across borders, 156 to 121 in paying taxes, 137 to 108 in resolving Insolvency, 186 to 163 in enforcing

- Because banks cannot lend below the benchmark lending rates, firms with good ratings have preferred to meet short-term working capital requirements through commercial papers at lower-than-bank rates.

Will this spike in commercial papers be sustained?

- Issuance of commercial papers will continue to remain strong till there is surplus liquidity in banks and short-term rates continue to be significantly lower than benchmark lending rates of the banks.
- A bank or mutual fund with surplus temporary liquidity will prefer to subscribe to commercial papers and earn a slightly higher return in the short-term than parking funds under reverse repo.
- To retain business relationships with stronger corporates, banks have been subscribing to commercial papers of these corporates as that allows them to lend indirectly at lower than their benchmark lending rates. This is also one reason for an increase in commercial paper issuance. Roughly 33% of outstanding commercial papers have been subscribed to by banks.

What are the advantages of issuing CPs?

- Apart from being a cheaper source of funds, it helps meet funding requirements relatively quickly for better-rated corporates. Procedural requirements for securing bank facilities and charge creation on assets is not required.

What are the key challenges with CPs?

- As the CP is an unsecured loan, the investor in commercial papers largely prefers highly-rated corporates or public sector entities in terms of credit rating. Lender appetite is limited to better rated companies.
- Also commercial paper markets can be seasonal and vulnerable to liquidity conditions. In case of sudden tightening of liquidity, a firm's ability to secure funding can be challenged. Within the year, liquidity conditions can become tight in certain months such as the end of a quarter, because of advance payment of taxes and the like. At such times, funding costs can also rise for the issue of CPs.

Therefore, commercial papers should not be used as a permanent source of capital and should largely be used to benefit from liquidity conditions and arbitrage in short-term borrowing rates.

TOPIC: GS III, INDIAN ECONOMY AND ISSUES RELATING TO PLANNING, MOBILIZATION OF RESOURCES, GROWTH, DEVELOPMENT

10. RBI initiates steps to set up digital Public Credit Registry (PCR)

Source: The Hindu

Why in news:

The Reserve Bank of India (RBI) has initiated steps to set up a wide-based digital Public Credit Registry (PCR) to capture details of all borrowers, including wilful defaulters and also the pending legal suits in order to check financial delinquencies.

- The PCR will also include data from entities like market regulator SEBI, the Corporate Affairs Ministry and the Insolvency and Bankruptcy Board of India to enable banks and financial institutions to get a 360-degree profile of existing and prospective borrowers on a real-time basis.

About Public Credit Registry:

PCR is digital registry of authenticated granular credit information. It will work as financial information infrastructure providing access to various stakeholders and enrich the existing credit information ecosystem. It seeks to serve as single point of mandatory reporting for all material events for each loan, notwithstanding any threshold in the loan amount or type of borrower.

- Generally, a PCR is managed by a public authority like the central bank or the banking supervisor, and reporting of loan details to the PCR by lenders and/or borrowers is mandated by law. The contractual terms and outcomes covered and the threshold above which the contracts are to be reported vary in different jurisdictions, but the idea is to capture all relevant information in one large database on the borrower, in particular, the borrower's entire set of borrowing contracts and outcomes.

Need for a PCR:

- A central repository, which, for instance, captures and certifies the details of collaterals, can enable the writing of contracts that prevent over-pledging of collateral by a borrower. In absence of the repository, the lender may not trust its first right on the collateral and either charge a high cost on the loan or ask for more collateral than necessary to prevent being diluted by other lenders. This leads to, what in economics is termed as, pecuniary externality – in this case, a spillover of one loan contract onto outcomes and terms of other loan contracts.

- Furthermore, absent a public credit registry, the 'good' borrowers are disadvantaged in not being able to distinguish themselves from the rest in opaque credit markets; they could potentially be subjected to a rent being extracted from their existing lenders who enjoy an information monopoly over them. The lenders may also end up picking up fresh clients who have a history of delinquency that is unknown to all lenders and this way face greater overall credit risk.

Advantages of having a PCR:

- A PCR can potentially help banks in credit assessment and pricing of credit as well as in making risk-based, dynamic and counter-cyclical provisioning.
- The PCR can also help the RBI in understanding if transmission of monetary policy is working, and if not, where are the bottlenecks.
- Further, it can help supervisors, regulators and banks in early intervention and effective restructuring of stressed bank credits.
- A PCR will also help banks and regulators as credit information is a 'public good' and its utility is to the credit market at large and to society in general.

Background:

- In June 2018, RBI had announced to set up PCR for India with view to address information asymmetry, foster access to credit and strengthen the credit culture in the economy. This decision was taken based on recommendation of high-level task force (HTF) i.e. YM Deosthalee committee which was constituted by RBI to review current availability of information on credit, adequacy of existing information utilities, and identify gaps that could be filled by PCR.
- The task force has suggested the registry should capture all loan information and borrowers be able to access their own history. Data is to be made available to stakeholders such as banks, on a need-to-know basis. Data privacy will be protected.

Currently, there are multiple granular credit information repositories in India, with each having somewhat distinct objectives and coverage. Within RBI, CRILC is borrower level supervisory dataset with threshold in aggregate exposure of Rs 5 crore. Moreover, there are four privately owned credit information companies (CICs) operating in India. RBI has mandated all its regulated entities to submit credit information individually to all four CICs.

TOPIC: GS III, ISSUES RELATED TO DIRECT AND INDIRECT FARM SUBSIDIES AND MINIMUM SUPPORT PRICES; PUBLIC DISTRIBUTION SYSTEM OBJECTIVES, ISSUES OF BUFFER STOCKS AND FOOD SECURITY

11. Operation Greens

Source: PIB

Why in news:

Ministry of Food Processing Industries (MoFPI) has approved the operationalisation strategy for Operation Greens.

The Strategy will comprise of a series of measures as decided by the Ministry:

Short term Price Stabilisation Measures:

- NAFED will be the Nodal Agency to implement price stabilisation measures.
- MoFPI will provide 50% of the subsidy on transportation of Tomato Onion Potato (TOP) Crops from production to storage; and hiring of appropriate storage facilities for TOP Crops.

Long Term Integrated value chain development projects:

- Capacity Building of FPOs & their consortium.
- Quality production.
- Post-harvest processing facilities.
- Agri-Logistics.
- Marketing / Consumption Points.
- Creation and Management of e-platform for demand and supply management of TOP Crops.

About Operation Greens:

- Operation Greens was announced in the Budget speech of 2018-19 with an outlay of Rs 500 crores to stabilize the supply of Tomato, Onion and Potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility.
- Operation Green (OG) wants to replicate the success story of Operation Flood, in fruits and vegetables, starting with three basic vegetables.

Major objectives:

- Enhancing value realisation of TOP farmers by targeted interventions to strengthen TOP production clusters and their FPOs, and linking/connecting them with the market.
- Price stabilisation for producers and consumers by proper production planning in the TOP clusters and introduction of dual use varieties.

- Reduction in post-harvest losses by creation of farm gate infrastructure, development of suitable agro-logistics, creation of appropriate storage capacity linking consumption centres.
- Increase in food processing capacities and value addition in TOP value chain with firm linkages with production clusters.
- Setting up of a market intelligence network to collect and collate real time data on demand and supply and price of TOP crops.

TOPIC: GS III, INDIAN ECONOMY

12. Partial Credit Enhancement (PCE)

Source: Livemint

Why in news:

The Reserve Bank of India (RBI) has allowed banks to provide partial credit enhancement (PCE) to bonds issued by systemically important non-deposit taking non-banking financial companies (NBFCs) registered with the RBI and housing finance companies (HFCs) registered with the National Housing Bank.

Key points:

- The tenure of these bonds shall not be less than three years and proceeds from them shall only be utilized to refinance existing debt.
- Banks shall introduce appropriate mechanisms to monitor and ensure that the end-use condition is met.
- The central bank has restricted the exposure of a bank through PCEs to bonds issued by each such NBFC or HFC to 1% of capital funds of the bank within the current single and group borrower exposure limits.
- Banks are allowed to provide PCE as non-funded subordinated facility in the form of a contingent line of credit to be used in case of shortfall in cash flows for servicing the bonds and thereby improve the credit rating of the bond issue.

Significance:

- The move is aimed at enhancing the credit rating of the bonds and enabling these NBFCs to access funds from the bond market on better terms.
- PCE is expected to help NBFCs and HFCs raise money from insurance and provident or pension funds who invest only in highly-rated instruments.

Background:

- The incentive comes at a time when NBFCs and HFCs have requested the government and regulators to ensure that confidence returns to

the market. They have sought relaxations of the National Housing Bank's credit rating norms related to refinance, lowering of the criterion on years of existence to one year, providing for 10% of the loan loss by the government and capital infusion in banks.

- The Indian corporate bond market is at a nascent stage of development, resulting in excessive pressure on the banking system to fund credit for project development. Due to greater asset-liability mismatch in infrastructure and project financing, banks are exposed to liquidity risk. The insurance and provident/pension funds, whose liabilities are long term, may be better suited to finance such projects.

TOPIC: GS III, EFFECTS OF LIBERALIZATION ON THE ECONOMY, CHANGES IN INDUSTRIAL POLICY AND THEIR EFFECTS ON INDUSTRIAL GROWTH

13. Support and Outreach Initiatives for MSME Sector

Sources: PIB, India Today

Why in news:

Recently, the Government of India unveiled 12 key initiatives which will help the growth, expansion and facilitation of MSMEs across the country.

Five key aspects of facilitating the MSME sector:

1. Access to credit
2. Access to market
3. Technology upgradation
4. Ease of doing business
5. A sense of security for employees

The 12 initiatives will address each of these five categories.

1. Access to credit

- 59-minute loan portal to enable easy access to credit for MSMEs. Loans up to Rs 1 crore can be granted in-principle approval in just 59 minutes through GST Portal.
- 2 per cent interest subvention for all GST registered MSMEs on fresh or incremental loans. Increase in interest rebate from 3 per cent to 5 per cent for exporters who receive loans in the pre-shipment and post-shipment period.
- All companies with a turnover of more than Rs 500 crore would now have to come on Trade Receivables e-Discounting System (TReDS) platform so that there is no cash flow problem for MSMEs.

12 historic decisions by PM Modi for the MSME Sector

Loan in 59 minutes.	Interest benefits for GST registered MSMEs.	CPSEs and Corporates more than Rs. 500 crore to join Trade Receivables e-Discounting System or the TReDS Platform.
Tech support to MSMEs via 20 hubs and 100 Spokes.	Mandatory 25% procurement from MSMEs by CPSEs.	Now, returns due to 8 Labour Laws and 10 rules to be filed only once instead of the earlier twice.
Pharma Clusters where 70% cost borne by Centre.	All CPSEs to join Government e-Marketplace (GeM).	Of the 25% mandatory procurement, 3% to be done only from women-led MSMEs.
Ending Inspector Raj and ensuring transparency.	Ordinance for simplifying levy of penalties for minor offences.	Easier process for Environmental Clearances and 'Consent to Establish.'

2. Access to markets

- Public sector companies will now have to compulsorily procure 25 per cent, instead of 20 per cent of their total purchases, from MSMEs.
- Out of the 25 per cent procurement mandated from MSMEs, 3 per cent will be reserved for women entrepreneurs.
- All public sector undertakings of the union government must now compulsorily be a part of GeM (Government e-Marketplace)

3. Technology upgradation

- Modi announced Rs 6,000 crore for creation of 20 hubs and 100 tool rooms for technology upgradation.

4. Ease of doing business

- Clusters will be formed of pharma MSMEs. 70 per cent cost of establishing these clusters will be borne by the union government.
- MSMEs will have to file just one annual return on eight labour laws and 10 central rules.
- To rid the sector of inspector raj, Modi announced that inspections of factories in the sector will be sanctioned only through a computerised random allotment and inspectors will have to upload reports on portal within 48 hours.
- An ordinance has been promulgated to simplify the levy of penalties for minor offences under the Companies Act.

5. Social security for MSME sector employees

- A mission will be launched to ensure that they have Jan Dhan Accounts, provident fund, and insurance.

- MSME outreach programme will run for 100 days covering 100 districts throughout the country.

About the MSME sector of India:

- The Indian MSME sector provides maximum opportunities for both self-employment and wage employment outside the agricultural sector
- The sector generates around 100 million jobs through over 46 million units situated throughout the geographical expanse of the country
- With 38 per cent contribution to the nation's Gross Domestic Product (GDP) and 40-45 per cent share of the overall exports and manufacturing output respectively, the sector plays a key role in our economy.
- Besides the wide range of services provided by the sector, it is engaged in the manufacturing of over 6000 products ranging from traditional to hi-tech items.

III. ENVIRONMENT

TOPIC: GS III, CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

14. Oceans Heating Faster Than Previously Thought, Says Study

Source: The Hindu

Why in news:

Scientists from the Intergovernmental Panel on Climate Change (IPCC) have released their assessment on the health of world oceans.

Highlights of the study:

- For each of the last 25 years, oceans had absorbed heat energy equivalent to 150 times the amount of electricity mankind produces annually. That is 60% higher than what previous studies showed.
- The world's oceans have absorbed 90% of the temperature rise caused by man-made carbon emissions.

Why it matters?

- Oceans cover more than two thirds of the planet's surface and play a vital role in sustaining life on Earth.
- The IPCC warns that drastic measures need taking in order to limit global warming to 1.5 Celsius by the end of the century but the world produced a record amount of carbon emissions in 2017.

How was it measured?

- US-based Scientists focussed on two gases found naturally in the atmosphere — Oxygen and carbon

dioxide. Both gases are soluble in water, but the rate at which water absorbs them decreases as it warms. By measuring atmospheric oxygen and CO₂ for each year, scientists were able to more accurately estimate how much heat oceans had absorbed on a global scale.

Way forward:

- We must once again revise down our carbon footprint, with emissions needing to fall 25% compared to previous estimates. The result significantly increases the confidence we can place in estimates of ocean warming and therefore helps reduce uncertainty.

TOPIC: GS II, GOVERNMENT POLICIES AND INTERVENTIONS FOR DEVELOPMENT IN VARIOUS SECTORS

15. Deal inked for Biofuel research

Source: The Hindu

Why in news:

The Department of Biotechnology (DBT) has signed a three-year, ₹11 crore deal with The Energy and Research Institute (TERI) to set up a centre to produce “advanced biofuels and bio-commodities.”

Key points:

- This is the fifth such dedicated centre for bioenergy-research and development set up by the Department. The others are located at the Indian Agricultural Research Institute, New Delhi; the Indian Institute of Technology-Guwahati; Transtech Green Power Limited, Jaipur; and the Oil and Natural Gas Energy Centre in the National Capital Region.
- The bio-centre would be focussed on not only developing technology but also commercialising it.
- Other than fuel, by-products envisaged at the TERI-DBT Centre include food, feed, nutrition supplements, bio-plastics and novelty speciality chemicals.
- Last year, TERI established a photo bioreactor of 10,000-litre capacities for round-the-year-production of algal strains that contain heightened lipid concentrations and a pilot scale (1,500 litre) scale bio-hydrogen production facility.

TOPIC: GS III, CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

16. Palau becomes first country to ban sunscreen to save coral reefs

- Palau, a Western Pacific nation has become the first country to ban many kinds of sunscreen.

- It is a move to protect the country's coral reefs from chemicals that scientists say cause significant damage.
- Under the ban, which will take effect in 2020, “reef-toxic” sunscreen — defined as containing one of 10 prohibited chemicals, a list that could grow later — can be confiscated from tourists when they enter the country, and retailers who sell it can be fined up to \$1,000.



TOPIC: GS III, DIFFERENT TYPES OF IRRIGATION AND IRRIGATION SYSTEMS STORAGE

17. Turga Pumped Storage

Source: PIB

Why in news:

A Loan Agreement was recently signed between India and Japan on Japanese Official Development Assistance loan for the construction of Turga Pumped Storage (I) of Yen 29.442 Billion (Rs. 1817 crore approximately).

[Exchange RATE: 1 Rupee= JPY 1.62]

About Turga Pumped Storage project:

- The Turga Pumped Storage Project is a closed loop type Pumped Storage Project located in Purulia district of West Bengal. The project envisages construction of Upper Dam across Turga Nala, a tributary of Subarnarekha river and a water conductor system with an underground Power House on the downstream of Upper Dam and a Lower Dam having intermediate catchment of 4.37 sq. km.

- The Project envisages utilization of rainfall in the catchment of the Turga Nala in Ayodhya hills for peak power generation for a Pumped Storage type project development.
- The objective of the Project is to strengthen the capability to respond to fluctuation in supply and demand of power and to improve stability of the power supply by constructing the pumped storage facilities, thereby contributing to the Industrial Development and Living Standard Improvement in the State of West Bengal.

Significance in India-Japan relation:

- India and Japan have had a long and fruitful history of bilateral development cooperation since 1958. In the last few years, the economic cooperation between India and Japan has steadily progressed. This further consolidates and strengthens the Strategic and Global Partnership between India and Japan.

IV. INTERNATIONAL RELATIONS

TOPIC: GS II, IMPACT OF INTERNATIONAL POLICIES ON INDIA

18. CPEC and India

Source: The Hindu

Why in news:

India has opposed a recently proposed bus service between Pakistan and China that would pass through parts of Pakistan-occupied Kashmir and Gilgit-Baltistan territory that India claims, terming it a violation of India's sovereignty.

About CPEC:

- China-Pakistan Economic Corridor project is an extension of China sponsored Belt and Road Initiative (BRI) aimed at enhancing China's influence around the world through China-funded infrastructure projects.
- Its length is 3,000 km and it passes through Pakistan Occupied Kashmir.
- It aims at linking the city of Gwadar in south western Pakistan to China's north western region Xinjiang through a vast network of highways and railways.

India's concerns:

- It violates India's sovereignty. That is why India opposes Chinese BRI project as supporting it will dilute India's legitimate claims on PoK.
- It will enhance Chinese presence in the Indian Ocean which will undermine India's influence in the Indian Ocean.

- It is China's penetration into India's traditional zone of influence i.e., South Asia.
- It will bring China strategically closer to India which is not good for India's security.
- India shares trust deficit with China and Pakistan and has a history of conflict with both the nations.

TOPIC: GS II, IMPACT OF INTERNATIONAL POLICIES ON INDIA

19. U.S. waiver to India in Iran

Source: The Hindu

Why in news:

- USA has recently announced to exempt China, India, Italy, Greece, Japan, South Korea, Taiwan and Turkey for continuing their trade with Iran, after implementation of its sanctions on the country on the condition of significantly reducing its oil import from the country.
- Iran is the third largest source of oil for India after Iraq and Saudi Arabia.

What US waiver means for India:

- It is not a long term solution as the waivers are strictly linked to the condition that countries receiving them keep cutting down their purchases from Iran.
- It would only stave off penalties and allow India to continue some of its trade with Iran and in no case it will not restore the pre-2018 situation.
- Iran is India's third largest oil supplier and reducing import from will exacerbate the rising costs of oil in addition to the cost borne by the Indian fuel refineries that are used to process Iran's special crude to recalibrate.
- India enjoys the privilege of conducting business with Iran in rupees that is not the case with other oil exporting nations to India.
- The waiver will not mitigate the indirect impact of US sanctions on India's investment in the Chabahar port for fulfilling its Connect Central Asia policy, as major trading companies refuse to participate in the project as they do not want to be sanctioned under US, CAATSA (Countering America's Adversaries Through Sanctions Act).
- It will adversely impact on India's regional security situation, which could see the Iranian-Arab divide deepen, Afghanistan's choices dwindle and an angry Iran to become closer into the China-Russia corner.
- The U.S. has clearly stated that it is a temporary waiver, and It is important to note that along with

the JCPOA-linked sanctions, India continues to face sanctions linked to the CAATSA, which puts more restrictions on dealings with Iran, Russia and North Korea.

Background:

- US withdrew from Joint Comprehensive Plan of Action (JCPOA) in May 2018 and later on announced to imposed sanctions o Iran aimed at crippling its oil industry which is to be implemented in November 2018.
- Causes of withdrawal:
 1. According to the current US administration, the JCPOA did not target Iran’s ballistic missile programme.
 2. It does not focus on Iran’s nuclear activities beyond 2025.
 3. It also ignored Iran’s role in civil war in Yemen and Syria.
 4. According to current US administration, the deal gave Iran’s dictatorship a political and economic lifeline.
 5. Within months after the deal, Iran conducted its first ballistic missile test which according to US is a violation of US Security council resolution. However it has nothing to do with the Iranian nuclear programme which was the aim of JCPOA.
- It is important to note that the U.S. has given no evidence that Iran in any way violated the terms of the JCPOA and the International Atomic Energy Agency’s report concluded that Iran’s stockpile of uranium and heavy water as well as its implementation of additional protocols were in compliance with the agreement.

What is Joint Comprehensive Plan of Action (JCPOA)?

- It was signed between Iran and the P5, plus Germany and the EU in 2015. P5 is the 5 permanent members of the UNSC (US, China, France, Russia, and UK).
- The deal aimed at curbing Iran’s nuclear programme in exchange for lifting of international sanctions on Iran under which:
 1. Most of Iran’s enriched uranium was to be shipped out of the country.
 2. A heavy water facility was to be rendered inoperable.
 3. Operational nuclear facilities were to be brought under international inspection.

TOPIC: GS II, BILATERAL AND REGIONAL GROUPINGS

20. Archaic agreements for contemporary threats of arms race

Source: The Hindu

Why in news:

- US has recently announced to quit the Intermediate-Range Nuclear Forces (INF) Treaty signed with the erstwhile U.S.S.R. in 1987 which may trigger a new nuclear arms race in Europe and elsewhere.
- Under this treaty both agreed to eliminate all ground-launched-missiles of 500-5,500 km range and not to develop, produce or deploy these in future.

Changing trends:

- Withdrawing from the bipolar cold war era agreements shows their declining importance in the contemporary world scenario which is multipolar.
- These erstwhile superpowers are feeling restricted under these archaic agreements in fulfilling their interests under current global circumstances. That is why both are searching a way out to end these agreements on the pretext of accusing each others of violating its provisions. For example, U.S accused Russia, after its Novator 9M729 missile tests of breaching the INF treaty in 2014 and Russia alleged U.S.A for violating the same for its deployment of missile defence interceptors in Poland and Romania.
- In 2001, the U.S. unilaterally withdrew from the 1972 Anti-Ballistic Missile (ABM) Treaty with the U.S.S.R. which limited deployment of ABM systems.
- START (Strategic Arms Reduction Treaty) :
 - (a) signed between Russia and USA in 1991.
 - (b) led to the removal of about 80 percent of all strategic nuclear weapons then in existence expired in 2009 and was replaced by NEW START treaty which limits both countries from deploying more than 700 intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missile (SLBMs) and heavy bombers and 1,550 warheads each is to be lapsed in 2021.
 - (c) No significant steps is being taken either keep the treaty alive or renew it for further five years as agreed previously. The lapse of this treaty would mark the first time since 1968 that the U.S. and Russian nuclear arsenals would be unconstrained by any agreement.

Changing global realities:

- The U.S.’s 2018 Nuclear Posture Review (NPR) reflects a harsher assessment of the security

environment faced by the U.S. and envisages a more expansive role for nuclear weapons than in the past.

- China, for the first time is being seen as a strategic competitor seeking regional hegemony in the Indo-Pacific region and shows the potential to replace USA as net security provider to many countries.
- Russia has unveiled plans to develop a new nuclear torpedo and nuclear-powered cruise missile.
- New technologies like computer simulation nuclear test, US decision to create space military and cyber systems, will enhance the chances of nuclear escalation.
- Nuclear proliferation treaty (NPT) which is considered to be the most successful example of multilateral arms control is highly discriminatory in nature as it allows the P5 countries to produce nuclear weapons and restricting the others and at the same time succeeded in only delegitimising nuclear proliferation and not nuclear weapons.

Way forward:

- The existing nuclear arms and other weapons of mass destruction control instruments can only be preserved if these take new realities into account.
- Reformation of UN security council must be undertaken as first step in this regard.
- Discriminatory treaties like NPT should be restructured which should be aimed at complete abolishment of nuclear weapons.
- Critical areas like space which is indispensable for human survival must be prevented from being used for military purpose by any nation.
- Environmental harm must be kept in mind while making global laws as it is the greatest threat of this century on which entire human survival is dependent.

V. SCIENCE & TECHNOLOGY

TOPIC: GS III, AWARENESS IN SPACE

21. NASA's Kepler space telescope

Source: The Hindu

Why in news:

The Kepler space telescope has run out of fuel and will be retired after a 9-1/2-year mission.

- Currently orbiting the sun 156 million km from the earth, the spacecraft will drift further from our planet when mission engineers turn off its radio transmitters.

About Kepler Mission:

- Launched in 2009, the Kepler mission is specifically designed to survey our region of the Milky Way

galaxy to discover hundreds of Earth-size and smaller planets in or near the habitable zone and determine the fraction of the hundreds of billions of stars in our galaxy that might have such planets.

- Since the launch of the observatory in 2009, astronomers have discovered thousands of extra-solar planets, or exoplanets (the term for planets outside our solar system), through this telescope alone. Most of them are planets that are ranging between the size of Earth and Neptune (which itself is four times the size of Earth). Most of these planets were discovered in a small region of the constellation Cygnus, at which Kepler was pointed for the first four years of its mission.
- The Kepler telescope discovered more than 2,600 of the roughly 3,800 exoplanets.

What is the habitable zone?

If a planet is too close to the star it orbits, any water on the surface quickly boils off, forming a steam atmosphere. If the planet is too far from the star, any water on the surface freezes.

- The habitable zone (or "Goldilocks zone") is the range of orbital distances from a star at which liquid water can exist on the surface of a planet. This range of distances changes depending on the size and temperature of the star.
- Our Earth is in the habitable zone of the Sun, which is one of the reasons our planet has liquid water like oceans and lakes.

TOPIC: GS III, AWARENESS IN SPACE

22. NASA's Dawn asteroid mission

Source: The Hindu

Why in news:

Dawn, a NASA spacecraft that launched 11 years ago and studied two of the largest objects in the asteroid belt, has ended its mission after running out of fuel.

Background:

- Scientists have known for about a month that Dawn was essentially out of hydrazine, the fuel that kept the spacecraft's antennae oriented toward Earth and helped turn its solar panels to the Sun to recharge. When the spacecraft missed scheduled communications with NASA's Deep Space Network, the space agency formally declared it dead.

Accomplishments of Dawn Mission:

- Dawn became the only spacecraft ever to orbit a cosmic body in the main asteroid belt between Mars and Jupiter in 2011 when it began circling the asteroid Vesta.

- Then it moved on to the dwarf planet Ceres in 2015, becoming the first spacecraft to visit a dwarf planet and the only spacecraft to orbit one.
- The unmanned spacecraft has travelled 4.3 billion miles (6.9 billion kilometers) since its launch in 2007. It is expected to remain in orbit around Ceres for decades, but will no longer be able to communicate with Earth.

TOPIC: GS III, INDIGENIZATION AND DEVELOPMENT OF NEW TECHNOLOGY

23. India test-fires nuclear-capable Agni-I Ballistic Missile

Source: Economic Times

Why the news:

India has successfully conducted the night trial of the indigenously developed nuclear capable Agni-I ballistic missile. The surface-to-surface missile test was test-fired as part of a user-trial from the Abdul Kalam Island off Odisha coast.

About Agni - I:

- Agni-I is a short-range nuclear capable surface-to-surface ballistic missile.
- It was developed by DRDO of India under the Integrated Guided Missile Development Program.
- Agni-I missile has a specialised navigation system which ensures it reaches the target with a high degree of accuracy and precision.
- It weighs 12 tonnes and is 15-metre-long. It is designed to carry payload of more than one tonne (both conventional and nuclear warhead).
- It is single stage missile powered by solid propellants. It can hit a target 700 km away. Its strike range can be extended by reducing the payload. It can be fired from road and rail mobile launchers.
- It is developed after the Kargil War to fill the gap between 250 km range of Prithvi-II and 2,500 km range of Agni-II.
- The missile already has been inducted into armed forces. Since its induction it has proved its excellent performance in terms of range, accuracy and lethality. It is also claimed to be a part of India's minimum credible deterrence under No first to use policy.

TOPIC: GS III, AWARENESS IN SPACE

24. ISRO's AstroSat

Source: The Hindu

Why in news:

Indian astrophysicists have discovered large ultraviolet lobes and jets that were hurled out from a dying star-NGC 6302 (Butterfly Nebula), using data from AstroSat,

the space observatory launched by the Indian Space Research Organisation (ISRO) in 2015.

Key points:

- Scientists used the Ultra-Violet Imaging Telescope (UVIT) on board AstroSat to stare at a planetary nebula called NGC 6302, popularly known as the Butterfly Nebula.
- The Nebula's central star is one of the hottest that we know, at 220000 degrees. The name itself comes from the shape of the two lobes of expanding gas that look like the wings of a butterfly.
- This discovery was made possible because of the uniqueness of UVIT. Of all the ultraviolet telescopes in space, UVIT is special in its ability to image a large field of view with a very high resolution, or detail.

What is a planetary nebula?

- A planetary nebula is formed when a star like our Sun, or a few times heavier – is in its dying days. The term, a misnomer now, was coined by astronomers in the 19th century since the nebula looked like planets through their telescopes.
- When hydrogen and helium fuel that kept the star shining gets exhausted, the star expands in size and becomes a red giant star. Such stars shed most of their outer layers which expands outwards, and the inner core, made of carbon and oxygen, shrinks further and becomes hotter. This hot core shines brightly in the ultraviolet, and ionises the expanding gas. This glowing ionised gas is what is seen as a planetary nebula.

About ASTROSAT:

- Astrosat is India's first dedicated multi wavelength space observatory. This scientific satellite mission endeavours for a more detailed understanding of our universe.
- Astrosat is designed to observe the universe in the Visible, Ultraviolet, low and high energy X-ray regions of the electromagnetic spectrum simultaneously with the help of its five payloads.
- Astrosat aims at understanding the high energy processes in binary star systems containing neutron stars and black holes, to estimate magnetic fields of neutron stars, to study star birth regions and high energy processes in star systems lying beyond the Milky Way galaxy.
- This mission has put ISRO in a very exclusive club of nations that have space-based observatories. Only the United States, European Space Agency, Japan and Russia have such observatories in space.

25. Earth BioGenome Project

Source: The Hindu

Why in news:

International biologists have launched Earth BioGenome Project (EBP), an ambitious project to read all the DNA in each of the world's known animal, plant and fungal species, at an estimated cost of \$4.7bn.

About the Earth BioGenome Project (EBP):

- The Earth BioGenome Project plans to record the genomes — the DNA blueprint of life — of 1.5 million species of animal, plant, protozoa and fungi within a decade.
- So far, 19 research institutions around the world have signed up to take part in the EBP and more plan to join. They expect to read the full DNA sequence of all the world's eukaryotic species — organisms whose cells have a nucleus enclosed by membranes. These are animals, plants, fungi and protozoa, which encompass all of life except simple microbes (bacteria and archaea).
- Participating institutions aim to raise the required funds from governments, foundations and charities. The project's first phase — producing a reference genome for each of the 9,000 taxonomic families of eukaryotic life — will require \$600m, of which about one-third has already been provided.
- UK participants, led by the Wellcome Sanger Institute, will sequence the genetic codes of all 66,000 species known to inhabit Britain in a £100m national effort called the Darwin Tree of Life, as well as helping the broader international project.

Need:

- The target of 1.5m genomes represents all eukaryotic species known and catalogued by science. Biologists say that many more remain undiscovered, with the real total estimated at 10m to 15m species. But they are disappearing fast as a result of human activity, in what scientists are calling Earth's sixth great extinction; the fifth was the asteroid impact that wiped out dinosaurs 65m years ago.

Significance:

- The blueprints for all living species will be a tremendous resource for new discoveries, understanding the rules of life, how evolution works, new approaches for the conservation of rare and endangered species, and provide new resources for researchers in agricultural and medical fields.

- So far, only 3,300 eukaryotic species have had their DNA fully sequenced, 0.2% of the target. With strong international co-ordination, adequate funding and continuing rapid technological progress, 1.5m genomes could be achieved by 2028.

VI. PRELIMS/MISCELLANEOUS

26. World's longest DNA sequence decoded

- A team of UK scientists have claimed the record for decoding the world's longest DNA sequence. The new holder of the trophy for world's longest DNA read is a team led by Matt Loose at Nottingham University.
- The scientists produced a DNA read that is about 10,000 times longer than normal, and twice as large as a previous record holder, from Australia.

27. ICGS Varaha

- ICGS Varaha is a new Offshore patrol vessel (OPV) launched by the Indian Coast Guard (ICG).
- It is fourth in the series of 98 M OPVs designed and built indigenously by Larsen & Toubro (L&T).
- It is fitted with advanced technology navigation and communication equipment, sensor and machinery. Its weaponry includes one 30 mm and two 12.7 mm guns with fire control system. It has been designed to attain maximum speed of 26 knots and has endurance of 5,000 nautical miles.
- It also equipped with an Integrated Bridge System (IBS), Automated Power Management System (APMS), Integrated Platform Management System (IPMS), and High Power External Fire Fighting (EFF) system.

28. Veer Surendra Sai Airport

- The Union Cabinet has approved renaming of Jharsuguda airport of Odisha as Veer Surendra Sai Airport.
- It was a long-pending demand of the Odisha government reflects the sentiments of the local public the state.

Veer Surendra Sai:

- He is a well-known freedom fighter born in 1809 at Khinda in Sambalpur, Odisha.
- He was a direct descendant of Madhukar Sai, Maharaja of Sambalpur of the Chauhan dynasty in the 16th century and rebelled against the British due to the annexation of Sambhalpur under policy of annexation. He also participated in 1857 revolt.

- He was caught and jailed in Asirgarh fort in Madhya Pradesh where he lost his eye sight and later died in 1884.

29. Dharma Guardian 2018

- Exercise Dharma Exercise 2018 has recently commenced at counter insurgency and jungle warfare school, Vairengete, Mizoram.

About Dharma Guardian:

- It is the first joint military exercise between Indian & Japanese Armies.
- Objective:
 1. To build and promote army to army relations
 2. To exchange skills and experiences between both the armies.
 3. To enhance tactical skills to fight against global terrorism and on increasing interoperability between forces of both countries.

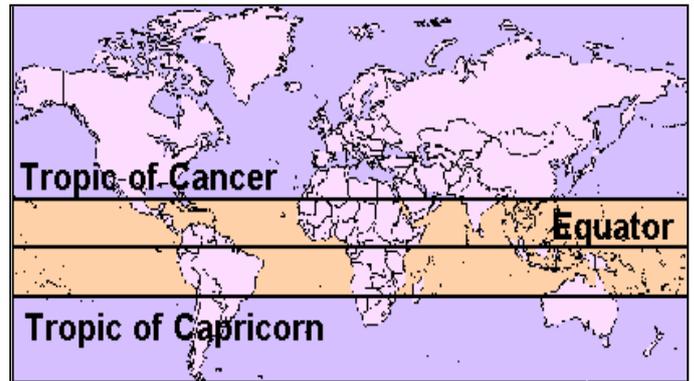
30. International Solar Alliance

- Botswana has recently announced its decision to join the International Solar Alliance.

About ISA (International Solar Alliance):

- ISA is an alliance dedicated to the promotion of solar energy among its member countries who are located between the tropic of Cancer and tropic of Capricorn. However, at the first assembly of ISA in October 2018, after the amendment of ISA framework, the membership has been opened for all the members of the United Nations.
- It was launched at the UN Climate Change Conference (COP 21) in Paris in 2015 by the President of France and the Prime Minister of India. However, its framework agreement had entered into force in December 2017.
- It is headquartered at Gurugram, India.
- There are 71 signatories to this initiative and 48 members have signed as well as ratified it.
- Its objective is to include global deployment of over 1,000GW of solar generation capacity and mobilisation of investment of over US\$ 1000 billion.
- Key focus areas:
 1. To promote solar technologies, new business models and investment in the solar sector to enhance prosperity
 2. To formulate projects and programmes to promote solar applications
 3. To develop innovative financial mechanisms to reduce cost of capital
 4. To build a common knowledge e-Portal

5. To facilitate capacity building for promotion and absorption of solar technologies and R&D among member countries.



ISA IIF:

- In September 2018 ISA Innovation and Investment Forum (ISA-IIF) organised by FICCI under the aegis of International Solar Alliance (ISA) with support of Invest India.
- It emphasized on India's commitment to produce 100GW from Solar Energy by 2022 out of total 175 GW production of energy from renewable source of energy.

31. National Ayurveda Day

- This year Ayurveda Day is being observed on 5th November 2018.
- It is noteworthy that ministry of AYUSH observes Ayurveda Day every year on Dhanawantari Jayanti (Dhanteras).



32. International Telecommunications

Union

- India has been elected as a Member of the International Telecommunications Union (ITU) Council for another 4-year term (2019-2022).
- India ranked third among the 13 countries elected from the Asia-Australasia region, and eighth among the 48 countries elected to the Council globally.

About ITU:

- It is a specialized agency of the United Nations (UN) that is responsible for issues that concern information and communication technologies.

- It coordinates the shared global use of the radio spectrum, promotes international cooperation in assigning satellite orbits, works to improve telecommunication infrastructure in the developing world, and assists in the development and coordination of worldwide technical standards.
- Its headquarter is located in Geneva.
- It has 193 member states who elect representatives to the Council.
- It was formed in 1865 as International Radiotelegraph convention.
- India has been an active member of the ITU since 1869 and a regular member of its council since 1952.
- South Asia Area Office and Technology Innovation Centre of ITU has been decided to be set up in New Delhi.

33. Rajasthan Zika virus not linked to microcephaly

- The Union Health Ministry has suggest that the Zika virus strain affecting patients in Rajasthan does not contain the known mutations linked to foetal microcephaly and high transmissibility of the virus in Aedes mosquitoes.
- The statement is based on the studies of the Rajasthan Zika virus strains, carried out by Indian Council of Medical Research (ICMR)-National Institute of Virology (NIV), Pune, through Next Generation Sequencing.

Note: Zika virus and its impact has been explained in earlier weekly magazines.

Question:

1. A series of multi dimensional communal divide is emerging in India, particularly in North East. Discuss in the context of the National register of citizens and Citizenship amendment bill 2016.
2. Discuss the issues undermining the efficiency of Indian judiciary. Explain the law commission recommendations regarding shortages of judges in India. Suggest measures to enhance the efficiency of Indian judiciary.
3. How far the temple entry movement by women is justified? DO you think that the recent verdict of the Supreme Court on abolishing ban on temple entry is the exercise of due process of law?
4. How far the geographical location of the north east is responsible for disturbance in the region? What are the reasons for the perpetual nature of insurgency in the north east?
5. Critically analyse the steps taken towards delivering safe drinking water at pan India level. Critically analyse the importance of water ATM achieving this goal.
6. Highlighting the issues in the health insurance policies in the country explain the recommendations of the IRDAI committee for regulating health insurance policy in India.
7. Do you think that India should join the Belt and Road initiative? How far it is undermining India's influence in its neighbourhood?
8. US waiver to India for continuing its trade with Iran is temporary and unsustainable. Discuss.
9. Critically analyse the changing trends of power games played by the superpowers under the current global circumstances. Are the cold war era agreements capable enough to handle the current issues specially related to nuclear threats? What are the key challenges that should be kept in mind while forming global laws for securing the world from new phase of arms race?