

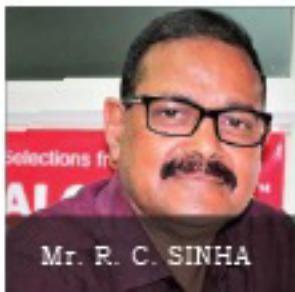


सामिक्षा
Comprehensive NEWS Analysis

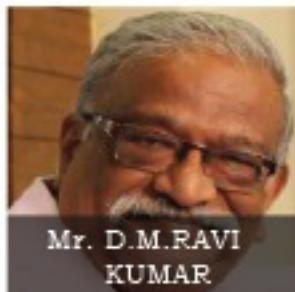
18-02-2019
To
24-02-2019
FEBRUARY
Week - 04

OUR TEAM

GENERAL STUDIES



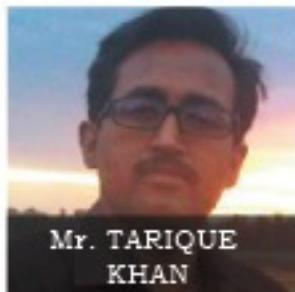
Mr. R. C. SINHA



Mr. D.M.RAVI KUMAR



Mr. SAROJ SAMAL



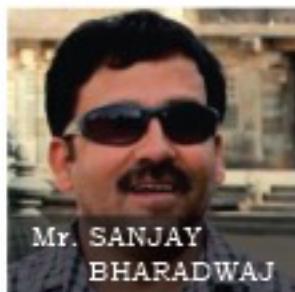
Mr. TARIQUE KHAN



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Mr. SAROJ SAMAL

Public Administration



Mr. R.C. SINHA



Mr. D.M.RAVI KUMAR



MATHEMATICS

Mr. VINNAKOTA SRIKANTH



GEOGRAPHY

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OTHER OPTIONALS

ANTHROPOLOGY

POLITICAL SCIENCE

TELUGU LITERATURE

HISTORY

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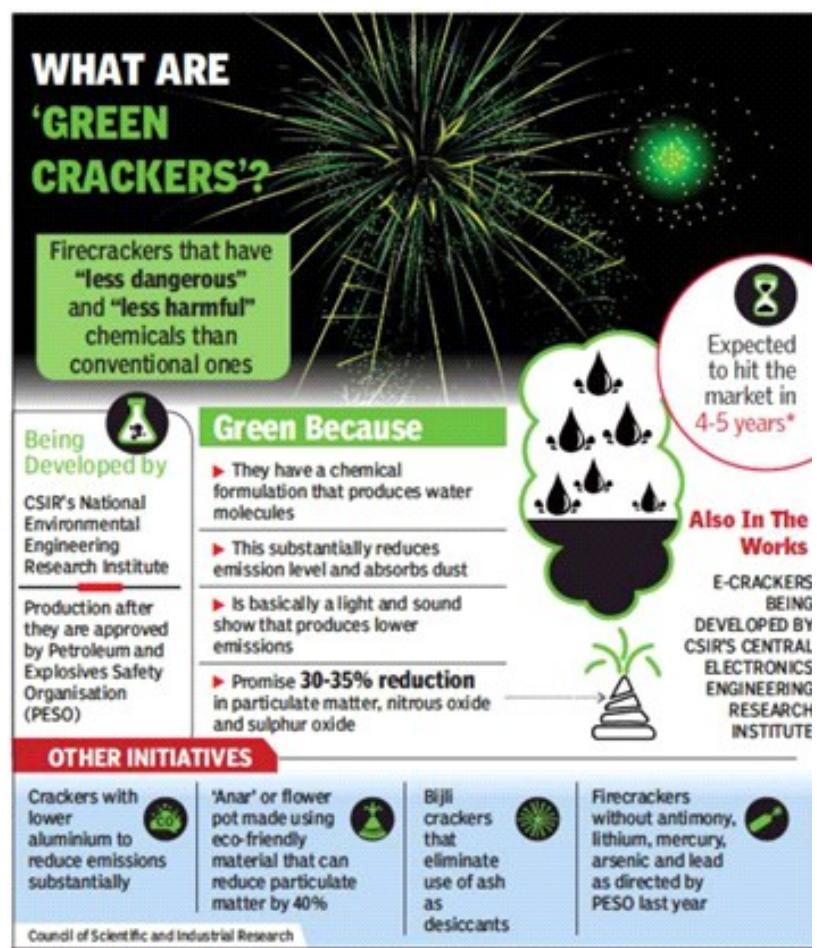
Polity and Governance

1. Green Crackers

Context:

The apex court ordered that only crackers with reduced emission and green crackers can be manufactured and sold in the retail market.

- As the name suggests, green crackers are said to be less harmful as compared to the conventional firecrackers. Green crackers do not contain harmful chemicals. It means that less pollution emission resulting in reduced air pollution.
- The idea of green firecrackers is carried forward by a network of CSIR labs after it was proposed by Union Science & Technology Minister Dr Harsh Vardhan in January. The Central Electro Chemical Research Institute, Tamil Nadu, the Indian Institute of Chemical Technology, Telangana, the National Botanical Research Institute, Uttar Pradesh and the National Chemical Laboratory in Maharashtra have moved forward with the idea. All the part of the CSIR network.
- “The idea was to assess if we can replace or reduce dangerous components with materials that are less harmful,” Kumar said. “We came up with 3-4 formulations and looked at 30-40% of active materials which reduce particulate matter,” IE reported.
- Moreover, the CSIR-CECRI has developed flower pots by using eco-friendly materials that can potentially reduce particulate matter by 40%. CSIR-NEERI is testing the efficacy of crackers, named as Bijli crackers. Here they have eliminated the use of ash as desiccants. They have also developed potential sound-emitting functional prototypes that do not emit sulphur dioxide. Also in the pipeline are flower pots substituting barium nitrate with an eco-friendly version, which are in the testing stage now.



SWAS, STAR & SAFAL:

- The crackers have been named as Safe Water Releaser (SWAS), Safe Thermite Cracker (STAR) and Safe Minimal Aluminium (SAFAL).
- According to the researchers, the crackers have the unique property of releasing water vapour and/or air as a dust suppressant and diluent for gaseous emissions that match with the performance in sound with traditional conventional crackers. These crackers are now under the testing stage at the Petroleum and Explosives Safety Organisation.
- The results of the crackers have already been shown to some manufacturers and they have been successfully demonstrated in Sivakasi in Tamil Nadu, one of the hubs for fireworks industries in the country.
- Highlighting the issue of the use of substandard raw materials in firework industries for manufacturing purpose, Dr Kumar also said that an emissions testing facility has also been established at CSIR-NEERI. This will test conventional and green crackers and monitor them for emissions and sound.
- Not only green, but another concept towards a cleaner environment is being tested, called E-Crackers. E-crackers or electric crackers are being tested by at the CSIR-CEERI in Pilani, Rajasthan.

2. Saubhagya Scheme – In Pursuit of 100% Electrification

Context:

The ambitious Pradhan Mantri Sahaj Bijli Har Ghar Yojana, better known as “Saubhagya” scheme, for universal household electrification is all set to achieve its goal soon with only about 28,000 households left to be electrified all over the country. On the other hand, criticisms have been pouring across the country regarding the scheme’s inability to solve some of the grey areas in the power sector.

What is Saubhagya Scheme and what are its salient features?

- The Saubhagya Scheme was launched in September 2017.
- It aims at achieving universal household electrification in all parts of the country. The objective is to provide last mile connectivity and electricity connections to all remaining un-electrified households in rural as well as urban areas of the country.

The scope of the scheme is as follows:

- Providing last mile connectivity and electricity connections to all un-electrified households in rural areas
- Providing Solar Photovoltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible villages/habitations, where grid extension is not feasible or cost effective.
- Providing last mile connectivity and electricity connections to all remaining economically poor un-electrified households in urban areas.

- Non-poor urban households are excluded from this scheme. Rural Electrification Corporation (REC) has been made the nodal agency for the Saubhagya Scheme.
- Rural Electrification Corporation Limited (REC) is a leading public Infrastructure Finance Company in India's power sector.
- It is functioning under the purview of the Ministry of Power – Government of India. It is headquartered in New Delhi.
- The company finances and promotes rural electrification projects across India.
- The company provides loans to Central/ State Sector Power Utilities, State Electricity Boards, Rural Electric Cooperatives, NGOs and Private Power Developers.
- All DISCOMs (power distribution companies) including private sector discoms, state power departments, and RE cooperative societies shall be eligible for financial assistance under the scheme in line with Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY).



Beneficiary households would be identified using SECC 2011 data. But un-electrified households not covered under SECC data would also be provided electricity connections under the scheme on Rs. 500 payment which shall be recovered by DISCOMs in 10 installments through electricity bill. It is being funded to the extent of 60% by Central grants, 30% by bank loans and 10% by states.

What is the need for Saubhagya Scheme?

Village electrification programme such as Deen Dayal Upadhyay Gram Jyoti Yojana, launched in July 2015 revealed that a huge number of households are yet to be provided access to electricity. The Ujwal DISCOM Assurance Yojana (UDAY scheme) has failed to make enough difference regarding the fundamental problems in the power sector as follows:

- The power generation utilities in India remain highly under-utilized, and investments in the sector are drastically falling.
- The plant load factor (PLF), an indicator of capacity utilization of power generation units, has dropped consistently over the decade

What is the significance of the scheme?

Resolve the NPA problem: The deeply troubled power sector accounts for almost 1/10 of all bank loans in India. The scheme will resolve the issue of NPA in the power sector as the power discoms who are in financial distress may be able to recover some of their costs through the new household connections and added demand.

Reduce health hazards: The use of kerosene for lighting purposes could be curbed that reduces indoor air pollution thereby saving people from health hazards. Reduce government expenditure: Replacing kerosene with electricity would also reduce annual subsidy on kerosene and would also help reduce the import of petroleum products.

Improve health services: Electricity access would help in creating effective and modern health services in all parts of the country.

Increase in social and economic activities: Lighting after the sunset also provides a sense of increased personal safety particularly for women which increases in social and economic activities after sunset.

Boost educational services: Electricity access will boost education services across all areas and quality lighting after sunset would help children spend more on studies and move ahead further in prospective careers. Household electrification also enhances the possibility that women would study and earn income.

Improve agricultural productivity: Farmers can access information about new and improved agricultural techniques, agro machinery, quality seeds etc. considerable increase in agricultural production will increase in farmer income.

Generate employment: Implementation of the scheme would itself lead to employment creation considering the need for semi-skilled/skilled manpower for execution of works of household electrification under the scheme

What are the concerns?

Neglecting rural enterprises: Despite achieving near 100% electrification of households, the saubhagya scheme has been criticized for not being able to cover a sizeable chunk of commercial rural enterprises which are still cut off from grid-connected power as the scheme's focus is primarily on rural households. Enterprises that have better access to reliable electricity can increase income for entrepreneurs and creating prosperity within the communities.

Payment of bills: It expects the poor to pay the bills without providing any subsidy to ease their burden. Expecting poor households to bear the recurring burden of bills as per the prevailing tariff of DISCOMs is unimaginable. The government doesn't consider the fact that the inability to pay the electricity bill is a big challenge for the poor in some states.

Efficiency: Even if 100% of households are electrified in the villages, there

is no promise of minimum hours of supply as the scheme doesn't address structural issues that plague the broken power sector. There is a power shortage which results in scheduled and unscheduled load shedding, often up to 10 hours or more.

Illegal connections: It fails to consider illegal connections taken by households which find it difficult to afford legal access to power. Electricity access definitely has positive effect on quality of life of people in all aspects of daily household chores and human development.

Conclusion:

The Saubhagya scheme is a significant initiative as it touches different aspects of human life – health, education and employment. Its successful implementation is the key to creating smart villages, ensuring energy security and improving the lives of people living in remote and inaccessible areas.

3. Right to Information Act

Introduction

- It aims to establish an open and transparent regime of right to information for citizens of India so that they can secure information under control of public authorities.
- It helps in promoting transparency and accountability in public offices and making the citizens aware about various decisions taken by the government at various levels.
- An informed citizen helps in increasing transparency and reducing corruption through fixing of accountability.

Information :

“Information” means any material in any form, including records, documents, memos, e-mails, opinions, advices, press releases, circulars, orders, logbooks, contracts, reports, papers, samples, models, data material held in any electronic form and information relating to any private body which can be accessed by a public authority under any other law for the time being in force. Record includes-

- any document, manuscript and file
- any microfilm, microfiche and facsimile copy of a document
- any reproduction of image or images embodied in such microfilm
- any other material produced by a computer or any other device

Procedure:

A person who desires to obtain any information under this act, shall make a request in writing or through electronic means in English, Hindi or in official language of the area where the application is made with an accompanying fee to:

- Central Public Information Officer (CPIO) or State Public Information Officer (SPIO); or

- Central Assistant Public Information Officer or State Assistant Public Information Officer.
- An applicant shall not have to give the reason for which information is sought. CPIO on receipt of the application for information within 30 days can either provide information or reject the request for such information.
- However, if information sought for concerns the life or liberty of a person, the same shall be provided within 48 hours of the receipt of the request.

When Information cannot be provided under RTI?

Section 8 and 9 provides for the exceptions when information cannot be provided

- Information, disclosure of which would prejudicially affect the sovereignty and integrity of India, the security, strategic, scientific or economic interests of the State, relation with foreign State or lead to incitement of an offence.
- Information which has been expressly forbidden to be published by any court of law or tribunal or the disclosure of which may constitute contempt of court; Information, the disclosure of which would cause a breach of privilege of Parliament or the State Legislature.

Where RTI act does not apply?

Second Schedule of RTI Act Section 24 of RTI Act does not apply to the intelligence and security organizations specified in the Second Schedule of the Act which includes –

- Intelligence Bureau
- Research and Analysis Wing of the Cabinet Secretariat
- Directorate of Revenue Intelligence
- Central Economic Intelligence Bureau etc.

4. Rafale Deal Controversy

Context:

- There are many doubts that have raised with the modified rafale deal and it needs to be addressed.
- The governments of India and France had entered into an MoU in 2012 under which India would buy 126 Rafale twin-engine multi-role fighter aircraft.
- The price per aircraft discovered through an international bid opened on December 12, 2012, was Rs 526.10 crore.
- The manufacturer Dassault would supply 18 aircraft in „fly away condition. The remaining 108 aircraft would be manufactured in India at the Hindustan Aeronautics Limited's facilities in Bengaluru using

Dassault technology that would be available to HAL under a Transfer of Technology agreement.

- That signed MoU was cancelled and the Prime Minister announced the new „deal“ on 2015.
- Under the modified deal, the number of aircrafts to be purchased was reduced to 36 from 126 aircrafts as per the previous agreement.
- All the 36 aircrafts were accepted to be bought under “flyaway” condition that left out the possibility of “Make in India” component.

Concerns

- The decision taken to cancel the earlier MoU and enter into a new agreement was not made public by the government.
- **Quantity** - Under the new agreement, India will buy 36 aircraft at an undisclosed price.
- The Indian Air Force has 31 squadrons now and said it needed 42 squadrons of fighter jets. But the government decided to buy only 2 squadrons (36 aircrafts) when the need was for 7 squadrons (126 aircrafts).
- **Price** - The government is purchasing the same aircraft from the same manufacturer under “the same configuration”.
- But the price per aircraft under the new agreement is Rs 1,670 crore as disclosed by Dassault which is a threefold increase in quoted price from the previous agreement.
- But the government claims that the price of the aircraft under the new agreement is “cheaper” by 9%.
- Still, the government is buying only 36 aircraft and not all the 126 aircraft offered by Dassault.
- **Purchase** - The new agreement was presented as an “emergency purchase”. But the schedule of delivery of the first aircraft is stated as September 2019 (four years after the agreement) and the last only in 2022. This raised concerns on how the deal qualified to be an “emergency purchase”.

Transfer of technology –

HAL has experience of 77 years and has manufactured a variety of aircraft under licence from the respective manufacturer.

- When entering into the new agreement, there was no mention of Transfer of Technology from Dassault to HAL. The absence of transfer of technology (ToT) component creates void on the role guaranteed for any Indian public sector company, including HAL.
- Offset supplies - Every defence purchase by India imposes an „offset obligation“ upon the vendor. Dassault has admitted that it would have an offset obligation to the tune of Rs 30,000 crore against the sale of 36 aircraft.

- HAL is a public sector undertaking and it had entered into a „work share agreement with Dassault on 2014, which was also qualified to be the offset partner. But France has disclosed that the Government of India had suggested the name of a private sector company as the offset partner and France and Dassault had “no choice” in the matter.

Conclusion:

Recently, Defence Minister of France laid the foundation stone for the factory of the private sector company at Mihan, near Nagpur, where the offset supplies would be manufactured. Dassault and the private sector offset partner had also disclosed in a press release that their joint venture “will be a key player in the execution of offset obligations”. However, Government of India has denied that it had suggested the name of a private partner. There were also recent reports of disparaging remarks made against HAL by the government which raised the doubts regarding their intention to privatising or shutting down operations of HAL. All these concerns warrant the need for government to order an enquiry into the matter and make details of the deal public.

5. Kisan Urja Suraksha evam Utthaan Mahabhiyan

Context:

The Cabinet Committee on Economic Affairs has approved launch of Kisan Urja Suraksha evam Utthaan Mahabhiyan with the objective of providing financial and water security to farmers.

The proposed scheme consists of three components:

- Component-A: 10,000 MW of Decentralized Ground Mounted Grid Connected Renewable Power Plants.
- Component-B: Installation of 17.50 lakh standalone Solar Powered Agriculture Pumps.
- Component-C: Solarisation of 10 Lakh Grid-connected Solar Powered Agriculture Pumps.

All three components combined, the scheme aims to add a solar capacity of 25,750 MW by 2022. The total central financial support provided under the scheme would be Rs. 34,422 crore.

Key facts:

- Under Component A, Renewable power plants of capacity 500 KW to 2 MW will be setup by individual farmers/ cooperatives/panchayats / farmer producer organisations (FPO) on their barren or cultivable lands. The power generated will be purchased by the DISCOMs at Feed in tariffs determined by respective SERC. The scheme will open a stable and continuous source of income to the rural land owners.
- Under Component C of the scheme, individual farmers will be supported to solarise pumps of capacity up to 7.5 HP. The farmer will be able to use the generated energy to meet the irrigation needs and the excess

available energy will be sold to DISCOM. This will help to create an avenue for extra income to the farmers, and for the States to meet their RPO targets.

- For both Component-B and Component-C, central financial assistance (CFA) of 30% of the benchmark cost or the tender cost, whichever is lower, will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for meeting 30% of the cost. The remaining 10% will be provided by the farmer. Higher CFA of 50% will be provided for North Eastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Lakshadweep and A&N Islands.

Significance of the scheme:

- The Scheme will have substantial environmental impact in terms of savings of CO₂ emissions.** All three components of the Scheme combined together are likely to result in saving of about 27 million tonnes of CO₂ emission per annum. Further, Component-B of the Scheme on standalone solar pumps may result in saving of 1.2 billion liters of diesel per annum and associated savings in the foreign exchange due to reduction of import of crude oil.
- The scheme has direct employment potential.** Besides increasing self-employment the proposal is likely to generate employment opportunity equivalent to 6.31 lakh job years for skilled and unskilled workers.

6. Assam Rifles

Context :

The Centre granted paramilitary force Assam Rifles the power to arrest anyone and search a place without warrant in border districts in five northeastern states. The Assam Rifles conducts counter-insurgency operations in the North East and guards the India-Myanmar border.

- The Assam Rifles came into being in 1835, as a militia called the 'Cachar Levy'. This Force was formed to primarily protect British Tea estates and their settlements against tribal raids.
- Subsequently, all these Forces were reorganized and renamed as the 'Frontier Force' as their role was increased to conduct of punitive expeditions across the borders of Assam.
- In 1870, existing elements were merged into three Assam Military Police Battalions, named as Lushai Hills, Lakhimpur and Naga Hills. The Assam Military Police were tasked as part of the British Army to Europe and the Middle East.
- In 1917, recognizing their work during the Great War, the name of the Force was changed to 'Assam Rifles'.
- Post-Independence, the Assam Rifles continued to evolve ranging from

conventional combat role during Sino-India War 1962, operating in foreign land as part of the Indian.

- Peace Keeping Force (IPKF) to Sri Lanka in 1987 (Op Pawan) to peacekeeping role in the North-Eastern areas of India.
- They are fondly called 'Friends of the North East People' and are the highest awarded and decorated Para Military Force of the Republic of India.

Main objective:

- Conduct counter insurgency operations in the north-east and other areas where deemed necessary, under control of the army.
- During peace and 'proxy war', ensure security of the Indo-China and Indo-Myanmar borders. They also act as penultimate interventionist force of the central government in internal security situation and under the control of army when the situation goes beyond the control of central paramilitary operations.

International Relations

7. India – U.S Defence Pacts

Context:

It was officially announced that the Logistics Exchange Memorandum of Agreement (LEMOA) has been fully operationalised.

There are four foundational agreements that help the U.S. to intensify its defence cooperation with a partner nation such as India.

India had signed only three of these four agreements –

1. General Security of Military Information Agreement (GSOMIA) in 2002
 2. Logistics Exchange Memorandum of Agreement (LEMOA) in 2016
 3. Communications Compatibility and Security Agreement (COMCASA) in 2018
- The last one remaining is the Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA). BECA facilitates exchange of geospatial information.
 - GSOMIA paved the way for greater technology cooperation in the military sector.

Significance of LEMOA

- LEMOA gives both nations access to each other's military facilities. But it does not make it automatic or obligatory.
- LEMOA is a tweaked India-specific version of the Logistics Support Agreement (LSA) of the U.S. It gives both countries access to designated military facilities on either side. It can be availed for the purpose of refueling and replenishment in primarily four areas.
- These are: port calls, joint exercises, training, and humanitarian assistance and disaster relief. The biggest beneficiary of the LEMOA is the Indian Navy as it interacts and exercises the most with foreign Navies. Also, fuel exchange gets subsumed into the LEMOA and does away with the need for a separate agreement. So far, the three services had individual accounts from which payments were being made during military exercises.
- Under the LEMOA, the standard operating procedures (SOPs) are applicable to all three services. All these improve the interoperability between the militaries and allow transfer of high-end military platforms.

Significance of COMCASA

It is meant to provide a legal framework for the transfer of communication security equipment from the U.S. to India.

- COMCASA will facilitate transfer of encrypted communications systems. It helps in sharing high-tech military hardware, especially armed drones which the U.S. is willing to supply to India.

- This would facilitate “interoperability” between their forces and potentially with other militaries that use U.S. origin systems for secured data links.
- It would also facilitate transfer of high-end U.S. technology to India, but there is feared that it would compromise on India's defence secrecy.
- Benefits - U.S. granted India the status of “Major Defence Partner” during the Obama's time, to facilitate transfer of high-end defence technology.
- Signing of the 3 foundational agreements would underline that status, besides making the transfer of American defence technology possible to India.
- However, there is also concern about intrusive access COMCASA would grant the US to Indian Military communication system and Russia-origin and indigenous military platforms may not be compatible with COMCASA.

8. India-Japan Ties

Context:

Indo-Japan relations India and Japan held 13th India-Japan annual summit recently. They have signed five pacts covering defence exchanges, cooperation in clean energy, roads and highways, healthcare and women while vowing to take their relationship to newer level.

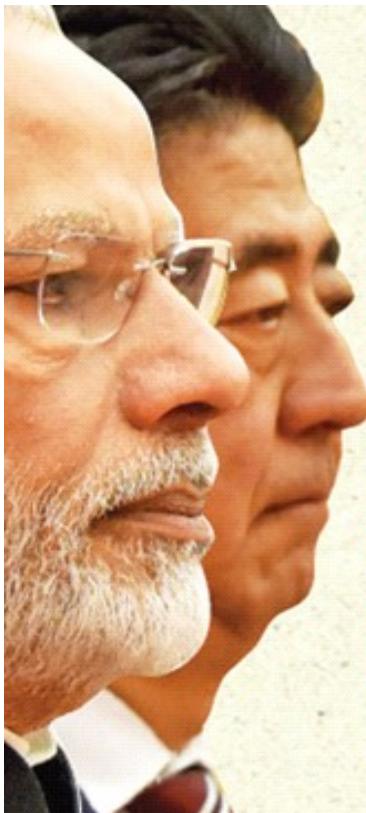
Both sides reviewed the progress of several initiatives such as enhancing connectivity and ecological management in India's north-eastern region through the India-Japan Act East Forum.

They also reviewed the progress made on the Mumbai-Ahmedabad high-speed railway project. Japan promised 3.5 trillion Yen (USD 35 billion or 2,10,000 crore) to India through public and private funding over the five years for various works, including building of smart cities and clean-up of the Ganga river.

- A pact was signed under which Varanasi would be developed on the pattern of Kyoto 'smart city' with the help of Japan.
- Japan also announced that as an example of Indo-Japan Cooperation, Tokyo will help India in providing financial, technical and operational support to introduce Bullet trains.
- Japan lifted ban on six Indian entities including Hindustan Aeronautics Limited (HAL) which had been imposed in the aftermath of 1998 nuclear tests. They also decided to speed up negotiations on civil nuclear deal that could not be concluded now.

Outcome in the economic sphere

- The first big development was the signing of a \$75 billion currency swap agreement, one of the largest swap arrangements in the world.



Liquidity Boost

WHAT IS CURRENCY SWAP: One country exchanges its national currency for that of another or even a third one

INDIA-JAPAN SWAP: India can acquire yen or dollars from Japan up to \$75 billion in exchange for rupees. The exchange has to be reversed after an agreed period

TERMS OF AGREEMENT: The facility is entered into between central banks of two countries. The terms of the swap and its cost are also included. The exchange rate is typically fixed for a transaction. The borrowing bank pays interest for use of funds

How Does It Help

RBI's \$393-billion chest gets a one-shot **\$75 billion boost**

There is no immediate cost; only when an amount is drawn

Short-term liquidity mismatches can be met quickly

It improves market sentiment, curbs speculative pressure on the rupee

Foreign investors will draw comfort from the arrangement

- A currency-swap agreement allows India to avail itself of \$75 billion from Japan in exchange for rupees in case the need arises.
- This arrangement makes eminent sense since the rupee has lost around 13% of its value against the dollar this year.
- To be sure, this is not the first time India has had such an agreement with Japan. In 2008 and 2013, India signed up for similar swaps valued at \$3 billion and \$50 billion, respectively.
- The bilateral trade between the two countries has been far below expectations despite the two countries having a comprehensive economic partnership agreement(CEPA).
- The swap arrangement means the bilateral trade will likely get a boost, especially as it reduces its dependence on the dollar.

What is Currency Swap Agreement?

Under this arrangement, India can acquire dollars from Japan in exchange for rupees. So, India can acquire yen or dollars from Japan upto \$75 billion in exchange for rupees under a fixed exchange rate. This exchange has to be reversed after an agreed period. Conversely, Japan can also seek dollars from India in exchange for yen. This facility will serve as a line of defence for our country's foreign exchange reserve.

Advantages

- Short -term liquidity mismatches can be met quickly.
- It will help stabilize the rupee, which has witnessed the steepest fall in recent years.
- It improves market sentiment, curbs speculative pressure on the rupee.

- Foreign Investors will draw comfort from the arrangement.

Outcomes in the security sphere

- Both countries reaffirmed their desire to further deepen bilateral security and defence cooperation and institute Foreign and Defence Ministerial Dialogue (2+2).
- At present, India has this arrangement only with the US. This enhances the strategic dimension of the relationship between India and Japan.
- There was encouragement for technological collaboration between the respective agencies of the two countries in the Joint Lunar Polar Exploration Mission.

9. String of Pearls

Context:

Minister of State for External Affairs V.K. Singh said that it is not encirclement of China as relationship between two countries are steadily increasing after Wuhan summit.



Background

- A geopolitical theory on the potential intentions of China in the Indian Ocean Region is called as the String of Pearls.
- It refers to the network of Chinese commercial facilities, military facilities and relationships along sea lines.
- It passes through many major maritime points like the Lombok Strait, the Strait of Hormuz, the Malacca Strait and the Strait of Mandeb.
- It was seeking to encircle India by setting up new strategic ports, airfields in Pakistan (Gwadar), Sri Lanka (Hambantota) and Bangladesh (Chittagong).

- This indicates China's expanding geopolitical influence through concerted efforts to increase access to airfields and ports, modernize and expand the military forces, and promote better and stronger diplomatic relationships with the trading partners.

Under String of pearls

- Sittwe: Naval base.Chittagong: Port at Bangladesh with container shipping facility.
- Hambantota: Port being developed in Sri Lanka.
- Maldives: Port of Marao
- Gwadar: Port of Pakistan with Navy base.
- Coco Islands: A runway and other infrastructure is being developed
- Seychelles Islands: Naval base
- Madagascar: Various infrastructure projects.
- Tanzania: For development of port of Bagamoyo

Impact on India

- The presence of Chinese ports and ships in Indian Ocean affects India's trade in particular with Africa which is more accessible to India.
- India sees the presence of China in Indian Ocean as an intrusion into its sphere of influence.
- The Chinese investments could be followed by increased frequency of Chinese navy ships and submarines in Indian Ocean.

Steps taken by India

- India has launched Project Mausam. It is soft power diplomacy by India. The project is under Ministry of Culture and its purpose is to reconnect and re-establish communication links between countries of Indian Ocean and enhancing their cultural values.
- India is seeking to develop naval base in Assumption Island and has also developed a port in Chahabar, Iran.
- India has agreement with countries to use ports like Duqm in Oman, Changi in Singapore etc.
- India is rapidly increasing the capacity of Navy and Coast guard

Economy

10. Pulwama Attack and the MFN status

Context

After the recent terror attack in Pulwama, India withdrew the Most Favoured Nation (MFN) status accorded to Pakistan.

What is most favoured nation status?

- Article 1 of General Agreement on Tariffs and Trade (GATT), 1994, requires every WTO member country to accord MFN status (or preferential trade terms with respect to tariffs and trade barriers) to all other member countries.
- India granted MFN status to Pakistan in 1996, just a year after the formation of the WTO. On the other hand, Pakistan is yet to award MFN status to India. The reason behind Pakistan's move to not grant MFN status to India is decades of conflict, mistrust, and war.
- Pakistan maintains a Negative List of 1,209 products that are not allowed to be imported from India. Despite these restrictions, India continues to maintain a substantial trade surplus with Pakistan.

Trade between India and Pakistan

Trade between India and Pakistan is done mainly through three routes

- a) The official route,
 - b) The illegal (informal) route ,through smuggling along porous India-Pakistan land borders and also Afghanistan, which may not be accounted for in the national income.
 - c) Through free ports of Dubai and Singapore: A large volume of trade between two countries is done mainly through Dubai and Singapore, which have free ports and accommodate legal agents of traders from India and Pakistan.
- From 2011-12 to 2017-18, India's formal trade with Pakistan increased from \$1.94 billion to \$2.41 billion.
 - Imports from Pakistan grew at a lower rate (1.04%) compared to exports (1.32%) per annum from 2011-12 to 2017-18.
 - Major exports from India is cotton, p-Xylene, polypropylene and single yarn while major exports to India are dates, Portland cement, other petroleum oil and light oils.
 - Pakistan imposes a large number of Non-tariff barrier on Indian exports, the major ones being export related measures, technical barriers to trade and sanitary and phytosanitary measures.
 - In 2012-13, informal trade between India and Pakistan, estimated in a study, was \$4.71 billion, which was double when compared to formal

trade. India's informal export share to Pakistan was again much higher at \$4 billion while its import share was low at \$0.71 billion.

- Despite of bilateral ups and downs, the MFN status accorded by India was not touched earlier. In the aftermath of the Uri terrorist attack in 2016, India considered revoking Pakistan's MFN status and withdrawing concessions given under the South Asian Free Trade (SAFTA) agreement. However, government ultimately decided not to take any trade-related countermeasures.

Impact of withdrawal of status of MFN

India's decision to impose a 200% customs duty on all Pakistani goods will lead to a significant drop in Pakistani imports to India. However, given the low trade volume, it will not have any noticeable impact on Pakistan. Some of the other impacts are:

- Pakistan economy:** According to ASSOCHAM much of India's imports from Pakistan are raw materials while India's exports are finished products. If India restrict trade with Pakistan, it would hurt Pakistan badly.
- Informal trade may increase:** Informal trade may increase due to restrictions which would ultimately impact the India's interest more.
- Retaliatory tariffs on Indian goods:** Pakistan may impose retaliatory tariffs on Indian goods and/or expands its negative list prohibiting imports from India. Such retaliatory tariffs will jeopardise Indian exports worth close to \$2 billion
- Impact on regional atmosphere:** This would impact intra-SAARC trade. Pakistan may look for new markets beyond SAFTA.
- Violates the WTO principle:** India has to justify deviation from the MFN obligation. Although in the current scenario, India would make a case under the national security exception given in Article XXI of GATT. Last year, US announced a hike in steel and aluminium tariff rates citing national security.

Pakistan had used the provision of Article XXI to extend the MFN status to India. India has not taken the issue to the WTO dispute settlement mechanism, partly because it is difficult to challenge Pakistan's subjective assessment on security issues.

Way Ahead

- It is reported that Pakistan based terrorist organisation JeM allegedly has direct involvement in Pulwama terror attack. Thus, India's move to revoke MFN status can be justified on the ground of national security.
- India should also look for another punitive measure both diplomatically and economically (such as blacklisting of Pakistan at FATF meeting) to compel Pakistan to stop terror outfit growing on their land.
- India should adopt functionalist approach to deepen trade ties with Pakistan as part of a long term solution in bringing peace in South

Asia. Deeper economic integration through trade will create vociferous constituencies that would demand and lobby for peace as it would serve their interests.

11. Credit Rating Agencies

Context:

The Credit rating agencies in India have come under immense criticism due to their failure to predict the credit defaults of the NBFCs such as IL&FS. It is to be noted that the credit rating of IL&FS was relegated to junk (D) from the most coveted investment grade (AAA) status in just 45 days. In this regard, SEBI has issued guidelines in order to strengthen the mechanism of disclosure and review norms for credit rating agencies (CRAs).

- A credit rating agency is an entity which assesses the ability and willingness of the issuer company for timely payment of interest and principal on a debt instrument. The Rating is denoted by a simple alphanumeric symbol, for e.g. AA+, A-, etc.
- The rating is assigned to a security or an instrument issued by a company.
- Ratings are based on a comprehensive evaluation of the strengths and weaknesses of the company fundamentals including financials along with an in-depth study of the industry as well as macro-economic, regulatory and political environment.
- It is to be noted that the issuer company pays the money to the CRA in order to get the Credit Rating and hence this model is referred to as “Issuer Pays” Model.
- Under the “Investor Pay Model”, the prospective investor would be required to pay money to get the credit rating, based on which he/she decides to buy the security/instrument issued by the company.

Problems with the Credit Rating Agencies

- The “Issuer-Pay” model of rating in India has inherent conflict of interest since the CRAs obtain most of their revenue from the issuers. Due to which, they may follow lesser standards in issuing the rating. Thus, there is need to have an independent and unbiased mechanism for the credit rating in India.
- Presently, there are less number of credit rating agencies in India due to which the level of competition is poor. This leads to complacency and lack of innovation in the credit rating system.

What are the New Guidelines laid down by the SEBI?

- The credit rating agencies should analyse the deterioration in the liquidity conditions of the issuer and take into account any asset-liability mismatch while reviewing ratings.
- It is expected that such analyses could align the ratings with market dynamics. It is to be noted that the credit ratings of the institutions

such as the IL&FS would not have remained 'AAA' if the new guidelines would have been made applicable earlier. Hence, this new guideline would enable the CRAs to take into account the impending risks faced by the issuer company.

- When a rating issued by CRA takes into account support from a Parent/ Group/ Government, with an expectation of infusion of funds towards timely debt servicing, the name of such entities, along with rationale for such expectation should be provided.
- The CRAs should take into account the sharp deviations in the bond yields in order to issue rating to the instruments.

Way Forward:

- The new SEBI Guidelines would improve the transparency in the functioning of the CRAs and enable the investors to take better decisions. However, the latest regulations can only help to a certain extent as a lot of the problems with the credit rating industry have to do with structural issues rather than the lack of formal rules.
- The Rating agencies will have to come up with lucrative business models that put the interests of investors above those of borrowers.
- Further, the government may look into increasing the legal liability of CRAs on the lines suggested by the Dodd-Frank Act of USA. For example, SEBI can make CRAs liable for compensating investors for any loss caused to them by negligent or fraudulent rating.

12. Angel Tax

Context:

The Centre recently eased the norms under which investments in start-ups will be taxed by the government.

Recent changes:

- Investments up to ¹ 25 crore in companies that are less than 10 years old and with a total turnover of less than ¹ 100 crore will be exempted from the new angel tax.
- Investments made by listed companies with a net worth of at least ¹ 100 crore or a total turnover of at least ¹ 250 crore will be fully exempt from the tax; so will investments made by non-resident Indians.

Loopholes of the previous rules:

In 2012, the angel tax was introduced and was justified as an emergency measure to prevent the laundering of illegal wealth by means of investments in the shares of unlisted private companies at extraordinary valuations. But the adverse effect that it has had on investor confidence has forced the government to ease the stringent rules.

Benefits of new rules:

1. The easing of the outdated angel tax rules will definitely make life

easier for start-ups, which are in desperate need for capital to fund their growth and other business requirements.

2. Since the new rules are set to be applied retrospectively, many young companies that have received notices from the Income Tax Department in the last few years will be relieved by the latest tweak in the rules.



WHAT NEW NORMS MEAN FOR STARTUPS

- ▶ New rules have mandated that startups with a paid capital and share premium of up to Rs 10 crore will be eligible for tax breaks
- ▶ Only investors with net annual income of Rs 50 lakh in the tax return in the previous financial year will be eligible for benefits. The earlier ceiling was Rs 25 lakh during three preceding years
- ▶ Alternatively, investor's net worth should exceed Rs 2 crore, which officials say is a criteria that most companies will meet

There are, however, a few other issues with the new rules that could still cause unnecessary headaches to young start-ups:

- Companies wishing to make use of the latest exemption, for instance, will first need to be registered with the government as start-ups.
- To be classified as one, a company needs to attest to conditions such as that it has not invested in any land unrelated to the business, vehicles worth over ₹ 10 lakh, or jewellery.
- These requirements, while probably aimed to prevent money-laundering, can lead to considerable bureaucratic delays and rent-seeking.
- Also, the new rules for the angel tax can cause the same old problem of arbitrary tax demands for companies that do not fall under the defined category of start-ups.
- The taxes to be paid are still supposed to be calculated by the authorities based on how much the sale price of a company's unlisted share exceeds its fair market value. It is impossible to know the market value, let alone the fair market value, of shares that are not openly traded in the marketplace. So tax authorities with ulterior motives will still possess enough leeway to harass start-ups with unreasonable tax demands.

13. RBI's Surplus

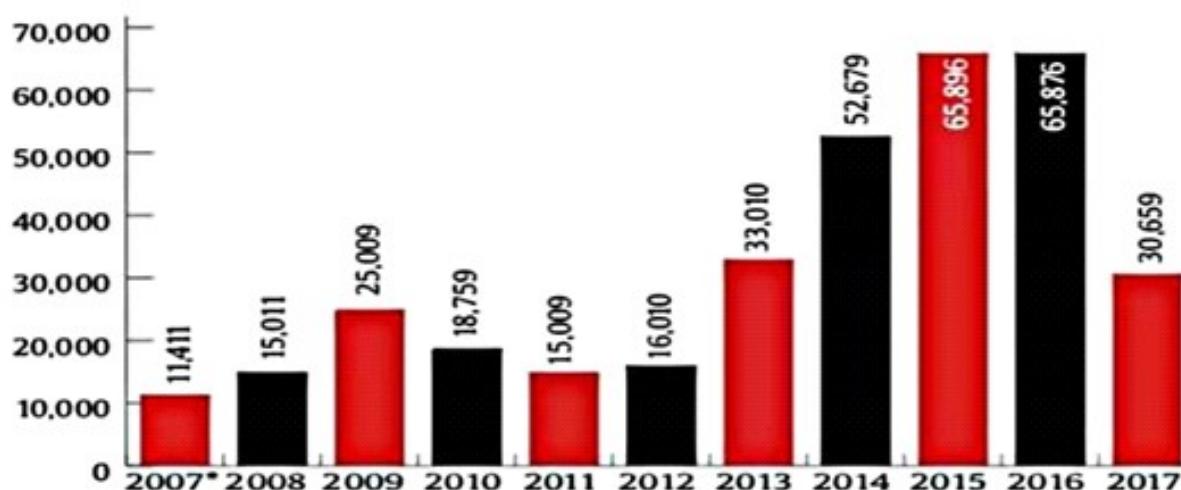
Context:

For the second year the RBI has paid an interim dividend to the government; it had approved an interim payout of Rs 10,000 crore last year.

RBI's Surplus

- RBI earns largely from the returns on its foreign currency assets, which could be in the form of bonds and treasury bills of other central banks or top-rated securities, deposits with other central banks, the interest it earns on its holdings of local rupee-denominated government bonds or securities; when lending to banks for very short tenures (such as overnight); and management commission on handling the borrowings of state governments and the central government.
- The RBI buys these financial assets against its fixed liabilities such as currency held by the public, and deposits issued to commercial banks on which it does not pay interest.
- RBI's expenditure is mainly on the printing of currency notes and on staff; on commissions to banks for undertaking transactions on behalf of the government across the country, and to primary dealers, including banks, for underwriting some of these borrowings.
- The central bank's total costs, including expenditure on printing and commissions, is only about a seventh of its total net interest income which implies that it generates a large surplus.

ANNUAL RBI TRANSFERS TO GOVT (In Rupees crore)



*In 2007, RBI sold its holding in SBI to the government. Including the profit from the sale of these shares, it transferred a total Rs 45,719.60 crore that year.

Source: RBI Annual Reports

Government's claim on RBI surplus

- Government of India is the sole owner of the RBI.
- Therefore, the government can make a legitimate claim to surplus generated by RBI.
- RBI transfers its "surplus" the excess of income over expenditure ,to the government under the provisions Section 47 of the Reserve Bank of India Act, 1934

Section 47 of the Reserve Bank of India Act, 1934:

"After making provision for bad and doubtful debts, depreciation in assets, contributions to staff and superannuation funds and for all other matters

for which provision is to be made by or under this Act or which are usually provided for by bankers, the balance of the profits shall be paid to the Central Government."

Concerns in giving extra surplus

- Much of the surplus that the RBI generates comes from the interest on government assets, or from the capital gains it makes off other market participants.
- When this is paid to the government as dividend, the RBI is putting back into the system the money it has made from it — and there is no additional money-printing or reserve-creation involved.
- But when the RBI pays an additional dividend to the government, it has to create additional permanent reserves — that is, it has to print money.
- To accommodate the special dividend, the RBI would have to withdraw an equivalent amount of money from the public by selling government bonds in its portfolio.

What is the global practice on payment of surplus by central banks?

- Almost all central banks, the US Federal Reserve, the Bank of England, Germany's Bundesbank, or the Reserve Bank of Australia, are owned by their respective governments, and have to transfer their surplus or profits to the Treasury, or the equivalent of India's Finance Ministry.
- The UK has a formal Memorandum of Understanding on the financial relationship between the Treasury and the Bank of England, which lays down a clear framework for passing on 100% of net profits to the government. The US Fed too, transfers all its net earnings to the Treasury.

14. Recapitalization package for PSBs

Context:

The government has approved the disbursal of a recapitalisation package of ¹ 48,239 crore for 12 public sector banks

- Recapitalization refers to injection of capital mainly through equity investment by the government in order to financially strengthen the PSBs.
- Hence, as part of recapitalisation of PSBs, the government buys the shares of the PSBs in order to improve their financial health.
- The Recapitalisation of Banks is one of the 7 pronged strategy adopted by the government as part of Indradhanush plan to improve the framework of governance of the Public sector Banks.

Higher NPAs

- The PSBs in India are presently under stress due to higher NPAs. It is to be noted that the NPAs of the PSBs are higher than the private

sector banks and remain elevated at 12 per cent of gross advances as on March 2018.

- It becomes a cause of concern for the Indian economy since 70% of the banking assets are currently held by PSBs.

Prompt Corrective Action (PCA) framework

- Presently, the RBI has placed 11 PSBs under the Prompt corrective action (PCA) framework in order to arrest their deteriorating financial condition.

- This has led to higher provisioning requirements and restrictions on lending by these PSBs. The Government believes that the PCA framework has curbed credit growth to critical sectors such as MSMEs.
- Further, there are some PSBs which are currently under stress and there is danger of these banks slipping under the PCA framework.
- In this regard, there is need for the government to infuse more capital to enable these 11 PSBs to come out of PCA framework and kick start credit growth in the economy.

Meeting Capital requirements under BASEL III Guidelines

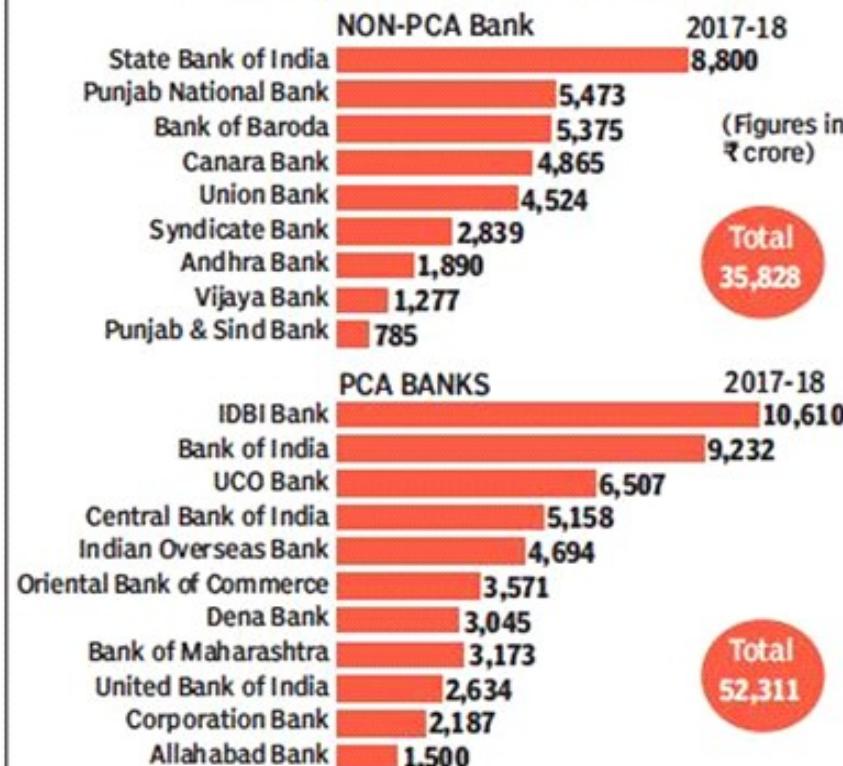
- RBI has adopted norms which are more stringent than the Basel norms. For instance, against the Basel norms of minimum CRAR of 8%, RBI has prescribed a 9% CRAR for Indian banks.
- In addition to that, banks are required to have 2.5% capital conservation buffer—mandatory capital that banks are required to hold in addition to other minimum capital requirements.
- Hence, the government has to infuse more capital in order to meet the BASEL III guidelines.

Government's Recapitalization Plan

- Government announced Indradhanush plan for revamping Public Sector Banks (PSBs) in August 2015. The plan envisaged infusion of

RECAP WITH RIDERS

CAPITAL ALLOCATION FOR STATE-RUN BANKS



PCA: Prompt Corrective Action plan of RBI to tackle bad loan problem

Source: Govt

capital in PSBs by the Government to the tune of Rs. 70,000 crore over a period of four financial years.

- In Jan 2018, the Government announced its decision to further recapitalize PSBs to the tune of Rs. 2,11,000 crore. Out of this total money, Rs. 1,35,000 crore would be raised through the issue of recap bonds and remaining through budgetary provision and capital raising of the Banks.
- The capital infusion plan of the government is considered to be huge since it would amount to 1.3% of India's GDP

Benefits of recapitalization

- **Credit rating upgradation:** Capital infusion into PSBs would improve their financial health leading to upgradation in the credit rating.
- **Basel III Tier-I Capital:** The recapitalization plan to meet Basel-III Tier-I capital requirement norms is expected to boost credit lending and future revenues.
- **GDP growth:** Empirical study has shown credit growth or additional credit capacity has a multiplier effect on the GDP growth. It is believed that the recapitalization plan will impact positively on economic activities in the country and will spur GDP growth rate significantly.

Recapitalisation Bonds

- A government bond is an instrument to raise money from the market with a promise to pay to repay the face value of the bond at the maturity date along with the interest. A bond issued for the purpose of recapitalization is called recapitalization bonds.
- The government would issue recapitalization bonds which would then be bought by the banks i.e. the banks would be lending money to the government by buying the Recapitalization bonds.
- This money raised by the government through these bonds will be used to buy the shares of the public sector banks leading to increase in Bank's Capital. This will immediately strengthen the balance-sheet of the banks and show capital-adequacy.

Geography and Environment

15. WORLD MALARIA REPORT-2018

Context:

Among the highest-burden countries in terms of malaria, India turned out as the only country to mark progress in reducing its disease burden in 2017 compared to 2016, according to WHO World Malaria Report 2018.

ABOUT MALARIA

- The Malaria is a mosquito-borne infectious disease affecting humans and other animals caused by parasitic single celled microorganisms belonging to the Plasmodium group. Malaria causes symptoms that typically include fever, tiredness, vomiting, and headaches. In severe cases it can cause yellow skin, seizures, coma, or death.
- Symptoms usually begin ten to fifteen days after being bitten by an infected mosquito. If not properly treated, people may have recurrences of the disease months later. The disease is most commonly transmitted by an infected female Anopheles mosquito.
- The mosquito bite introduces the parasites from the mosquito's saliva into a person's blood. The parasites travel to the liver where they mature and reproduce. In India, Odisha, Jharkhand, Chhattisgarh, North eastern states and parts of Gujarat, Maharashtra, Madhya Pradesh and Karnataka are prone to malaria.

WORLD MALARIA REPORT-2018

- The World Malaria report, 2018 has been released by World Health Organization.

GTS: global targets for 2030 and milestones for 2020 and 2025 Source: GTS (2).

Vision – A world free of malaria

Pillars			
Pillar 1			
Pillar 2			
Pillar 3			
Goals			
	Milestones		Targets
	2020	2025	2030
1. Reduce malaria mortality rates globally compared with 2015	At least 40%	At least 75%	At least 90%
2. Reduce malaria case incidence globally compared with 2015	At least 40%	At least 75%	At least 90%
3. Eliminate malaria from countries in which malaria was transmitted in 2015	At least 10 countries	At least 20 countries	At least 35 countries
4. Prevent re-establishment of malaria in all countries that are malaria free	Re-establishment prevented	Re-establishment prevented	Re-establishment prevented

GTS: Global technical strategy for malaria 2016–2030.

- Among the 11 nations with 70% of the world's burden of malaria, only India has managed to reduce its disease burden, registering a 24% decrease between 2016 and 2017.
- India's reduction, the sharpest within a year, now means the country accounts for 4% of the world's total malaria cases. However, 1.25 billion Indians—94% of its population—are still at risk of malaria, the report noted.
- Top three countries with the highest rates of malaria are Uganda, Ghana, Democratic Republic of Congo.
- Since 2000, India has reduced malaria deaths by two-thirds and halved the number of malaria cases.
- India's success is largely due to substantial declines of the disease in the highly endemic state of Odisha, home to approximately 40% of all malaria cases in the country.
- The other countries that showed results were the malaria-endemic countries of China and El Salvador, which reported no local transmission in 2017
- Globally, the progress made against malaria has stalled for the second consecutive year as the number of cases rose in 2017 as compared to 2016. The report revealed a plateauing, as funds have declined.

16. Indus Water Treaty

Context:

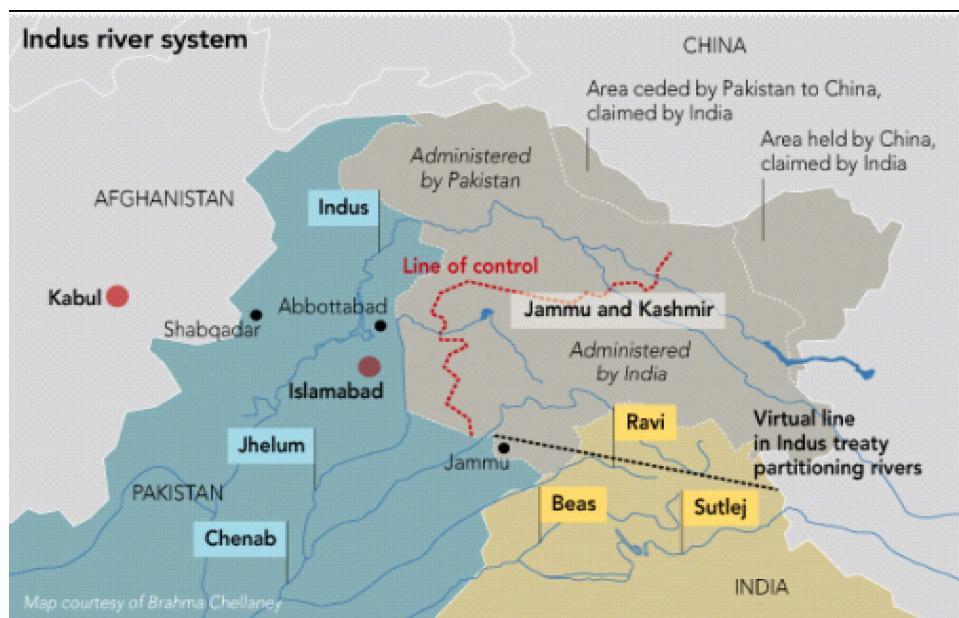
In response to Pulwama terror attack, the Centre has decided to stop India's share of water that used to flow to Pakistan. The government would divert water from eastern rivers to Jammu and Kashmir.

The government's decision will not impact Pakistan's share of water under the Indus Water Treaty between the two nations.

River sharing between India and Pakistan:

- The sharing of water of the six rivers—Indus, Chenab, Jhelum, Beas, Ravi and Sutlej—between India and Pakistan is governed by a treaty the two countries signed in 1960. The deal was brokered by the World Bank after nine years of negotiation.
- Under the treaty, India has control over water flowing in the eastern rivers—Beas, Ravi and Sutlej. Pakistan has control over the western rivers—Indus, Chenab and Jhelum.
- As per the treaty, the water commissioners of Pakistan and India are required to meet twice a year and arrange technical visits to projects' sites and critical river head works. Both the sides share details of the water flow and the quantum of water being used under the treaty.
- The treaty sets out a mechanism for cooperation and information exchange between the two countries regarding their use of the rivers.

- Of the total 168 million acre-feet, India's share of water from the three allotted rivers is 33 million acre-feet, which constitutes nearly 20 per cent.
- India uses nearly 93-94 per cent of its share under the Indus Waters Treaty. The rest of the water remains unutilised and goes to Pakistan.



Projects proposed to utilize the unutilized water:

- After the Uri attack in 2016, India has fast-tracked water projects to arrest the unutilized water. The three projects include the Shahpur-Kandi dam project, a second Sutlej-Beas link in Punjab and the UJH Dam project in Jammu and Kashmir.

Pakistan's water woes:

- An IMF study said that Pakistan is the third most affected country in the world in terms of acute water shortage. Closing the taps is likely to send a strong message that Pakistan cannot continue to perpetrate terrorism from its soil with impunity.

Why it may not be feasible to stop water-flow altogether?

- So far the treaty has survived wars and phases of frosty ties between India and Pakistan. India's any move affecting the treaty would be closely watched by the international community.
- India cannot abrogate the treaty on a short notice. It takes years to divert the flow of a river. The government of India will have to prepare a long-term strategy if it intends to threaten Pakistan by diverting or stopping the water.

Challenges and concerns:

- The IWT has survived various wars and other hostilities between the two countries, and as such it is largely considered a success.
- Today, however, the treaty is increasingly faced with challenges it wasn't designed to deal with.
- For instance, India recently fast-tracked approval for several major dams along the Chenab, a 900km-long tributary of the Indus that was originally allotted to Pakistan under the IWT.

- This follows several other contentious dams already being built on shared rivers including Kishanganga, on the Jhelum River, which was also allotted to Pakistan.
- Under the IWT, India does indeed have a right to “limited hydropower generation” upstream on the western tributaries allotted to Pakistan, including the Chenab and the Jhelum.
- However, many in Pakistan worry that even though these proposed dams may individually abide by the technical letter of the treaty, their effects will add up downstream.
- Because the treaty does not provide a definitive solution, the two countries have frequently sought time-consuming and expensive international arbitration.
- From time to time, Pakistan has raised concerns and asked for intervention on the storage capacity of Indian dams planned on shared rivers allotted to Pakistan under the IWT.
- Basin countries have also not been forthcoming in sharing data and announcing planned hydropower projects ahead of time.

17. Kole wetlands

Context:

The Kole Fish Count, conducted on February 2, 2019 in connection with World Wetland Day across the Kole wetlands of central Kerala, recorded 82 aquatic species.

About the survey:

- Some of the most common species encountered during the survey include the orange chromide (known as pallathi in Malayalam), the dwarf pufferfish, Malabar leaf fish, and pearl spot or karimeen.
- The teams also came across six non-native fish species, raising concerns on the sustainability of the fishery and aquaculture practices being followed in the Kole and vicinity.
- The presence of six species of non-native fish in the Kole is of significant concern as these have the potential to compete with, and outnumber native species.
- Particularly alarming is the frequent catches of the Amazonian sucker catfish from various parts of the Kole.



Kole Wetlands

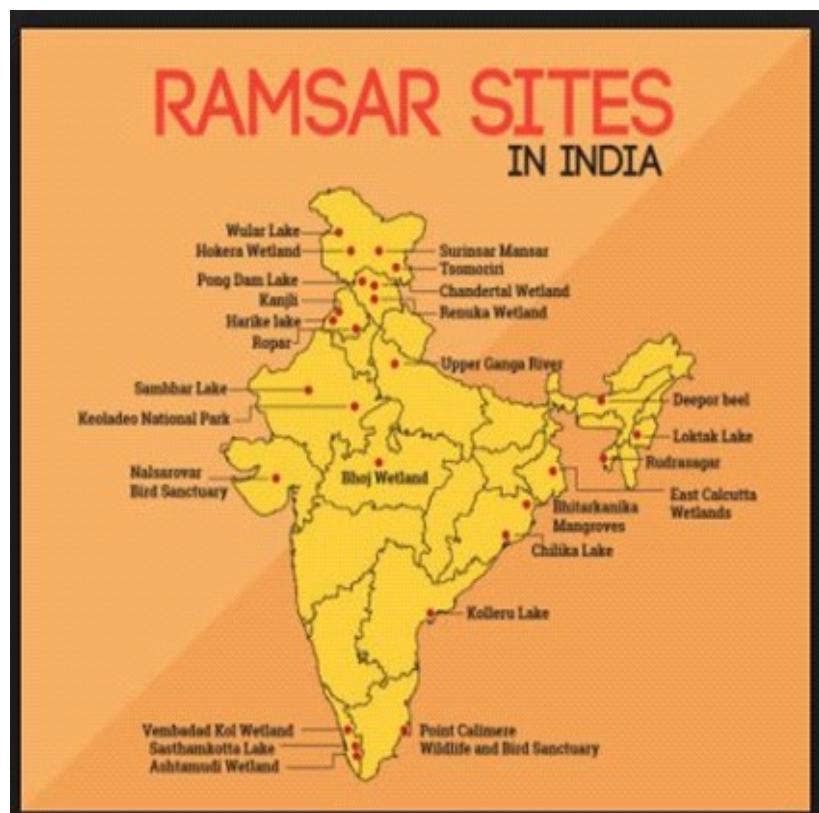
- Kole Wetlands is a Ramsar site, a wetland of international importance, designed under the Ramsar Convention lying in Thrissur District in Kerala, India.
- The Kole wetlands located in Kerala's Thrissur and Mallapuram districts spans about 13,500 hectares, merging with Vembanand, India's largest lake, thus nurturing one of the most biologically diverse ecosystems in South Asia.
- The Kole ecosystem supports the third largest population of waterfowl in India during winter.
- It is also an important stopover in the Central Asian-Indian Flyway, which is the migratory route of birds that fly south from Siberia in the winter months.

Concerns:

- In Kole, rice cultivation and fishing are the traditional economic activities, both of which are under threat due to the increasing population.
- Spreading out from cities like Thrissur, the pressure of population has resulted in vast swathes being converted into housing sites here.
- The fields have also been subdivided and fragmented umpteen times, hence hindering rice cultivation.
- Fishing too has suffered, with a nexus of a profit-driven, capital-intensive system that is driving away the traditional fishing communities in the area.

Ramsar Convention:

- Ramsar is a city in Iran. In 1971, an international treaty for conservation and sustainable use of wetlands was signed at Ramsar.
- The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".



- At the time of joining the Convention, each Contracting Party undertakes to designate at least one wetland site for inclusion in the List of Wetlands of International Importance.
- The inclusion of a “Ramsar Site” in the List embodies the government’s commitment to take the steps necessary to ensure that its ecological character is maintained.
- The 2nd of February each year is World Wetlands Day, marking the date of the adoption of the Convention on Wetlands on 2 February 1971.
- The Ramsar Sites Information Service (RSIS) is a searchable database which provides information on each Ramsar Site.
- The Ramsar Convention works closely with six other organisations known as International Organization Partners (IOPs). They are:
 - 1) Birdlife International.
 - 2) International Union for Conservation of Nature (IUCN).
 - 3) International Water Management Institute (IWMI).
 - 4) Wetlands International.
 - 5) WWF International.
 - 6) Wildfowl & Wetlands Trust (WWT).

18. Scientists discover massive mountains under Earth's crust

Context:

Scientists have discovered massive mountains in the earth's mantle. Data was collected from an enormous earthquake of 8.2 magnitude that occurred in Bolivia in 1994. These mountains and other topography was found between upper and lower mantle.

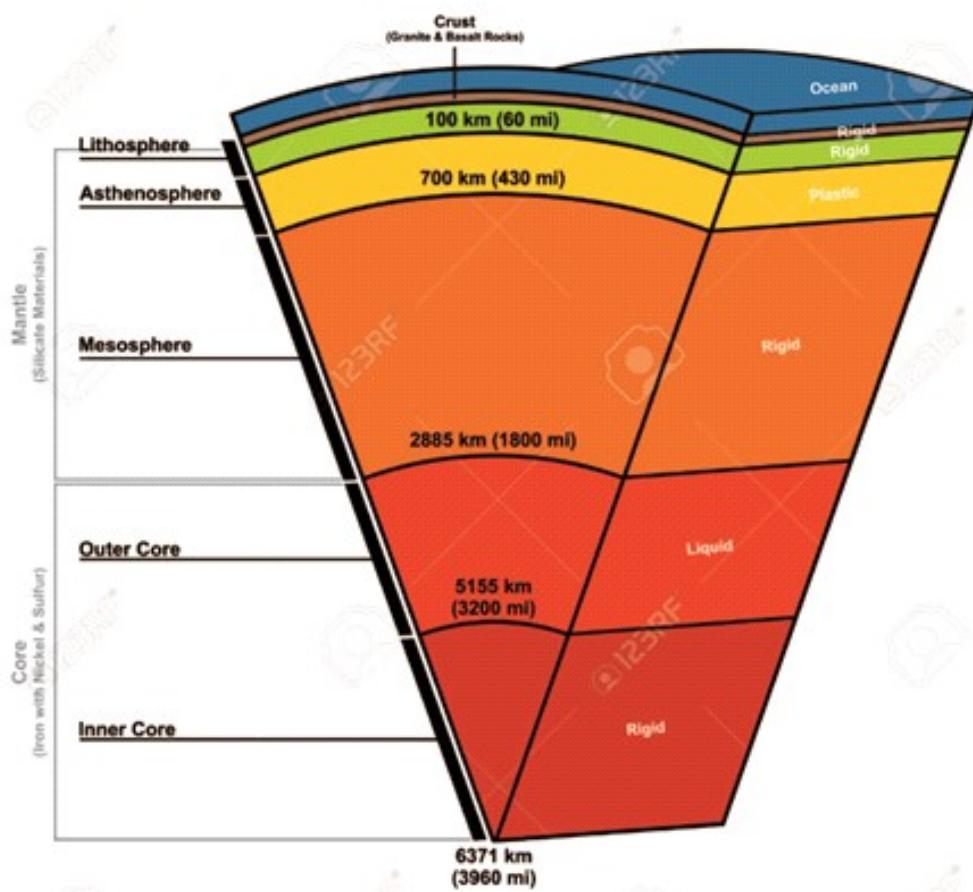
Different layers under earth's crust:

Crust:

- It is the outermost solid part of the earth and is brittle in nature.
- The thickness of the crust varies under the oceanic and continental areas.
- Oceanic crust is thinner as compared to the continental crust. The continental crust is thicker in the areas of major mountain systems.
- It is made up of heavier rocks having higher density whereas rock found in the oceanic crust is basalt.

Mantle:

- The portion of the interior beyond the crust is called the mantle. The mantle extends from Moho's discontinuity (between crust and mantle) to core.



- The upper portion of the mantle is called asthenosphere.
- It is the main source of magma that finds its way to the surface during volcanic eruptions. It has a density higher than the crust's.
- The crust and the uppermost part of the mantle are called lithosphere.
- The lower mantle extends beyond the asthenosphere. It is in solid state.

Core:

- The outer core is in liquid state while the inner core is in solid state.
- The density of material at the mantle core boundary is less than that at the centre of the earth which is almost thrice the density of outer core.
- The core is made up of very heavy material mostly constituted by nickel and iron. It is sometimes referred to as the nife layer due to the presence of nickel and Iron.

Science and Technology

19. Leprosy

Context:

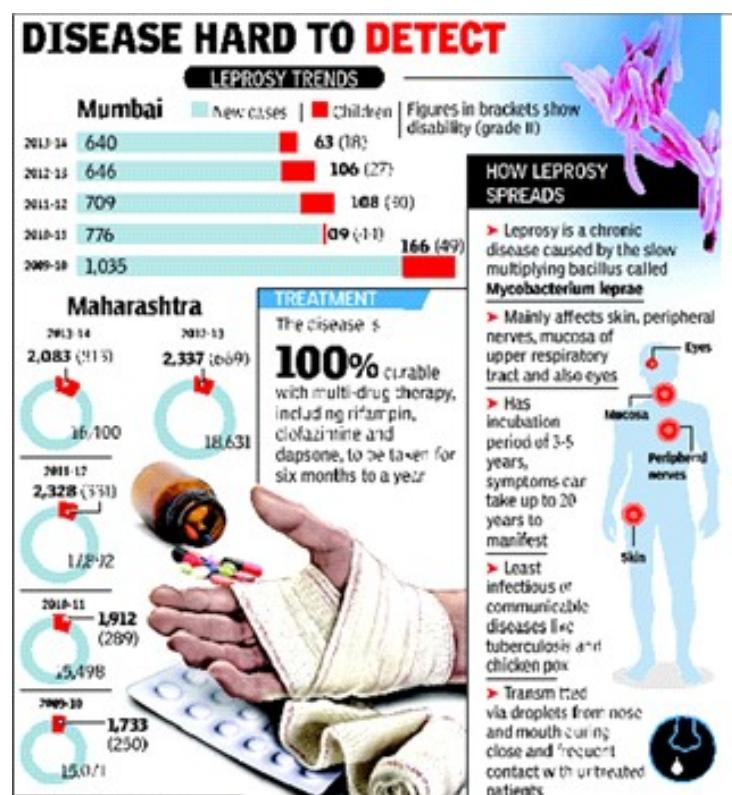
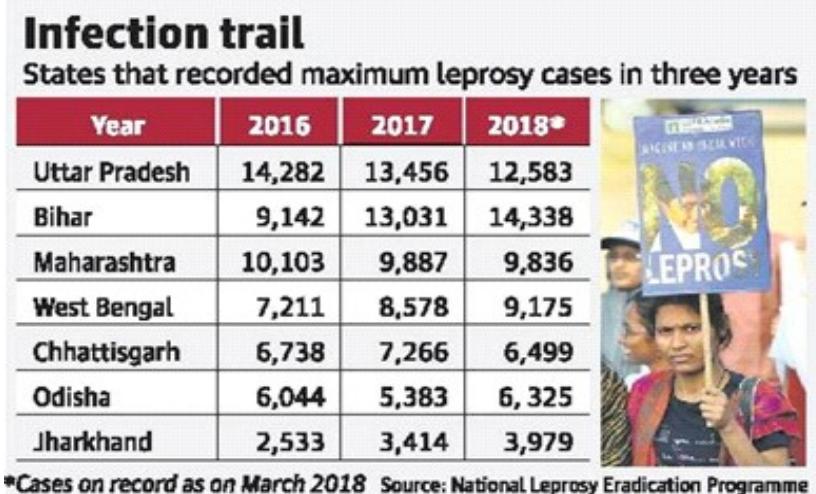
The Leprosy Case Detection Campaign report has shown that 34,730 cases were detected in 2016, 32,147 in 2017, and 16,097 in 2018.

About Leprosy

- Leprosy is a chronic, progressive bacterial infection caused by the bacterium *Mycobacterium leprae*. It primarily affects the nerves of the extremities, the skin, the lining of the nose, and the upper respiratory tract. Leprosy is also known as Hansen's disease.
- Leprosy produces skin ulcers, nerve damage, and muscle weakness. If it isn't treated, it can cause severe disfigurement and significant disability.
- Leprosy is one of the oldest diseases in recorded history. Leprosy is common in many countries, especially those with tropical or subtropical climates.

Report Highlights

- The rise in the number of recorded leprosy cases from 86,147 (in 2013-14) to 90,709 (2017-18), reported a decade and a half after India was declared leprosy-free in 2005, has turned the spotlight on the hotspots for the disease.
- The World Health Organization (WHO) has set the goal of zero children with leprosy and deformities by 2020, and less than one patient per million for other newly diagnosed patients.



- Today, though, Bihar, Chhattisgarh, Odisha, Jharkhand, Uttar Pradesh, West Bengal and Maharashtra remain the ‘hotspots’ from which maximum prevalence was detected last year.
- High population density, poor sanitation and inadequate access to nutrition are among the reasons for the number remaining high. ? The Centre says a more aggressive detection campaign is being carried out, explaining the numbers.
- There has been a change in the percentage of new child cases from 9.49% in 2013-14 to 8.15% in 2017-18, with the level having remained almost stagnant at 8.94% in 2015-16 and 8.69 % in 2016-17.
- In 2016-17, the proportion of new child cases was more than 10% of the new cases detected in 10 States.

20. Aero India Show 2019

Context:

The 12th edition of Aero India will be held at Air Force Station at Yelahanka in Bengaluru. It aims to provide a significant platform in bolstering business opportunities in the International aviation sector. The Aero India 2019 has a tagline “The Runway to a Billion Opportunities” and has a logo inspired by the Tejas Light Combat Aircraft (LCA).

- Aero India Show is a biennial air show organized by the Ministry of Defence. The first edition of the air show was held in 1996. The show aims at giving a fillip to the rapidly growing economy, defence production and participation of private players.
- This five-day event will combine a major trade exhibition of the aerospace and defence industries with public air shows.
- Besides global leaders and big investors in aerospace industry, the show will also see participation by think-tanks from across the world. Aero India will provide a unique opportunity for exchange of information, ideas and new developments in the aviation industry.
- Besides giving a fillip to the domestic aviation industry it would further the cause of Make in India.
- In Aero India, close to 500 companies, both Indian and foreign, are expected to participate.

21. LOFAR Telescope

Context:

A new map of the night sky published recently charts hundreds of thousands of previously unknown galaxies discovered using LOFAR telescope that can detect light sources optical instruments cannot see.

- The discovery literally shed new light on some of the Universe’s deepest secrets, including the physics of black holes and how clusters of galaxies evolve.

- The mission of LOFAR is to map the Universe at radio frequencies from ~10–240 MHz with greater resolution and greater sensitivity than previous surveys, such as the 7C and 8C surveys, and surveys by the Very Large Array (VLA) and Giant Meterwave Radio Telescope (GMRT).

About LOFAR Telescope:

The Low-Frequency Array or LOFAR, is a large radio telescope network located mainly in the Netherlands, completed in 2012 by ASTRON, the Netherlands Institute for Radio Astronomy and its international partners.

How it works?

LOFAR consists of a vast array of omnidirectional antennas using a new concept in which the signals from the separate antennas are not combined in real time as they are in most array antennas. The electronic signals from the antennas are digitized, transported to a central digital processor, and combined in software to emulate a conventional antenna.

The project is based on an interferometric array of radio telescopes using about 20,000 small antennas concentrated in at least 48 stations.

22. 'Inkjet' solar panels

Context:

Scientists has developed a novel inkjet processing method for perovskites a new generation of cheaper solar cells that makes it possible to produce solar panels under lower temperatures, thus sharply reducing costs.

What is inkjet printing?

- Inkjet printing is a type of computer printing that recreates a digital image by propelling droplets of ink onto paper, plastic, or other substrates.

About the research:

- Scientists has developed a novel inkjet processing method for perovskites a new generation of cheaper solar cells that makes it possible to produce solar panels under lower temperatures, thus sharply reducing costs.
- Solar panels coated with the mineral are light, flexible, efficient, inexpensive and come in varying hues and degrees of transparency.
- They can easily be fixed to almost any surface be it laptop, car, drone, spacecraft or building to produce electricity, including in the shade or indoors In the following decades, synthesising the atomic structure of perovskite became easier. But it was not until 2009 that Japanese researcher Tsutomu Miyasaka discovered that perovskites can be used to form photovoltaic solar cells.
- Initially the process was complicated and required ultra high temperatures, so only materials that could withstand extreme heat like glass could be coated with perovskite cells.

- In 2013, while still a Ph.D student at the University of Valencia in Spain, Ms. Malinkiewicz figured out a way to coat flexible foil with perovskites using an evaporation method.
- Later, she developed an inkjet printing procedure that lowered production costs enough to make mass production economically feasible. "That was a bull's eye. Now high temperatures are no longer required to coat things with a photovoltaic layer," she said.

Perovskite solar cell:

- Calcium titanium oxide (CaTiO_3) is also known as Perovskite.
- Perovskite solar cell is a type of solar cell that contains perovskite structure compounds i.e. those having the same structure as that of a perovskite mineral.
- The most commonly used perovskite mineral for solar cell is a hybrid organicinorganic lead or tin halide-based material.
- Perovskites minerals display a number of interesting properties such as Superconductivity, Magnetoresistance, and Ferroelectricity which makes them well suited to many technological applications, including solar cells.

Perovskites solar cells are more efficient in comparison to conventional silicon solar cells due to following reasons:

- Efficiency of a solar cell depends upon the mobility of atoms and molecules within the material used for its construction. A perovskite mineral have high mobility and respond to light within trillionths of a second, which is much faster than that by a silicon wafer. This property makes Perovskites solar cells highly efficient in converting light energy to electricity.
- Perovskite thin films are also lightweight and flexible in comparison to silicon solar cells.
- Further, unlike silicon solar cells, Perovskites solar cells are environment friendly (manufacturing and disposal process), cheap, and easy to install.

Miscellaneous

23. Vande Bharat

Context:

The inaugural trip of India's first semi-high speed train, Vande Bharat Express, was flagged off by Prime Minister Narendra Modi at the New Delhi railway station.

Fast forward

The semi-high speed Train 18, which has been recently rechristened Vande Bharat Express, can run up to a maximum speed of 160 kmph. A look at Indian Railways' new showpiece train



18 set has already generated export interest from several countries.

- The 16-coach all air-conditioned Vande Bharat Express will have both Executive and non-Executive chair cars. The fares of Vande Bharat Express are 40-50% higher than the base fare of Shatabdi Express.

24. Quota for Gujjars

Context:

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 comes in the backdrop of two similar bills passed in 2015 and 2017 which were struck down by the Rajasthan High Court. Provisions of the Bill .
- The bill seeks to provide 5% reservation to Gujjars, Banjaras, Gadia Lohars, Raikas and Gadaria. At present, the communities are provided 1% reservation under More Backward Classes (MBC).
- The bill has increased the OBC reservation in Rajasthan from the present 21% to 26%. It has also increased 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. ? This is because Rajasthan has breached the 50% cap on reservations set by the Supreme Court. A law enacted and included in the Ninth Schedule gets protection under Article 31-B (validation of certain Acts and Regulations) and is not subject to judicial review.
- However, in 2007, the Supreme Court ruled that all laws including those in the Ninth Schedule would be open to judicial review if they violated the basic structure of the constitution.

25. Swachh Shakti 2019

Context:

Swachh Shakti 2019 Awards were recently distributed by the PM on the occasion of Swach Shakti 2019 programme.

Swachh Shakti Programme

- The Swachh Shakti Programme is a national event which aims to bring in to focus the leadership role played by rural women in Swachh Bharat Mission.
- Launched in 2017, the Programme is a part of ongoing activities under the aegis of the Swachh Bharat Mission, launched on October 2, 2014 by the Prime Minister Narendra Modi to achieve a clean and Open Defecation Free (ODF) India by October 2, 2019.
- The programme is attended by womenpanchs and sarpanchs from across the country. The first edition of Swachh Shakti programme was launched from Gandhinagar, Gujarat by the Prime Minister Narendra Modi on International Women's Day 2017. The second edition was launched from Lucknow, Uttar Pradesh.

26. Buddhism and Bhutan relations

Context:

An international conference and exhibition of rare artefacts about the life and legacy of 8th century Buddhist sage Guru Padmasambhava is being held in New Delhi.

- The conference is titled “Life and Legacy of Guru Padmasambhava”.
- The conference also celebrates the 50 years of diplomatic relations between India and Bhutan.

About Guru Padmasambhava

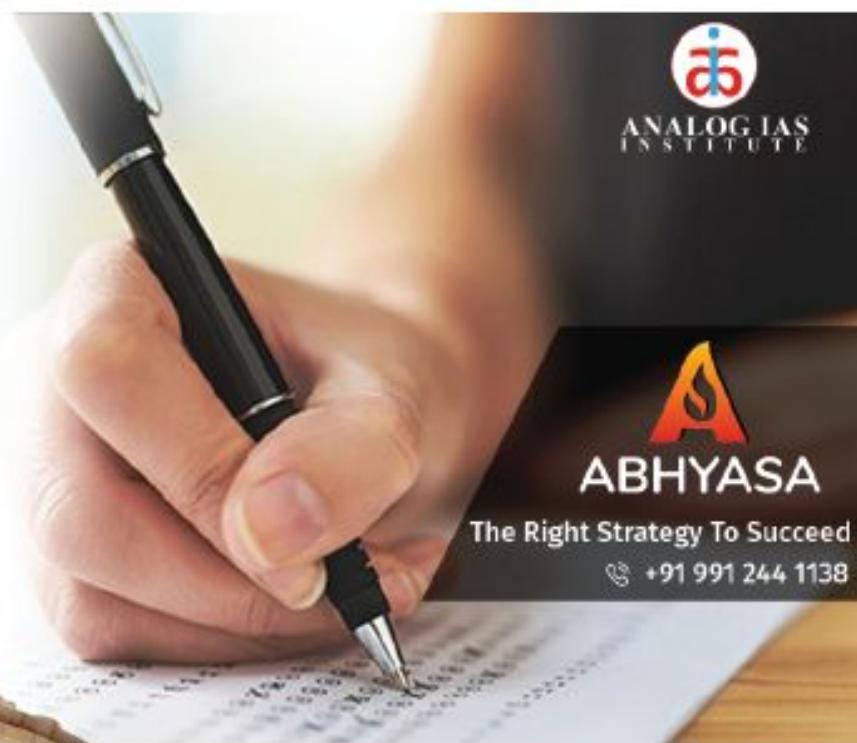
- Guru Padmasambhava is known as the Second Buddha because he played a seminal role in spreading Buddhism and Buddhist teachings across the Himalayan region including Northeast India, Nepal, Bhutan and Tibet. In Tibetan, Guru Padmasambhava is generally referred to as Guru Rinpoche, which means “precious master.”

- He undertook many travels across India, Bhutan, Tibet and Nepal. Thangka paintings, sculptures and photographs portray the life and teachings of the Guru.



Huyen langlon

- Huyen langlon is an Indian martial art from Manipur. In the Meitei language, huyen means war while langlon or langlong can mean net, knowledge or art.
- Huyen langlon consists of two main components: thang-ta (armed combat) and sarit sarak (unarmed fighting). The primary weapons of huyen langlon are the thang (sword) and ta (spear).
- The spear can be used in its non-missile form while in close or thrown from afar. Other weapons include the shield and the axe.
- Unarmed combat incorporates hand strikes, kicks, and grappling (mukna).
- Because of Manipur's cultural similarity and geographical proximity with Myanmar, huyen langlon is closely related to Burmese bando and banshay.



Abhyasa Program Structure

	Multiple Choice Questions (PRELIMS)	Descriptive Questions (MAINS)	Total Marks
Daily Test	10 (10*1 = 10 marks)	1 (1*10= 10 Marks)	20
Weekly Test	20 (20*1 = 20 marks)	2 (2*10= 20 Marks)	40
Fortnightly Test	30 (30*1 = 30 marks)	3 (3*10= 30 Marks)	60
Monthly Test	50 (50*1 = 50 marks)	5 (5*10= 50 Marks)	100
3 Months Test	100 (100*1 = 100 marks)	10 (10*10= 100 Marks)	200
Total Questions	4250+	500+	

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144



149



187



295



296



360



412



417



474



480



548



614



673



713



726



758



761



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828



832



872



886

