CURRENT AFFAIRS WEEKLY

WEEK - 2 **SEPTEMBER, 2019**

MAINS

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- ⌖ Impact of Merger of Banks
- ⌖ Reducing Food Loss and Waste (UNEP Report)

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— Disclaimer —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST
WEEK-2 (SEPTEMBER, 2019)

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Section - B: Prelims Current Affairs

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SECTION: A
(MAINS)

CURRENT AFFAIRS

BUSINESS TO BUSINESS (B2B) E- COMMERCE IN INDIA

CONTEXT

- Indiamart pulled off a successful stock market listing—the rarest of rare achievements for an Indian internet firm.

⊙ BACKGROUND

- Electronic commerce is popularly known as e-commerce. An e-commerce business model enables a firm/individual to conduct business over an electronic network, typically the Internet. Electronic commerce can be classified into four main categories. The basis for this simple classification is the parties that are involved in the transactions.

Types of electronic commerce models:

- **Consumer to Consumer(C2C)**
  - Here the consumers are in direct contact with each other. No company is involved. It helps people sell their personal goods and assets directly to an interested party. E.g. OLX, Quikretc .

- **Consumer to Business (C2B)**
  - This is the reverse of B2C; it is a consumer to business. So the consumer provides a good or some service to the company. E.g.- An IT freelancer who demos and sells his software to a company.

- **Business to Consumer (B2C)**
  - Here the company will sell their goods and/or services directly to the consumer. The consumer can browse their websites and look at products, pictures, read reviews. Then they place their order and the company ships the goods directly to them. Popular examples are Amazon, Flipkart, Jabong etc.

- **Business to Business (B2B)**
  - Here the companies are doing business with each other. The final consumer is not involved. So the online transactions only involve the manufacturers, wholesalers, retailers etc.

⊙ ABOUT B2B E-COMMERCE:

- This includes firm to firm economic interactions or business using all round electronic methods and procedure.

Some examples of B2B E-Commerce platforms:

- **Indiamart:** A marketplace for business as well as payment services.

- **UDAAN:** It facilitates buying and selling of fashion, groceries and electronics between manufacturers, brands and retailers.

- **NinjaCart:** The Tiger Global-backed firm was founded in 2015 as a consumer internet firm but shifted to B2B e-commerce later. The platform now enables retailers and merchants to source fresh produce directly from farmers daily. NinjaCart eliminates middlemen by allowing farmers to directly deal with establishments.

Udaan and Indiamart are examples of horizontal platforms and there are many other B2B startups which are called vertical platforms.

Difference between horizontal and vertical E-Commerce platforms:

Horizontal E-Commerce

- Horizontal e-commerce businesses are those that sell products from a large number of categories. Basically it serves retailers across industries. The most famous horizontal e-commerce business is Amazon.com. It sells books, furniture, food, grocery, apparel, toys, software, music, gadgets, and a whole lot more.

- Horizontal e-commerce businesses present themselves as a one-stop shop and communicate convenience as a strong benefit. They also tend to find supply chain or scale advantages that help them offer great prices.

Vertical E-Commerce

- Vertical e-commerce players are specialists which focus on specific regions or categories. So an online retailer that only sells baby products is a vertical e-commerce business.

- Vertical e-commerce players rely on being able to showcase the product better. Since they focus on one, or few, product categories, they can engineer the user experience in a way that highlights the special features of the product category.

Factors responsible for growth of B2B E-Commerce:

- Until recently, B2B e-commerce start-ups failed to make a dent in the largely-unorganized market. But they have found success at a time when the country's informal economy is in bad shape.The

revival of B2B e-commerce has been driven by structural changes in the industry brought about by following macro factors:

- ➤ **The launch of 4G services led by Reliance Jio:** 4G services provided stable and fast internet connections that made businesses more willing to use the internet to conduct business.

- ➤ **The introduction of a goods and services tax (GST):** The introduction of GST made it convenient to transport goods between states.

- ➤ **Demonetization:** Demonetization compelled businesses to experiment with digital payments.

- ◎ According to experts by damaging the informal economy, the last two changes have contributed to the present economic slowdown. But one sector has benefitted immensely from them is B2B e-commerce.

Governments Initiatives:

- ◎ **GeM(Government E-marketplace) Portal:** It is a platform to make procurement by public sector enterprises more efficient.It facilitates online procurement of common use Goods & Services required by various Government Departments / Organisations / PSUs.

- ◎ In order to increase the participation of foreign players in the e-commerce field, the Indian Government hiked the limit of foreign direct investment (FDI) in the E-commerce marketplace model for up to 100 per cent in B2B models.

- ◎ The heavy investment of Government of India in rolling out the fiber network for 5G will help boost ecommerce in India.

Achievements:

- ◎ Udaan, a B2B online trade platform that connect small and medium size manufacturers and wholesalers with online retailers and also provide them logistics, payments and technology support, has sellers in over 80 cities of India and delivers to over 500 cities.

- ◎ According to the UN's e-governance index, India has jumped 11 positions to 107 in 2016 from 2018 in 2014.

- ◎ Under the Digital India movement, government launched various initiatives like Udaan, Umang, Start-up India Portal etc.

Significance of B2B E-Commerce:

- ◎ **For retailers:** It was generally believed that Indian businesses were unwilling to pay for using a digital platform and other technological services. But now retailers are willing to pay for e-services because the value that E-commerce companies are providing, be it credit, or price discovery and

transparency or logistics, has transformed their businesses. Not only do they earn more revenues and can expand into other categories, they are also seeing an increase in profit margins.

- ◎ **For wholesalers:** Currently, the most profitable players in the ecosystem are wholesalers. Retailers make very less margins. Wholesalers enjoy a far higher return on capital than retailers. Therefor E-commerce can cut short wholesalers revenue.

- ◎ The global B2B market size is expected to be around $700 billion by 2020, according to an April 2016 report by the Confederation of Indian Industry and Deloitte.

- ◎ As a higher number of MSMEs come online, the digital services market serving these firms will increase to $10 billion in 2023 from $1.5 billion according to an estimate.

- • India's internet economy is expected to double from US$125 billion as of April 2017 to US$ 250 billion by 2020, majorly backed by ecommerce.

- • The Indian e-commerce industry has been on an upward growth trajectory and is expected to surpass the US to become the second largest e-commerce market in the world by 2034

Challenges for B2B E-Commerce:

- ◎ Micro, small and medium enterprises (MSMEs) in India spent $1.5 billion on digital services in 2018. On the whole, only 6% of all MSMEs in India paid for digital services in any form in 2018, the others have still not taken to the internet because of a lack of knowledge about how to use software, low awareness about B2B platforms and unwillingness to pay for such services.

- ◎ The online B2B market will grow primarily through the displacement of wholesalers.

- ◎ Most customers of the B2B internet platforms do not pay for value-added services such as online advertising and analytics

- ◎ **Contract based pricing:** B2B sales sector deals with significantly larger volumes and more complicated transactions than B2C, including multi-level approval processes, negotiations, etc.

- ◎ **Order Approval process:** Unlike B2C, which works directly with end-buyers, B2B often deals with a whole chain of negotiations and approval processes. So an e-commerce platform needs to be able to support approval process with different roles.

- ◎ The FDI provision restricted to Indian firms may Influence the much needed FDI in general and e commerce industry in particular.

Suggestions:

◉ E-Commerce should be included in the National Integrated Logistics Plan being prepared by the Department of Commerce, which would focus on faster delivery with emphasis on lower costs.

◉ Continued focus on Digital India initiatives by the Government will help in the development of B2B e-commerce sector.

◉ Early roll out of 5G services would boost internet speed which will ensure faster service delivery.

◉ As digital transactions will increase in the near future there is need of comprehensive data storage of B2B transactions for smooth functioning.

◉ Most of the B2B e-commerce businesses are fundamentally financing engines. For qualitative value addition there is a strong need for effective management of working capital.

Road ahead:

◉ Thee-commerce industry been directly impacting the micro, small & medium enterprises (MSME) in India by providing means of financing, technology and training and has a favourable cascading effect on other industries as well.Technology enabled innovations like digital payments, hyper-local logistics, analytics driven customer engagement and digital advertisements will likely support the growth in the sector. The growth in B2B e-commerce sector will also boost employment, increase revenues from export, increase tax collection by ex-chequers, and provide better products and services to customers in the long-term.

📖 Practice Question

◉ **What is B2B E-Commerce? Discuss its significance and factors responsible for its growth. Also suggest some measures to boost B2B E-Commerce in India**

Business to Business (B2B) e-Commerce in India

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Context

Recently, B2B e-commerce in India came into limelight when Indiamart pulled off a successful stock market listing—the rarest of rare achievements for an Indian internet firm

e-commerce categories

B2B • IndiaMart → companies conduct business with each other involving the manufacturers, wholesalers, retailers, etc

C2C • OLX → the consumers are in direct contact with each other

C2B • BlaBlaCar → the consumer provides a good /service to a company

companies sell their goods and/or services directly to the consumer

B2C • Amazon

C : Consumer
B : Business

Factors responsible for growth of B2B e-Commerce in India recently

| Launch of 4G services	Introduction of GST	Demonetisation
It provided stable and fast internet connections that made businesses more willing to use the internet to conduct business	It made it convenient to transport goods between states	It compelled businesses to experiment with digital payments

According to experts by damaging the informal economy, these two changes have contributed to the present economic slowdown. But one sector that has benefitted immensely from them is B2B e-commerce

Significance of B2B e-Commerce
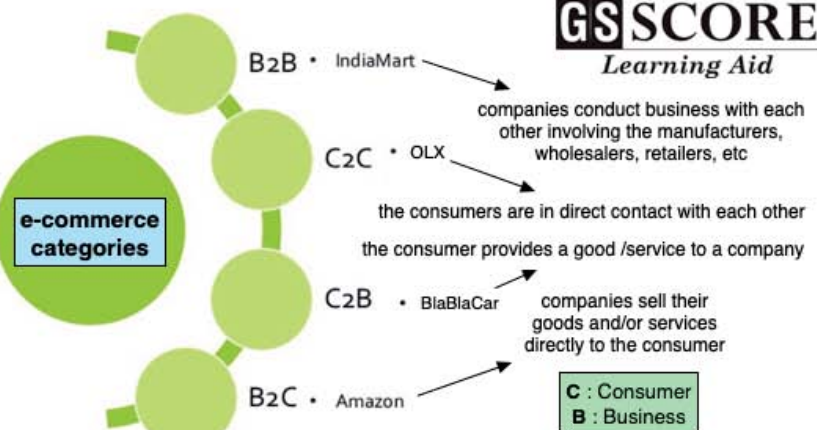
Retailers and Wholesalers are willing to pay for e-services because the value that e-commerce companies are providing, be it credit, or price discovery and transparency or logistics, has transformed their businesses.

The global B2B market size is expected to be around **$700 billion by 2020**

The **Indian e-commerce industry** has been on an upward growth trajectory and is **expected to surpass the US** to become the second largest e-commerce market in the world by 2034

Governments Initiatives

GeM(Government e-Marketplace) Portal is a platform to make procurement by public sector enterprises more efficient

Under the **Digital India**, govt launched various initiatives like Udaan, Umang, Start-up India Portal etc

The raising of limit of **FDI** in the e-Commerce marketplace model for **up to 100 %** in B2B models

Heavy investment in rolling out the fiber network for **5G** will help boost e-Commerce in India

According to the UN's e-governance index, India has jumped up to 107th rank in 2016

Challenges for B2B e-Commerce

The online B2B market will grow primarily through the **displacement of wholesalers**

The **FDI provision restricted to Indian firms** may Influence the much needed FDI in general and e commerce industry in particular

Only 6% of all MSMEs paid for digital services in any form in 2018 while others have still not taken to the internet because of a lack of knowledge about how to use software, low awareness about B2B platforms and unwillingness to pay for such services

What more needs to be done

e-Commerce should be included in the National Integrated Logistics Plan being prepared by the Department of Commerce, which would focus on faster delivery with emphasis on lower costs

As digital transactions will increase in the near future there is need of comprehensive data storage of B2B transactions for smooth functioning

Most of the B2B e-commerce businesses are fundamentally financing engines. For qualitative value addition there is a strong need for effective management of working capital

The e-commerce industry has been directly impacting the MSMEs in India by providing means of financing, technology and training and has a favourable cascading effect on other industries as well. Ensuring a conducive environment will lead to growth in B2B e-Commerce sector and boost employment, revenue and provide better products and services to customers in the long-term

IMPACT OF MERGER OF BANKS

CONTEXT

- Finance Minister Nirmala Sitharaman had recently announced a slew of banking reform measures, including merger of 10 public sector banks into four entities.

◉ BACKGROUND

- After the second half of 2018, the global economic growth continues to get weaken in advanced as well as emerging market economies.

- Several forces responsible for this slowdown are: escalations of trade tensions, uncertainty over BREXIT, volatile crude prices, slowing down of Chinese Economy etc.

India's Economic Scenario

- In this environment, India's gross domestic product (GDP) growth rate slowed to a sixyear low of 5% in the first quarter of the 201920 financial year.

- This loss of speed of economic growth became evident with reduced private investments and consumptions, especially in the Fast-moving consumer goods (FMCG) sector. Investment demand also remained lacklustre and fixed capital formation grew 4%. Automobile production is also on an all time low.

- Moreover, Union Budget 2019 announced additional surcharges of Foreign Portfolio Investors due to which investors were pulling out their investments from the Indian shores.

- In this backdrop, Securities and Exchange Board of India and Ministry of Finance took a slew of short term measures to retain the investments and increase the private demand in the economy. Like increasing the depreciation rate for automobiles by 15%, keeping CSR violations only as a Civil Offence and not a criminal offence, front loading Public Sectors banks with a Rs. 70,000 Crore package etc. The government had also announced measures to support non-banking financial companies (NBFCs) and housing finance companies (HFCs).

- But since it is difficult to diagnose whether the current situation is a soft patch or a cyclical slow down or a structural slowdown, the Ministry of Finance took no time in taking some the long term measures to address the current economic slowdown.

- Another long term measures is the Merging of Public Sector Banks in order to ensure the broad based flow of credit to all the sectors of the economy..

- The decision is justified as the earlier merger of Bank of Baroda, Vijaya Bank and Dena Bank led to enhanced customization and rationalization of operations without any retrenchment.

◉ ANALYSIS

Current Merger Decision

Banks to be merged	Size of merged entity	Total business
Punjab National Bank, Oriental Bank of commerce and United Bank	2nd largest PSB	Rs. 18 Lakh cr.
Canara Bank and Syndicate Bank	4th largest PSB	Rs. 15.2 lakh cr.
Union Bank, Andhra Bank and Corporation Bank	5th largest PSB	Rs. 14.6 lakh cr.
Indian Bank and Allahabad Bank	7th largest PSB	Rs. 8.08 lakh cr.

- The decision would take the number of banks in the country from 27 in 2017 to 12.

- The banks that are being merged with each other run the same or very similar platforms, and so there will be no disruption in their activities.

- There will be no retrenchment due to these mergers.

- The largest of the mergers announced is that of Punjab National Bank with Oriental Bank of Commerce and United Bank. The amalgamated entity — to be called Punjab National Bank — will become the secondlargest public sector bank in India, after the State Bank of India.

- The second merger announced was that of Canara Bank and Syndicate Bank, which would render the merged entity the fourthlargest public sector bank.

◉ The third merger is of Union Bank of India with Andhra Bank and Corporation Bank which would make the merged entity the fifth largest public sector bank.

◉ The fourth merger is of Indian Bank and Allahabad Bank.

◉ The merger process of 10 public sector banks is expected to be completed by March 31, 2020.

◉ Technological Synergy has been ensured since all the merger banks in a particular bucket have similar core banking solution platforms, their technological integration will be easier.

◉ Geographical Synergy, to some extent has been ensured. Like Allahabad Bank is stronger in east and north India, while Indian Bank has strong presence in the south.

Concerns while implementing the decision

◉ The amalgamation will require harmonisation of asset quality and provisioning levels among the merging banks.

◉ Due to high bad loans of the merged entities, profitability could be impacted in the near term

◉ Merger related issues including HR/IT related synchronisation, branch rationalisation and realigning NPAs could impact interim profitability.

◉ Geographical synergies are missing in most of the mergers. For instance, both PNB and OBC are northbased, with strong presence. Similarly, both Canara Bank and Syndicate Bank have strong presence in the south.

◉ Plenty of prospective bank mergers and acquisitions only look at the two banks on paper – without taking their people or culture into account

Advantages of Merging of Banks

◉ **Scale:** A bank merger helps the merged entities scale up quickly and gain a large number of new customers instantly. It also provides a broader geographic footprint to operate.

◉ **Efficiency:** Every bank has an infrastructure in place for compliance, risk management, accounting, operations and IT – and now that two banks have become one, it will be able to more efficiently consolidate and administer those operational infrastructures.

◉ **Business Gaps Filled**: Acquiring a smaller bank that offers a unique revenue model or financial product is sometimes easier than building that business unit from scratch.

◉ **Synergy**: The synergy created by the merger is powerful enough to enhance business performance, financial gains, and overall shareholders value in long term.

◉ **Cost Efficiency:** The merger results in improving the purchasing power of the company which helps in negotiating the bulk orders and leads to cost efficiency. The reduction in staff reduces the salary costs and increases the margins of the company. The increase in production volume causes the per unit production cost resulting in benefits from economies of scale.

◉ **Competitive Edge:** The combined talent and resources of the new company helps it gain and maintain a competitive edge.

◉ **New Markets:** The market reach is improved by the merger due to the diversification or the combination of two businesses. This results in better sales opportunities.

Disadvantages of Merging of Banks

◉ **Systemic risk**: It is the possibility that the failure of one bank to settle net transactions with other banks will trigger a chain reaction, depriving other banks of funds and, in turn, preventing them from closing their positions. The consequence is frequently loss of confidence in the whole banking system.

◉ **"Too big to fail" factor**: As a result, any substantial disruption in the particular institution's operations would be likely to have a serious effect on a country's financial markets, either preventing the markets from operating properly or raising questions about their integrity. The consequence of the "too big to fail" factor is that countries extend protection to large institutions and their customers that is not granted to others

◉ **Problem to ordinary people**: The move would result in closure of large number of branches as it happened in the case of State Bank of India, affect banking services and reduce employment opportunities.

◉ **Bad banks merged with Good Banks**: Narasimham Committee in the late 1990s recommended consolidation through a process of merging strong banks. It also recommended that weaker banks should be shut down and they should not be merged with strong Banks. But in the current merger decision, weak banks are being merged with the strong banks.

Amalgamation vs Merger – Key Differences

Basis- Merger vs Amalgamation	Merger	Amalgamation
Definition	Two or more companies are combined together to form either a new company or an existing company absorbing the other target companies. A merger is a process to consolidate multiple businesses into one business entity. All the Amalgamations are part of the Merger.	It is a type of merger process in which two or more companies combine together to form a new entity. All the mergers are not Amalgamation.
Number of Entities Required	Minimum 2 companies are required as one absorbing company will survive after absorbing the target company	Minimum 3 companies are required as an Amalgamation of two companies results in a new entity
Size of the Companies	In the merger process, the size of the absorbing company is relatively larger than the absorbing company.	In Amalgamation, the size of the target companies is comparable.
Resultant Entity	One of the existing company may absorb the target company for a merger, hence may retain its identity.	Existing companies lose their identity and a new company is formed.
Impact on Shareholders	Shareholders of the absorbing entity retain their ownership however shareholders of the absorbed entity gain ownership in the absorbing company.	All the shareholders in the existing entities become shareholders in the new entity.
Impact on Shares	Shares of the absorbing company are given to shareholders of the absorbed company.	Shares of the new entity formed in the process are given to the shareholders of the existing entities.
Driver for Consolidation	Mergers are mostly driven by the absorbing Company	Amalgamation process is initiated by both the companies interested in the Amalgamation process
Accounting Treatment	Asset and liabilities of the absorbed/acquired company is consolidating	Asset and liabilities of the existing entities are housed and transferred into the Balance sheet of the newly formed entity
Examples of Amalgamation vs Merger	Consolidation of two entities Tata Steel and UK based Corus Group with the resulting entity being Tata Steel. Corus Group lost its identity in the process.	Consolidation of two entities Mittal Steel and Arcelor resulting in the new entity named Arcelor Mittal. Both Mittal Steel and Arcelor Group lost their identity in the process.

Conclusion

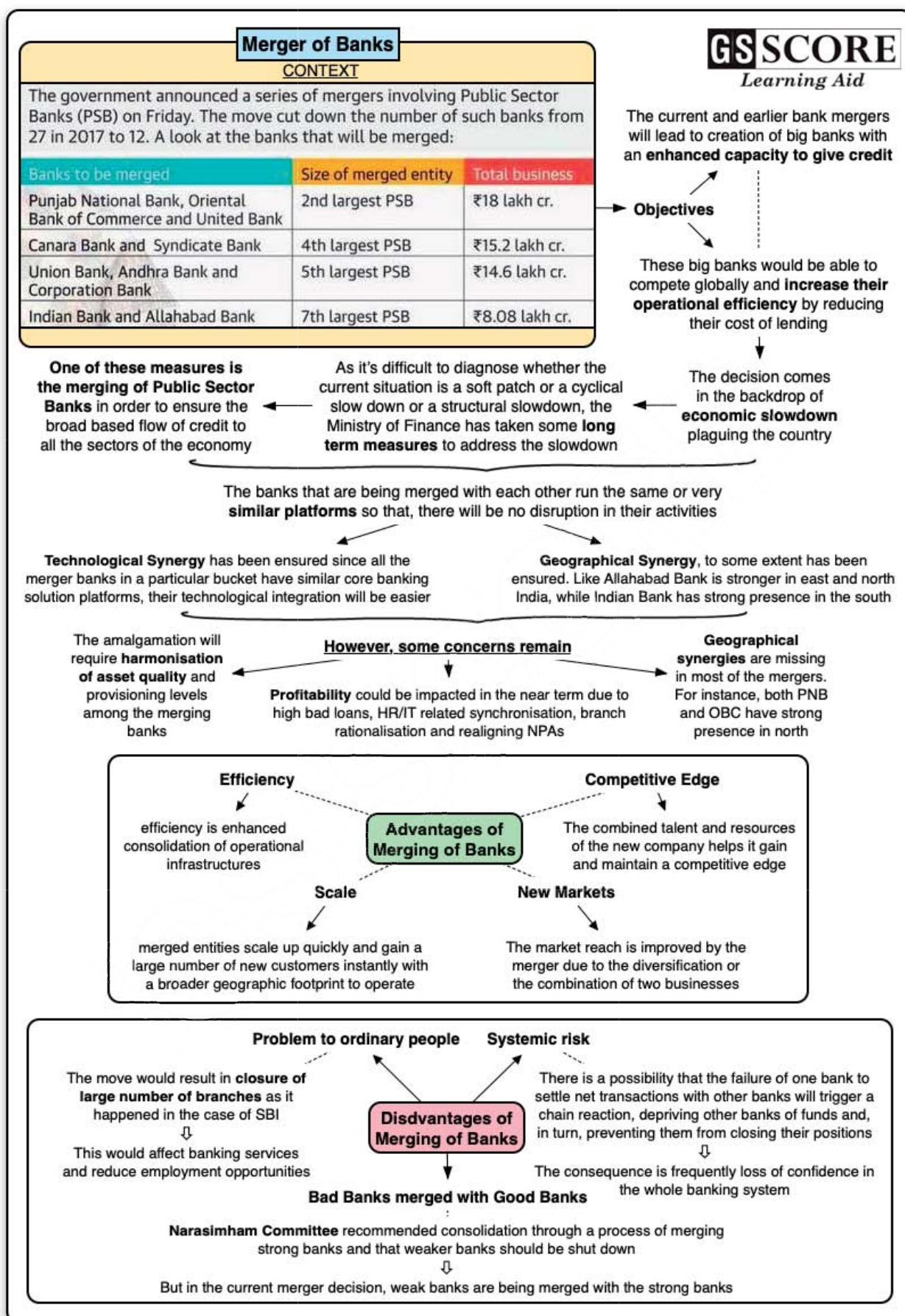The recent wave of rapid measures taken by the Government for igniting the flow of investments and spur demand in the economy are expected to being results both in short term and long term as well. More structural reforms like amending the FRBM Act are needed to take India to the $5 Trillion Economy by 2024.

📖 Practice Question

◉ **What is the difference between Bank merger & Bank Amalgamation? How will the recent decision of bank merger help in tacking the economic slowdown in India. .**

Merger of Banks

CONTEXT

The government announced a series of mergers involving Public Sector Banks (PSB) on Friday. The move cut down the number of such banks from 27 in 2017 to 12. A look at the banks that will be merged:

Banks to be merged	Size of merged entity	Total business
Punjab National Bank, Oriental Bank of Commerce and United Bank	2nd largest PSB	₹18 lakh cr.
Canara Bank and Syndicate Bank	4th largest PSB	₹15.2 lakh cr.
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The current and earlier bank mergers will lead to creation of big banks with an **enhanced capacity to give credit**

→ **Objectives**

These big banks would be able to compete globally and **increase their operational efficiency** by reducing their cost of lending

The decision comes in the backdrop of **economic slowdown** plaguing the country

One of these measures is the merging of Public Sector Banks in order to ensure the broad based flow of credit to all the sectors of the economy

As it's difficult to diagnose whether the current situation is a soft patch or a cyclical slow down or a structural slowdown, the Ministry of Finance has taken some **long term measures** to address the slowdown

The banks that are being merged with each other run the same or very **similar platforms** so that, there will be no disruption in their activities

Technological Synergy has been ensured since all the merger banks in a particular bucket have similar core banking solution platforms, their technological integration will be easier

Geographical Synergy, to some extent has been ensured. Like Allahabad Bank is stronger in east and north India, while Indian Bank has strong presence in the south

The amalgamation will require **harmonisation of asset quality** and provisioning levels among the merging banks

However, some concerns remain

Profitability could be impacted in the near term due to high bad loans, HR/IT related synchronisation, branch rationalisation and realigning NPAs

Geographical synergies are missing in most of the mergers. For instance, both PNB and OBC have strong presence in north

Efficiency

efficiency is enhanced consolidation of operational infrastructures

Competitive Edge

The combined talent and resources of the new company helps it gain and maintain a competitive edge

Advantages of Merging of Banks

Scale

merged entities scale up quickly and gain a large number of new customers instantly with a broader geographic footprint to operate

New Markets

The market reach is improved by the merger due to the diversification or the combination of two businesses

Problem to ordinary people

The move would result in **closure of large number of branches** as it happened in the case of SBI
⇩
This would affect banking services and reduce employment opportunities

Systemic risk

There is a possibility that the failure of one bank to settle net transactions with other banks will trigger a chain reaction, depriving other banks of funds and, in turn, preventing them from closing their positions
⇩
The consequence is frequently loss of confidence in the whole banking system

Disdvantages of Merging of Banks

Bad Banks merged with Good Banks

Narasimham Committee recommended consolidation through a process of merging strong banks and that weaker banks should be shut down
⇩
But in the current merger decision, weak banks are being merged with the strong banks

REDUCING FOOD LOSS AND WASTE (UNEP REPORT)

CONTEXT

- A new report by the World Resources Institute (WRI) with the support of the Rockefeller Foundation has quantified global food wastage — nearly one-third of the food that is produced each year goes uneaten, costing the global economy over $940 billion..

⊙ BACKGROUND

- Significant amounts of food are lost or wasted every day, in every country, and at every stage in the supply chain, from the farm to household.

- According to an estimate by the Food and Agriculture Organization of the United Nations (FAO), about one-third of food produced is lost or wasted globally, which is approximately 1.3 billion tones.

- One out of every four food calories intended for people is not ultimately consumed by them.

- Costs aside, food loss has significant impacts on food security, environmental conservation, and climate change.

- It is estimated that saving one-fourth of the food currently lost or wasted globally would be enough to feed 870 million hungry people in the world, of which the highest number are in India.

Meaning

- "Food loss and waste" refers to the edible parts of plants and animals that are produced or harvested for human consumption but that are not ultimately consumed by people.

- "Food loss" refers to food that spills, spoils, incurs an abnormal reduction in quality such as bruising or wilting, or otherwise gets lost before it reaches the consumer.

- Food loss is the unintended result of an agricultural process or technical limitation in storage, infrastructure, packaging, or marketing.

- "Food waste" refers to food that is of good quality and fit for human consumption but that does not get consumed because it is discarded—either before or after it spoils. Food waste is the result of negligence or a conscious decision to throw food away.

How "Reducing Food Loss and Waste" Performs Against the Sustainable Food Future Criteria

CRITERIA	DEFINITION	PER-FORMANCE	COMMENT
Poverty Alleviation	Reduces poverty and advances rural development, while still being cost effective	—	• Reducing postharvest losses can increase the amount of food available to farmers for their won consumption or for sale to market • Reducing postharvest losses can reduce the likelihood that small-holders become net food buyers • Reducing losses in the value chain lowers expenditures of processors and retailers per unit of food grown or harvested • Reducing food waste can lower household expenditures per unit of food consumed • Reducing quality losses can better maintain nutritional value of food
Gender	Generates benefits for women	—	• Reducing food losses increases the return on investment of time spent farming and could reduce the total time needed to work in fields • Reducing food waste could reduce total household expenditures on food, freeing up resources for health, education, and other household benefits

Eco-systems	Avoids agricultural expansion into remaining natural terrestrial ecosystems and relieves pressure on overstrained fisheries	—	• Better utilizing food already grown reduces the need to convert more ecosystems into food production or to harvest more wild food (e.g., fish)
Climate	Helps reduce greenhouse gas emissions from agriculture to levels consistent with stabilizing the climate	—	• Better utilizing food already grown reduces the need to convert more land, apply more fertilizers, raise more livestock, and use energy for producing, processing, transporting, and storing food • Diverting food loss and waste from landfills prevents methane emissions from rotting food
Water	Does not deplete or pollute aquifers or surface waters	—	• Better utilizing food already grown reduces the need to withdraw more water from aquifers or add more agriculture chemicals that may pollute water bodies

Food loss and waste can occur at each stage of the food value chain

◉ During production or harvest in the form of grain left behind by poor harvesting equipment, discarded fish, and fruit not harvested or discarded because they fail to meet quality standards or are uneconomical to harvest.

◉ During handling and storage in the form of food degraded by pests, fungus, and disease.

◉ During processing and packaging in the form of spilled milk, damaged fish, and fruit unsuitable for processing. Processed foods may be lost or wasted because of poor order forecasting and inefficient factory processes.

◉ During distribution and marketing in the form of edible food discarded because it is non-compliant with aesthetic quality standards or is not sold before "best before" and "use-by" dates.

◉ During consumption in the form of food purchased by consumers, restaurants, and caterers but not eaten.

Possible Approaches to save the food

◉ **Food redistribution**: Food redistribution or donation programs are a method for reducing both food loss and waste. As used here, "food redistribution" means voluntarily giving away food that otherwise would be lost or wasted to recipients such as food banks, which then redistribute the food to those who need it.

◉ **Evaporative coolers**: Evaporative coolers extend the shelf life of food and avoid spoilage by keeping food at lower-than-room temperatures without having to use electricity. This lowcost, low-energy technique provides an opportunity to store perishable foods longer in areas that lack electricity infrastructure or that has low-income farmers.

◉ **Plastic storage bags**: Damage from pests is a major source of food loss during the handling and storage phase of the supply chain. Take cowpeas for instance. The crop is important for many smallholder farmers due to the cowpeas' ability to adapt to dry, hot conditions.

◉ **Small metal silos**: Small metal silos, which are intended for use by one farmer or by one household and generally hold between 250–1000 kg of crops, can be an effective strategy for reducing food loss at the storage stage, especially for cereals and pulses. Insufficient storage is a major source of food loss for farmers, especially in developing countries, where storage structures often do not keep harvested crops in hermetic or airtight conditions.

◉ **Plastic crates**: Using plastic crates instead of other forms of containerization has demonstrated significant reductions in food losses during handling and storage, particularly among fruits, vegetables, and other forms of fresh produce. In developing countries, 19 percent of fruit and vegetable loss occurs in the handling and storage stage of the food value chain.

◉ **Food date labeling**: Dates provided on the packaging of food and drinks, such as "use-by,""sell-by," and "best before," is intended to provide consumers with information regarding the freshness and safety of foods. However, these seemingly simple dates can actually confuse consumers about how long it is safe for them to store food and when they should dispose of uneaten items.

◉ **Consumer awareness campaigns**: Consumer attitudes and behavior play a large role in determining the amount of food that is wasted in households. Although changing the way people consume and throw out food can be difficult,

communication campaigns can help influence consumer behavior at the household level.

◉ **Reduced portion sizes**: For restaurants and other food service providers, food portion sizes can dictate the amount of food waste that occurs within the four walls of their business, since larger portions increase the likelihood that a consumer will not consume all of the food purchased. Reducing portion sizes for consumers in both direct and indirect ways can both decrease food waste and save money for food providers.

Conclusion

◉ An amazing 24 percent of all food calories grown today are lost or wasted between the farm and the fork.

◉ This fact is ultimately a failure of economic and natural resource efficiency. The world faced an analogous failure of efficiency in the 1970s with energy.

◉ In the face of record oil prices and growing demand, the world essentially declared war on energy wastefulness and significantly improved its energy efficiency.

◉ Yet a "war on waste" has yet to be waged when it comes to food. Given that food prices recently hit historic highs and global food demand continues to rise, now is the time.

Practice Question

◉ Discuss how "Reducing food loss & waste will play a crucial role in achieving sustainable development goals across the globe. Also discuss the role of women in reducing food loss & some other possible approaches to save the food .

Food wastage is a global phenomenon happening **every day, in every country, and at every stage** in the supply chain, from the farm to household

According to an estimate, saving even 1/4th of the food wasted globally would be enough to **feed 870 million hungry people in the world**

How much food is lost or wasted?

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2016

Each year **one third** of **global food production** for human consumption never finds its way onto plates and is lost or wasted

1.3

This is equivalent to **1.3 billion tonnes** of edible food

Food loss and waste can occur at each stage of the food value chain
⇩
· During production or harvest
· During handling and storage
· During processing and packaging
· During distribution and marketing or not being sold before "use-by" date
· During consumption (purchased but not eaten)

CONTEXT
A new report by the World Resources Institute (WRI) with the support of the Rockefeller Foundation has quantified global food wastage — nearly one-third of the food that is produced each year goes uneaten, costing the global economy over $940 billion
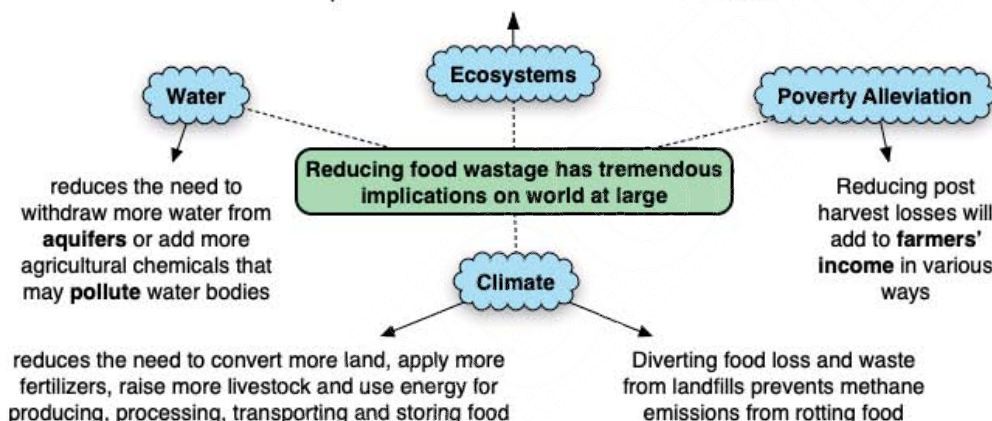
Better utilising food already grown reduces the need to convert more ecosystems into food production or to harvest more wild food like fish

Water

Ecosystems

Poverty Alleviation

Reducing food wastage has tremendous implications on world at large

reduces the need to withdraw more water from **aquifers** or add more agricultural chemicals that may **pollute** water bodies

Reducing post harvest losses will add to **farmers' income** in various ways

Climate

reduces the need to convert more land, apply more fertilizers, raise more livestock and use energy for producing, processing, transporting and storing food

Diverting food loss and waste from landfills prevents methane emissions from rotting food

Food redistribution: voluntarily giving away food that otherwise would be wasted to recipients such as food banks, which then redistribute the food to those who need it

Reduced portion sizes in restaurants can increase the likelihood that a consumer will not waste food and also save money for food providers

Possible approaches to save the food

Consumer awareness campaigns can help influence consumer behaviour at the household level

providing **basic infra** to farmers and food handlers

Small metal silos can be an effective strategy for reducing food loss at the storage stage, especially for cereals and pulses

Damage from pests is a major source of food loss during the handling and storage phase of the supply chain → This could be solved by use of **reusable plastic storage bags**

Evaporative coolers maintain lower temperatures without having to use electricity → beneficial for low income / remotely located farmers

Bottomline
This humongous amount of food wastage is ultimately a failure of economic and natural resource efficiency. What the world needs is a "war on waste" to be waged when it comes to food. Given that food prices recently hit historic highs and global food demand continues to rise, now is the time.

NRC (NATIONAL REGISTER OF CITIZENS) AN OVERVIEW

CONTEXT

- **On 31st August, the updated National Registry of Citizens was released in Assam after a Supreme Court deadline. Of the 3.3 crore applicants, 3.11 crore figured in the final citizens' list, while about 19 lakh residents were excluded.**

⦿ BACKGROUND

- During British rule, Assam was merged with Bengal Presidency for administrative purpose. From 1826 to 1947, the British continuously brought migrant workers to Assam for cheap labour in tea plantations.

- There had been several waves of migration to Assam from Bangladeshbut the two major waves of migration came after British rule — first after Partition, from East Pakistan (now Bangladesh), and then the biggest in the aftermath of the liberation of Bangladesh in 1971. This eventually led to an agitation during 1979-85, led by the All Assam Students' Union demanding illegal migrants to be identified and deported.

- The Assam Accord of 1985 that ended the six-year anti-foreigners' agitation decided upon **the midnight of March 24, 1971 as the cut-off date**to root out foreigners. The NRC process was thus started to address the issue of illegal migrants, specifically from Bangladesh.

- The Citizenship Act of 1955 was amended after the Assam Accord for all Indian-origin people who came from Bangladesh before January 1, 1966 to be deemed as citizens. Those who came between January 1, 1966 and March 25, 1971 were eligible for citizenship after registering and living in the State for 10 years while those entering after March 25, 1971, were to be deported.

National Register of Citizens

- The National Register of Citizens **was first published in 1951** to record citizens, their houses and holdings.

- Updating the NRC to root out foreigners was a demand during the Assam Agitation (1979-1985). The **updated National Register of Citizens (NRC)** was published on August 31, 2019.

- It is the biggest exercise India has undertaken to weed out illegal Bangladeshi immigrants, as well as their descendants, settled illegally in India, even as there is still no clear plan on deportation of those excluded from the final list.

- The NRC is a Supreme Court-monitored exercise. It took five years and Rs. 1,220 crore. All residents of Assam had to produce documents proving that they or their families lived in India before March 24, 1971.

- When the final draft of the list was released on July 30, 2018, out of 3.29 crore applicants, the names of over 40 lakh people were left out of the list.

- **Over 19 lakh people found themselves excluded from the final list on August 31, 2019**.

⦿ ANALYSIS

Issues in the NRC Process

- The Assam Public Works (APW), the original petitioner in the Supreme Court which led to the updation of the National Register of Citizens six years ago, said the final NRC turned out to be **a "flawed document" as its appeal for reverification of the draft list** was rejected by the apex court.

- There are doubts whether the software used in the updation exercise was capable enough to handle so much data and if it was examined by any third party Information Technology expert.

- The State government and many political parties have promised to offer legal help to those excluded suggests that procedural errors might have occurred in the process.

- But such assistance should have been forthcoming from the time the updating exercise was rolled out on the ground in 2015.

- Such legal help was mostly left to sundry organisations and concerned activists to come to the aid of hundreds of thousands oblivious of documentation novelties such as legacy data.

Fate of excluded People

- Those excluded, will now need to prove that they or their ancestors were Indian citizens on or before 24 March 1971, according to the Assam Accord of 1985, which was drafted between the Centre, the Assam government and the All Assam Students' Union.

- Excluded persons **will have 120 days** to file an appeal at any of the existing 100 Foreigners'

Tribunals. At least 200 additional Foreigners' Tribunals are expected to be set up by September, 2019.

- The Tribunals are required to dispose of the cases **within six months**. Appellants can then approach the High Court and Supreme Court. They will get a window **of 10 months** to prove their citizenship before being sent to detention centres.

- Six Central jails will double up as detention centres. A separate detention centre at Agia in western Assam's Goalpara district has been constructed. It has the capacity to house 3,000 people. Ten more such centres are in the works.

Nowlays the question of what to do with those declared illegal aliens once the quasi-judicial process is done and dusted.

Will they be deported?

Issues in Deportation

- For a country to be able to deport a mass of individuals to another country, the second country has to accept that they were its citizens who entered the first country illegally.

- According to government data until February 2019, Assam has since 2013 deported 166 persons (162 "convicted" and four "declared") including 147 to Bangladesh.

- The NRC context is vastly different this is not about a few hundred but lakhs of individuals, many of whom have lived in Assam for decades and been identifying themselves as Indian citizens.

- Bangladesh has always maintained that NRC is an internal matter of India.Over the years, Bangladeshi leaders have frequently been quoted in the media as denying the presence of its nationals in India.

- Now even External Affairs Minister S Jaishankar has said thatthe process of documenting and identifying illegal immigrants in Assam is India's "internal matter".

Other options

- The administration is readying detention centres, but only a veritable 'prison state' can house such numbers.The detention centres have often come into focus for lack of basic facilities, and the Supreme Court recently allowed conditional release of those who have completed three years in detention, against a bond.

- Some has suggested that their identity should be digitally recorded and they should not be allowed to claim Indian citizenship in other states.

- Once that is done, they should be given basic human rights. Then a system of work permits can be instituted.

- A renewed attempt should be taken to nudge Dhaka to take in some of the declared foreigners with appropriate deal.

- Some 'friendly' State governments volunteering to share some of the burden can be provided with some incentives.
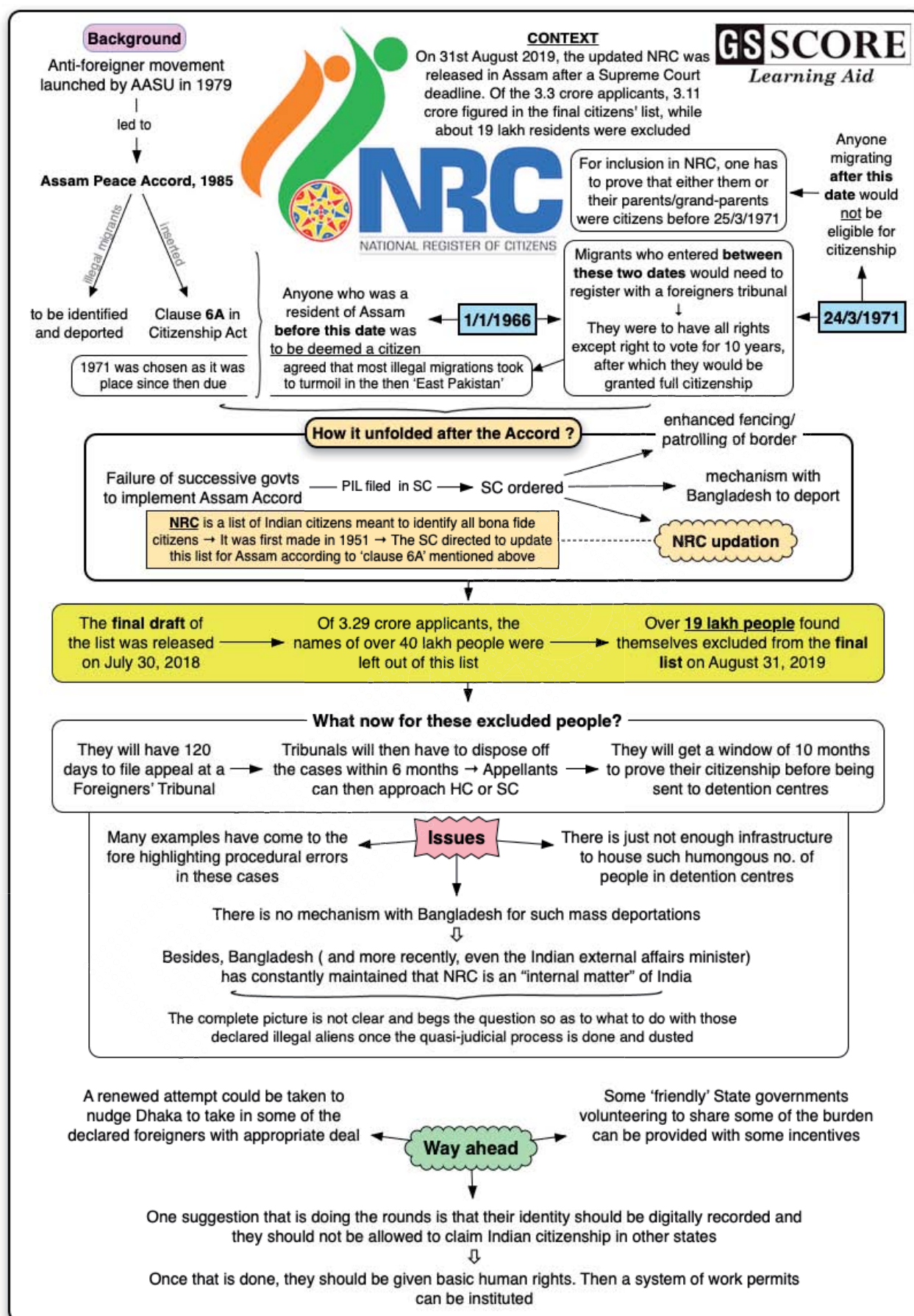
⊙ WAY FORWARD

- The Centre might have a plan in place, but if it is in the form of the Citizenship Amendment Bill to extend citizenship to non-Muslims alone, left after judicial filtration, it would negate the very non-denominational premise of the exercise to identify those who entered the country illegally after the cut-off date of March 24, 1971.

- While the apex court could still consider limited Re-verification to satisfy sentiments even though it had rejected the plea in the run-up to final publication, the aim should be to bury the bogey of the Bangladeshi.

Practice Question

- **How has India tackled to problems which arose due to the large scale migration in India since independence. Also, discuss what should be done to fill the loopholes in the existing measures.**

Background

Anti-foreigner movement launched by AASU in 1979

↓ led to

Assam Peace Accord, 1985

CONTEXT
On 31st August 2019, the updated NRC was released in Assam after a Supreme Court deadline. Of the 3.3 crore applicants, 3.11 crore figured in the final citizens' list, while about 19 lakh residents were excluded

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NRC
NATIONAL REGISTER OF CITIZENS

For inclusion in NRC, one has to prove that either them or their parents/grand-parents were citizens before 25/3/1971

Anyone migrating **after this date** would <u>not</u> be eligible for citizenship

illegal migrants / *Inserted*

to be identified and deported

Clause **6A** in Citizenship Act

1971 was chosen as it was place since then due

Anyone who was a resident of Assam **before this date** was to be deemed a citizen agreed that most illegal migrations took place since then due to turmoil in the then 'East Pakistan'

1/1/1966

Migrants who entered **between these two dates** would need to register with a foreigners tribunal

↓

They were to have all rights except right to vote for 10 years, after which they would be granted full citizenship

24/3/1971

How it unfolded after the Accord ?

enhanced fencing/ patrolling of border

Failure of successive govts to implement Assam Accord — PIL filed in SC → SC ordered —

mechanism with Bangladesh to deport

NRC is a list of Indian citizens meant to identify all bona fide citizens → It was first made in 1951 → The SC directed to update this list for Assam according to 'clause 6A' mentioned above

NRC updation

The **final draft** of the list was released on July 30, 2018 → Of 3.29 crore applicants, the names of over 40 lakh people were left out of this list → Over **19 lakh people** found themselves excluded from the **final list** on August 31, 2019

What now for these excluded people?

They will have 120 days to file appeal at a Foreigners' Tribunal → Tribunals will then have to dispose off the cases within 6 months → Appellants can then approach HC or SC → They will get a window of 10 months to prove their citizenship before being sent to detention centres

Many examples have come to the fore highlighting procedural errors in these cases

Issues

There is just not enough infrastructure to house such humongous no. of people in detention centres

There is no mechanism with Bangladesh for such mass deportations

⇩

Besides, Bangladesh (and more recently, even the Indian external affairs minister) has constantly maintained that NRC is an "internal matter" of India

The complete picture is not clear and begs the question so as to what to do with those declared illegal aliens once the quasi-judicial process is done and dusted

A renewed attempt could be taken to nudge Dhaka to take in some of the declared foreigners with appropriate deal

Way ahead

Some 'friendly' State governments volunteering to share some of the burden can be provided with some incentives

One suggestion that is doing the rounds is that their identity should be digitally recorded and they should not be allowed to claim Indian citizenship in other states

⇩

Once that is done, they should be given basic human rights. Then a system of work permits can be instituted

SECTION: B
(PRELIMS)

CURRENT AFFAIRS

AUTOMATIC EXCHANGE OF INFORMATION

⊙ **CONTEXT:**

- **Switzerland to share bank account information with India.**

⊙ **ABOUT:**

- Banking details of Indians with accounts in Switzerland will be available to tax authorities as the automatic exchange of information regime kicks off between the two countries**.**

- The move is a significant step in the government's fight against black money and the era of "Swiss bank secrecy".

- India will receive information of the calendar year 2018 in respect of all financial accounts held by Indian residents in Switzerland.

Automatic Exchange of Information

- The new global standard on Automatic Exchange of Information (AEOI) reduces the possibility for tax evasion.

- It provides for the exchange of non-resident financial account information with the tax authorities in the account holders' country of residence.

- Participating jurisdictions that implement AEOI send and receive pre-agreed information each year, without having to send a specific request.

- It will enable governments to recover tax revenue lost to non-compliant taxpayers, and will further strengthen international efforts to increase transparency, cooperation, and accountability among financial institutions and tax administrations.

- Additionally, AEOI will generate secondary benefits by increasing voluntary disclosures of concealed assets and by encouraging taxpayers to report all relevant information.

- As new information is brought to light by AEOI, the importance of the current standard of Exchange of Information on Request (EOIR) will also increase. The two standards of AEOI and EOIR are therefore complementary, working together to enhance the effectiveness of tax administrations' efforts in addressing international tax evasion.

MUDRA LOAN

⊙ **CONTEXT:**

- **A Government survey has found that Just 1 in 5 Mudra beneficiaries started new business and half of extra jobs created were self-employment.**

⊙ **ABOUT:**

- A survey by the Labour Ministry, yet to be made public, has found just **one out of five beneficiaries (20.6 per cent)** from the sample survey **availed of Mudra loan** for setting up a new establishment, **the rest used the funds for expanding their existing business.**

- It has found **that 1.12 crore additional jobs** were created during April 2015-December 2017, **the first 33 months following the rollout of the scheme**.

- Of this, 51.06 **lakh were self-employed or working owners** which also included unpaid family members **while 60.94 lakh were employees or hired workers**.

- A total of Rs 5.71 lakh crore in loans was sanctioned under three categories of **Mudra — Shishu, Kishor and Tarun —** through 12.27 crore loan accounts during the first three years. The average ticket size of a loan was Rs 46,536.

PradhanMantri MUDRA Yojana (PMMY)

- PradhanMantri Mudra Yojana (PMMY) is a flagship scheme of Government of India to "fund the unfunded" by bringing such enterprises to the formal financial system and extending affordable credit to them.

- It enables a small borrower to borrow from all Public Sector Banks such as PSU Banks, Regional Rural Banks and Cooperative Banks, Private Sector Banks, Foreign Banks, Micro Finance Institutions (MFI) and Non-Banking Finance Companies (NBFC) for loans uptoRs 10 lakhs for non-farm income generating activities.

- The scheme was launched on 8th April, 2015 by the Hon'ble Prime Minister.

Eligibility

- Any Indian Citizen who has a business plan **for a non-farm sector** income generating activity such as manufacturing, processing, trading or service sector and whose credit need is less than Rs 10 lakh.

- The citizen can approach **either a Bank, MFI, or NBFC** for availing of Micro Units Development & Refinance Agency Ltd. (MUDRA) loans under PradhanMantri Mudra Yojana (PMMY).

Types of loans provided

- Under the aegis of PradhanMantri MUDRA Yojana, MUDRA has already created the following products / schemes.

  - Shishu : covering loans upto 50,000/-

  - Kishor : covering loans above 50,000/- and upto 5 lakh

  - Tarun : covering loans above 5 lakh and upto 10 lakh

- The interventions have been named 'Shishu', 'Kishor' and 'Tarun' to signify the stage of growth / development and funding needs of the beneficiary micro unit / entrepreneur and also provide a reference point for the next phase of graduation / growth to look forward to.

- It would be ensured that at least 60% of the credit flows to Shishu Category Units and the balance to Kishor and Tarun Categories.

- There is no subsidy for the loan given under PMMY. However, if the loan proposal is linked some Government scheme, wherein the Government is providing capital subsidy, it will be eligible under PMMY also.

72ND SESSION OF THE WHO REGIONAL COMMITTEE FOR SOUTH-EAST ASIA

- ⦿ **CONTEXT:**
  - **Union Minister of Health and Family Welfare, Dr Harsh Vardhaninaugurated the '72nd Session of the WHO Regional Committee for South-East Asia 'in New Delhi which India is hosting for the second time.**

- ⦿ **BACKGROUND:**
  - Representatives from 11 member countries came together to deliberate on the priority health issues in the region. These include cervical cancer, strengthening of emergency preparedness capacities, eliminating measles and addressing the high burden of tuberculosis.

  - Deliberations are targeted to ensure that regional priorities are aligned to the UN Sustainable Development Goals (SDG) and WHO's global triple billion goals.

  - The government is observing the entire month of September as "PoshanMaah" (Nutrition Month) to sensitize the public towards healthy eating, address the twin issues of malnutrition/under nutrition and problem of obesity in some sections of the population, and intensifying the campaign towards a 'Malnutrition-Free India'

- ⦿ **ABOUT WHO:**
  - The **World Health Organization (WHO)** is a specialized agency of the United Nations that is concerned with international public health

- It was established on 7 April 1948, and is headquartered in Geneva, Switzerland.
- The core function of WHO is to direct and coordinate international health work through collaboration.
- The main areas of work are health systems; health through the life-course; noncommunicable and communicable diseases; preparedness, surveillance and response; and corporate services.
- WHO partners with countries, the United Nations system, international organisations, civil society, foundations, academia, and research institutions.
- The World Health Assembly is attended by delegations from all Member States, and determines the policies of the Organization.

WHO Regional Offices:

- WHO Member States are grouped into following six regions. Each region has a regional office:
  - Regional Office for Africa.
  - Regional Office for the Americas.
  - Regional Office for South-East Asia.
  - Regional Office for Europe.
  - Regional Office for Eastern Mediterranean.
  - Regional Office for the Western Pacific.
- Regional committees meet once every year to set policy and approve budgets and programmes of work for their regions. Each meeting addresses the specific public health needs of the area represented by the region

About World Health Organization in South-East Asia:

- South-East Asia is home to a quarter of the world population; WHO SEARO provides leadership on health matters, articulates evidence-based policy options, provides technical support to countries and monitors health trends.
- WHO South-East Asia Countries include:
  - Bangladesh
  - Bhutan
  - Democratic People's Republic of Korea
  - India
  - Indonesia
  - Maldives
  - Myanmar
  - Nepal
  - Sri Lanka
  - Thailand
  - Timor-Leste

South-East Asia region turning as the world capital for disease elimination:

- It is free of polio and maternal and neonatal tetanus.
- Maldives and Sri Lanka are malaria-free.
- Thailand and Maldives have eliminated mother-to-child transmission of HIV and

syphilis.

- Bhutan, Maldives, South Korea, Timor-Leste and Sri Lanka have eliminated measles.
- Bangladesh, Bhutan, Maldives, Nepal, Sri Lanka and Timor-Leste have controlled rubella.
- Maldives, Sri Lanka and Thailand have eliminated lymphatic filariasis.
- India is yaws-free.
- Nepal has eliminated trachoma.
- Bangladesh, Bhutan, Nepal and Thailand have controlled Hepatitis B.

RISING ELECTRONICS EXPORTS AS BRIGHT SPOT AMID ECONOMIC SLOWDOWN

⊙ **CONTEXT:**

- **The electronics exports have shown a rising tide amid slowdown in Indian economy and that is why it is in news.**

⊙ **ABOUT**

- Total value of **production of electronic goods increased from $31.2 billion in FY15 to $65.5 billion in FY19**.
- **Exports are led by mobile phones**. **India has become the 2nd largest producer of mobile phones, replacing Vietnam.**
- India started to become an **alternate production destination because**
  - ◉ **Pull Factors** include potential domestic demand and government policies to boost electronic exports.
  - ◉ **Push Factors** include trade tensions between the US and China. This is expected that the positive trend in India's electronic exports to continue.

India calling

Production of electronic goods in the country has got a boost from manufacturing of mobile phones.

Annual average USD-INR exchange rate used

Source: Annual report FY19, ministry of electronics and information technology

Production value (in $ billion)
- Total electronic goods
- Mobile phones

	FY15	FY16	FY17	FY18	FY19
Total electronic goods	31.2	37.1	47.4	60.3	65.5
Mobile phones	3.1	8.2	13.4	20.5	24.3

Steps by Government to Boost Electronics Exports

- **Schemes to boost local manufacturing of electronic goods:** These include **Phased Manufacturing Programme** for mobile handsets and related sub-assemblies/ components manufacturing, **National Policy on Electronics 2019**, **Electronics Manufacturing Clusters scheme** and **Modified Special Incentive Package Scheme.**
- **Some countervailing duties were also announced to discourage imports of electronic goods.**

Significance

- Avert BoP Crisis and control the stretched current account deficit (CAD)
- Transfer of technology
- Boost to manufacturing sector
- Employment generation

Government Schemes Promoting Electronics Sector

- **National Electronics Policy (NEP), 2019**
  - ◉ **Launched in 2019 and it replaced NEP, 2012.**
  - ◉ **Vision**
    - ➤ To position India as a **global hub for Electronics System Design and Manufacturing (ESDM)** by creating an enabling environment for the industry to compete globally.
  - ◉ **Mission**
    - ➤ **Promote domestic manufacturing** in the entire value-chain of ESDM, including core components and materials to increase the domestic value addition and reduce dependence on import of electronic goods by focusing on scale, skill and technology.
    - ➤ **Strengthen India's linkages with global trade**, integrate with global value chains and build facilitative programmes and incentive framework to boost Indian ESDM exports.
    - ➤ **Develop capacities for manufacture in all sub-sectors of electronics**, including semiconductor wafer fabrication and display fabrication (FAB) facilities and create a vibrant, dynamic and self-reliant Fabless Chip Design ecosystem in the country.
    - ➤ **Build a risk-management ecosystem** to promote and create a framework for a comprehensive Start-up ecosystem with focus on development of products, key components and technologies based on emerging technological landscapes.
    - ➤ Medical electronics, Defence Electronics, Automotive electronics, Industrial Electronics, Strategic Electronics, etc., and Fabless Chip Design.
    - ➤ **Become a global leader in the Electronics Manufacturing Services (EMS)** segment by promoting progressively higher value addition in manufacturing of electronic products.
    - ➤ **Provide policy support** and special package of incentives for highly capital intensive projects.
    - ➤ Drive **indigenization in the microchips** used by strategic and critical infrastructure sectors viz., Defence, Space, Atomic Energy, Telecom, Aviation, Power, etc., through design and production of such microchips.
    - ➤ **Create specialized governance structures** within the Government to cater to specific needs of the ESDM sector, in view of fast changes in technology and business models.
    - ➤ **Facilitate cost effective loans** for setting up and expansion of electronics manufacturing units.
    - ➤ **Promote research, innovation and support** to the industry in the areas of packaging, interconnects and micro photonics, as a long term measure to counter the problems posed by the continued use of Silicon, like the limit of scaling and dark Silicon.

➤ Promote research, innovation and support to industry for green processes and **sustainable e-Waste management**, including safe disposal of e-Waste in an environment friendly manner, development of e-Waste recycling industry and adoption of best practices in e-Waste management

○ **Strategy**

➤ Creating eco-system for globally competitive ESDM sector

➤ Developing and Mandating Standards

➤ Ease-of-doing-Business

➤ Industry-led R&D and Innovation

➤ Human Resource Development

➤ Cyber Security

➤ Export Promotion

● **Modified Special Incentive Package Scheme (M-SIPS)**

○ M-SIPS was launched in 2012 under NEP, 2012 and ended in 2018

○ **Aim**

➤ To promote large-scale manufacturing in the Electronic System Design and Manufacturing (ESDM) sector

○ **Salient Features**

➤ M-SIPS provides for 25% subsidy on capital investment along with a host of other incentives.

➤ It also provides for reimbursements of CVD/ excise for capital equipment for the non-SEZ units.

➤ The incentives are provided on reimbursement basis.

➤ The incentives were available for 29 electronic verticals.

➤ The investment threshold varies from Rs 1 Crore to Rs 5000 Crores depending upon a type of project. The incentives are available for 10 years from the date of approval. The scheme was initially opened for 3 years till 26-07-2015.The scheme was amended on August 3, 2015 and been extended up to31.12.2018.

● **Electronics Manufacturing Clusters (EMC)**

○ Launched in 2012to overcome disadvantages due to infrastructure

○ Encourages entities, including State Government entities, to provide good quality infrastructure within a cluster.

○ Under the scheme, 50% of the project cost for Greenfield EMC and 75% for Brownfield EMC is given by the Ministry of Electronics and Information Technology as grant.

● **Electronics Development Fund (EDF)**

○ In order to promote startups and innovation, a scheme called Electronics Development Fund (EDF) was launched.

○ EDF is a fund of funds which invests in Venture funds, which in turn invests in ventures.

○ At least 50% of the corpus has to be invested in Ventures working in ESDM sector.

⊙ Under the scheme, 13 daughter funds have been approved with EDF commitment of Rs.857/crore. These funds are expected to invest Rs.6,951/- crore of corpus in startups.

- **Phased Manufacturing Programme (PMP)**

  ⊙ The Phased Manufacturing Programme (PMP) for mobile handsets and related subassemblies/ components manufacturing has been implemented with the objective of progressively increasing the domestic value addition for establishment of a robust Cellular mobile handsets manufacturing eco-system in the country.

  ⊙ As a result, India has rapidly started attracting investments into this sector and Cellular mobile handsets manufacturing has emerged as a flagship sector in the electronics manufacturing space.

POSHAN ABHIYAAN

⊙ **CONTEXT:**
- 'Eat Right' campaign was kick started by the Health Ministers. It is a primary component of Poshan Abhiyaan & other health Scheme

⊙ **ABOUT:**
- **POSHAN Abhiyaan (National Nutrition Mission) was launched in 2018 by the Prime Minister in Jhunjhunu, Rajasthan**

- It **targets to reduce level of under-nutrition and other related problems** by ensuring convergence of various nutrition related schemes

- It also **targets stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and low birth rate.**

- It will **monitor and review implementation of all such schemes** and utilize existing structural arrangements of line ministries wherever available.

- Its large component involves **gradual scaling-up of interventions supported by on-going World Bank assisted Integrated Child Development Services (ICDS) Systems Strengthening and Nutrition Improvement Project (ISSNIP)** to all districts in the country by 2022.

- Its vision is to ensure attainment of **malnutrition free India by 2022.**

Implementation and Strategy

- **The Ministry of Women and Child Development is implementing** POSHAN Abhiyaan in 315 districts in first year, 235 districts in second year and remaining districts will be covered in the third year.

- POSHAN Abhiyaan is **rolled out in three phases from 2017-18 to 2019-20.**

- Implementation strategy would be based on intense monitoring and Convergence Action Plan right up to the grass root level.

- POSHAN Abhiyaan targets to reduce stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively. Although the target to reduce Stunting is at least 2% p.a., Mission would strive to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022 (Mission 25 by 2022).
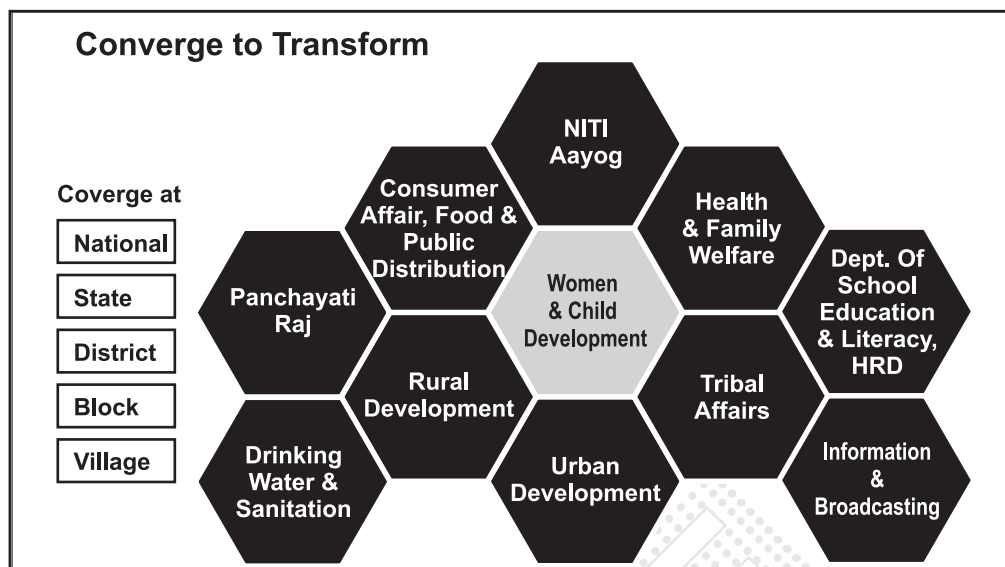
14ᵗʰ CONFERENCE OF PARTIES (COP14) TO THE UN CONVENTION TO COMBAT DESERTIFICATION (UNCCD) AND REPORT ON SOIL ORGANIC CARBON (SOC)

⊙ **CONTEXT:**

- The United Nations Convention to Combat Desertification (UNCCD)'s Committee on Science and Technology (CST) on September 3, 2019, released its report on Soil Organic Carbon (SOC) in New Delhi.

⊙ **ABOUT:**

- **The report titled as "Realising the Carbon Benefits of Sustainable Land Management Practices: Guidelines for Estimation of Soil Organic Carbon in the Context of Land Degradation Neutrality Planning and Monitoring", emphasises the importance of SOC in preventing land degradation and desertification**

What isSoil Organic carbon (SOC)?

- Soil organic carbon (SOC) comes from plants, animals, microbes, leaves and wood. It is mostly found in the first metre layer of the soil.

- There are many conditions like temperature, rainfall, vegetation, soil management and land-use changeand processes that determine the changes in SOC content.

Benefits of Soil Organic carbon (SOC):

- SOC improves soil health, agricultural yield and reduces the need for chemicals.

- Small increases of SOC over very large areas significantly reduce net carbon dioxide emissions from agriculture. So SOC tries to mitigate climate change by reducing atmospheric carbon dioxide.

Land Degradation Neutrality (LDN)

- It is defined as a state where the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems

- It is a unique approach that counterbalances the expected loss of productive land with the recovery of degraded areas. It strategically places the measures to conserve, sustainably manage and restore land in the context of land use planning.

- Sustainable Development Goal (SDG) target 15.3 has the component related to land degradation which states:"By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world."

- India's target for LDN is 30 million hectares by 2030.

About UNCCD:

- Established in 1994, the United Nations Convention to Combat Desertification (UNCCD) is the **sole legally binding international agreement linking environment and development to sustainable land management.**

- The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found.

- The UNCCD is particularly committed to a bottom-up approach, encouraging the participation of local people in combating desertification and land degradation.

- The new **UNCCD 2018-2030 Strategic Framework** is the most comprehensive global commitment to achieve **Land Degradation Neutrality (LDN)** in order to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations to build.

- The UNCCD secretariat facilitates cooperation between developed and developing countries, particularly around knowledge and technology transfer for sustainable land management.

- The **UNCCD collaborates closely with the other two Rio Conventions; the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC)** with an integrated approach and the best possible use of natural resources.

Conference of Parties (COP):

- The COP was established by the Convention as the **supreme decision-making body.**

- It comprises ratifying governments and regional economic integration organizations, such as the European Union.

- Till now COP had held thirteen sessions and **14th session will be held in India**.

- It has been **meeting biennially since 2001.**

Conference of Parties (COP)	Country	Year
COP 1	Rome, Italy	1997
COP 2	Dakar, Senegal	1998
COP 3	Recife, Brazil	1999
COP 4	Bonn, Germany	2000
COP 5	Geneva, Switzerland	2001
COP 6	Havana, Cuba	2003
COP 7	Nairobi, Kenya	2005
COP 8	Madrid, Spain	2007
COP 9	Buenos Aires, Argentina	2009

COP 10	Changwon, South Korea	2011
COP 11	Windhoek, Namibia	2013
COP 12	Ankara, Turkey	2015
COP 13	Ordos, China	2017
COP 14	New Delhi, India	2019

ETHANOL BLENDING

⊙ **CONTEXT:**

- **Government has hiked ethanol procurement price for blending with petrol, allowed conversion of old sugar into ethanol.**

⊙ **ABOUT:**

- The government has approved an **increase in the price of ethanol to be procured by public sector oil marketing companies (OMCs) from sugar mills** for blending with petrol for the 2019-20 supply year from December 1**.**

- Cabinet Committee on Economic Affairs (CCEA) has also allowed conversion of old sugar into ethanol, which again is expected to help mills deal with the current overproduction in the sweetener and make timely payments to farmers for the cane delivered by them.

- It has thusallowed mills to produce ethanol **from heavy molasses** and **directly from sugarcane juice.**

- The CCEA approved even use of sugar and sugar syrup for production of ethanol; mills can simply add these to the molasses mother liquor for further fermentation.

Ethanol blending

- Biofuels in India are of **strategic importance** as it augers well with the ongoing initiatives of the Government such **as Make in India, Swachh Bharat Abhiyan, Skill Development** and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation.

- Biofuels programme in India has been largely impacted due to the sustained and quantum non-availability of domestic feedstock for biofuel production which needs to be addressed.

Biofuels

- Biofuels are **liquid or gaseous fuels primarily produced from biomass**, and can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications.

- Crops used to make biofuels are generally **high in sugar** (such as sugarcane, sugarbeet, and sweet sorghum), **starch** (such as maize and tapioca) or **oils** (such as soybean, rapeseed, coconut, sunflower).

Categories of biofuels

- Biofuels are generally classified into three categories. They are

  ◎ **First generation biofuels** - First-generation biofuels are made from sugar, starch, vegetable oil, or animal fats using conventional technology. Common first-generation biofuels include Bioalcohols, Biodiesel, Vegetable oil, Bioethers, Biogas.

  ◎ **Second generation biofuels** - These are produced from non-food crops, such as cellulosic biofuels and waste biomass (stalks of wheat and corn, and wood). Examples include advanced biofuels like biohydrogen, biomethanol.

- ◉ **Third generation biofuels** - These are produced from micro-organisms like algae.

Ethanol Blended with Petrol (EBP) programme:

- EBP programme was launched by the government in 2003 to promote the use of alternative and environmental friendly fuels.

- This intervention also aimed to reduce import dependency for energy requirements, and give boost to the agriculture sector (supply of straw, additional income to farmers).

- Oil marketing companies (OMCs) were mandated to sell ethanol blended petrol with percentage of ethanol up to 10 per cent. The government allowed procurement of ethanol produced from non-food feed stocks, like cellulosic and ligno-cellulosic materials, including petrochemical route.

- **Ligno-cellulosic materials:** It describes the main constituents in most plants, namely cellulose, hemicelluloses, and lignin. Lignocellulose is a complex matrix, comprising many different polysaccharides, phenolic polymers and proteins. Cellulose, the major component of cell walls of land plants, is a glucan polysaccharide containing large reservoirs of energy that provide real potential for conversion into biofuels. It is the non-starch based fibrous part of plant material

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National Policy on Biofuels 2018:

Salient Features:

- The Policy categorizes biofuels as "Basic Biofuels" viz. First Generation (1G) bioethanol & biodiesel and "Advanced Biofuels" - Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.

- The Policy expands the scope of raw material for ethanol production by allowing use of Sugarcane Juice, Sugar containing materials like Sugar Beet, Sweet Sorghum, Starch containing materials like Corn, Cassava, Damaged food grains like wheat, broken rice, Rotten Potatoes, unfit for human consumption for ethanol production.

- Farmers are at a risk of not getting appropriate price for their produce during the surplus production phase. Taking this into account, the Policy allows use of surplus food grains for production of ethanol for blending with petrol with the approval of National Biofuel Coordination Committee.

- With a thrust on Advanced Biofuels, the Policy indicates a viability gap funding scheme for 2G ethanol Bio refineries of Rs.5000 crore in 6 years in addition to additional tax incentives, higher purchase price as compared to 1G biofuels.

- The Policy encourages setting up of supply chain mechanisms for biodiesel production from non-edible oilseeds, Used Cooking Oil, short gestation crops.

HURRICANE DORIAN

⊙ **CONTEXT:**

- **Hurricane Dorian is a strong tropical cyclone currently affecting the Bahamas and the South-eastern United States. At least 5 people have dies and 21 injured.**

- **It is one of the most powerful storms ever to hit Atlantic. Despite getting downgraded to Category 2, it is expected to remain very powerful for the next few days.**

⊙ **ABOUT**

- **Hurricane** - A hurricane is a large rotating storm with high speeds of wind that gust at least 74 mph that forms over warm waters in tropical areas.

- Hurricanes have three main parts, the calm eye in the center, the eyewall where the winds and rains are the strongest, and the rain bands which spin out from the center and give the storm its size

- In the southern hemisphere, hurricanes rotate in a **clockwise direction**, and in the northern hemisphere they rotate in an **anti-clockwise direction**. This is due to what's called the Coriolis Force, produced by the Earth's rotation.

How are hurricanes formed?

- Hurricanes begin as tropical disturbances in warm ocean waters with surface temperatures of at least 80 degrees Fahrenheit (26.5 degrees Celsius). Those low-pressure systems are fed by energy from warm seas.

- A storm with wind speeds of 38 miles (61 km) an hour or less is classified as a tropical depression. It becomes a tropical storm—and is given a name, according to conventions determined by the World Meteorological Organization—when its sustained wind speeds top 39 miles (63 km) an hour.

- Hurricanes are enormous heat engines that deliver energy on a staggering scale. They draw heat from warm, moist ocean air and release it through condensation of water vapor in thunderstorms.

- Hurricanes spin around a low-pressure center known as the eye. Sinking air makes this 20- to 40-mile-wide (32- to 64-kilometer-wide) area notoriously calm. But the eye is surrounded by a circular "eye wall" that contains the storm's strongest winds and rain.

Measurement

- The size of Hurricane is mainly measured by the **Saffir-Simpson scale** – other scales are used in Asia Pacific and Australia.

The system divides storms into five categories:

- **Category 1**: Winds 74 to 95 mph (Minor damage)
- **Category 2**: Winds 96 to 110 mph (Extensive damage — Can uproot trees and break windows)
- **Category 3**: Winds 111 to 129 mph (Devastating — Can break windows and doors)
- **Category 4**: Winds 130 to 156 mph (Catastrophic damage — Can tear off roofs)
- **Category 5:** Winds 157 mph or higher (The absolute worst and can level houses and destroy buildings)

Naming

- Hurricanes are given names by the World Meteorological Organisation (WMO) so that they can be distinguished.
- Each year, tropical storms are named in alphabetical order according to a list produced by the WMO.
- That name stays with the storm if it develops into a hurricane.
- The names can only be repeated after six years.

Hurricane Dorian

- Dorian is estimated to be the second-most-powerful hurricane ever recorded in the Atlantic Ocean and ties the record for the most-powerful storm to make landfall, according to the National Weather Service
- The storm is not currently expected to make landfall in the US; it should instead stay uncomfortably close offshore.
- The storm could bring several inches of rain or more for parts of Florida and the Southeast.
- The deadliest aspect of a hurricane tends to be **storm surge** (**flooding caused by seawater pushed onshore by the hurricane's winds**).
- **Reason behind downgrading of Category of Dorian**: Dorian has slowed down because a high pressure ridge that was steering the storm westward has weakened. Now, the storm is essentially waiting for another external force before it starts moving quickly again.

'BUILD FOR DIGITAL INDIA' PROGRAMME

⊙ **CONTEXT:**

- **The Ministry of Electronics and Information Technology (MeitY) and Google have signed a statement of intent to roll-out 'Build for Digital India' programme.**

⊙ **ABOUT:**

- The programme will give engineering students a platform to develop technology-based solutions to address key social problems.

- As part of the programme, engineering students across the country will be invited to apply and join in a learning journey that will help them transform their bright ideas into real-world solutions.

- Applicants will take part in online and offline learning opportunities on key technologies such as machine learning, cloud and android.

- These will be offered through Google's Developer Student Club network and other Google Developer networks.

- Google will also offer mentorship sessions in product design, strategy and technology to the most promising products and prototypes.

Significance

- This initiative will motivate college students across India to innovate and produce some good technology solutions for major social challenges of India.

- Advanced new technologies such as machine learning and AI can help address at scale some of the toughest social challenges that India faces today.

- The programme will provide great exposure to students in dealing with real world problems and develop deeper understanding of how newer technologies can be used to solve them.

- The programme will invite bright ideas and solutions from students to focus on areas of healthcare, agriculture, education, smart cities and infrastructure, women safety, smart mobility and transportation, environment, accessibility and disability and digital literacy.

DALITS WELFARE

⊙ **CONTEXT:**

- **The Union government has identified 26,968 Dalit-majority villages for focused implementation of various government schemes over the next five years.**

⊙ **ABOUT:**

- All existing Central and state welfare schemes that are necessary to meet critical gaps in socio-economic and infrastructure needs, and reduce disparities will be implemented in Dalit villages

- These villages — where over 50 per cent of the total population are Dalits and those with a sizeable overall population — have been zeroed in under the **Pradhan Mantri Adarsh Gram Yojana for "integrated development".**

- While the scheme is mainly about ensuring focused implementation **and convergence of existing Central and state government schemes**, the ministry provides **Rs 21 lakh per village** as gap funding.

- According to the 2011 Census, **Dalits make up 16.6 per cent of the country's total population,** with states such as Punjab, Uttar Pradesh, Haryana, Himachal Pradesh, West Bengal, and the Union Territory of Delhi recording more than 20 per cent Dalit population.

Pradhan Mantri Adarsh Gram Yojana (PMAGY)

- The Pradhan Mantri Adarsh Gram Yojana was first launched on a pilot basis in 2009-10 for an **area-based development** approach of **predominantly Dalit villages.**

- It aimed to **achieve integrated development of selected villages** with more than 50% SC population through convergent implementation of all relevant Central and State schemes.

- Problems in implementation of PMAGY

- Over the last decade, **merely 2,500 Dalit-majority villages** were taken up under the scheme.

- Due to the pace, people gradually lost interest and the implementation fizzled out eventually.

- Due to the break in continuity, there was no regular Budget allocation for the scheme on an annual basis.

New approach to improve efficiency

- It has been decided to scale up the coverage and 7,000 villages so far have been taken as per new approach.

- The earlier approach of the scheme was to ensure the development of physical infrastructure in these Scheduled Caste majority villages.

- It has now been redesigned to include 50 socio-economic indicators that have to be improved so as to reduce the inequality between Dalit and general households in these villages.

- These 50 "monitorable indicators" fall within 10 key basic service areas such as health, education, drinking water and sanitation, social security, roads and housing, electricity, agriculture, livelihoods, financial inclusion, and digitisation.

EASTERN ECONOMIC FORUM

⊙ **CONTEXT:**

- **Prime Minister of India and leaders of a number of other countries attended the 5th Eastern Economic Forum (EEF) held from September 4 to 6 in Russia**

⊙ **ABOUT:**

Eastern Economic Forum

- It was established by decree of the President of the Russian Federation Vladimir Putin in **2015** to support the economic development of **Russia's Far East** and to expand **international cooperation in the Asia-Pacific region**.

- In accordance with the Decree, the Eastern Economic Forum takes place each year in Vladivostok.

  - Every year, the Eastern Economic Forum serves as a platform for the discussion of key issues in the world economy, regional integration, and the development of new industrial and technological sectors, as well as of the global challenges facing Russia and other nations.

  - Events at the Forum traditionally take place in the form of panel sessions, roundtables, televised debates, business breakfasts, and business dialogues devoted to Russia's relationships with various countries.

  - The Forum business programme includes a number of business dialogues with leading partner countries in the Asia-Pacific region, and with ASEAN, a key integration organization of dynamically developing nations in Southeast Asia

ABOUT THE FAR EAST:

- The Far East is the easternmost part of Russia. The macro-region borders two oceans, the Pacific and the Arctic, and five countries (China, Japan, Mongolia, the United States and the DPRK).

- The Far Eastern Federal District covers more than a third of the country's territory.
- **RESOURCES**: The Far East is rich in natural resources like diamonds, stannary, borax materials, 50 gold, tungsten, and fish and seafood. About 1/3 of all coal reserves and hydro-engineering resources of the country are here. Forests of the region comprise about 30% of the total forest area of Russia.
- Significant rivers include the Volga, Dnieper and Dvina (west), the Lena, Ob, and Yenisey (central) and the Amur in the far-east.

Other similar forum:

- **St. Petersburg International Economic Forum**
  - The St. Petersburg International Economic Forum (SPIEF) is a unique event in the world of business and economics. SPIEF has been held since 1997, and since 2006, it has been held under the auspices of the President of the Russian Federation, who has also attended each event.
  - Over the last 21 years, the Forum has become a leading global platform for members of the business community to meet and discuss the key economic issues facing Russia, emerging markets, and the world as a whole.
  - The main events of the St. Petersburg International Economic Forum took place on 6–8 June, 2019 at the ExpoForum Convention and Exhibition Centre.

APPOINTMENT OF THE SUPREME COURT JUDGES

⊙ **CONTEXT:**

- **The Supreme Court Collegium had made recommendations to fill four vacancies in the Supreme Court and for appointments of Chief Justices in eight High Courts across the country.**

⊙ **ABOUT:**

Evolution of Collegium System

- Judges of the Supreme Court and High Courts are appointed by the President under **Articles 124(2) and 217 of the Constitution**.
- The chief justice is appointed by the president after **consultation** with such judges of the Supreme Court and high courts as he deems necessary. The other judges are appointed by president after **consultation** with the chief justice and such other judges of the Supreme Court and the high court's as he deems necessary. The **consultation** with the chief justice is **obligatory** in the case of appointment of a judge other than Chief justice.
- The collegium system has its genesis in a series of judgments called "**Judges Cases**". The collegium came into being through interpretations of pertinent constitutional provisions by the Supreme Court in the Judges Cases.
- In the **First Judges case (1982)**, the Court held that **consultation does not mean concurrence** and it **only implies exchange of views**.
- But, in the **Second Judges case (1993)**, the Court reversed its earlier ruling and changed the meaning of the word **consultation to concurrence**. Hence, it ruled that the advice tendered by the Chief Justice of India is **binding on the President** in the matters of appointment of the judges of the Supreme Court. But, the Chief Justice would tender his advice on the matter after consulting two of his seniormost colleagues.
- Similarly, in **the Third Judges case (1998)**, the Court opined that the consultation process to be adopted by the Chief justice of India requires '**consultation of plurality judges**'. The sole opinion of the chief justice of India does not constitute the consultation process. He should consult **a collegium of four seniormost judges of the Supreme**

Court and even if **two judges give an adverse opinion**, he should **not send the recommendation** to the government.

Collegium System

- It is the system of **appointment and transfer** of judges that has evolved through judgments of the Supreme Court, and **not by an Act of Parliament** or by a provision of the Constitution.

- The Supreme Court collegium is headed by the Chief Justice of India and comprises four other seniormost judges of the court.

- A High Court collegium is led by its Chief Justice and four other seniormost judges of that court.

- Names recommended for appointment by a High Court collegium reaches the government **only after approval by the CJI and the Supreme Court collegium**.

- Judges of the higher judiciary are appointed only through the collegium system — and the government has a role only after names have been decided by the collegium.

- The government's role is limited to getting an inquiry conducted by the Intelligence Bureau (IB) if a lawyer is to be elevated as a judge in a High Court or the Supreme Court. It can also raise objections and seek clarifications regarding the collegium's choices, but if the collegium reiterates the same names, the government is bound, under Constitution Bench judgments, to appoint them as judges.

Number of Judges

- Originally, the strength of the Supreme Court was fixed at eight (one chief justice and seven other judges).

- The Parliament has increased this number of other judges progressively to ten in 1956, to thirteen in 1960, to seventeen in 1977 and to twenty-five in 1986.

- In February 2009, the centre notified an increase in the number of Supreme Court judges from twenty-six to thirty-one, including the Chief Justice of India.

- Recently, the Supreme Court (Number of Judges) Amendment Bill has been passed by Parliament. After the law comes into force, the sanctioned strength of SC will be **33, besides the CJI (total strength = 34)**.

FIVE STATES TO GET NEW GOVERNORS

⦿ **CONTEXT:**
- **President Ram Nath Kovind had announced the appointment of five new Governors in the states of Rajasthan, Maharashtra, Himachal Pradesh, Kerala and Telangana**

⦿ **ABOUT:**
- The Governor is the head of a state just like the President is the head of the republic. The Governor is the nominal head of a state, while the Chief Minister is the executive head. All executive actions of the state are taken in the name of the Governor.

Eligibility Criteria

- As per **the Constitution of India**, the following are the eligibility criteria for the appointment of the Governor in a particular state:
  - He or she must be a **citizen** of India.
  - He or she must have completed **35 years of age.**

- Additionally, **two conventions** have also developed in this regard over the years.
  - He should be an outsider, that is, he should not belong to the state where he is appointed, so that he is free from the local politics.

◉ While appointing the governor, the president is required to consult the chief minister of the state concerned, so that the smooth functioning of the constitutional machinery in the state is ensured. However, both the conventions have been violated in some of the cases.

CONDITIONS OF GOVERNOR'S OFFICE

- The Constitution lays down the following conditions for the governor's office:

  ◉ He should not be a member of either House of Parliament or a House of the state legislature. If any such person is appointed as governor, he is deemed to have vacated his seat in that House on the date on which he enters upon his office as the governor.

  ◉ He should not hold any other office of profit.

  ◉ He is entitled without payment of rent to the use of his official residence (the Raj Bhavan).

  ◉ He is entitled to such emoluments, allowances and privileges as may be determined by Parliament.

  ◉ When the same person is appointed as the governor of two or more states, the emoluments and allowances payable to him are shared by the states in such proportion as determined by the president.

  ◉ His emoluments and allowances cannot be diminished during his term of office

Selection Process of the Governor

- The Governor is **not elected by the process of direct or indirect voting** (like the Chief Minister, the Prime Minister or the President). The Governor of a particular state is appointed directly by the President of India, for a **period of five years**. The Governor must meet all the eligibility criteria enumerated above, to be appointed by the President.

Oath and Affirmation

- Every Governor and every person discharging the functions of the Governor shall, before entering upon his office, make and subscribe in the presence of the **Chief Justice of the High Court** exercising jurisdiction in relation to the state, or, in his absence, the senior most Judge of that court available, an oath or affirmation

Duty Term of the Governor

- A governor of a state in India holds office for a period of five years, but it is subject to termination earlier if:

  ◉ The Governor is dismissed by the President, at whose pleasure he holds the office. In reality, the President is advised by the Prime Minister of the country, who decides the dismissal of the Governor of a state, usually on the grounds of gross delinquency namely corruption, bribery and violation of the Constitution.

  ◉ The Governor resigns from his post. There is no retirement age of the Governor, as he or she stays in office for a fixed term. There is no provision for a Governor to be impeached from office, unlike that of a President.]

JURISDICTION OF HIGH COURT

⊙ **CONTEXT:**

- **Bureaucrat turned politician Shah Faesal contended that the Delhi High Court has the territorial jurisdiction to hear his habeas corpus plea as he was detained at the IGI Airport and was forcibly taken to Srinagar.**

⊙ **ABOUT:**

Habeas Corpus

- A writ of habeas corpus (which literally means to "produce the body") is a court order demanding that a public official (such as a warden) deliver an imprisoned individual to the court and show a valid reason for that person's detention.

- The procedure provides a means for prison inmates, or others acting on their behalf, to dispute the legal basis for confinement.

- The court then examines the cause and legality of detention.

- It would set the detained person free, if the detention is found to be illegal. Thus, this writ is a bulwark of individual liberty against arbitrary detention.

- The writ of habeas corpus can be issued against both public authorities as well as private individuals.

- The writ, on the other hand, is not issued where the

  ◎ detention is lawful

  ◎ the proceeding is for contempt of a legislature or a court

  ◎ detention is by a competent court

  ◎ detention is **outside the jurisdiction of the court**.

Jurisdiction of High Court

- The High Court is the **highest court of appeal** in the state. It is the **protector of the Fundamental Rights** of the citizens. It is vested with the power to **interpret the Constitution**. Besides, it has supervisory and consultative roles.

- However, the Constitution **does not contain detailed provisions** with regard to the jurisdiction and powers of a high court.

- At present, a high court enjoys the following jurisdiction and powers:

  ◎ Original jurisdiction.

  ◎ Writ jurisdiction.

  ◎ Appellate jurisdiction.

  ◎ Supervisory jurisdiction.

  ◎ Control over subordinate courts.

  ◎ A court of record.

  ◎ Power of judicial review

Writ Jurisdiction of High Court

- **Article 226** of the Constitution empowers a high court to issue writs including **habeas corpus, mandamus, certiorari, prohibition and quo warrento** for the enforcement of the fundamental rights of the citizens and for any other purpose.

- The phrase '**for any other purpose'** refers to the enforcement of an **ordinary legal right**.

- The high court can issue writs to any person, authority and government **not only within its territorial jurisdiction but also outside its territorial jurisdiction if the cause of action arises within its territorial jurisdiction (15th Constitutional Amendment Act of 1963)**.

- In the **Chandra Kumar case (1997**), the Supreme Court ruled that the **writ jurisdiction of both the high court and the Supreme Court constitute a part of the basic structure** of the Constitution. Hence, it cannot be ousted or excluded even by way of an amendment to the Constitution.

- In Shah Faesal's Case, his case is justified because cause of action was happend in Delhi and then he was taken to outside the territory of Delhi.

PROJECT MINIATURE SUN

⊙ **CONTEXT:**
- **Scientists in France are trying to create a 'miniature Sun' on Earth and India is a partner in this mega project.**
- **Dubbed as The ITER Project or The Path, costing over Euro 20 billion, it has 'Made in India' written all over it.**
- **Prime Minister Narendra Modi recently visited the project site and also held discussions with French President Emmanuel Macron**

⊙ **ABOUT:**

Project Miniature Sun

- Nick named as '**miniature sun**', **International Thermonuclear Experimental Reactor (ITER)** is the largest plasma based fusion reactor ever built.
- It is the costliest technological project of the 21st century with an estimated construction cost of $25 Billion.
- The project site is located in **Cadarache, Southern France**.
- The term '**Thermonuclear**' indicates the **nuclear fusion reaction**.
- ITER will be two times the size of the largest fusion reactor present and the chamber volume will be 10 times the present one.
- It is worth mentioning here that the mega project is undertaken by USA, Russia, South Korea, China, Japan, European Union and India.

India's Contribution

- India has also provided a **Cryostat**, the **world's largest refrigerator**, weighing around 3800 tons and made with stainless steel. It is built by Larsen & Toubro
- It will cover the entire structure and keep the magnetic components at a very low temperature (less than -200ºC) for maintaining the superconductivity of magnets.

International Thermonuclear Experimental Reactor (ITER)

- **Tokamak reactor** is a term used for the location where the nuclear fusion takes place.
- The terminology is similar to the term '**boiler**' used in steam power plants, wherein the core reaction takes place.
- It is a **magnetic fusion** device to harness fusion energy by **mimicking the sun** and other stars.
- In the sun, the massive gravitational force creates the conditions for fusion.
- On earth, it is much harder to achieve:
- Fuel must be heated to around **15 millionºC**.
- Fuel need to be dense enough and maintained at higher temperature and pressure for fusion to take place.
- Initially, the Tokamak cylinder is made **completely vacuum**.

The Sun

- The sun was born about 4.6 billion years ago.
- The sun and its atmosphere are divided into several zones and layers.
- The solar interior, from the inside out, is made up of the **core, radiative zone and the convective zone**.
- The solar atmosphere above that consists of the **photosphere, chromosphere, a transition region and the corona**.
- Beyond that is the solar wind, an outflow of gas from the corona.

- **Some key definitions:**
  - ◉ **Sunspot**: Sunspots are darker, cooler areas on the surface of the sun in a region called the photosphere.
  - ◉ **Solar Flare**: A solar flare is an intense burst of radiation coming from the release of magnetic energy associated with sunspots.
  - ◉ **Corona**: The Sun's corona is the outermost part of the Sun's atmosphere. The corona is usually hidden by the bright light of the Sun's surface.
  - ◉ **Coronal Mass Ejections (CMEs):** They are large expulsions of plasma and magnetic field from the Sun's corona. They can eject billions of tons of coronal material and carry an embedded magnetic field (frozen in flux) that is stronger than the background solar wind interplanetary magnetic field (IMF) strength.

Mechanism of Nuclear Fusion in the Sun:

- The sun is composed of Hydrogen (75%), Helium (25%) and smaller amounts of Oxygen, Iron, Neon, Nitrogen, Silicon, etc.
- The sun is a massive nuclear fusion reactor like all the other stars.
- The reaction began when a nebula (a cloud of gas and particles) collapsed under its own gravitational force forming a big ball of hot plasma, the sun.
- The core of the sun is the hottest and has high pressure which makes the Hydrogen atoms collected at the centre to fuse together to form Helium atoms and release solar energy.
- Two Hydrogen atoms fuse to form one Helium

ARTIFICIAL INTELLIGENCE – BASED SOLUTIONS TO COMBAT TB

⊙ **CONTEXT:**

- **The Health Ministry has signed a Memorandum of Understanding (MoU) with Wadhwani Institute for Artificial Intelligence (AI) to explore the application of Artificial Intelligence technology in its fight against tuberculosis (TB) in 2019. That is why it was in news.**

⊙ **ABOUT:**

- **Revised National TB Programme (RNTCP) aims** at adoption of AI technologies for building easy TB combats. RNTCP is **the state-run tuberculosis (TB) control initiative** of the Government of India.
- As per **the National Strategic Plan 2012–17,** the program has a vision of achieving a "**TB free India",** and aims to achieve Universal Access to TB control services.
- As part of the collaboration, Wadhwani AI would support the National TB programme by helping it become AI-ready which includes developing, piloting, and deploying AI-based solutions. It would support the programme in vulnerability and hot-spot mapping, modeling novel methods of screening and diagnostics.
- India plans **to end TB by 2025,** five years ahead of the Global Sustainable Development targets. Meanwhile, World Health Organization (WHO) stated that countries aiming to reduce their TB burden by 2035.
- Most of the **tests used for early detection of TB are not promising**. For example, sputum testing is only 50% accurate and frequently misses the disease in its early stages. Molecular testing – while highly accurate – is too expensive for population screening in most regions. AI is very helpful in detection of TB with accuracy and precision.

How AI-Based solutions can combat TB?

- **A Promising Solution for Early Detection:** More recently, there has been interest in using artificial intelligence (AI) for medical image interpretation. Many affected people

arrive at clinics too late with advanced disease or multi-drug resistant TB (MDR-TB), which is difficult to treat and more likely to cause death. One of the key strategies to tackle TB is early diagnosis. Unfortunately, sputum testing is only 50% accurate and frequently misses the disease in its early stages.

- **AI solutions can be deployed offline:** The AI-based solutions to combat TB can be used offline with a low power device which is crucial for remote, low-resource settings.

- **Low cost accessible AI-based TB Solutions:** Home Ministry aims to scale its AI solution to provide low-cost, accessible TB detection to vulnerable populations.

- **Automated disease detection:** With focused investment to scale AI solutions for automated disease detection, millions of currently underserved people can gain access to high quality, affordable health screening. The AI-based solution has the potential to lead to earlier detection and make a tremendous impact in battling TB.

- **Useful Diagnostic Aid**: From reading radiographs to adverse event monitoring, sifting through vast datasets to personalize a patient's care plan or to customize training materials, AI is going to be a useful aid to combat TB

Significance

- AI provides a unique opportunity for the health sector, **bringing efficiency, saving resources and bringing accuracy in interpretation and enhancing quality of service delivery**. Its use in this sector has an ample scope to improve outcomes, especially in situations where resources are limited, further stated the press statement.

⊙ **ABOUT (TB)**

- Tuberculosis (TB) is an infectious disease usually caused by **Mycobacterium tuberculosis (MTB) Bacteria**. Tuberculosis generally affects the lungs, but can also affect other parts of the body.

- **India is the country with the highest burden of TB According to the World Health Organization (WHO)** India has close to 27 lakh TB cases every year and 4.23 lakh cases die (2016).

- **National Strategic Plan (NSP) for 2017-2025** has been set up in line with other health sector strategies and global efforts, such as the draft National Health Policy 2015, World Health Organization's (WHO) End TB Strategy and the Sustainable Development Goals (SDGs) of the United Nations (UN) for TB elimination by 2025.

Diagnostic tests for TB disease include the following:

- **Rapid molecular tests**: This tests is used to detect influenza viral RNA or nucleic acids in respiratory specimens with high sensitivity and high specificity. Notably, the detection of influenza viral RNA or nucleic acids by molecular assays does not necessarily indicate detection of viable virus or on-going influenza viral replication.

- **Sputum smear microscopy:** This technique requires the examination of sputum samples using a microscope to determine the presence of bacteria. In the current case definitions recommended by WHO, one positive result is required for a diagnosis of smear-positive pulmonary TB.

- **Culture-based methods**: A culture test involves studying bacteria by growing the bacteria on different substances. This is to find out if particular bacteria are present. In the case of the TB culture test the test is to see if the TB bacteria Mycobacterium tuberculosis, are present.

Drug-Resistant TB

- Drug-resistant TB occurs when bacteria become resistant to the drugs used to treat TB. This means that the drug can no longer kill the TB bacteria. XDR-TB involves resistance to the two most powerful anti-TB drugs- isoniazid and rifampicin. This is also known as multidrug-resistance (MDR-TB).

SAMUDRAYAAN PROJECT

⊙ **CONTEXT:**
- **India to join developed nations in ocean studies with 'Samudrayaan' project.**

⊙ **ABOUT**
- The 'Samudrayaan' is a part of the Ministry of Earth Sciences' pilot project for deep ocean mining for rare minerals.
- The project proposes to send a submersible vehicle with three persons to a depth of about 6000 metres to carry out deep underwater studies.
- The indigenously developed vehicle is capable of crawling on the sea bed at a depth of six kilometre for 72 hours.
- Similar to ISRO's plan to carry persons on a space mission, NIOT has undertaken Samudrayaan. The Rs. 200 crore project proposes to carry three persons in a submersible vehicle to a depth of 6000 metres under sea for various studies.
- The success of the ''Samudrayaan'' will help India join the league of developed nations in exploration of minerals from oceans.
- India has been allocated a site of 75,000 sq km in the Central Indian Ocean Basin by the International Sea Bed Authority for exploration of polymetallic nodules from seabed.
- The estimated resource of polymetallic nodules is about 380 million tonnes, containing 4.7 million tonnes of nickel, 4.29 million tonnes of copper and 0.55 million tonnes of cobalt and 92.59 million tonnes of manganese.

> **International Seabed Authority**
> - The International Seabed Authority (ISA) is an intergovernmental body based in Kingston, Jamaica.
> - It was established to organize, regulate and control all mineral-related activities in the international seabed area beyond the limits of national jurisdiction, an area underlying most of the world's oceans.
> - It is an organization established by the United Nations Convention on the Law of the Sea.

GLOBAL LIVEABILITY INDEX 2019

⊙ **CONTEXT:**
- **The Economist Intelligence Unit (EIU) recently released Global Liveability Index 2019.**

⊙ **ABOUT**
- The survey ranks countries across indicators including stability, healthcare, education, infrastructure, culture and environment.
- Vienna in Austria, Melbourne and Sydney in Australia make the top three cities in the list.
- In India, New Delhi and Mumbai rank 118th and 119th out of 140 cities.
- Damascus in Syria, Lagos in Nigeria and Dhaka in Bangladesh rank in the bottom.
- The index assesses which locations around the world provide the best or the worst living conditions. Each factor in a city is rated as acceptable, tolerable, uncomfortable, undesirable or intolerable.
- According to the report deterioration in culture and environment scores is of concern including the quality of air in cities like New Delhi.
- Of the 37 Asian and Australasian cities included in the index, five are among the ten most liveable and six are among the 20 least liveable.

The top 10 most liveable cities in the world according to The Global Liveability Index 2019, are:

- Vienna
- Melbourne
- Sydney
- Osaka
- Calgary
- Vancouver
- Tokyo
- Toronto
- Copenhagen
- Adelaide

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