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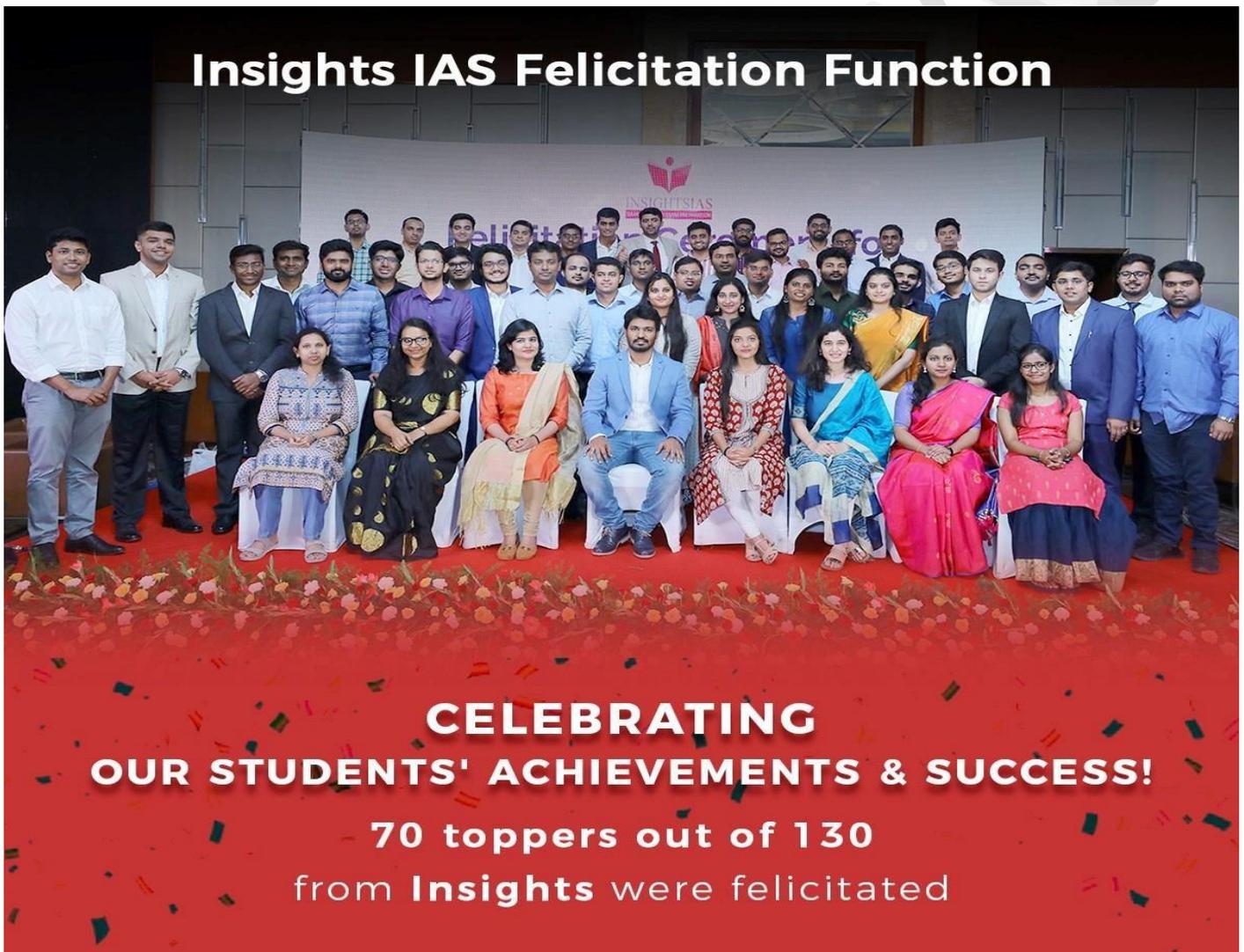
**GS-III**

**DECEMBER 2019**



**NOTE:** Please remember that following 'answers' are NOT 'model answers'. They are NOT synopsis too if we go by definition of the term. What we are providing is content that both meets demand of the question and at the same time gives you extra points in the form of background information.

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Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Economists and experts argue that India is now in classic Stagflation Territory. Analyse. What are the structural policies needed to curb the economic slowdown facing India?

[The Hindu](#)

[The Wire](#)

[The Economic Times](#)

*Why this question:*

*The slowdown is three years in the making and it is now irrefutable that India is in a growth recession.*

*Key demand of the question:*

*One has to find the reasons for the economic slowdown facing India and provide the structural measures needed to overcome the same.*

*Directive:*

*Analyze – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.*

*Structure of the answer:*

*Introduction:*

*Define what is stagflation.*

*Stagflation, as defined by Princeton economist Alan S. Blinder, is “the simultaneous occurrence of economic stagnation and comparatively high rates of inflation”.*

*Body:*

*Discuss the reasons for the economic slowdown.*

*Provide data to substantiate your views.*

*According to the National Statistical Office (NSO), the Consumer Food Price Index increased from 5.11% in September 2019 to 7.89% in October 2019. The retail price inflation rate reached an annual high at 4.62%. The government itself has admitted that growth has slowed. The recent NSO estimates of gross domestic product (GDP) for the second quarter of 2019-20 reported a further reduction in the growth rate of GDP to 4.5%, the lowest since 2012-13.*

*Provide the various structural measures needed to overcome*

*like Higher liquidity and disposable income, and increased employment; reduction and reform of direct individual and corporate taxes, and indirect taxes. Labour laws also need to be amended to generate employment.*

*Conclusion:*

*Conclude with a way forward.*

**Introduction:**

Stagflation, as defined by Princeton economist Alan S. Blinder, is “the simultaneous occurrence of economic stagnation and comparatively high rates of inflation”.

**Body:**

**Economic scenario which point towards stagflation in India:**

- According to the National Statistical Office (NSO), the Consumer Food Price Index increased from 5.11% in September 2019 to 7.89% in October 2019.
- The retail price inflation rate reached an annual high at 4.62%. The government itself has admitted that growth has slowed.



- The recent NSO estimates of gross domestic product (GDP) for the second quarter of 2019-20 reported a further reduction in the growth rate of GDP to 4.5%, the lowest since 2012-13.
- India's gross domestic product (GDP) growth has dropped to 4.5% in the July-September quarter of 2019-20, a free fall from the government's ambitious call for a double-digit growth not so long ago.
- The fall has been sudden although not entirely unexpected. In the first quarter of 2016-17, India registered a spectacular GDP growth of 9.4%. Today, it's struggling at a 26-quarter low.

#### **Measures taken by the Government now:**

- First it withdrew the super-rich surcharge levied on foreign portfolio investors and then rolled out a series of measures, including corporate tax cut and the proposal to set up a Rs 25,000 crore fund to revive the realty sector.
- The RBI, for its part, has already lowered its benchmark interest rate (repo rate) five times during this calendar year, taking the cumulative cuts to 135 basis points, from 6.5% in January to 5.15% in October, even as the Consumer Price Index (CPI)-based inflation shot.
- To avoid further economic turbulence, the Centre has pressed the pause button on banning single-use plastics as well as the quick replacement of fossil fuel-guzzling automobiles with electric vehicles.

#### **Structural measures needed:**

- The Reserve Bank of India (RBI) can quickly increase the amount of cash in the economy.
- Then banks, especially public sector banks, can use that together with interest rate policy to provide easy credit. A larger supply of credit should lead to cheaper credit.
- This will have to be supported by reduction of the administered price of credit, which is the RBI's repo rate.
- There could be hurdles to credit off-take due to fiduciary or prudential reasons, so those need to be tackled. Same for mismatched expectations.
- Higher liquidity and disposable income, and increased employment can pull us out of the quagmire.
- reduction and reform of direct individual and corporate taxes, and indirect taxes.
- Labour laws also need to be amended to generate employment.
- The government needs to hold granular conversations with the private sector.
- A skills and industrial policy which can make full use of an abundant pool of reasonably priced labour

#### **Conclusion:**

The current economic slowdown is an outcome of supply-side constraints and not demand-side constraints. We need to produce things that Indians earning minimum wages can afford, so that the aggregate demand will increase.



With successive cuts in the policy rates, the RBI has been sending a signal to the rest of the banking system that the lending rates should come down. However, the monetary policy transmission has been inefficient in India. Discuss. Suggest measures to tackle the issue.

*The Hindu*

*The Hindu*

**Why this question:**

*The Monetary Policy Committee of the Reserve Bank of India (RBI) decided to keep the interest rate unchanged at 5.15% in the fifth bimonthly policy review, citing inflation concerns despite economic growth continuing to slow down. All the six members of the MPC voted in favour of keeping the interest rate unchanged.*

**Key demand of the question:**

*One must assess the reasons for poor transmission of the monetary policies, the implications of not doing so by the banks and the other measures needed*

**Directive:**

*Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.*

**Structure of the answer:**

**Introduction:**

*Briefly narrate the background of the issue. Between February and August, the RBI cut repo rate from 6.5% to 5.4%. But, the interest rate charged by banks on fresh loans fell just 27% of the amount by which the repo rate came down.*

**Body:**

*The answer should cover the following:*

*Discuss first the role of RBI's Monetary Policy.*

*Monetary Policy Process and Goals of Monetary policy.*

*Current issues facing RBI policies.*

*What needs to be done to address these issues and challenges?*

*Discuss the role of government policies is also of prime importance in handling such issues.*

**Conclusion:**

*Conclude with a way forward.*

**Introduction:**

The monetary policy refers to a regulatory policy whereby the central bank maintains its control over the supply of money to achieve the general economic goals. Since February 2019, the Reserve Bank of India (RBI) has aggressively cut the repo rate. By cutting the repo rate, the RBI has been sending a signal to the rest of the banking system that the lending rates should come down.

The Monetary Policy Committee of the Reserve Bank of India (RBI) decided to keep the interest rate unchanged at 5.15% in the fifth bimonthly policy review (Dec 2019), citing inflation concerns despite economic growth continuing to slow down.

**Body:**

**Monetary policy scenario in India:**

- In India, the process of monetary policy transmission is inefficient.
- For example, between February and December, the RBI cut repo rate from 6.5% to 5.15%.
- But, the interest rate charged by banks on fresh loans fell just 27% of the amount by which the repo rate came down.



- Further, RBI has urged banks to link their lending rates to the repo rate

**Reasons for policy rate cut:**

- Since February, India's economic growth momentum has rapidly decelerated.
- Projections of GDP growth rate have come down.
- A lower interest rate regime is expected to help.
- The main issue is that people are not consuming at a high enough rate.
- At lower interest rates, people are expected to borrow and spend more, the more the money circulates in the economy, the greater would be the economic activity.
- If banks reduce their lending rates, they would also have to reduce their deposit rates.
- This, in turn, will incentivise people to save less and spend more.
- If banks reduce the interest rates on loans, more businesses are likely to be enthused to borrow new loans for investment

**Reasons for poor monetary policy transmission:**

- Repo rates have little impact on a bank's overall cost of funds.
- Reducing lending rates just because the repo rate has been cut is not feasible for banks.
- This is because, for banks to be viable, there must be a clear difference between the lending rate (charged on loans) and the deposit rate (given on deposits).
- The difference between the two has to be not only positive but also big enough for the bank to make profits.
- Notably, to attract deposits, banks pay a high deposit rate.
- Such deposits make up almost 80% of all banks' funds from which they then lend to borrowers.
- On the other hand, banks borrow a minuscule fraction from the RBI under the repo.
- So even sharply reducing the repo rate does not change the overall cost of funds for the banks.
- In effect, unless banks reduce their deposit rates, they will not be able to reduce their lending rates.
- However, if a bank were to reduce its deposit rates, depositors would shift to a rival bank that pays better interest rates.
- Otherwise, they would park more of their savings in small saving instruments (public provident fund, Sukanya Samridhi Yojana, etc) that pay much higher interest rates.
- Also, 65% of total deposits are "term" deposits (fixed for a certain duration) and take, on an average, up to 2 years to get repriced at fresh rates.
- So, banks cannot always reduce deposit rates immediately as deposits take longer to get repriced.



- Moreover, if banks are under pressure to reduce the interest rate they charge on new loans, they could possibly push up the interest rates on old loans that allow for such flexibility.

#### Measures needed:

- Enabling effective monetary transmission would not only increase the credibility of the Central Bank but also help in strengthening the financial structure.
- Impounding of bank money by RBI is too high with 4% cash reserve ratio carrying no return whatsoever.
- To make transmission work, the least the RBI can do is to reduce CRR.
- Timely transmission of policy rates could be considerably improved if the banking sector's non-performing assets (NPAs) are resolved more quickly and efficiently.
- If the government wants to reduce lending rates, it could focus on bringing down its own fiscal deficit and public sector borrowing.
- At the current low levels of per capita income, the savers are far more risk-averse in India and unwilling to invest in higher-risk instruments other than bank deposits.
- For a repo-linked regime to work, the whole banking system in India would have to shift to that.
- In other words, along with banks' lending rates, their deposit rates too must go up and down with the repo.

Imports from China have curbed capacity creation and utilization over time. Do you think India's bane is its non-competitiveness? Analyse with relevant illustrations. (250 words).

#### Business Line

#### Why this question:

The question seeks to examine the levels of competitiveness India stands at owing to competition from China.

#### Key demand of the question:

One must examine closely the effects of Chinese market flooding Indian markets and in what way it has curbed capacity creation and utilization over time.

#### Directive:

*Analyze* – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.

#### Structure of the answer:

#### Introduction:

Explain the context of the question in brief.

#### Body:

Discuss the following aspects in the answer body:

Explain the relevance of competitiveness in general to an economy of a country.

Highlight the current trends in the world; discuss how the strategies of one country affect the other.

Discuss the case of India and China.

Take hints from the article and illustrate relevantly the context of the answer.

#### Conclusion:

Conclude with solutions as to what should India do to overcome these challenges.

#### **Introduction:**



Bilateral trade between India and China increased from USD 38 billion in 2007-08 to USD 89.6 billion in 2017-18. While imports from China increased by USD 50 billion, exports increased by USD 2.5 billion during the same period. This has widened India's trade deficit. Trade with China constitutes more than 40% of India's total trade deficit. Government of India has been taking continuous and sustained steps to bridge trade deficit by lowering the trade barriers for Indian exports to China.

Body:

#### **Relevance of competitiveness to an economy of a country:**

- Foreign Trade is the important factor in economic development in any nation.
- International trade is a crucial part of development strategy and it can be an effective mechanism of financial growth, job opportunities and poverty reduction in an economy.
- According to Traditional Pattern of development, resources are transferred from the agricultural to the manufacturing sector and then into services.

#### **Case study of India's non-competitiveness:**

*Why is India lagging behind in ready-made garment exports? This is one sector where India has had a traditional advantage, and should have raced ahead, due to the low-cost space vacated by China. India is capable of investing in modern machinery and automation, as also in skilling its personnel, just like its competitors. But Bangladesh and Vietnam have now outpaced India even in absolute, not just relative, terms. Of course, a country like Bangladesh has greater labour flexibility, and allows three shifts even with women, who now dominate the garment sector in that country. It may be argued that Bangladesh has special duty-free access to the US and EU, accorded to low-income countries. Even then, however, it does not explain India's lacklustre performance.*

#### **India's bane is its non-competitiveness:**

- India's competitiveness in the labour intensive export sectors has been on a declining path in the last decade and needs significant structural reforms that need to be addressed
- The **rigidity in labour laws, challenges associated with land acquisition, inadequate physical infrastructure (roads, ports and electricity), and poorly skilled manpower** have held back manufacturing sector growth
- The **limited diversification of India's export basket**, with the top 10 principal exports in terms of commodity groups accounting for as much as 78 per cent of total merchandise exports.
- In recent times the export performance of some of these goods has either deteriorated or been characterised by a lack of dynamism.
- Thus, for example, four of India's lead exports (Engineering goods, Gems and jewellery, chemicals and readymade garments) registered negative or near zero growth rates during 2015-16.
- The **absence of product patents** till the revision of the patent law in 2005 had helped India build the capability to manufacture of generic drugs that are substitutes for more expensive branded products.



- the industry had found a foothold in the patent-expired, generic drug market that accounts for around a third of the \$1 trillion plus global market for pharmaceutical products. This was reflected in high export growth figures, but those growth rates have collapsed more recently.
- in recent years, special circumstances have not only affected exports of some commodities, but because of the **low value on average of India's export trade**, allowed these 'special category' goods to find a slot among India's principal exports for a brief period. Typical examples are iron ore, rice and petroleum products

#### Way forward:

- India needs to take a hard look at its choices. India must move fast to renew its stalled trade negotiations with the European Union, RCEP etc.
- There is a need to focus on labour-intensive exports such as agriculture, textiles, footwear and tourism
- The **revealed comparative advantage (RCA)**, a measure of international competitiveness, for some of India's key export items has declined in the past decade should be increased as Most of these sectors have large employment multipliers.
- Creating global competitiveness and doing all that it takes to do so, including abandoning conventional ways of thinking, cannot be delayed.
- Better-functioning factor markets and reducing costs for businesses are overdue.
- Smarter, creative policies for developing and nurturing the nation's industrial and technological capacities need to be crafted.
- We must shun product- and market-specific incentives (which run afoul of World Trade Organization rules), but focus on regional or cluster subsidies, which benefit all producers, small or large, domestic or export oriented.
- steps including improving purchasing power across the board, bringing out favourable tax policies for the middle class, increasing investment and attracting FDI as well as maintaining global competitiveness.
- Economic nationalism and greater ambition is the need of the hour.
- Lastly, we should be committed to open borders, notwithstanding the pressure to raise trade barriers. It is not by protection that domestic industry will become world leaders in competitiveness. And that's an absolute prerequisite to winning in world markets.

Tourism has the potential to be one of the main pillars of India's economy. Examine. (250 words)

*The Hindu*

**Why this question:**

*As the fourth largest city in the Tamilnadu, Tiruchi — projecting a fine blend of tradition and modernity — serves as a good base for visitors' keen on exploring tourist destinations in central Tamil Nadu. Yet a lot of potential has been left untapped, rue a section of stakeholders in tourism and travel industry.*

**Key demand of the question:**

*The question expects us to highlight the potential of tourism sector in India, the shortcomings in*



*the sector, the steps that India needs to take to boost tourism in the country. Finally, we need to mention the impact of focussing on tourism sector in India.*

*Directive word*

*Examine – When asked to ‘Examine’, we must look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications.*

*Structure of the answer*

**Introduction:**

*Mention that there was a marginal growth of 5.6% in Foreign Tourist Arrivals (FTAs) during the period January-November 2018, as compared to the same period of the previous year. India’s Tourism is ranked at 7th position in terms of its contribution to World GDP in World Travel and Tourism Council’s report in 2017.*

**Body:**

*Discuss the status of tourism in India. Give facts and figures related to revenue and forex earnings, tourist footfalls. Also highlight the diverse nature of tourist circuits in the country. Highlight the areas where work is needed – security, infrastructure, connectivity and so on. give details of these three aspects*

*Mention the steps taken by the government in improving the aforementioned areas through schemes and programmes like PRASAD, e tourist visa etc.*

*Discuss the steps that need to be taken still to fill in the gaps*

**Conclusion:**

*Give your view on the potential of tourism sector in India and the impact it can have.*

**Introduction:**

India is a large market for travel and tourism. It offers a diverse portfolio of niche tourism products – cruises, adventure, medical, wellness, sports, MICE, eco-tourism, film, rural and religious tourism. India has been recognized as a destination for spiritual tourism for domestic and international tourists.

Travel and tourism industry contributed a tenth of India’s GDP in 2018 and accounts for 42 million jobs in the country, report says. In India, over Rs 16 trillion were created by this sector alone. The same is expected to double by 2029, reaching Rs 35 trillion mark. Also, the industry has given a major boost to the global economy as well with it contributing over 10% to the global GDP.

**Body:**

**India’s Tourism Industry:**

- Currently India is the seventh largest tourism industry.
- 29 states, 4000 cities, rich history, incredible diversity
- India all set to become third largest in next 10 years.
- Tourism contribution to economy to double
- Expected to add 5.23 crore jobs in 2028
- India doing well in medical tourism, business tourism, ecological tourism, pilgrimage tourism, historical tourism, adventure tourism.

**Tourism has the potential to be one of the main pillars of India’s economy:**

**Reasons why rural tourism need to be promoted:**

- Seeing the stressful urban lifestyles leading towards “counter-urbanization” syndrome
- Growing curiosity of urban people regarding rural culture and heritages
- Downfall of income level from agriculture and related works
- Lack of alternative way outs for earning sufficient money
- Scope for new business opportunities
- Changing attitude in Indian and global tourists behaviour in terms of nature awareness and increasing demand for niche tourism and green products. So it is evident that the future of Rural Tourism in India is going to be very promising one.

**Maintaining the sustainable livelihood:**

- It has a great impact in case of maintaining the sustainable livelihood of the rural population, promoting local culture and heritages, empowering local women, alleviating poverty, conserving and preserving natural resources, improving basic rural infrastructure, adopting new work culture and overall developing a better impression of locality and its people in tourists’ mind.

**Reduces migration:**

- Tourism facilitates the declining areas to be developed with basic infrastructure facilities and provides the host community alternative ways of employment and side by side it reduces out-migration.
- It fosters a closer relationship between city dwellers and rural communities.

**Alternative Way of Earning:**

- Tourism can be a potential tool to reduce over-dependency on cultivation especially in rural areas and it contributes to the overall economic development of an area that would otherwise be deprived.

**Employment:**

- Tourism creates a large number of semi-skilled jobs for the local population in not only local hotels and catering trades but also in other fields like transport, retailing, heritage interpretation etc.
- Moreover, it ensures revival of traditional arts, crafts, building art etc. and brings marketing opportunity for rural producers to sell their products directly to the tourists.
- It allows alternative sources of earning opportunities from non-agricultural sectors that improve living standards of the rural dwellers to some extent.

**Job Retention:**

- Cash flows generating from rural tourism can assist job retention in services such as retailing, transport, hospitality, medical care etc. It provides additional income for farmers, local fishermen and local suppliers
- Alternative Business Opportunities



- Tourism generates new business opportunities through developing close relationships with tourist facilities.
- For example, a number of tourists love to taste local cuisines of different tourist spots. Therefore, any restaurant serving ethnic foods can also attract tourists though many of these restaurants are not directly related to tourism business.

**Poverty Alleviation:**

- Rural Tourism is being admired all over the world because such form of tourism can shape up rural society both by economic and social terms.
- It brings both monetary and social benefits to the rural people.
- It alleviates poverty by creating alternative sources of earning.

**Empowerment of Localities**

- Tourism cannot be flourished without the involvement of local people in it.
- Accommodation facilities are being provided by local hotel owners whereas local suppliers supply food and beverages to the local hotels.
- Local producers produce locally made products as per tourists' demand and earn money by selling them in the local market.
- To entertain tourists, local organizers conduct different cultural programmes where local performers exhibit their art and culture through live performance.
- Not only that, people also become engaged in different decision-making processes. All such engagement actually empowers the localites.

**Entrepreneurial scope:**

- Tourism has increased career options for the young entrepreneurs.

**Arts and Crafts Sale:**

- Arts and crafts are the evidence of local culture and heritages of a community belonging from any region or any nation. The urban tourists, wherever they go, generally prefer to have a collection of local arts and crafts to make their trip-experience a remembering one.
- Such tendency motivates them to purchase local arts and crafts from the local producers and artists.
- Side by side it encourages the local community to sell their products in local market. Such practice opens an alternative way of earning to the rural people.

**Environmental Improvement:**

- Environmental improvements such as village paving and traffic regulation schemes, sewage and litter disposal can be assisted by tourism revenues and political pressures from tourism authorities.
- These help develop pride of place, important in retaining existing population and businesses, and in attracting new enterprises and families.

**Heritage Preservation:**

- Tourism brings a strong sense of emotion in everyone's (both community and tourists) mind to preserve and reserve the local culture and heritages to make any place attractive for the tourists to visit it and also for the host community to live in.
- Such sense is maintained through rural museums that play a significant role in local heritage preservation.

**Source of Foreign Exchange Earnings:**

- Tourism is an important source of foreign exchange earnings in India. This has favourable impact on the balance of payment of the country.
- The tourism industry in India generated about US\$100 billion in 2008 and that is expected to increase to US\$275.5 billion by 2018 at a 9.4% annual growth rate.

**Challenges tourism industry faces:**

- **Communication Skill:** The difference in languages and lack of basic education are the two basic obstacles.
- **Legislation Problem:** Generally, owners of licensed accommodation units pay taxes to the government. But it is kind of burden for the poor rural marketers to pay tax at a regular basis as they lack sufficient financial backing and many a time they face losses in business because of seasonal demand.
- **Insufficient Financial Support:** Most of the tourism marketers especially in rural areas come from the poor family background and not every time they are financially supported by the local banks or local government bodies through loan facilities.
- **Lack of Trained Human Resource:** Lack of trained human resource is a common issue that affects directly the tourism and hospitality industry badly. Moreover, the trained people from urban areas normally are not interested in going to rural areas to work due to lack of basic infrastructure facilities.
- **Lack of Proper Physical Communications:** Proper drinking water, sufficient electricity, good telecommunication, safety and security, etc. are the few basic needs of a tourist while he or she is visiting any place individually or in a group. It is unfortunate but true that nearly half of the villages in this country do not have all-weather roads and above said basic facilities.
- **Deprivation, Improper Communication Facilities and Embryonic Stage of Rural Market:**
- Markets are often characterized by population and majority of them still come under below Poverty Line. These villagers are less involved in showcasing their culture and heritages in front of the tourists visiting their places as they are not very much aware of the potentiality of rural tourism that can act as an alternative source of earning
- Moreover, most of the rural markets are underdeveloped with lots of hindrances like absence of proper mode of surface transportation, lack of basic infrastructure etc.

**Steps to promote Tourism:**

- Atithi Devo Bhavah Campaign



- Incredible India Campaign
- Swadesh Darshan Scheme
- PRASAD
- Reforms in Visa process
- Online option of applying for tourist visa
- E-visa facility available to citizens of 163 countries
- India ranks 8th among 100 countries on most valuable nation brands list

**Way forward:**

- Government should educate people to enhance their communication skill, create sense of ownership, make them aware of the value of their culture and heritages and motivate them to take active participation
- Encouraging local entrepreneurs, private enterprises, investors and other tourism stakeholders to come under a common umbrella for basic rural infrastructure development activities is also essential.
- Product development as per tourists changing demands.
- Proper planning and conservation of natural resources and local heritages for the sustainable development of Tourism.
- Educate the people and develop their communication skill and language proficiency.
- Creating awareness regarding rural tourism benefits.
- Democratic movement that helps rural people at all levels to participate in tourism development activities.
- Conduct regular Government and/or private sponsored skill development programmes in identified rural area to train the rural people appointed in tourism business.
- Encourage young and potential business entrepreneurs for their businesses.
- Government initiatives to support the young entrepreneurs by providing loans.
- FDI or Private investment to introduces latest technology.
- Taking Tourism Circuit development approach for overall regional development.
- Take necessary safety and security measures for the tourists.
- Share information to make better business decisions.
- Any museum or interpretation centre can be set-up to provide information to tourists.

As the years rolled by the “Twin Balance Sheet problem” morphed into a “four balance sheet challenge” — comprising banks, infrastructure, plus NBFCs and real estate companies — for the economy. Discuss. (250 words)

*[Indian Express](#)*  
*[Economic Time](#)*



### Hindustan Times

#### **Why this question:**

India is facing a “Great Slowdown” with its economy headed for intensive care unit primarily due to a “second wave” of the twin balance sheet crisis at banks, former Chief Economic Adviser Arvind Subramanian has said. In a new working paper published by Harvard University’s Center for International Development last week, Arvind Subramanian, who was India’s chief economic advisor between October 2014 and August 2018, and Josh Felman, former IMF resident representative to India, give a detailed understanding of how the Indian economy lost its way.

#### **Key demand of the question:**

The question is in the backdrop of India’s Great Economic Slowdown. One must provide the details for the economic slowdown and how the twin-balance sheet is now a four-balance sheet problem. Provide measures to tackle the issue.

#### **Directive:**

Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

#### **Structure of the answer**

##### **Introduction:**

In brief explain what the economic slowdown in India. TBS-1 was about bank loans made to steel, power, and infrastructure sector companies during the investment boom of 2004-11 turning bad. TBS-2 is largely a post-demonetization phenomenon, involving non-banking financial companies (NBFCs) and real estate firms.

##### **Body:**

Explain about the twin-balance sheet syndrome.

Now move on to discuss the reasons for the TBS to become four balance sheet challenge

Since the Global Financial Crisis, India’s long-term growth has slowed as the two engines propelling rapid growth — investment and exports — sputtered.

Today, the other engine — consumption — has also stalled. As a result, growth has plummeted precipitously over the past few quarters

Dwelling into the current problem facing the economy, he said, after demonetization, considerable amounts of cash made their way to banks, who on-lent a major part of that to NBFCs. The NBFCs, in turn, channelled this money to the real estate sector. By 2017-18, NBFCs were accounting for roughly half of the estimated Rs 5 lakh crore of outstanding real estate loans.

The collapse of IL&FS in September 2018 was a “seismic event” not only because of the Rs 90,000 crore-plus debts of the infrastructure-cum-lending behemoth, but also its “prompting markets to wake up and reassess the entire NBFC sector

Provide measures to tackle it.

##### **Conclusion:**

Conclude by suggesting what should be the way forward.

##### **Introduction:**

India is facing a “Great Slowdown” with its economy headed for intensive care unit primarily due to a “second wave” of the twin balance sheet crisis at banks, former Chief Economic Adviser Arvind Subramanian has said. In a new working paper published by Harvard University’s Center for International Development last week, Arvind Subramanian, who was India’s chief economic advisor between October 2014 and August 2018, and Josh Felman, former IMF resident representative to India, give a detailed understanding of how the Indian economy lost its way. TBS-1 was about bank loans made to steel, power, and infrastructure sector companies during the investment boom of 2004-11 turning bad. TBS-2 is largely a post-demonetization phenomenon, involving non-banking financial companies (NBFCs) and real estate firms.

**Body:**

According to the paper, Indian economy is facing both **structural** (that is, more long-term issues related to the overall framework of the economy such as the flexibility or inflexibility of labour laws etc.) and **cyclical** (that is, more short-term issues such as a bad monsoon that disrupts production of food articles etc.) **challenges**.

**Twin-balance sheet problem:**

- In the Economic Survey of 2017-18 that the economy was facing a TBS problem. The two balance sheets he referred to belonged to **the Indian banks** (especially public sector banks or the government-owned banks) and the **corporate sector**, respectively.
- The balance sheets of Indian banks were burdened by a high proportion of non-performing loans and the balance sheet of corporates were clogged because they had over-borrowed and were unable to pay.
- The origins of India's TBS was traced to the economic boom that happened between 2005 and 2009.
- This was a period when economic prospects were rosy and the economy was growing at near double-digit growth rates.
- As such, companies threw caution to the wind and borrowed heavily in the hope of making profits in the future.
- The banks, especially the government-owned ones, too, ignored prudential norms and lent a lot of money to companies in the hope that this would help boost economic growth.
- The Economic prospects collapsed quite sharply after the Global Financial Crisis (GFC) and a high proportion of companies found that their projects were no longer viable.
- The end result was that the companies were left with huge loans they could not pay back in time and the banks were left with huge loans that had turned duds.
- This essentially meant that neither the Indian companies were in position to invest nor were the Indian banks in a position to lend.

**Economy kept going from 2014 to 2018:**

- even though the TBS problem remained unsolved yet, thanks to a sharp fall in crude oil prices, Indians experienced an income boost.
- government funded economic activity in the country not directly but indirectly through government backed institutions such as Food Corporation of India and National Highways Authority of India.
- These are called "off-budget" items which should ideally be counted in the fiscal deficit but are not.
- India's growth was boosted by a lending spree provided by non-banking financial companies (NBFCs) like IL&FS and DHFL.
- NBFCs took over the leading role of lending to the economy because banks were still struggling with NPAs and were largely unwilling to lend directly to businesses.



- The credit provided by NBFCs fuelled both private consumption and business investment, and through this route fuelled GDP growth.
- The authors state that these factors papered over the disruptions caused by demonetisation and GST introduction.

#### Towards “Four Balance Sheet” challenge:

- In short, there are two broad but interlinked reasons. One, the unresolved TBS problem, and two, the fall of NBFCs and the real estate sector. Together, they make for the **Four Balance Sheet Challenge for the Indian economy**.
- even after the introduction of the Insolvency and Bankruptcy Code (IBC) in December 2016. The data shows that the IBC resolution has been much slower than expected. Moreover, the recovery rates are nowhere near what were hoped for.
- while the unresolved TBS problem provided a progressively weakening ecosystem of banks and companies, the collapse of some of the leading NBFCs has proven to be trigger for the sharp growth deceleration.
- ILFS was a behemoth, with Rs. 90,000 crores of debt, so its failure sent shockwaves throughout the financial system.
- The failure was completely unexpected, prompting markets to wake up and re-assess the entire NBFC sector.
- Much of the NBFC lending had been channelled to one particular sector, real estate. And that sector itself was in a precarious situation.
- The real estate story is about builders launching numerous projects since the start of mid-2000s in the hope that these flats would be lapped up.
- But after the Global Financial Crisis, the demand for flats as well as bank funding for builders collapsed.
- The real estate sector was unable to pay back to the NBFCs, which, in turn, starting defaulting.

#### Measures needed:

- The first major action — almost a pre-condition for righting the economy — could be a **Data Big Bang**, which instil confidence and produce a reliable basis for policy making.
- This must comprise the **publication of unreleased reports together with a strategy for improving official statistics in at least three areas: the real sector** (GDP, consumption, and employment), **fiscal accounts**, and **stressed assets** in the banking system.
- A new asset quality review to cover banks and NBFCs must be conducted.
- Also changes to the Insolvency and Bankruptcy Code (IBC) be made to ensure that participants actually have incentives to solve the problem.
- Creation of two executive-led public sector asset restructuring companies (bad banks), one each for the real estate and power sectors, while at the same time strengthening oversight, especially of NBFCs.



- Recapitalization of banks should be linked to resolution and reforms such as shrinking public sector banking should be undertaken.
- The private final consumption expenditure, or spending by individuals, government spending, private investment and net exports. These engines need a spark in the upcoming Budget to be presented on February 1.

‘Government has no business being in business’. Examine in light of the India’s approach to disinvestment since liberalisation. Analyse whether there is a need to relook at the policy of disinvestment? (250 words)

*The Hindu*

*The Hindu Business Line*

**Why this question:**

Last month, the Cabinet approved sale of the government’s stake in Bharat Petroleum Corporation Limited, a navratna public sector company with oil refining and marketing operations. BPCL’s stake alone is expected to raise about ₹60,000 crore for the exchequer this year, and given the fiscal pressures the government is facing on the tax revenue front, such large-scale disinvestment will help.

**Key demand of the question**

One needs to examine the India’s path of disinvestment since liberalisation, discuss the macro features of the policy of disinvestment and analyse whether there is a need to have a relook at it.

**Directive word**

**Examine** – When asked to ‘Examine’, we have to look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications.

**Analyse** – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.

**Structure of the answer**

**Introduction:**

In a few introductory lines brief define the disinvestment. Give the context of recent sale of stakes in BPCL.

**Body:**

The question must discuss the following points:

Present the evolution of disinvestment in India.

Discuss how the disinvestment has fared and loopholes/challenges for disinvestment.

Mention the cases of air India sale, and the hesitant approach in case of IDBI etc. shows the reticence of government towards disinvestment.

Examine whether disinvestment has yielded results. Whether private management can take PSUs to bigger scales.

Also discuss why there is a need to remain cautious with respect to disinvestment and measures to attain the same.

**Conclusion:**

Give a balanced way forward.

**Introduction:**

Disinvestment, or divestment, refers to the act of a business or government selling or liquidating an asset or subsidiary or the process of dilution of a government’s stake in a Public Sector Undertaking (PSU). Last month, the Cabinet approved sale of the government’s stake in Bharat Petroleum Corporation Limited, a navratna public sector company with oil refining and marketing operations. BPCL’s stake alone is expected to raise about ₹60,000 crore for the exchequer this year, and given



the fiscal pressures the government is facing on the tax revenue front, such large-scale disinvestment will help.

**Body:**

**India's approach to disinvestment since liberalisation:**

- In the **Interim Budget of 1991-92**, it was announced that the Government would disinvest up to 20% of its equity in selected PSEs in favour of mutual funds and financial and institutional investors in public sector.
- In the **Budget speech of 1992-93**, the cap of 20% was reinstated and the list of eligible investors was enlarged to include FIIs, employees and OCBs.
- In April **1993**, the Rangarajan Committee recommended disinvesting up to 49% of PSEs equity for industries explicitly reserved for the public sector and over 74% in other industries. But the then Government did not take any decision on the Committee's recommendations.
- In **1996**, as per the Common Minimum Programme (CMP), the Budget speech of 1996-97 announced the setting up of Disinvestment Commission for 3 years (For more details about the Disinvestment Commission, click here). CMP also emphasized adding more transparency to the disinvestment process and examine the non – core areas of public sector.
- In the **Budget speech of 1998-99**, it was announced that the Government shareholding in CPSEs should be brought down to 26% on case-to-case basis, excluding strategic CPSEs where the Government would retain majority shareholding. The interest of workers was to be protected in all the cases. For this purpose, on 16 March 1999, the Government classified the PSEs into Strategic and Non-Strategic areas. It was decided that Strategic PSEs would be those in areas of:
  - Arms and ammunition and allied items of defence equipment, defence aircraft and warships
  - Atomic energy (except in the areas related to the generation of nuclear power and applications of radiation and radio-isotopes to agriculture, medicine and non-strategic industries)
  - Railway transport
  - All other PSEs were to be considered Non-Strategic.
- In the **Budget speech of 1999-2000**, it was announced that the Government would continue to strengthen the Strategic units and “privatizing” the Non-Strategic ones through gradual disinvestment or strategic sale and devise viable rehabilitation strategies for weak units.
- **The 2000-01 Budget speech** focused on restructuring and revival of viable CPSEs, closure of PSEs which cannot be revived; bringing down Government shareholdings in Non-Strategic CPSEs to 26% or lower, if necessary, and protection of the interest of workers. The receipts from disinvestment would be used for the social sector, restructuring of CPSEs and for retirement of public debt.



- In the suo motu statement of **2002**, specific aim was given to the Disinvestment Policy- modernization and upgradation of PSEs, creation of new assets, generation of employment and retiring of public debt.
- In the **Budget speech of 2003-04**, the Government announced details regarding the setting up of Disinvestment Fund and Asset Management Company to hold, manage and dispose the residual holdings of Government.
- In **2004**, with the change in the Government, there was a change in the outlook of Disinvestment Policy.
- In **2005**, the government formed a National Investment Fund or NIF, to which the proceeds of disinvestment were channelled. The mandate of the Fund, managed by professional investment managers, was to utilise 75% of annual funds in social sector schemes to promote education, health and employment.
- But with the **economic slowdown of 2008-09**, and later a drought, this was waived for three years — and later, in **2013**, restructured to provide flexibility in using the Fund.
- The NDA government has enjoyed the best of market conditions, with equities soaring in its first year, but like many previous governments, is yet to carry out asset sales consistently over a fiscal year — pushing it till the end, with resultant impact on valuation and proceeds.

#### **India's current disinvestment policy (2014 onwards):**

- Public Sector Undertakings are the wealth of the Nation and to ensure this wealth rests in the hands of the people, promote public ownership of CPSEs
- While pursuing disinvestment through minority stake sale in listed CPSEs, the Government will retain majority shareholding, i.e. at least 51 per cent of the shareholding and management control of the Public Sector Undertakings
- Strategic disinvestment by way of sale of substantial portion of Government shareholding in identified CPSEs upto 50 per cent or more, along with transfer of management control.

#### **Outcome of disinvestment policy:**

- While strategic sale deals in the past have seen a few mis-steps, they've also yielded convincing success stories like Hindustan Zinc's, which has seen a hundred-fold increase in its profits on the back of a six-fold expansion in capacities, since its takeover by Vedanta in 2002.

#### **Need to relook at the policy of disinvestment:**

- Government has mostly used disinvestment for fiscal reasons rather than growth objectives.
- Process of disinvestment is not favoured socially as it is against the interests of socially disadvantaged people.
- Loss making units don't attract investment so easily.
- Over the years the policy of divestment has increasingly become a tool to raise resources to cover the fiscal deficit with little focus on market discipline or strategic objective.



- Government presence in non-strategic sectors not only distorts competitive dynamics for private players, it also results in consumers and taxpayers bearing the brunt of inefficient PSU operations.
- Sometimes with the emergence of private monopolies consumer welfare will be reduced.
- Mere change of ownership from public to private does not ensure higher efficiency and productivity.
- It may lead to retrenchment of workers who will be deprived of the means of their livelihood.
- Private sector governed as they are by profit motive has a tendency to use capital intensive techniques which will worsen unemployment problem in India.

**Way forward:**

- Define the priority sectors for the government based on its strategic interests.
- Investment in PSU's has to be in terms of generation of adequate social and strategic returns.
- Financial return cannot be the sole reason for investment in PSUs. They have to serve social/strategic purposes. The key role of a PSU is to maintain competition in the sector and limit excessive monopoly.
- Government ownership is required for sectors with strategic relevance such as defence, natural resources, etc. The government should, therefore, exit non-strategic sectors such as hotels, soaps, airlines, travel agencies and the manufacture and sale of alcohol.
- The outlook towards strategic divestment should move from the current policy of emphasizing on public ownership and retaining majority shareholding to looking at the strategic interest.
- It is important to realize that ownership is not a substitute for regulation. Therefore, instead of creating PSUs in non-priority sectors, the government should look into strengthening the regulatory framework that ensures efficient market conditions. The regulations should also ensure that the basic necessities of the consumers are met.

Stagflation is said to happen when an economy faces stagnant growth as well as persistently high inflation. Is India facing stagflation? Analyse with suitable justifications for your answer. (250 words)

*Indian Express*

**Why this question:**

*Last week, Finance Minister Nirmala Sitharaman refused to comment on queries on stagflation. But with fast decelerating economic growth and sharply rising inflation, there is a growing murmur about India facing stagflation.*

**Key demand of the question:**

*One has to analyse the context of Stagflation currently witnessing the Indian economy.*

**Directive:**

*Analyze – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.*

**Structure of the answer:****Introduction:**



*In first define what stagflation is – Stagflation is a portmanteau of stagnant growth and rising inflation. Typically, inflation rises when the economy is growing fast.*

**Body:**

*Explain the concept of stagflation in detail.*

*Discuss the past experiences of stagflation in the Indian economy; The most famous case of stagflation happened in the early and mid-1970s when OPEC (The Organization of Petroleum Exporting Countries), which works like a cartel, decided to cut supply and sent oil prices soaring across the world. On the one hand, the rise in oil prices constrained the productive capacity of most western economies that heavily depended on oil, thus hampering economic growth.*

*Discuss what needs to be done.*

**Conclusion:** *Conclude with way forward.*

**Introduction:**

Stagflation, as defined by Princeton economist **Alan S. Blinder**, is “the simultaneous occurrence of economic stagnation and comparatively high rates of inflation”. It is said to happen when an economy faces stagnant growth as well as persistently high inflation

**Body:**

**Stagflation:**

- Stagflation is a portmanteau of stagnant growth and rising inflation.
- Typically, inflation rises when the economy is growing fast.
- That’s because people are earning more and more money and are capable of paying higher prices for the same quantity of goods.
- When the economy stalls, inflation tends to dip as well – again because there is less money now chasing the same quantity of goods.
- Stagflation is said to happen when an economy faces stagnant growth as well as persistently high inflation.
- That’s because with stalled economic growth, unemployment tends to rise and existing incomes do not rise fast enough and yet, people have to contend with rising inflation.
- So people find themselves pressurised from both sides as their purchasing power is reduced.

**Current economic scenario in India:**

- According to the National Statistical Office (NSO), the Consumer Food Price Index increased from 5.11% in September 2019 to 7.89% in October 2019.
- The retail price inflation rate reached an annual high at 4.62%. The government itself has admitted that growth has slowed.
- Over the past 6 quarters, economic growth in India has decelerated with every quarter.
- The recent NSO estimates of gross domestic product (GDP) for the second quarter of 2019-20 reported a further reduction in the growth rate of GDP to 4.5%, the lowest since 2012-13.



- India's gross domestic product (GDP) growth has dropped to 4.5% in the July-September quarter of 2019-20, a free fall from the government's ambitious call for a double-digit growth not so long ago.
- The fall has been sudden although not entirely unexpected. In the first quarter of 2016-17, India registered a spectacular GDP growth of 9.4%. Today, it's struggling at a 26-quarter low
- Inflation for the rest of the financial year is expected to stay above the RBI's comfort level of 4%.
- So, with growth decelerating every quarter and now inflation rising up every month, there are growing concerns of stagflation in India

#### **Indian economy and stagflation:**

- Although it appears so at the first glance, India is not yet facing stagflation.
- India is not growing as fast as it had in the past or as fast as it could.
- However, it is still growing at 5%, and is expected to grow faster in the coming years.
- India's growth has not yet stalled and declined.
- In other words, year on year, India's GDP has grown in absolute number, not declined.
- However, it is true that retail inflation has been quite high in the past few months.
- But, the reason for this spike is only temporary.
- It has been caused by a spurt in agricultural commodities after some unseasonal rains.
- So, with better food management, food inflation is expected to come down.
- The core inflation (inflation without taking into account food and fuel) is still in the safe zone.
- Moreover, retail inflation has been well within the RBI's target level of 4% for most of the year.
- So, a sudden spike of a few months, which is likely to flatten out in the next few months, is a premature criterion for the stagflation claims or concerns.

#### **Measures taken by the Government now:**

- First it withdrew the super-rich surcharge levied on foreign portfolio investors and then rolled out a series of measures, including corporate tax cut and the proposal to set up a Rs 25,000 crore fund to revive the realty sector.
- The RBI, for its part, has already lowered its benchmark interest rate (repo rate) five times during this calendar year, taking the cumulative cuts to 135 basis points, from 6.5% in January to 5.15% in October, even as the Consumer Price Index (CPI)-based inflation shot.
- To avoid further economic turbulence, the Centre has pressed the pause button on banning single-use plastics as well as the quick replacement of fossil fuel-guzzling automobiles with electric vehicles.

#### **Structural measures needed:**



- The Reserve Bank of India (RBI) can quickly increase the amount of cash in the economy.
- Then banks, especially public sector banks, can use that together with interest rate policy to provide easy credit. A larger supply of credit should lead to cheaper credit.
- This will have to be supported by reduction of the administered price of credit, which is the RBI's repo rate.
- There could be hurdles to credit off-take due to fiduciary or prudential reasons, so those need to be tackled. Same for mismatched expectations.
- Higher liquidity and disposable income, and increased employment can pull us out of the quagmire.
- reduction and reform of direct individual and corporate taxes, and indirect taxes.
- Labour laws also need to be amended to generate employment.
- The government needs to hold granular conversations with the private sector.
- A skills and industrial policy which can make full use of an abundant pool of reasonably priced labour

#### **Conclusion:**

The current economic slowdown is an outcome of supply-side constraints and not demand-side constraints. We need to produce things that Indians earning minimum wages can afford, so that the aggregate demand will increase.

Time has come to have a re-look at the whole policy for Dairy sector and move from white revolution 2.0 to 3.0 and device steps so that the interests of the Indian farmers and consumers are protected. Elucidate in the backdrop of the statement where in unveiling White Revolution 2.0 is projected to amalgamate the milk production in the country and make India as a global leader. (250 words)

*Financial Express*

*Why this question:*

*Niti Aayog estimates that the country is expected to increase its milk production to 330 million metric tonnes (mt) in 2033–34 from the current level of 176 mt.*

*Thus the question aims to analyse the prospects of white revolution 3.0 in the country.*

*Key demand of the question:*

*One must discuss the prospects and future of the Dairy sector and the possibility of moving forward to white revolution 3.0.*

*Directive:*

*Elucidate – Give a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.*

*Structure of the answer:*

*Introduction:*

*In 2019, India emerged as the largest milk producer and consumer. Discuss the facts brought out by the NITI Aayog.*

*Body:*

*Explain the prospects of white revolution in the country.*

*Bring out the transition from past to present.*



*Explain the key features of white revolution 2.0 and discuss in detail how India can move forward to white revolution 3.0.*

*Discuss the possible challenges and how they can be addressed.*

**Conclusion:**

*Conclude with way forward.*

### **Introduction:**

The huge increase in milk supply through concerted efforts on a cooperative level is known as the **White Revolution**. Forty-eight years after **Operation Flood** – that made India the world's largest milk producer – India continues to be on the lookout for the next breakthrough in agricultural produce and productivity. White Revolution 2.0 has effectuated dairy firms' marketing strategy for milk and milk products, resuscitating the outlook of product-market mix.

### **Body:**

#### **Milk production in India:**

- India emerged as the largest milk producer and consumer in 2019.
- Niti Aayog estimates that the country is expected to increase its milk production to 330 million metric tonnes (mt) in 2033–34 from the current level of 176 mt.
- Currently India has 17% of world output of dairy products, surpassing USA in 1998 as world's largest producer of dairy. All this was achieved by operation Flood which was launched in 1970's.
- According to market research company IMARC, the milk and dairy products industry reached Rs7.9 lakh crore in 2017.
- In 2016, the milk sector alone was valued at Rs3 lakh crore and is projected to scale Rs7.3 lakh crore by 2021.
- The per capita milk availability in India has gone up from 126 gm per day in 1960 to 359 gm per day in 2015.

#### **Potential of White Revolution 2.0:**

- Post-liberalisation and Milk and Milk Products Order (2002) was abolished, dairy businesses observed a radical shift toward a strategic product diversification towards functional and traceable foods like nutrition-based health drinks, packaged milk products (such as paneer), and frozen/probiotic products and so on.
- Market structure, conduct, and performance has dramatically changed post 2000s. Besides the established cooperative federations like Amul, other state cooperative federations and multinationals (namely, Nestle, Danon, and Lactalis) are aggressively harnessing the untapped business potential.
- White revolution 2.0 can strengthen the scope of vertical integration between cattle feed industries, dairy machinery firms, producer cooperatives unions, state marketing federations, advertising and marketing firms, logistics and distribution agencies.



- The dairy industry in India is unique. With six lakh villages housing about 90 crore people, dairying is not just a large economic activity but also an integral part of our social and cultural heritage
- Can help small farmers to reduce dependence on crop sales
- Can increase source of income of farmers in low yielding areas like Marathwada, Bundelkhand etc
- India is surrounded by countries and regions that are milk-deficient, such as the Middle East, South Asia and Southeast Asia.
- There is ample scope for export of value-added milk products to Bangladesh, China, Singapore, Thailand, Malaysia, Philippines, Japan, the UAE, Oman and other gulf countries, all of which are located close to India.
- At present, the population of South Asia alone is growing at 1.3 per cent a year; it is likely to be 2.2 billion by 2050. This presents an opportunity for India's dairy industry

#### **Challenges to White Revolution 2.0:**

- The Indian cows and buffaloes are generally low yielding and non-descript because of the lack of healthy cattle-feed and fodder, tropical heat and diseases.
- Despite lack of water and gradually declining arable land, dairy farming is on the rise.
- Free trade agreements, or FTAs, for instance, will allow EU government-subsidised products to be imported from Europe with little entry barriers. This will pose a big challenge to cow-farmers.
- Due to unhygienic production, handling conditions and high temperatures, the quality of milk is adversely affected.
- Because of inadequate marketing facilities, most of the marketable surplus is sold in the form of ghee which is the least remunerative of all milk products.

#### **Measures needed:**

- Increase in the market share depends on how dairy firms' capabilities and their resources are utilised given the opportunities and threats emanating from emerging markets economies.
- Contract/corporate dairying and emerging global dairy trade are required to rope in dairy supply chains stakeholders in order to expand their outreach and "on-the-go" product positioning into the target segment.
- Digital technology-enabled dairy firms need to identify their compatible partners and competitors for co-creation through product-process innovation via relationship/value-based marketing.
- Freshness in milk, and convenience to store milk or milk products can be a technology innovation brought in by large dairy firms in association start-ups.
- Education and Training at Panchayat level for small and medium size farmers
- Subsidizing cattle production and encouraging cattle markets



- Facility of logistics for produced milk
- Improved Veterinary facility specially in artificial insemination of cattle
- Encouraging private sector firm to procure dairy produced at rural level
- Low interest loans for small and medium scale farmers for cattle purchase
- Encouraging rural women to take up animal husbandry
- Insurance of cattle against diseases like Anthrax, Foot and Mouth, Peste des Ruminantes, etc.
- Nurture dairy entrepreneurs through effective training of youth at the village level coupled with dedicated leadership and professional management of farmers' institutions.
- Agricultural practices, sanitation, quality of drinking water & fodder, type and quality of pipelines – all of these need to be aligned to the goal of healthy milk

India Post will have to shed its half-hearted attempts to transform itself into a payments bank if it wants to convert itself into a digitally enabled, pure deposit-taking bank.

Discuss in detail the issues faced by India post and suggest way forward. (250 words)

The Hindu

**Why this question:**

The article explains that If India Post can shed its half-hearted attempts to transform itself into a payments bank and convert itself into a digitally enabled, pure deposit-taking bank; it can render a yeoman service both to the government and small savers of this country.

**Key demand of the question:**

One must explain the trends that have recently witnessed in the Indian post and the challenges it has been facing. Also suggest solutions to address the same.

**Directive:**

**Discuss** – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

**Structure of the answer:**

**Introduction:**

Explain the current case – The confidence that ordinary Indian savers repose in guaranteed return products has been subjected to hard knocks off late.

**Body:**

One must provide for a detailed analysis of the issues and challenges posing the India Post despite it taking the path of digitization, online services.

Discuss the positive prospects it can have in future if the challenges are addressed.

Mention the challenges and concerns currently being faced.

Suggest solutions to the same.

**Conclusion:**

Conclude with way forward.

**Introduction:**

The Department of Posts (DoP), trading as **India Post**, is a government-operated postal system in India, which is a subsidiary of the Ministry of Communications. Generally called “the post office” in India, it is the most widely distributed postal system in the world. Founded in 1854 by Lord



Dalhousie who laid the foundation for the modern Indian postal service. With **155,015 post offices**, India Post has the most widely distributed postal network in the world. The country has been divided into **23 postal circles**, each circle headed by a Chief Postmaster General.

### Body:

#### Issues with the IndiaPost:

- **Issue of financial literacy:**
  - it is quite impossible to follow for a majority of households in India which have a subsistence level of income and scant access to financial literacy.
  - A survey on financial literacy among Indian savers by the **Tarun Ramadorai committee** in 2015, found that over 30% of savers did not grasp the concept of compound interest.
- **Lack of Options:**
  - Indian savers have felt a need for 10-year or 20-year fixed return instruments to park their long-term money.
  - Investors who would like a longer-term option have just two choices — the Public Provident Fund (PPF, 15 years) and Kisan Vikas Patra (KVP, 9 years), as the Sukanya Samridhi Yojana is restricted to those with a girl child.
  - most post office schemes offer tax breaks on the principal invested under Section 80C but their returns are taxed at income tax slab rates (the only exceptions being PPF and Sukanya Samridhi).
- **Poor customer service:**
  - The foremost reason savers cite in shying away from post office schemes — despite their safety and reasonable returns — is the woefully poor customer service that they need to deal with.
- Most post office schemes offer tax breaks on the principal invested under Section 80C but their returns are taxed at income tax slab rates
- **Lack of Digitization:**
  - India Post continues to rely on archaic modes of working in dealing with customers.
  - Its insistence on a paper application process, old-fashioned passbooks, cheque payments and branch visits ensures a process that is time-consuming and arduous for those seeking to invest their money with it.

#### Measures needed:

- the crying need for Indian savers to have access to simple fixed return products that offer complete safety of capital without their having to dig into balance sheets.
- There is a need for Small savers to have the predictability of a fixed return for the long term. But given their limited savings, they also need early exit options in case they are beset by an emergency.



- Doing away with bureaucratic rules for investors to get their hands on their own money is critical to make post office schemes more attractive to their target audience
- Re-introducing National Savings Certificates in the 10, 15 and 20-year tenors can meet this need while helping the Central government source long-term funds for capital spending.
- IndiaPost must learn from the private organizations who make deposit investing such a seamless experience for their customers.

### Conclusion:

IndiaPost has the potential to convert itself into a digitally enabled, pure deposit-taking bank, it can render a yeoman service both to the government and small savers of this country.

Discuss the concept of monetary transmission mechanism. Explain in what way it can facilitate RBI in ensuring the pass-through of its policy decisions. (250 words)

Economic Times

### Why this question:

The question is based on the concept of Monetary transmission and the article provides a detailed analysis of the concept as applied to the Indian economy.

### Key demand of the question:

Explain and discuss the concept of monetary transmission in detail, explain its importance to the context of Indian economy.

### Directive:

**Discuss** – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

### Structure of the answer:

#### Introduction:

Define what Monetary transmission mechanism is.

#### Body:

The monetary transmission mechanism is the process by which asset prices and general economic conditions are affected as a result of monetary policy decisions. Such decisions are intended to influence the aggregate demand, interest rates, and amounts of money and credit in order to affect overall economic performance.

The traditional monetary transmission mechanism occurs through interest rate channels, which affect interest rates, costs of borrowing, levels of physical investment, and aggregate demand. Additionally, aggregate demand can be affected through friction in the credit markets, known as the credit view. In short, the monetary transmission mechanism can be defined as the link between monetary policy and aggregate demand.

Monetary transmission is the process through which RBI's policy actions reach its effective end goal of tackling inflation and addressing growth concerns.

Take hints from the article and explain why monetary transmission is important to Indian context.

#### Conclusion:

Conclude with the benefits of inculcating such mechanism.

### Introduction:

The monetary policy refers to a regulatory policy whereby the central bank maintains its control over the supply of money to achieve the general economic goals. Since February 2019, the Reserve Bank of India (RBI) has aggressively cut the repo rate. By cutting the repo rate, the RBI has been sending a signal to the rest of the banking system that the lending rates should come down.



The Monetary Policy Committee of the Reserve Bank of India (RBI) decided to keep the interest rate unchanged at 5.15% in the fifth bimonthly policy review (Dec 2019), citing inflation concerns despite economic growth continuing to slow down.

Body:

#### **Monetary policy scenario in India:**

- In India, the process of monetary policy transmission is inefficient.
- For example, between February and December, the RBI cut repo rate from 6.5% to 5.15%.
- But, the interest rate charged by banks on fresh loans fell just 27% of the amount by which the repo rate came down.
- Further, RBI has urged banks to link their lending rates to the repo rate

#### **Reasons for poor monetary policy transmission:**

- Repo rates have little impact on a bank's overall cost of funds.
- Reducing lending rates just because the repo rate has been cut is not feasible for banks.
- This is because, for banks to be viable, there must be a clear difference between the lending rate (charged on loans) and the deposit rate (given on deposits).
- The difference between the two has to be not only positive but also big enough for the bank to make profits.
- Notably, to attract deposits, banks pay a high deposit rate.
- Such deposits make up almost 80% of all banks' funds from which they then lend to borrowers.
- On the other hand, banks borrow a minuscule fraction from the RBI under the repo.
- So even sharply reducing the repo rate does not change the overall cost of funds for the banks.
- In effect, unless banks reduce their deposit rates, they will not be able to reduce their lending rates.
- However, if a bank were to reduce its deposit rates, depositors would shift to a rival bank that pays better interest rates.
- Otherwise, they would park more of their savings in small saving instruments (public provident fund, Sukanya Samridhi Yojana, etc.) that pay much higher interest rates.
- Also, 65% of total deposits are "term" deposits (fixed for a certain duration) and take, on an average, up to 2 years to get repriced at fresh rates.
- So, banks cannot always reduce deposit rates immediately as deposits take longer to get repriced.
- Moreover, if banks are under pressure to reduce the interest rate they charge on new loans, they could possibly push up the interest rates on old loans that allow for such flexibility.

#### **Measures needed:**

Telegram: <https://t.me/insightsIAStips>

Youtube: <https://www.youtube.com/channel/UCpoccbCX9GEIwaile4HLjwA>

Facebook: <https://www.facebook.com/insightsonindia>



- Enabling effective monetary transmission would not only increase the credibility of the Central Bank but also help in strengthening the financial structure.
- Impounding of bank money by RBI is too high with 4% cash reserve ratio carrying no return whatsoever.
- To make transmission work, the least the RBI can do is to reduce CRR.
- Timely transmission of policy rates could be considerably improved if the banking sector's non-performing assets (NPAs) are resolved more quickly and efficiently.
- If the government wants to reduce lending rates, it could focus on bringing down its own fiscal deficit and public sector borrowing.
- At the current low levels of per capita income, the savers are far more risk-averse in India and unwilling to invest in higher-risk instruments other than bank deposits.
- For a repo-linked regime to work, the whole banking system in India would have to shift to that.
- In other words, along with banks' lending rates, their deposit rates too must go up and down with the repo.

The present economic slowdown is a consequence of both cyclical and structural factors. Comment. (250 words)

*The Hindu*

**Why this question:**

*India is now in the midst of a significant economic slowdown, the International Monetary Fund has said, urging the government to take urgent policy actions to address the current prolonged downturn.*

**Key demand of the question:**

*Explain the recent trends being witnessed in the economy and provide for an analysis as to in what way it is the result of both cyclical and structural factors.*

**Directive:**

*Comment— here we have to express our knowledge and understanding of the issue and form an overall opinion thereupon.*

**Structure of the answer:**

**Introduction:**

*Briefly discuss what a cyclic slowdown is; A cyclical slowdown is a period of weak economic growth that occurs at regular intervals. A structural slowdown is a more deep-rooted phenomenon signifying weak economic growth for over a long time.*

**Body:**

*Discuss first the structural factors responsible for these issues ranging from investment, Failure of the Insolvency and Bankruptcy Code (IBC), Unemployment etc.*

*Discuss then the cyclical factors – consumption, savings factor etc.*

*Explain the recent steps taken by the govt. and the RBI.*

*Suggest way forward.*

**Conclusion:**

*Conclude by suggesting solutions and suggestions as to what can be done to address these issues.*

**Introduction:**

According to a research paper by former Chief Economic Adviser Arvind Subramanian, Indian economy is facing both **structural** (that is, more long-term issues related to the overall framework of



the economy such as the flexibility or inflexibility of labour laws etc.) and **cyclical** (that is, more short-term issues such as a bad monsoon that disrupts production of food articles etc.) **challenges**.

**Body:****Reasons for economic slowdown:****Cyclical factors:**

- Poor policy making like FPI surcharge, angel tax, penalizing for non-compliance of Corporate Social Responsibility (CSR) have deterred investments in the economy thereby affecting the GDP growth.
- Tightening monetary and fiscal policies have left little room for the government to increase its spending to pump-prime the economy.

**Shadow banking stress (NBFC crisis):**

- NPAs of Banks and Too Much Debt on corporates affecting investment cycle- NPAs have resulted tightening of lending leading to a freeze on investment by industrial houses and corporates. The IL&FS crisis also triggered the Non-Banking Financial Companies' (NBFC) credit crunch in 2018.
- While the unresolved TBS problem provided a progressively weakening ecosystem of banks and companies, the collapse of some of the leading NBFCs has proven to be trigger for the sharp growth deceleration.
- The failure was completely unexpected, prompting markets to wake up and re-assess the entire NBFC sector.
- Much of the NBFC lending had been channeled to one particular sector, real estate. And that sector itself was in a precarious situation.

**Weaker global demand:**

- India is a net commodity exporter and thus there has been a slump in the volumes of exports due to global slowdown.
- With rising retreat of globalization like Brexit, Trump's protectionist policies and the US-China trade war, global sentiments have remained poor making the prospects of an export led growth bleak.

**Structural factors include:**

- The slowdown is also part of a longer-term structural shift wherein the Economy is shifting gears from the high investment era to a low investment era as well as a transition from being cash-driven economy to a digitally enabled economy.
- Irregular monsoonal pattern causing droughts in some parts and floods in another has severely affected the agricultural output, transportation facilities leading to imbalance in trade of commodities thereby affecting the economic growth.
- Demonetization and GST has led to a collapse in private consumption as consumers suddenly prefer to hoard cash or keep it in the bank and investments have also been



affected mainly by the small and medium businesses (SMEs) as they are forced to withhold inventories until they are compliant with the new rules and regulations.

- The rates of savings and investment in the Indian economy have declined, as also exports and total credit.
- This has led to a slowdown among the major industries, like the automobiles, diamond, textiles industry, and several Micro, Small and Medium Enterprises (MSME) are experiencing a continuous decline, which has led to the retrenchment of 3.5 lakh workers so far.
- Agriculture is in crisis today on account of rising costs of inputs and low prices of produces, and low public investments in this sector.
- Apart from it, there is income stagnation in urban areas.
- The slowdown in consumption is the major worry for India's economic slump (consumption has been the main driver of India's growth).
- There is a sharp fall in Private Consumption and as well as Public Expenditure.

#### Measures needed:

- The Reserve Bank of India (RBI) can quickly increase the amount of cash in the economy.
- Then banks, especially public sector banks, can use that together with interest rate policy to provide easy credit. A larger supply of credit should lead to cheaper credit.
- This will have to be supported by reduction of the administered price of credit, which is the RBI's repo rate.
- There could be hurdles to credit off-take due to fiduciary or prudential reasons, so those need to be tackled. Same for mismatched expectations.
- Higher liquidity and disposable income, and increased employment can pull us out of the quagmire.
- reduction and reform of direct individual and corporate taxes, and indirect taxes.
- Labour laws also need to be amended to generate employment.
- The government needs to hold granular conversations with the private sector.
- A skills and industrial policy which can make full use of an abundant pool of reasonably priced labour

Critically examine the double trouble Indian economy is facing – the problem of decreasing economic growth rate and increasing. (250 words)

*The Hindu*

#### Why this question:

*The article brings out a detailed discussion of the double whammy Indian economy is facing.*

#### Key demand of the question:

*Discuss in detail the double trouble Indian economy is facing – the problem of decreasing economic growth rate and increasing*

#### Directive:

*Critically examine – When asked to 'Examine', we have to look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question.*



While doing so we should explain why these facts and issues are important and their implications. When 'critically' is suffixed or prefixed to a directive, one needs to look at the good and bad of the topic and give a fair judgment.

**Structure of the answer:**

**Introduction:**

Define inflation and the trends of growth witnessing the Indian economy.

**Body:**

Uneven inflation and sluggish growth present serious dilemmas for policymakers in the country as prices in the economy continue to rise even as economic growth has plummeted to well under 5%. Food inflation, now in double-digits, has caused significant pain. The International Monetary Fund on December 23 called for "urgent" policy measures to reverse the current slowdown that has weighed down global economic growth.

Discuss the causative factors in detail.

Explain what needs to be done to overcome the issue.

**Conclusion:**

Conclude by suggesting solutions to the problem.

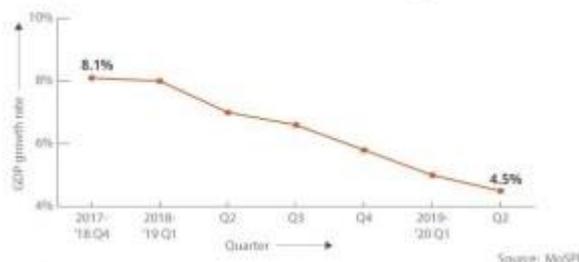
**Introduction:**

India's GDP growth rate has been decreasing. From the level of 8.1% in the fourth quarter of 2017-18, its quarterly GDP growth has fallen to 5% in the second quarter of 2019-20 (six-year low).

Uneven inflation and sluggish growth present serious dilemmas for policymakers. The prices in the economy continue to rise. Food inflation, now in double-digits, has caused significant pain.

**Body:**

GDP growth rate has contracted for six quarters



**Concerns:**

- the non-uniform nature of the current price rise.
- food inflation has crossed the 10% mark for the first time in many years
- Even as food prices have risen rapidly, sectors such as manufacturing have witnessed mild deflation as demand for products drops.
- The central bank's hands have been tied down by the recent spike in inflation, and it has halted its rate cut spree that began in February this year.
- Policymakers, however, tend to view the economy as an entity with a general price level that responds in predictable ways to their policy actions. Such an assumption is likely to cause practical difficulties in implementing policy.



- Indian economy just witnessed a debt-fueled boom followed by a sharp bust in growth rates, it is natural to expect the prices of various goods to adjust in accordance with underlying consumer desires to varying degrees.

**Inflation – real or anomaly:**

- RBI has termed the recent spike in inflation as a transient phenomenon.
- the rise in food prices may just be an anomaly amid widespread low inflation in the rest of the economy.
- The current food price inflation may be the result of seasonal factors that have affected crop production.
- If so, it should certainly be a transient phenomenon that will not trouble policymakers for anything beyond a few quarters.

**Way forward:**

- The Reserve Bank of India (RBI) Governor has called for countercyclical measures and structural reforms to help the economy.
- The government should concentrate on the supply-side reforms to both rein in inflation and reverse the economic slowdown.
- Exports can help to stimulate the economy since exports are influenced by the state of the economy in the rest of the world.
- A focused increase in capital expenditures of the Government and the Central public sector undertakings (PSUs) may help to apply the brakes on the slowdown. It might also help to “crowd in” private investment.
- Reform of the Goods and Services Tax (GST) is very much needed.

Deliberate upon the reform measures that can aid India to rise in terms of economic growth to the baseline medium-term potential and help drive growth in a sustainable way. (250 words)

*Business Standard*

*Economic Times*

**Why this question:**

*The article is in the backdrop of the recent IMF that has listed reform measures that might help India increase economic growth to the baseline medium-term potential of 7.3 percent.*

**Key demand of the question:**

*Explain the necessity of reforms that can help India to increase economic growth to the baseline medium-term potential and help push up growth in a sustainable way.*

**Directive:**

***Deliberate** – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.*

**Structure of the answer:****Introduction:**

*In general discuss the persistent issues brought out by the IMF.*

**Body:**

*Briefly discuss the suggestions made by the IMF.*



*What are the issues with the economy in the country?*

*Suggest what reforms can be made to overcome the challenges.*

**Conclusion:**

*Conclude by suggesting reforms – both long term and for short term.*

### Introduction:

India is in the midst of a significant economic slowdown. Declining consumption and investment, and falling tax revenue, have combined with other factors to put the brakes on one of the fastest growing economies in the world. The IMF has listed reform measures that might help India increase economic growth to the baseline medium-term potential of 7.3 per cent.

### Body:



### Reasons for growing slowdown despite measures:

- Although the government has infused a significant amount of capital into PSBs, there is practically no movement in terms of governance reforms.
- In the absence of such reforms, PSBs would remain prone to the same errors and undermine an efficient allocation of credit, which will affect overall economic growth in the medium term.
- crowding out caused by higher public sector borrowing requirement, which exceeds the net household financial savings of 6.6 per cent of GDP.
- the Reserve Bank of India has started managing yields by buying longer-dated bonds and selling short-tenor bonds, which would also help the government borrow at lower rates. However, measures like these have limitations and could unnecessarily complicate policy management of the central bank.
- the policy space on the fiscal side is virtually non-existent and there are limitations to the extent monetary policy can support growth in the given macro environment

### Reform measures:

- the clean-up of bank balance sheets should be completed along with strengthening governance in public sector banks (PSBs) and better oversight of non-banking financial companies (NBFCs).



- the central bank will need to augment regulatory capacity for better oversight of the system, including the NBFC sector.
- fiscal consolidation in the medium term should be anchored to the recommendations of the Fiscal Responsibility and Budget Management Act review committee.
- the use of off-budget financing, which makes the headline deficit number less meaningful. There is an urgent need to improve transparency.
- fiscal stimulus should be avoided at this stage, as evidently, a significantly higher level of government borrowing will push up the cost of money.
- The government would need to be mindful of the risks associated with fiscal slippage at this stage.
- to boost growth, among other things, the government should focus on reforms in product, labour and land markets.
- the government should focus on wider reforms that will help increase growth in the medium term

**Conclusion:**

India's substantial growth potential depends critically on the implementation of the growth-enhancing structural reforms. Further, there is a strong case for trade liberalization to support growth and employment. The economy clearly needs policy intervention to help push up growth in a sustainable way. There is a need for urgent steps to reverse slowdown while continuing with credible fiscal consolidation and cautioning against fiscal measures to support growth.

A refreshed 'Digital India' programme will play critical role in the pursuit of \$5 trillion economy. Comment.(250 words)

*The Hindu*

**Why this question:**

The question is in the context of Finance Minister's announcement on waiver of Merchant Discount Rate (MDR) on digital payments.

**Key demand of the question:**

The question expects one to comment upon the role of Digital India programme and the essence of it to \$5 trillion economy.

**Directive:**

**Comment**— here we have to express our knowledge and understanding of the issue and form an overall opinion thereupon.

**Structure of the answer:**

**Introduction:**

Discuss that In the past few years, digital technology has become a vital factor in accelerating the pace of India's economic growth, in promoting social and economic equity by enhancing access for all to information, markets and public services; and in overcoming the country's infrastructure deficit.

**Body:**

Explain the idea behind digital India.

Discuss the steps taken by the government in this direction.

Discuss the benefits of the programme.

Analyse the challenges and concerns associated.

**Conclusion:**

Conclude by reasserting its role in augmenting the dream of \$5 trillion economy.

**Introduction:**

According to a recent study by industry association Internet and Mobile Association of India (IAMAI), **Digitization of services will be an essential step towards achieving the \$5 trillion goal.** True to the tenets of the fourth industrial revolution, the next phase of India's prosperity will be driven by digitalization with next-generation technologies. The nation's naturally tech-savvy demography – **1.2 billion mobile phone connections, 560 million internet subscriptions, and over 350 million smartphones** – will serve as the fulcrum of an inclusive digital transformation.

**Body:**

India's **digital consumer base is the world's second-largest**, as well as the **second-fastest growing among 17 major economies**, as per findings of the latest **India Economic Survey**. And this base is core to the creation of future economic value and societal empowerment as digital solutions backed by new-gen technologies such as artificial intelligence (AI), internet of things (IoT) and automation become ubiquitous.

**Digital India:**

- The 'Digital India' initiative was launched by Prime Minister Narendra Modi on 1 July 2015.
- It has been launched with an aim of transforming the country into a digitally empowered society and knowledge economy.
- It would ensure that Government services are available to citizens electronically.
- It would also bring in public accountability through mandated delivery of government's services electronically
- Four years on, there have been dramatic improvements in all of its three key facets: in the **creation of pervasive national digital infrastructure**, in the **electronic delivery of public services** and **financial succour to citizens**, and in **enhancing digital awareness and literacy**.

**Steps taken by the Government of India in promotion of Digital India:**

- **Digilockers:** it is a "digital locker" service operated by the Government of India that enables Indian citizens to store certain official documents on the cloud. The service is aimed towards reducing the need to carry physical documents.
- **BHIM app:** It is an app to enable digital payments. BHIM app was used to facilitate 913 million transactions in 2017-18.
- **JAM Trinity**, a union of Jan Dhan-Aadhaar-Mobile number will better contribute to nation-building and overall economic progress. Digitalization has already helped disburse over \$86.4 billion directly to the bank accounts of beneficiaries spanning over 430 government schemes since 2015 while saving around \$15.3 in the process by plugging channel inefficiencies.
- **Pradhan Mantri Gramin Digital Saksharatha Abhiyan** to make citizen digitally literate. The project is expected to be one of the largest initiatives of the country with an overall target of training 6 crore students until the financial year, 2019. The government has accepted 250,000 Gram Panchayats to register at least 200-300 candidates each.



- **India's digital economy** will touch \$1 trillion by the year 2022. India would be \$10 trillion economy by 2030 and half of it would be the digital economy.
- More than 12,000 rural post office branches have been linked digitally and soon payment banking would also become a reality for them.
- The government also plans to make 'digital village' across the country, by linking all schemes with technology. The 'digital village' would be powered by LED lighting, solar energy, skill development centres and e-services like e-education and e-health.
- Electronic transactions related to e-governance projects in the country have almost doubled in 2015, owing to the Digital India Programme. According to government website electronic transaction aggregation and analysis layer (**eTaal**), 3.53 billion transactions took place in 2014, which almost doubled in 2015 to 6.95 billion.
- The progressive policies and aggressive focus on 'Make in India' have played a significant role in the resurgence of the electronics manufacturing sector.
- Implementation of **Aadhaar** – the biometric digital identity program spanning 1.2 billion citizens, and **the Goods and Services Tax (GST)** – which brought more than 10 million businesses online – have been the hallmarks of large-scale digitalization in India.

#### Need for a refreshed Digital India:

- One of the most promising outcomes of India's digital transformation experiment is its role in catalyzing the energies and in meeting the blossoming aspirations of India's youth, who have a natural flair for technology.
- Apart from the iconic start-ups that have metamorphosed into unicorns, thousands of technology enterprises and BPOs are sprouting across small-town and rural India.
- With the government's 365,000 Citizen's Service Centres [CSCs] providing employment to a million small entrepreneurs, as well as access to information and services to millions.
- The creation of a nationwide digital infrastructure, allied with potent new tools and technologies that are on the anvil: AI, Big Data, and the Internet of Things [IOT].
- These are expected to galvanize sectors that affect the well-being of every Indian, ranging from agriculture, that can benefit from the infusion of technological intelligence, to natural-resource management, energy-use, transportation, urban-infrastructure and manufacturing.
- Indeed, there is practically no aspect of modern life that cannot be improved by the application of intelligent digitization. India is striving to become one of the early adopters of 5G technology, and its induction is expected to multiply possibilities and opportunities across the spectrum in ways that we cannot fathom now.

#### Challenges:

- The BharatNet project has been delayed several times which proposes to give internet connection to 2.5 lakh villages.
- Delayed roll-out of Wi-Fi hotspots and the slow speed, in comparison to other developed nation.
- Most small and medium scale industry is struggling to adapt to modern technology.



- Entry level smartphones have limited capabilities for smooth internet access, and the outreach of the 'smartphones' is limited.
- There is an absence of enough skilled manpower in digital technology.
- Lack of user education and there are limited facilities to train personnel. India needs over one million cybersecurity experts to check and monitor the growing menace of digital crime.

**Measures needed:**

- There is a need for bridging the digital gap in rural areas.
- Websites and portals should be more compliant to standardization.
- Local language portals can be established to cater to the needs of diverse Indian population.
- External audits by NIC and increase of physical infrastructure to increase reach of internet services is necessary.
- Participative regulatory models will not only help us address emerging challenges in India's digital economy, but will also allow us to position ourselves as a technology-friendly jurisdiction.
- There should be an appetite for innovative structures such as regulatory sandboxes and a willingness to enhance regulatory capacity and measure performance

**Conclusion:**

India in the 21st Century must strive to meet the aspirations of its citizens where government and its services reach the doorsteps of citizens and contribute towards a long-lasting positive impact. The Digital India Programme aims to transform India into a digitally empowered society and knowledge economy by leveraging IT as a growth engine of new India.

**What do you mean by shadow banking system? How does the crisis in the shadow banking industry affect the common man? Explain. (250 words)**

*Reference:*

*Why this question:*

*The question is based on the concept of Shadow banking and its effect on the common man.*

*Key demand of the question:*

*Discuss in detail the concept of shadow banking; explain the concerns associated and its impact on common man.*

*Directive:*

*Explain – Clarify the topic by giving a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.*

*Structure of the answer:*

*Introduction:*

*Define what shadow banking is – The shadow banking system is a term for the collection of non-bank financial intermediaries that provide services similar to traditional commercial banks but have different regulatory guidelines.*

*Body:*

*Briefly explain what is shadow banking system and its role.*

*Enumerate the challenges faced by it in India.*

*Suggest ways to address these challenges.*

**Conclusion:**

Conclude that the challenges of shadow banking system have to be addressed at multiple levels.

**Introduction:**

Shadow banks are those institutions that do not collect deposits but still provide loans. These include a variety of institutions, ranging from trusts, investment funds etc. It facilitates the creation of credit but they are not subject to regulatory oversight. As a result, many of the institutions and instruments have been able to employ higher market, credit and liquidity risks, and do not have capital requirements commensurate with those risks. There are concerns that over lending and default in such institutions can destabilize the financial system.

**Body:****Importance of Shadow banking:**

- in the context of the developing countries, the shadow banking sector plays an important role in promoting financial inclusion.
- They are very customer friendly, market oriented, innovative and flexible.
- The main advantages of shadow banks lie in their ability to reduce transaction costs, their quick decision making ability, and customer orientation and prompt delivery of services.
- Similarly, in India, the NBFC sector performs an exceptional role in providing credit in the rural areas. Hence, the sector is carefully regulated by the RBI in recent years.

**Implications of Shadow banking:**

- Shadow lending has played a major role in the build-up to the Great Financial Crisis in 2008.
- In India's case, shadow banking primarily consists of NBFCs and housing finance companies (HFCs).
- A 2017 report by the RBI said that 99.7% of shadow banking in India involves making long-term loans against short-term funding, primarily carried out by NBFCs and housing finance companies.
- Problems arise when such NBFCs become too big, invest in assets of dubious quality and are interconnected with other financial institutions, as demonstrated in the case of IL&FS.
- Additionally, NBFCs, owing to the nature of their business, are also more prone to risks from business cycles, excess leverage and over-reliance on wholesale funding.
- Concentration risks—too much exposure to some sectors—can also be a headache.
- In its recently released Global Financial Stability Report, the International Monetary Fund warned of systemic risks associated with such shadow banking practices which might spill over to banks.
- Such warnings are especially relevant for India as the size of its shadow banking sector appears to be on the higher side, when compared to many other large economies, as per the estimates by Basel, Switzerland-based Financial Stability Board (FSB).



- the recent IL&FS episode, the related lapse on the part of ratings agencies, and the looming threat of a liquidity squeeze across the NBFC sector have raised concerns of spillover, with exposure of banks and mutual funds to NBFCs rising in recent years.

### Conclusion:

India also must end the regulatory arbitrage that allows shadow banks to raise most of their funds from retail investors and deposit-taking banks. Either shadow lenders should come out of the dark and be turned into banks, or a firewall will have to be erected around them to protect the rest of banking.

Discuss the need for greater collaboration between the government and the private sector for developing trade-smart schemes that can ensure long-term sustainability for the growth of Indian industry.(250 Words)

### Financial Express

#### Why this question:

The recent WTO panel report highlights the fact that India needs a fresh debate on trade policy framework.

#### Key demand of the question:

One must analyse the need for greater collaboration between the government and the private sector for developing trade-smart schemes that can ensure long-term sustainability for the growth of Indian industry.

#### Directive:

*Discuss* – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

#### Structure of the answer:

##### Introduction:

In brief trace the Recent global events that have had significant implications for reshaping India's trade policy framework.

##### Body:

First discuss in short the trade policy currently being practiced by the country.

Bring out the policies that the government in power has been trying to aim.

Emphasize on the fact that India's trade policy of the future ought to consider distinct approaches for trade in goods and trade in services.

Present case studies of successful collaborations of the government with private entities in the business scenario.

##### Conclusion:

Conclude that Greater collaboration between the government and the private sector, for developing trade-smart schemes and incentives that have long-term sustainability and contribution to the growth of Indian industry, is the only sensible way forward.

### Introduction:

Recent global events have significant implications for reshaping India's trade policy framework. Supplementing this, the recent WTO panel report also highlighted the fact that India needs a fresh debate on trade policy framework.

### Body:

#### **Need for changes in the trade policy framework:**



- In 2013-14 when India's per capita GNI (Gross National Income, earlier referred to as GNP or Gross National Product), assessed by the World Bank, breached the threshold of \$1,000.
- This development had a ripple effect in India's status as a 'developing country' under the WTO's Agreement on Subsidies and Countervailing Measures (ASCM), which regulates, among other aspects, export subsidies.
- In 2017, after three consecutive years of India's per capita GNI exceeding \$1,000, India graduated out of the list of 'developing countries' under Annex VII of the ASCM, which basically meant losing the space for foreign trade policy maneuverability that India had enjoyed till then as a developing country.
- A dispute challenging India's export subsidy schemes that was initiated by the US at the WTO in March 2018.
- The initial consultative phase did not lead to any resolution, and therefore the US sought the establishment of a panel for dispute settlement at the WTO in May 2018.
- At the core of the dispute was the contention that 'export incentives' granted by India under the DFIS, EOU, EPCG, MEIS and SEZ schemes are 'export subsidies' that are prohibited under the ASCM.
- The WTO dispute panel recommended that India should withdraw these schemes in a time-bound manner.

#### **Steps undertaken by the Government so far:**

- The government has also announced December 31, 2019, as the sunset date for the MEIS (Merchandise Exports from India Scheme).
- There is also anticipation of the launch of a new scheme, the RoDTEP (Remission of Duties or Taxes on Export Products).
- Another significant initiative by the Indian government was the setting up of a group consisting of SEZ stakeholders under the chairmanship of Baba Kalyani, which has made significant recommendations for SEZ reforms that the government is considering.

#### **Measures needed:**

- There is a need for emphasis that Indian industry should reduce its reliance on export incentives.
- India has to reinvent itself by increasing its competitiveness in the global market based on increased productivity of resources, improved quality, better efficiency and increasing reliance on data-driven business strategies.
- India's trade policy of the future ought to consider distinct approaches for trade in goods and trade in services
- The distinction between goods and services will also enable designing separate incentives and subsidies for services exports, which neither the WTO nor India's FTAs currently regulate.
- a meaningful trade policy framework needs to be rooted in an evidence-based approach, and rely on microeconomic data from the industry to enable targeted decision-making based on trade data analytics.



- Indian industry will also need to be proactive and establish appropriate mechanisms to capture data at the granular level, through innovative changes in accounting systems, IT systems and MIS, as well as ensure auditable record-keeping of the information required to benefit.
- the trade policy of the future will have to forego its three-decade old preoccupation with export obligations and foreign exchange earnings. The shift from **export growth to broad-based employment and economic growth** was highlighted in the Baba Kalyani report as well.
- Large industry houses, especially, will need to be better equipped with research and appropriate skill-sets, and apportion resources to be able to compliment and supplement government efforts.

#### Conclusion:

Indian industry should reduce its reliance on export incentives and has to reinvent itself by increasing its competitiveness in the global market based on increased productivity of resources, improved quality, better efficiency and increasing reliance on data-driven business strategies. Greater collaboration between the government and the private sector, for developing trade-smart schemes and incentives that have long-term sustainability and contribution to the growth of Indian industry, is the only sensible way forward.

#### Inclusive growth and issues arising from it.

“It is important not only to know how to counter the economic stagnation but also how not to counter it”. Deliberate upon the statement in the context of rapidly increasing fiscal deficit of Centre and states in the country. (250 words)

*The Hindu*

#### **Why this question:**

*The Centre and the States are so short of resources that their fiscal deficit is burgeoning. The Prime Minister, at a function of the Associated Chambers of Commerce and Industry of India recently, was optimistic but the Reserve Bank of India (RBI) Governor was less positive, admitting that the country's economic problems are also structural. Thus the question.*

#### **Key demand of the question:**

*Discuss the current economic conditions of the country. Explain in detail the causes and concerns of the fiscal deficit of the states and the country. Suggest methods and measures to overcome it.*

#### **Directive:**

**Deliberate** – Weigh up to what extent something is true. Persuade the reader of your argument by citing relevant research but also remember to point out any flaws and counter-arguments as well. Conclude by stating clearly how far you agree with the original proposition.

#### **Structure of the answer:**

##### **Introduction:**

*Explain what economic stagnation is.*

##### **Body:**

*Give a brief introduction about the increase of Centre and state's fiscal deficit in the recent times.*

*Explain the recent steps to contain the situation.*

*Give the defects in taking such steps.*

*Suggest requires ways to be taken in this regard.*

*Give a futuristic way forward for the same.*

##### **Conclusion:**

*Conclude with solutions and way forward.*



Introduction:

A **fiscal deficit** occurs when a government's total expenditures exceed the revenue that it generates, excluding money from borrowings. The difference between total revenue and total expenditure of the government is termed as fiscal deficit. It is an indication of the total borrowings needed by the government. Generally fiscal deficit takes place either due to revenue deficit or a major hike in capital expenditure. The Centre and the States are so short of resources that their fiscal deficit is burgeoning. The fiscal deficit at all levels of government is already high so a policy decision is needed on how much more it can be.

Body:

#### **Fiscal Deficit of Centre:**

- The government calculated tax revenues on the assumption of a 12% nominal growth. But, it has been around 9%, both last and this year. So, in 2018-19, tax revenue was short by about ₹1.5 lakh crore.
- Given that the base for calculating tax revenue this year was wrong and the rate of growth is incorrect, the revenue shortfall for the Centre will be even larger than last year — around ₹2 lakh crore

#### **Increasing fiscal deficit of states:**

- The States get 42% of this revenue so they will get ₹84,000 crore less.
- Further, the concessions in corporate taxation of ₹1.45 lakh crore will also mean ₹58,000 crore less revenue for the States.
- While the Centre has obtained ₹1.76 lakh crore from the RBI's reserves, no such succour is available to the States.
- The Centre will also get the proceeds of disinvestment but that is not shared with the States.
- In brief, the States will have a larger shortfall in resources than the Centre.
- The States have also been complaining that they are not getting the funds that are due to them from the Centre.
- The Centre has partly responded to this by transferring more, but that raises its deficit.
- One of the big contributors to GST has been the auto sector, but with sales falling over the last 10 months collections have declined.
- The Centre is apparently holding back the States' share of IGST and arguing that the cess collection is inadequate to compensate the States for their shortfall.

#### **However, Economic stagnation cannot be countered by the following:**

- Income-tax rates cannot be raised now since that would be seen as inequitable — rich corporates will pay a lower tax rate than the middle classes, who pay income-tax.
- There is pressure to reduce income-tax rates to boost demand in the economy.
- But a cut in income-tax rates will largely benefit less than 2% of the citizens who pay a significant amount of income-tax.
- They are well-to-do and unlikely to increase consumption.



- Similarly, the cut in corporate tax rates will not boost demand since neither investment nor consumption will rise.

#### Challenges posed by Fiscal Deficit:

- It can mean that the Government is spending money on unproductive programmes which do not increase economic productivity. (For example MNREGA, most of the money is eaten midway by the Sarpanch and Local officers.)
- As government borrows from RBI which meets this demand by printing of more currency notes (called deficit financing), it results in circulation of more money. This may cause **inflationary pressure in the economy**.
- When Government keeps borrowing and borrowing to fill up the fiscal deficit pothole, then bond yield will increase. It is not good because more and more of taxpayers' money (i.e. Government's incoming money) will go in repaying that bond interest rate rather than going into education or healthcare.
- State finances become important because of state governments increased reliance on market borrowings.
- The widening of state fiscal deficit now has more direct implications for interest rates in the economy.
- Fiscal deficits may cause macroeconomic instability by inflating the economy as money supply rises.
- Government may be compelled to borrow to finance even interest payment leading to emergence of a **vicious circle and debt trap**.
- Fiscal deficit "Crowds out" investment from private sector as Government borrows most of the cash.
- Borrowing is in fact financial burden on future generation to pay loan and interest amount which retards growth of economy.
- Large deficits even if they do not spill over into macroeconomic instability in the short run will require higher taxes in the long term to cover the heavy burden of internal debt.

#### Strategies to Reduce Fiscal Deficit:

- There is a need to implement **NK Singh committee recommendations** with respect to Fiscal deficit for a stable economy.
  - Suggested a fiscal deviation band of 0.5%.
  - This means that the government can deviate by 0.5% from the fiscal Deficit target if the economy is in slowdown.
  - The flexibility has been allowed for the government to create space for stimulus to pump-prime the economy.
- On the other hand, when the economy is doing well, the deficit can be compressed by 0.5%.
- A deficit is usually financed through borrowing from either the central bank of the country or raising money from capital markets by issuing different instruments like treasury bills and bonds.
- A drastic reduction in expenditure on major subsidies. Reduction in expenditure on bonus, LTC, leaves encashment, etc. Austerity steps to curtail non-plan expenditure.
- Tax base should be broadened and concessions and reduction in taxes should be curtailed. Tax evasion should be effectively checked. More emphasis on direct taxes to increase revenue. Restructuring and sale of shares in public sector units.



- Famous economist John Maynard Keynes opined that deficits actually assist nations in climbing out of economic recessions.
- However, fiscal conservatives believe that deficits should be avoided by the government which should be inclined towards a balanced budget policy.

Inclusive growth is expected to reduce poverty faster in the sense that it has to have a higher elasticity of poverty reduction. Do you agree? Analyse. (250 words)

*Indian economy by Dutta and Sundaram.*

**Why this question:**

*The question is based on the Inclusive growth and its relations to Poverty reduction.*

**Key demand of the question:**

*Discuss the importance of inclusive growth and its relations with Poverty reduction and in what way it has links with higher elasticity of poverty reduction.*

**Directive:**

**Analyze** – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.

**Structure of the answer:**

**Introduction:**

*Discuss what inclusive growth is.*

**Body:**

*Highlight the features of inclusive growth. The growth is inclusive growth when it is socially inclusive, regionally balanced, which enables every state to do better than in the past, which narrows the gap between different communities, which also brings in our concern for gender equality, upliftment of women, improving their educational condition and social status.*

*Discuss its relations with higher elasticity of poverty reduction.*

**Conclusion:**

*Conclude with detailed analysis and its effects and significance.*

Introduction:

The concept of **inclusive growth focuses on equitable growth for all sections of society**. This involves ensuring that fruits of growth and development reach the poor and marginalized sections as well. Inclusiveness is a multi-dimensional concept. Inequalities that include, social exclusion, discrimination, restrictions on migration, constraints on human development, lack of access to finance and insurance, corruption – are sources of inequality and limit the prospect for economic advancement among certain segments of the population, thereby perpetuating poverty.

Body:



#### **Inclusive Growth leads to Poverty Reduction:**

- Growth elasticity of poverty (GEP) is the percentage reduction in poverty rates associated with a percentage change in mean (per capita) income.
- Countries with a more equal distribution of income experience a greater reduction in the poverty rate for a given increase in per capita income.
- Economic growth has to be inclusive to ensure the wellbeing of the entire population. Inclusive growth requires full respect for human rights.
- Rapid and sustained poverty reduction requires inclusive growth that permits people to contribute to and benefit from economic growth.
- The main instrument for a sustainable and inclusive growth is assumed to be productive employment.
- Employment growth generates new jobs and income for the individual - from wages in all types of firms, or from self-employment, usually in micro firms - while productivity growth has the potential to lift the wages of those employed and the returns to the self-employed.
- The ability of individuals to be productively employed depends on the opportunities to make full use of available resources as the economy evolves over time.
- Inclusive growth generates decent jobs, gives opportunities for all segments of society, especially the most disadvantaged, and distributes the gains from prosperity more equally.
- Inclusive Growth lessens the fast growth rate of poverty in a country and upsurges the participation of people into the development of the country.

#### **Measures needed:**

- Lowering the incidence of poverty and inequality requires a comprehensive strategy.
- Important steps need to be taken like framing policies to improve health, nutrition and education.



- Labour market reforms and reforms of direct taxation will have redistributive effects on the system.
- Schemes like National Rural Employment Guarantee Scheme (NREGS), provide 100 days or more of employment at a wage determined by government are already in progress but there is a need to check the cost effectiveness of these schemes
- Reforms to plug the leakages in the PDS, introduction of GPS tracking, activating vigilance committees, must be undertaken across the country.
- Research needs to be carried out by government agencies to document the 'best practices' in the implementation of government schemes.
- Minorities and other excluded groups, including the poor in upper castes, also need special programmes to bring them into the mainstream.

#### Conclusion:

To achieve inclusiveness, all these dimensions need to be looked into. Institutional and attitudinal changes should be brought about though this will take time. Awareness about inclusiveness and empowerment is required to be created. Reducing poverty is to be taken as key element in our inclusive growth strategy and there has been some progress in that regard.

Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.

The government, which aims to double farmers' incomes, cannot possibly allow the passage of the seeds bill 2019 that strikes at the very roots of farmer survival. Examine.

*The Hindu*

*Hindustan Times*

**Why this question:**

*There is a draft seeds bill awaiting Parliament, which seeks to replace the old Seed Act of 1966. A law regulating seed production and trade is needed to ensure that farmers are protected against spurious seeds, and that seed producers are obliged to put only seeds of good and reliable quality on the market.*

**Directive word**

*examine – When asked to 'Examine', we have to look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications.*

**Structure of the answer**

**Introduction**

*One can start off with explaining about the Parliament's plan to introduce the new Seeds bill 2019 and how the previous two versions had created a lot of heated debates.*

**Body**

*Highlight the objectives and provisions of the New seeds bill 2019*

*Discuss the rationale behind the new Seeds bill 2019.*

*Discuss the challenges posed by the bill.*

*the Seeds Bill insists on compulsory registration of seeds. However, the PPVFR Act was based on voluntary registration. As a result, many seeds may be registered under the Seeds Bill but may not under the PPVFR Act.*



*as per the PPVFR Act, all applications for registrations should contain the complete passport data of the parental lines from which the seed variety was derived, including contributions made by farmers. This allows for an easier identification of beneficiaries and simpler benefit-sharing processes. Seeds Bill, on the other hand, demands no such information while registering a new variety.*

*And so on.*

*Provide measures to tackle the challenges posed.*

### **Conclusion**

*Give a fair and balanced conclusion and discuss the way forward.*

### **Introduction:**

The **revised draft Seeds Bill 2019**, which the Ministry of Agriculture and Farmers' Welfare placed in the public domain recently for suggestions and comments, seems to be a watered-down version of a draft prepared. The Bill is aimed at **ensuring supply of modern, high quality, cutting edge seed technologies to the farmers** which will help them in enhancing their productivity and profitability. The Bill amends the Seed Act 1966 and Seed Rules 1968. It is evident that the seed industry has been at the center of the significant advances made in agriculture in the last four decades and will continue to do in the years to come.

### **Body:**

#### **Background:**

- After the 'Green Revolution', India was quick to introduce the Seed Act 1966 as the first act to govern matters of seed and seed quality.
- It was modelled on the US legislation and aided by a later enactment of the Seed Rules 1968, which were also developed with the collaboration of the US.
- The seed industry in India has been governed by several legislative & policy frameworks such as Seed Act (1966), Seed Rules (1968), Seed (Control) Order (1983), New Policy on Seed Development (1988), Plants, Fruits & Seeds (Regulation of Import into India) Order (1989), Protection of Plant Varieties and Farmers' Right Act (2001), and the Essential Commodities Act, 1955 including Seeds (1955), National Seed Policy (2002), and Seed Bill (2004).
- The Seed Bill (2004) was proposed to replace the Seed Act (1966), however, owing to several shortcomings it was not passed. The 2019 draft version tries to overcome the drawbacks of the 2004 Bill.

#### **Highlights of New seeds bill:**

- It is an important legislation to **ensure the supply of modern, high quality, cutting edge seed technologies** to the farmers which will help them in **enhancing their productivity and profitability**.
- All varieties of **seeds for sale have to be registered** and are required to meet certain prescribed minimum standards. For instance, for transgenic varieties of seeds, registration is to be obtained under the Environment (Protection) Act, 1986. This can bring greater accountability to seed companies.
- Exempt farmers from obtaining registration for varieties developed by them. However, if the farmer sells such seeds for a monetary consideration, then that sale needs to be registered. This is to protect the interests of other farmers who buy seeds from such a farmer.



- Farmers are allowed to sow, exchange or sell their farm seeds and planting material without having to conform to the prescribed minimum limits of germination, physical purity and genetic purity (as required by registered seeds). However, farmers cannot sell any seed under a brand name.
- In the proposed Bill, there is a differentiation between the seed producer, seed processor and seed dealer for the purpose of licensing. However, there is no recognition of National Level Integrated Seed Companies with R&D capabilities.
- Currently, a large percentage of seed is sold under a self-certification programme called Truthfully Labelled (TL) seeds. The certification process has been kept voluntary.
- The bill empowers the government to fix prices of selected varieties in case of 'emergent' situations such as seed.
- The bill differentiates the agronomic performance of the seed, its physical quality and the supply of spurious seed, and consequently penalizes the offences and prescribes punishment.

#### Concerns or challenges posed:

- The Seeds Bill **insists on compulsory registration of seeds**. However, the PPVFR Act was based on voluntary registration. As a result, many seeds may be registered under the Seeds Bill but may not be under the PPVFR Act.
- If a seed variety could have been developed by a breeder, but derived from a traditional variety. In this case, the breeder will get exclusive marketing rights. But no gain will accrue to farmers as benefit-sharing is dealt with in the PPVFR Act, under which the seed is not registered.
- private seed companies can re-register their seeds. They can do this for an infinite number of times after the validity period. Given this "ever-greening" provision, many seed varieties may never enter the open domain for free-use.
- The provision for regulation of seed prices is vague in the bill. Farmers' have also demanded an official body to regulate seed prices and royalties. In its absence, they feel, seed companies may be able to fix seed prices as they deem fit, leading to sharp rises in costs of cultivation.
- According to the bill, the disputes on compensation have to be decided as per the Consumer Protection Act 1986. Consumer courts are hardly ideal and friendly institutions that farmers can approach.
- According to the Seeds Bill, farmers become eligible for compensation if a plant variety fails to give expected results under "given conditions". However, "given conditions" is almost impossible to define in agriculture.

#### Way forward:

- Quality seeds are India's lifeline. Farming, food and the livelihood of over 60 per cent of the Indian population depend on them.
- A failed harvest has the potential to curtail our GDP and force millions of Indians into poverty and hunger until the next harvest. Overall, India depends on seeds to sustain life.



- The present government has a chance to seed a unique and progressive Seed Bill or plagiarize from others.
- We are sure our government will not let us down in their decision, and ensure their seed bill will give plentiful harvests for Indian farmers and industry.
- Ultimately, the quality seed will be available to the farmers at competitive prices subject to a vibrant growth of the seed industry in an enabling environment.
- Healthy seed industry will lead to enhanced quality seed availability at affordable prices to the farmers.

Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

Embracing the new dogma of globalization without a cost-benefit analysis is equally dangerous, examine in the backdrop of India not joining the Regional Comprehensive Economic Partnership (RCEP). (250 Words).

The Hindu

**Why this question:**

The question is in the backdrop of India not joining the Regional Comprehensive Economic Partnership (RCEP).

**Key demand of the question:**

One must examine the relevance of globalisation and the limitations it comes with.

**Directive:**

**Examine** – When asked to ‘Examine’, we must look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications.

**Structure of the answer:**

**Introduction:**

In short explain the concept of globalisation, trace the history of its coming.

**Body:**

Explain what has been the issue with RCEP and India.

Discuss the pros and cons of globalisation.

Explain the effects of trade with China and its implications on Indian economy.

Highlight that India needs to take a hard look at its choices. Creating global competitiveness and doing all that it takes to do so, including abandoning conventional ways of thinking, cannot be delayed. Better-functioning factor markets and reducing costs for businesses are overdue.

**Conclusion:**

Conclude that Smarter, creative policies for developing and nurturing the nation’s industrial and technological capacities need to be crafted. Economic nationalism and greater ambition is the need of the hour.

**Introduction:**

Prime Minister recently announced that India would not sign on to the Regional Comprehensive Economic Partnership (RCEP) agreement. The agreement, which is dubbed as the world’s biggest trade agreement, is expected to proceed with the 15 other members of the agreement, including



Australia, China, Japan, New Zealand, South Korea, and the 10 member states of the Association of Southeast Asian Nations (ASEAN).

Body:

In defending **India's withdrawal from the RCEP**, the government has articulated **three key concerns**:

- The first is the negative impact of joining the agreement in key constituencies in India, particularly farmers and small business owners.
- The second is the lack of concessions within the final agreement on key demands for India such as work visas and liberalisation in services.
- The final is regarding India's trade deficit, and how those deficits would expand under the RCEP, given that India currently runs deficits with 11 of the 15 other member states.
- This concern is particularly acute when it relates to China, with India fearing an influx of cheap Chinese imports into India.
- These concerns, particularly on the fears of Chinese imports and its impact on Indian domestic manufacturers, are legitimate and well-founded.

**However, the answer to these concerns is not India's withdrawal from the agreement.**

- India's absence in both of **Asia's two key economic architectures (the RCEP and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP))** will take away from India's goals as a regional and Indo-Pacific power, as well as a prospective global power.
- Given **India's own ambitions to generate growth and jobs** through spurring manufacturing within India, and becoming a key player and rule-maker on the world stage, India's decision to withdraw from the RCEP is not ideal.
- As academician James Crabtree has noted: "India had already won concessions, including implementation delays stretching into decades and safeguards to protect sensitive sectors like agriculture."
- Moreover, as Arvind Panagariya, former Vice Chairman of NITI Aayog, stated that existing WTO rules "allow us to impose safeguard duties and anti-dumping," which India has used and can continue to use against China when it comes to unfair trade practices.
- Value Chain Integration with Global Markets will yield Sustained Economic Growth.
- Returning to India's articulation of its national interest, this delay in integrating with global value chains will impact India's internal and external ambitions.
- The World Bank found that when coupled with domestic reforms, joining such global value chains can "boost growth, create better jobs, and reduce poverty".
- India's own evidence shows that jobs linked to global value chains earn one-third more than those jobs focused on the domestic market.
- The inability to accede to the RCEP and ensure India's integration into these emerging global value chains means India will lose out on a key opportunity to create such high-quality, high-paying jobs.



Conclusion:

India's decision to withdraw at this stage, particularly in light of India's own articulation of its national interest and its ambitions internally and on the world stage, reflects an inability to translate ambitions into action.

Way Forward:

- The government must focus on the mechanisms through which India can create globally competitive sectors that can demand market access in India's partner countries.
- India will have to accelerate reforms to make exports more competitive.
- Making available round-the-clock good quality electricity, cheap and efficient logistics, and access to cheaper and quality capital.

Science and Technology- developments and their applications and effects in everyday life; Achievements of Indians in science & technology; indigenization of technology and developing new technology.

The Supreme Court has asked government to look into the feasibility of hydrogen-based tech to deal with vehicular air pollution in capital. In light of the above statement, Discuss the hydrogen fuel cells technology and its applications. Also evaluate India's preparedness to adopt it. (250 words)

*Indian Express*

**Why this question:**

Supreme Court has asked government to look into the feasibility of hydrogen-based tech to deal with vehicular air pollution in capital. India is looking closely at Japan, which has made progress in this field. The article provides deep insight into hydrogen fuel cell technology which are going to become the preferred mode of transportation in the days and years to come.

**Key demand of the question :**

The question expects us to explain how hydrogen fuel cells battery work. Thereafter, we need to highlight the pros and cons of technology, its possible applications. Further we need to analyse India's steps to accept and adopt the technology to combat the pollution issues. And finally give a fair and balanced view regarding the future of these technologies.

**Directive word**

Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

Structure of the answer

**Introduction:**

Explain that electric vehicles are the way forward because of threats of climate change

**Body:**

Explain how hydrogen fuel cell batteries work

At the heart of the fuel cell electric vehicles (FCEV) is a device that uses a source of fuel, such as hydrogen, and an oxidant to create electricity by an electrochemical process. Put simply, the fuel cell combines hydrogen and oxygen to generate an electric current, water being the only by-product. Like conventional batteries under the bonnets of automobiles, hydrogen fuel cells to convert chemical energy into electrical energy. From a long-term viability perspective, FCEVs are billed as vehicles of the future, given that hydrogen is the most abundant resource in the universe.

Discuss the pros and cons of HFC technology



Discuss the various applications of the technology.  
Finally, talk about how far is India ready to adopt the FCEV technology.

### Conclusion:

Give your opinion on which technology is the future and what should India do.

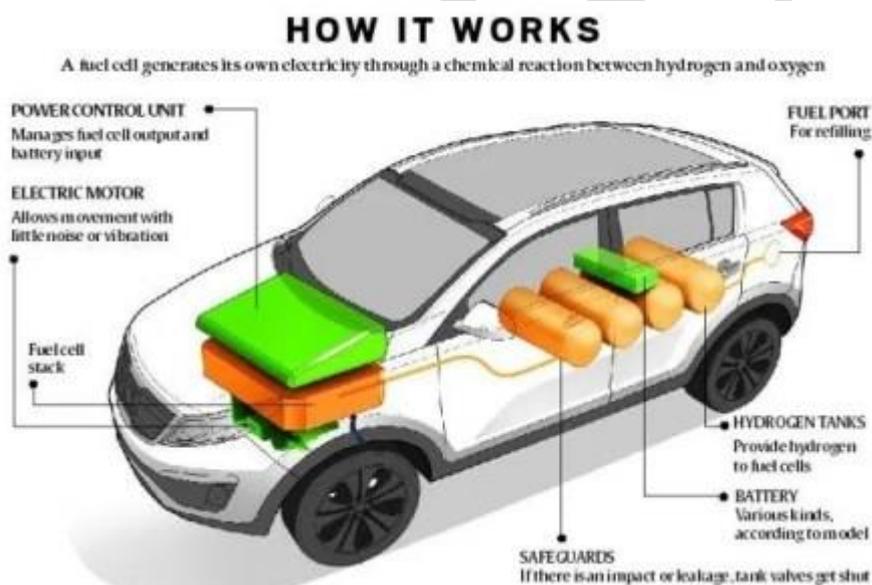
### Introduction:

Fuel cell electric vehicles (FCEV) is a device that uses a source of fuel, such as hydrogen, and an oxidant to create electricity by an electrochemical process. Put simply, the fuel cell combines hydrogen and oxygen to generate an electric current, water being the only by-product. Supreme Court has asked government to look into the feasibility of hydrogen-based tech to deal with vehicular air pollution in capital. India is looking closely at Japan, which has made progress in this field.

### Body:

#### Hydrogen-Fuel Cells:

- Fuel cells are **electrochemical devices** that convert chemical energy in fuels into electrical energy directly.
- A fuel cell produces electricity, water, and heat using fuel and oxygen in the air.
- An electrochemical reaction between hydrogen and oxygen, catalysed by platinum, to produce energy.
- Water is the only emission when hydrogen is the fuel.



#### Advantages:

- A fuel cell operating on pure hydrogen emits zero emissions at the source.
- Fuel cells provide a much longer operating life than a battery, and since fuel cells have a higher energy density, they are lighter than an equivalent battery system.
- Fuel cells create energy electrochemically, and do not burn fuel, they are fundamentally more efficient than combustion systems.



- They do not require recharging and is a renewable source of energy.
- Hydrogen can be produced from domestic resources, eliminating the need to import foreign oil. It gives energy security.
- Fuel cells are modular, and can be scaled up depending on the power needs of a facility. Larger fuel cells can be linked together to achieve multi-megawatt outputs

**Challenges:**

- While widely available, hydrogen is expensive. it takes a lot of time to separate the hydrogen element from others.
- The transport and storage of hydrogen is deemed impractical.
- Since it is a very powerful source of fuel, hydrogen can be **highly inflammable**.
- Other non-renewable sources such as coal, oil and natural gas are needed to separate hydrogen from oxygen. As a result, carbon dioxide is also emitted in the air and makes global warming worse.

**Global scenario:**

- China, far and away the world's biggest auto market with some 28 million vehicles sold annually, is aiming for more than 1 million hydrogen fuel cell vehicles (FCVs) in service by 2030. That compares with just 1,500 or so now, most of which are buses.
- Japan, a market of more than 5 million vehicles annually, wants to have 800,000 FCVs sold by that time from around 3,400 currently.
- South Korea, which has a car market just one third the size of Japan, has set a target of 850,000 vehicles on the road by 2030. But as of end-2018, fewer than 900 have been sold.

**Progress in India:**

- In India, so far, the definition of EV only covers BEVs; the government has lowered taxes to 12%.
- At 43%, hybrid electric vehicles and hydrogen FCEVs attract the same tax as IC vehicles.
- The Ministry of New and Renewable Energy, under its Research, Development and Demonstration (RD&D) programme, has been supporting various such projects in academic institutions, research and development organisations and industry for development.
- Fourteen RD&D projects on hydrogen and fuel cells are currently under implementation with the support of the Ministry. Between 2016-17 and 2018-19, eight projects were sanctioned and 18 completed.
- The Ministry of Science and Technology has supported two networked centres on hydrogen storage led by IIT Bombay and Nonferrous Materials Technology Development Centre, Hyderabad. These involve 10 institutions, including IITs, and IISc, Bangalore.

**Conclusion:**



The **FAME India** is a part of the **National Electric Mobility Mission Plan** whose main thrust is to **encourage electric vehicles by providing subsidies**. India must however make a concerted attempt to incentivize both EVs and FCEVs.

India needs to formally come up with its national strategy on synthetic biology — both policy and regulatory. Discuss. (250 words)

*The Hindu Business line*

**Why this question:**

*India established the Department of Biotechnology during the late 1980s to harness the emerging science to the benefit of the country. However, there has been a long-standing lack of clarity and consensus among scientists, policymakers, industry, farmers and civil society organisations on how India needs to deal with synthetic biological methods like the genetic modification technology in areas like agriculture.*

**Key demand of the question**

*The question expects us to explain the concept of Synthetic biology. Thereafter, we need to highlight the pros and cons of technology, its possible applications. Further we need to analyse India's need to come up with a policy to regulate the affairs in synthetic biology. And finally give a fair and balanced view regarding the kind of policy needed.*

**Directive word**

*Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.*

**Structure of the answer**

**Introduction**

*Explain the term Synthetic biology and need to come up with a policy on the same in India. Synthetic biology is a field of science that involves redesigning organisms for useful purposes by engineering them to have new abilities. This technology, of developing new life forms, is being pursued by industry despite there being no regulatory framework in place*

**Body**

*Explain the concept in detail.*

*Discuss the various applications of the technology. genetic modification technology in areas like agriculture*

*Cloning technologies*

*In less than nine years, synthetic biology has caught the imagination of scientists and the industry's market of \$11 billion in 2016 is expected to grow to \$100 billion by 2025.*

*Discuss the pros and cons of Synthetic biology.*

*Finally, talk about need for India to come up with a policy on synthetic biology.*

*The lack of policy is a cause of serious concern after decades of work in this area compromising research, investments and decision-making.*

*In the absence of India undertaking a proactive approach to this technology, there is ample chance that we will end up having the same, if not more, contentious debates about synthetic biology organisms and products as those on genetically modified organisms.*

**Conclusion**

*Give your opinion on what kind of policy should India come up with respect to synthetic biology.*

**Introduction:**

Synthetic biology is a field of science that involves redesigning organisms for useful purposes by engineering them to have new abilities. Synthetic biology combines chemical synthesis of DNA with growing knowledge of genomics to enable researchers to quickly manufacture catalogued DNA sequences and assemble them into new genomes. Synthetic biology researchers and companies around the world are harnessing the power of nature to solve problems in medicine, manufacturing



and agriculture. This technology, of developing new life forms, is being pursued by industry despite there being no regulatory framework in place.

**Body:**

Some examples of what scientists are producing with synthetic biology are:

- **Microorganisms harnessed for bioremediation** to clean pollutants from our water, soil and air.
- **Rice modified to produce beta-carotene**, a nutrient usually associated with carrots, that **prevents vitamin A deficiency**. Vitamin A deficiency causes blindness in 250,000 – 500,000 children every year and greatly increases a child's risk of death from infectious diseases.
- **Yeast engineered to produce rose oil** as an eco-friendly and sustainable substitute for real roses that perfumers use to make luxury scents.
- **Biosensors:** an engineered organism that is capable of reporting some ambient phenomenon such as the presence of heavy metals or toxins.
- **Cell transformation:** Cell transformation is used to create biological circuits, which can be manipulated to yield desired outputs. i.e., make antimalarial drug by modifying yeast molecules.
- **Space exploration:** Synthetic biology could help to produce resources for astronauts from a restricted compounds sent from Earth.
- **Access to food:** Synthetic biology was viewed initially by the public as a tool to tackle food scarcity. But concerns exist that large corporations could patent developments, create monopolies and leave developing countries dependent on the West.

**Need to come up with national strategy on Synthetic biology:**

- India established the Department of Biotechnology in 1986 to harness the emerging science to the benefit of the country. However, there has been a **long-standing lack of clarity and consensus** on how India needs to deal with genetic modification technology in areas like agriculture.
- **Potential of synthetic biology:**
  - It was the Craig Venter Institute, US, that created the first artificial life form and called it 'Synthia' in 2010.
  - In less than nine years, synthetic biology has caught the imagination of scientists and the industry's market of \$11 billion in 2016 is expected to grow to \$100 billion by 2025.
- The scope of technology foresight comprises not only technologies and their applications but also public policies and societal challenges.
- **Involvement of Private sector:**
  - It is surprising to note the number of interventions the private sector is undertaking to focus on product development using synthetic biology in India.



- Currently, there is no consolidated information on who does what, how, for how much, and when the technology will be commercialised with what policy prescriptions.
- Global policy-making favours treating synthetic biology products and organisms on similar lines as living (read genetically) modified organisms.
- There is ample chance that we will end up having the same, if not more, contentious debates about synthetic biology organisms and products as those on genetically modified organisms.
- Projects that propose to synthesize entire genomes **raise important ethical questions** about potential harms and benefits to society.

**Way forward:**

India's policy and regulatory framework needs to focus on the following:

- defining what constitutes the science of synthetic biology;
- what kinds of research and development priorities will be made for public sector;
- guidance for private sector in synthetic biology research in the future that considers all relevant policy frameworks, including those in intellectual property rights;
- how India will regulate the development and use of this technology, considering issues related to environment and socio-economics.



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Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Explain how Big data can play a significant role in enhancing our capabilities to manage disasters. (250 Words).

[HAL Archives](#)

**Why this question:**

*The question is pertaining to the role of Big data in managing disasters.*

**Key demand of the question:**

*The question wants us to write at length about the role big data technologies can play in disaster management. What are the areas of application and hurdles if any involved.*

**Directive:**

*Explain – Clarify the topic by giving a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.*

**Structure of the answer:**

**Introduction:**

*write a few lines about the increased incidences of disasters, their relevance for all the nations etc. Also mention that technologies like Big data, AI etc. can play a huge role in helping us manage the disasters in a better way.*

**Body:**

*Define disaster management- e.g. Disaster management is a systematic process with primary aim to reduce the negative consequences and effect of disasters, hence safeguarding people and social infrastructure.*

*Discuss in points, how big data can play a role in disaster management. E.g Big data generated from geo-informatics and remote sensing platforms can contribute to early warning systems for disasters. Geographical Information Systems (GIS), Global Positioning Systems (GPS) and environmental monitoring sensors with cloud services have a potential to predict disasters; Geoinformatics information along with transportation network data can benefit to understand human mobility patterns during disasters; social data sets; financial data sets etc.*

*Discuss the challenges involved in the process. E.g. Understanding how to link different datasets with different kinds of disasters, early phase of research and application of big data; protection of personal privacy and information etc.*

**Conclusion:**

*Conclude with way forward.*

**Introduction:**

Disaster management is a systematic process with primary aim to reduce the negative consequences and effect of disasters, hence safeguarding people and social infrastructure. Effective management as well as monitoring of disasters is a global challenge.

As the number and access to different datasets is expanding rapidly, the potential and utility of big data is growing for disaster management. Big Data has already saved lives and proven effective within the emergency management field

Body:

**Need for Big Data in Disaster Management:**

- The storage and processing of large volumes of disaster data are the biggest challenges faced by civil defence, police, fire departments, public health and other government organizations.



- It is very crucial for these organizations to get processed real-time disaster data as quick as possible in order to react and coordinate efficiently.
- Big data tools and techniques can assist disaster management officials to optimize decision-making procedures.
- Effective planning and management hugely depends on the quality as well as quantity of the data available.
- Emergency personnel can minimize their search time and maximize their recovery time when they have access to real-time information

#### **Role of Big Data in Disaster management:**

- Empower decision-makers to make accurate assessment during a disaster.
- Big data generated from geo-informatics and remote sensing platforms can contribute to early warning systems for disasters.
- Integration of different data streams, along with data processing and storage is effective for disaster preparedness.
- Help in the development of effective strategies and contribute to minimize the potential effects of disasters.
- Significance of big data analytics to predict occurrences of the floods and for flood management.
- It will help for timely humanitarian response to different disasters.
- Using geospatial datasets along with big data paradigm can provide location based services to avoid hazardous situations.
- It will also benefit in the identification of regions which need the most urgent attention.
- Enhance disaster recovery by utilizing community information and connecting victims with emergency responders and family.
- Connecting Missing People with Their Families
- With big data, safety professionals can better prepare disaster simulations for more accurate implementations.
- Big Data opens up new career opportunities for those who want to find innovative ways to help others.

#### **Limitations:**

- Understanding how to link different datasets with different kinds of disasters.
- The potential of big data technology has not been fully explored for disaster management.
- Not all big data is public and freely available.
- Network security threats and vulnerabilities.
- Challenges related to protection of personal information and privacy.

**Way Forward:**

- Integration of datasets along with providing access to information to agencies managing disasters is crucial to enable effective decision making.
- It's important to protect individuals' identifications and efforts should be put to anonymize the collected datasets.
- Leverage techniques from artificial intelligence (AI) and machine learning (ML) to understand, correlate and draw findings from the disaster related data.
- Analysis from processed disasters information can help to identify the most effective strategies to respond future disasters.
- Ensure data consistency, accuracy and completeness for decision making processes.
- Need to investigate data mining challenges as well for disaster management.
- Security as well as privacy issues in data transmission and storage also need to be under constant investigation.

One of the parameters of assessing societal development of a country is the extent to which there has been penetration of information and communications technology (ICT); in this regard explain what do you understand by digital divide? What are its implications? Suggest measures to overcome it. (250 words)

[The Hindu](#)

**Why this question:**

The government on Tuesday announced a new 'mission' aimed at providing broadband access in all villages in the country by 2022, entailing investments of around ₹7 lakh crore from various stakeholders.

**Key demand of the question:**

One must discuss the concept of digital divide; bring out the issues involved in the Indian scenario and suggest way forward.

**Directive:**

**Explain** – Clarify the topic by giving a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.

**Structure of the answer:****Introduction:**

Define what digital divide is; A digital divide is an economic and social inequality with regard to access to, use of, or impact of information and communication technologies (ICT).

**Body:**

Start with the significance of penetration of information and communications technology (ICT). Discuss the impact of it on the society.

Explain that Government of India has been pursuing e-governance initiatives to bring in transparency accountability, speed in delivery of public services. Digital divide has been the major hindrance in path of these e-governance initiatives.

Provide for suggestions.

**Conclusion:**

Conclude with way forward.

**Introduction:**



Digital divide refers to the **gap between demographics and regions** that have access to modern information and communications technology, and those that don't or have restricted access. It is an **economic and social inequality** with regard to access to, use of, or impact of information and communication technologies (ICT).

To bridge this gap, the government recently announced **The National Broadband Mission**, which is aimed at providing broadband access in all villages in the country by 2022, entailing investments of around ₹7 lakh crore from various stakeholders.

### Body:

#### Digital divide scenario in India:

- The report, titled Internet in India 2017, was released by the Internet and Mobile Association of India.
- In December 2017, internet penetration in urban India was at 64.84 percent as compared to 60.6 per cent in December 2016. In rural India, however, internet penetration was at 20.26 percent in December 2017, from 18 percent in 2016.
- According to a 2017 global survey by the Pew Research Centre, only one in four Indian adults report using Internet or owning a smartphone.
- despite the booming economy, India's progress in smartphone penetration has been slow.
- in India and Tanzania, less than one-quarter report owning smartphones, the lowest among the countries surveyed.
- A Deloitte India report released in January 2018 revealed that with only 17 percent internet penetration, rural India is lagging behind in connectivity owing to challenges in deployment of fixed broadband networks.

#### Implications of Digital divide:

- Increasing penetration of digital technology by bridging the existing digital divides is associated with greater social progress of a country.
- **Social capital:** Once an individual is connected, Internet connectivity and ICTs can enhance his or her future social and cultural capital.
- Economic disparity is created between those who can afford the technology and those who don't.
- A direct correlation between a company's access to technological advancements and its overall success in bolstering the economy.
- Countries with less digital gap are benefitted more than the ones with more digital gap.
- **Education:**
  - The digital divide also impacts children's ability to learn and grow in low-income school districts.
  - Without Internet access, students are unable to cultivate necessary tech skills in order to understand today's dynamic economy



- **Lack of information:**
  - Almost all India's socio-economic problems had links to the "digital divide", which had come to stay during the era of digital revolution and then again during the era of internet revolution in India.
  - Rural India suffered from information poverty. Information is controlled by a few at the top of the pyramid who restrict its percolation down to those at the bottom.
- Political empowerment and mobilisation in the age of social media is difficult when there is digital divide.
- **Transparency and accountability are increased** when digitalised for instance people filing taxes online, single window mechanisms for delivery of services ensures good governance as well.

#### Measures needed:

- To bridge the digital divide, there is a need to **accelerate execution**.
- **Meaningful collaborations with the private sector**, technological innovations and following a consistent focused approach towards the larger objective are necessary.
- Utilisation of multiple modes of transactions such as **Unstructured Supplementary Service Data (USSD), Unified Payment Interface (UPI), Immediate Payment Service (IMPS), and Point-of-Sale (POS) machines**, need to be strengthened
- India also needs easing of regulations to **allow inter-operability of wallets** to ensure easy transfer of funds for merchants as well as for consumers.
- 
- A framework comprising both is needed:
  - A **positive obligation** to create infrastructure for a minimum standard and quality of Internet access as well as capacity-building measures which would allow all citizens to be digitally literate.
  - A **negative obligation** to protect citizen's right to privacy.
- The government should invest the resources saved by moving services online, to create Digital infrastructure.
- The definition of digital literacy today must include the ability to access and act upon resources and information found online.
- Internet access and digital literacy are dependent on each other, and creation of digital infrastructure must go hand in hand with the **creation of digital skills**.
- Apart from it, there is a need to **strengthen telecom regulations**, so as to ensure market competition and make the **internet affordable to all**.
- **Zero-rated services for mobile data access**, could be an intermediate step to fully open and affordable Internet access for the poorest, provided that the choice of selecting services is transparent and inclusive.



### Extra information:

#### The National Broadband Mission

- The vision of the national broadband mission is to **fast-track growth of digital communications infrastructure, bridge the digital divide, facilitate digital empowerment and inclusion, and provide affordable and universal access of broadband for all.**
- It will facilitate universal and equitable access to broadband services across the country, especially in rural and remote areas.
- It will also aim at significantly improving quality of services for mobile and internet.
- Under the mission, the government plans to lay incremental 30 lakh route km of Optical Fiber Cable, while also increasing tower density from 0.42 to 1 tower per thousand of population by 2024.
- The mission envisages stakeholder investment of \$100 billion (₹7 lakh crore), including ₹70,000 crore from **Universal Service Obligation Fund (USOF)** in coming years.
- It tries to address policy and regulatory changes required to accelerate the expansion and creation of digital infrastructure and services.
- the Centre will work with States and UTs for having consistent policies pertaining to expansion of digital infrastructure including for **Right of Way (RoW) approvals** required for laying of optical fibre cable.
- **A Broadband Readiness Index** will be developed to measure the availability of digital communications infrastructure within a State/UT

India has achieved remarkable success in unmanned space missions till date; with Gaganyaan it has now ventured into manned space missions Discuss the significance of the Gaganyaan mission to India, what are the major challenges in the manned mission to space? Explain. (250 words)

*The Hindu*

**Why this question:**

The Indian Space Research Organization (ISRO) planning its first unmanned test mission of the Gaganyaan mission.

**Key demand of the question:**

Discuss the significance of the Gaganyaan mission to India and the challenges it has been facing in going ahead with an unmanned mission in space.

**Directive:**

**Explain** – Clarify the topic by giving a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.

**Structure of the answer:**

**Introduction:**

Discuss the background of the Mission Gaganyaan; Gaganyaan will be the first manned space mission of ISRO which is proposed to be launched by 2022.

**Body:**

Deliberate upon the manned and unmanned missions of the past in brief first.

Explain what the mission Gaganyaan is.



*Gaganyaan is an Indian crewed orbital spacecraft intended to be the basis of the Indian Human Spaceflight Programme.*

*Gaganyaan is expected to carry three people into space for seven days. The largely autonomous capsule will orbit the Earth in the low earth orbit of 300-400 Km.*

*The crewed vehicle is planned to be launched on ISRO's GSLV Mk III in December 2021. HAL has manufactured the crew module.*

*With this, India could potentially become the fourth country to send a man to space, after the erstwhile USSR, the US and China. Denmark also has a manned space flight scheduled for 2022.*

*Highlight the challenges faced.*

**Conclusion:**

*Conclude with way forward.*

**Introduction:**

The Prime Minister of India in his Independence Day address announced that an Indian astronaut would go into space by 2022, when India celebrates her 75th year of Independence. In pursuance of this, Indian Space Research Organization (ISRO) plans to fly the first unmanned test mission ahead of its ambitious crewed Gaganyaan mission by the end of 2020, according to ISRO Chairman.

**Body:**

**Mission Gaganyaan:**

- India's first manned space flight Gaganyaan is expected to send three persons into the space for seven days and the spacecraft will be placed in a low earth orbit of 300-400 km.
- Two unmanned Gaganyaan missions will be undertaken prior to sending humans.
- The total programme is expected to be completed before 2022 with first unmanned flight within 30 months.
- The mission is estimated at 9000 crore.
- It would raise scientific and technological temper across the country and inspire youngsters.
- When it achieves the mission, India would be the fourth nation to circle Earth after the Soviets, the Americans and the Chinese.

**Challenges:**

- For a manned mission, the key distinguishing capabilities that ISRO has had to develop include the ability
  - to bring the spacecraft back to Earth after flight
  - to build a spacecraft in which astronauts can live in Earth-like conditions in space
- India is yet to perfect fool-proof launch vehicle technology, the basic requirement for a manned space mission.
- The Polar Satellite launch vehicle and the Geosynchronous Launch vehicle, the two Indian spacecraft deployed to launch satellites and modules into space, are yet to be man-rated.
- India does not even have the facilities to train astronauts.



- ISRO has not been able to put in place India's own Global Positioning System in spite of completing the NavIC due to dysfunctional atomic clocks in the satellites, rendering the fleet a dud.
- The launchpad at the Sriharikota spaceport, the Satish Dhawan Space Centre, will have to be enhanced for the human mission.
- While the launch vehicle, crew module, re-entry technology, crew escape system are in place, monitoring and tracking systems, Environmental Control & Life Support System (ELCSS), space suit and crew support systems are still in the developmental phase.

#### Way forward:

- It is important to ensure engagements at political level to obtain long term commitment for India's human space flight missions
- Financial implications of a long-term human space-flight programme development should be assessed and the returns and benefits should be clearly articulated
- It is important to overcome the technological challenges to ensure a safe, successful manned space mission. International collaboration in this domain can help India ensure a robust technology for its HSF programme.
- Selection of Indians for astronauts will be an important step. Procedures and specifications for astronauts and a rigorous selection process is suggested.

### Conservation, environmental pollution and degradation, environmental impact assessment

The idea that 'green technology' can help save the environment is dangerous because it glosses over the alternatives' ills. Analyse.

*The Wire*

*Why this question:*

*The world is grappling with the consequences of climate change and environmental degradation. A number of solutions have been posed and several of them are current being implemented. However it has been seen that many of those solutions while addressing one aspect create further problems for environment and our climate. It is therefore important to discuss those solutions and their effects.*

*Directive word:*

*Analyze-here we have to examine methodically the structure or nature of the topic by separating it into component parts, and present them as a whole in a summary.*

*Key demand of the question:*

*The question wants us to dig deep into the solutions being posed and implemented to address the issue of climate change and environmental degradation and how they in turn affect the environment in a negative way.*

*Structure of the answer*

*Introduction:*

*write a few introductory lines highlighting environmental degradation, biodiversity loss and climate change. E.g Industrialists around the world have been extracting a wide array of minerals and metals to build electric vehicles and 'cleaner' batteries, simply replacing one injustice with another. present some related statistics and mention that a number of solutions have been currently in vogue to address those issues.*

*Body:*



*In a bid to reduce the extraction of hydrocarbons for fuel as well as to manufacture components for more efficient electronic and mechanical systems, industrialists around the world have been extracting a wide array of minerals and metals, destroying entire ecosystems and displacing hundreds of thousands of people. It's as if one injustice has replaced another.*

*Discuss how the extraction of minerals for development of Green technology has been leading to environmental pollution, taking the cases of Guinea, Congo etc.*

*Discuss Biofuels as alternatives to fossil fuels and challenges posed by them.*

*Wind farms vs biodiversity loss and air pollution.*

*Challenges posed by recycling.*

*Conclusion:*

*Based on your discussion, form a fair and a balanced conclusion on the given issue*

Introduction:

The climate change and environmental degradation has posed some grave threats to the environment. According to **UN Water**, some 1.1 billion people worldwide lack access to water, and a total of 2.7 billion find water scarce for at least one month of the year. The recent **IPCC's "Special Report on Global Warming of 1.5°C"** revealed that the impacts and costs of 1.5 degrees Celsius of global warming will be far greater than expected. The Intergovernmental Panel on Climate Change says a **1.5°C average rise may put 20-30% of species at risk of extinction**. If the **planet warms by more than 2°C, most ecosystems will struggle**. Coral reefs are projected to **decline by a further 70-90% at 1.5°C**.

Body:

In a bid to reduce the extraction of hydrocarbons for fuel as well as to manufacture components for more efficient electronic and mechanical systems, industrialists around the world have been extracting a wide array of minerals and metals, destroying entire ecosystems and displacing hundreds of thousands of people. It's as if one injustice has replaced another.

The salt flats 3,600 meters above sea-level in Bolivia and Chile hold nearly half of all the lithium in the world. Lithium is another important metal required to manufacture energy storage devices. (This year's Nobel Prize for chemistry was awarded to researchers who invented the lithium-ion battery.) But the rush to control Bolivia's resources quickly destabilised the local socialist government, which had intended to regulate mining and distribute profits among the population. The right-wing government in place now is likely to reopen negotiations with foreign mining companies that its predecessor had nixed.

- **Desalination technology:** Desalination has become a solution for many cities located in coastal areas. The saline water from the sea is treated and the water is made potable. More than 16,000 desalination plants are scattered across the globe producing fresh water, according to a **first global assessment of the sector's industrial waste**.
- **Challenges posed:** The plants produce more briny toxic sludge than fresh water. For every litre of fresh water extracted, a litre-and-a-half of salty, chemical-laden sludge called brine is dumped—in most cases—into the ocean. That's enough to cover the state of Florida in a 30-centimetre (one-foot) layer of slime.
- **Hydro Fluoro Carbons to protect ozone depletion: The 1987 Montreal Protocol** banned industrial chemicals (CFCs) dissolving stratospheric ozone, which protects us from the Sun's



dangerous ultraviolet rays. To replace the forbidden molecules, used in aerosols and refrigerants, scientists invented a new category known as HFCs.

- **Challenges posed:** But there was a small problem that didn't emerge until much later: the substitutes—while harmless to the ozone layer—were **dangerous greenhouse gases**, thousands of times more potent than carbon dioxide or methane. That meant a new, protracted round of negotiations over an amendment calling for the phase of HFCs, which was finally adopted in 2016.
- **Bio-fuels:** The rise in oil prices in the 1970s, and later the looming threat of climate change, boosted the production of bio-fuels made from corn, sugarcane and palm oil. It seemed like a great idea: planet-warming CO<sub>2</sub> released into the atmosphere when the bio-fuels were burned would be partially offset by the CO<sub>2</sub> absorbed while the plants were growing.
- **Challenges posed:** The energy needed to transform and transport plant-based fuels undercuts their original purpose. To make matters worse, the newly emerging market created a perverse incentive to cut down tropical forests—far more efficient at soaking up CO<sub>2</sub>—to make way for sugarcane and palm oil trees. When it comes to climate change, projections for how humanity can cap global warming under two degrees Celsius (3.6 degrees Fahrenheit) assume a major role for bio-fuels. But recently scientists have calculated that an area up to twice the size of India would be needed to cultivate them, which may not leave enough land to grow food.
- **Wind farms:** There are some 350,000 wind turbines scattered across the globe producing more than 500 gigawatts of clean, green energy and supplying four percent of global electricity demand.
- **Challenges posed:** According to one estimate, one wind turbine requires 900 tonnes of steel, 2,500 tonnes of concrete and 45 tonnes of plastic. For every tonne of steel produced, 780 kg of coal is used during the extraction phase. The production of every tonne of concrete emits 1.25 tonnes of carbon dioxide. But wind farms are also bird killers: up to 328,000 birds—especially those that fly at night—are felled every year by fast-spinning blades in the United States alone, where there are some 50,000 turbines. They also **disrupt ecosystems**.
- **Case Study:** A scientific study of **wind farms in the Western Ghats**, a UNESCO-listed range of mountains and forest spanning India's west coast, found that predatory raptor birds were four times rarer than in adjacent areas. Their absence cascaded down the food chain and radically altered the density and behaviour of the birds' prey. There was, in particular, an explosion in the raptors' favourite meal: fan-throated lizards.
- **Solar energy:** Photovoltaic solar panels absorb sunlight to generate electricity. This has powered many homes in developing and under-developed countries. It has shown the potential to reduce the consumption of coal for electricity generation.
- **Challenges posed:** conventional methods of solar panel manufacturing release nitrogen trifluoride, a greenhouse gas 17,200-times more potent than carbon dioxide and with an atmospheric tenancy of over seven centuries. High-voltage power generation and transmission requires the use of sulphur hexafluoride, which is 23,500-times more potent than carbon dioxide and lingers in the atmosphere for a millennium.
- **Recycling** is also energy-intensive and can often salvage only a fraction of spent resources. For example, the world produces about 360 million tonnes of plastic a year but only about



9% of all plastic waste is recycled. If production continues to grow at its current rate, recycling a tenth of it will soon be rendered meaningless.

Conclusion:

The need of the hour is to create solutions that are sustainable. The solutions themselves shouldn't pose further challenges, easily scalable and cost saving. Better Research and Development techniques with right validation is the way ahead before deployment on large scale

**Case Studies:**

- *The Republic of Guinea in equatorial Africa hosts 30% of the world's bauxite reserves as well as large quantities of iron ore. Some 98% of the country is also covered by forests. Aluminium from bauxite is required to make electric cars and high-capacity electric cables. Steel is the most commonly used metal and is used to make windmills and for structural use in urban infrastructure. Imagine the plight of Guinea's forests in the face of rising demand for both these materials.*
- *The Congo, its neighbour, is home to 60% of the world's cobalt. This metal is a critical component of batteries that power smartphones and electric vehicles. Contractors are thought to employ some 35,000 children, forced to work in pitiable conditions, to extract this metal. The mines erected to service this industry have destroyed large tracts of savannah and agriculture land and eliminated the livelihoods of thousands. As the demand for cobalt increases, as it is bound to, the Congo's rainforests are likely to be the next big casualty.*

It is evident that our challenges related to the environment are interwoven with challenges from societal, technological and philosophical perspectives. Analyse.

*Livemint*

**Why this question:**

*Mankind's progress has had unintended consequences on the environment. These include climate change, extreme weather events and the reduced availability of potable water.*

**Key demand of the question:**

*One has to find the reasons for reduced availability of potable water due to human actions, climate change and extreme weather events.*

**Directive:**

*Analyse – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.*

**Structure of the answer:**

**Introduction:**

*Start off with how Unintended consequences of human progress over the past decades have begun to adversely impact the environment we live in, which provides the basic conditions for life on earth to exist.*

**Body:**

*Present the various environmental challenges that is posed to us today like lack of potable water etc. Discuss how we can get an understanding to our current environmental challenges can only come from studying them in the context of technology, society and philosophy. Provide solutions to tackle the same.*

**Conclusion:**

*Conclude with a way forward.*

**Introduction:**



During last decade, environmental issues have been receiving increasing attention in all spheres of life, including greater coverage in the media. There is also a growing awareness of the need and importance of involving people actively in the protection of environment and management of the natural resources of their locality. Unintended consequences of human progress over the past decades have begun to adversely impact the environment we live in, which provides the basic conditions for life on earth to exist.

**Body:****Environmental challenges faced today:**

- The layer of ozone in the upper atmosphere, which protects us from harmful radiation, is being depleted due to our excessive use of aerosol chemicals.
- Predictions made back in the 1980s about climate change are starting to come true. Extreme weather events around the world appear to be more common than before.
- Cities like Chennai and Mumbai get flooded during the monsoon, and yet run out of water later in the year.
- One of the most critical crises that we face today is access to potable water.
- There are three kinds of access problems. The first one is where there are no systems in place for the regular supply of water; for example, in urban slums.
- The second is where there is a regular system in place, but a section of society faces challenges due to the seasonal unavailability of water. This situation is becoming common in cities like Chennai, Bengaluru, Mumbai, and is giving rise to widespread distress.
- The third kind of situation has often been observed in rural areas where people depend on natural sources of drinking water that are fast becoming inaccessible because of pollution and environmental changes.

**Environmental challenges are interwoven:**

- An understanding of our current environmental challenges can only come from studying them in the context of both technology and society.
- Technology is one of the key attributes of today's human society, one that makes our era entirely different from thousands of years of human presence on earth.
- On one hand, our tech-centred orientation is one of the primary causes of our alienation from nature; on the other, technology can help us cope with the environmental stresses being faced by human society.
- From a different point of view, technology is one of the major factors inducing environmental pollution.
- To accommodate technological progress, humans have always sacrificed the environment, which eventually led to complex issues like climate change and wide-scale biodiversity loss.

**Global environmental crisis and its relationship with technology:**

- First, how technology can help society manage environmental issues.



- Second, how society can act to manage the externalities of technology within environmentally acceptable standards.
- And third, how technology can aid in evaluating the current environmental condition and its impact on society.

**Environmental issues in the context of society:**

- we recognize that environmental migration is one of the key issues that future generations will need to cope with.
- The United Nations forecasts that there could be up to 1 billion environmental migrants by 2050, mostly from coastal areas.
- We must think through current land-use changes, diversification of livelihoods at a community level, building resilience, and policies for environmental migrants.
- An added layer of complexity, given our political boundaries, is how humanity should respond to environmental migrants.

**Measures needed:**

- We must redefine the needs of an individual, and understand the reasons behind increasingly consumeristic lifestyles across the globe. Humans do not harm the environment intentionally.
- Environmental disturbance is a by-product or negative externality of human actions that arise due to our needs and aspirations—in other words, the unintended consequences of human progress.
- Exploring the nature of our progress and the consumption landscape could be one way to address the latter.
- The cycle of production and consumption does not happen in a void. It is a way to respond to individual needs and desires.

**Conclusion:**

The strategies to ensure sustainable development has at least four important elements, such as ecologically harmonious, efficient and conserve resources including energy, and must aim at local self-reliance and offer equity with social justice. While for the achievements of the first three elements, considerable inputs from the science, technology, economics, and sociology would be needed while equity is a political question calling for the sensitivity and commitments of the political masters and policy makers in letter and spirit.

While the present climate activism movement has certainly helped the cause in terms of raising awareness, it spells out little in terms of meaningful action. Comment with suitable justifications. (250 words).

*Hindustantimes*

**Why this question:**

*The article brings out the concerns associated with climate activism and argues over the success of the same.*

**Key demand of the question:**

*One must*



*Discuss the instance of climate activism, explain the challenges involved therein.*

**Directive:**

**Comment**– here we have to express our knowledge and understanding of the issue and form an overall opinion thereupon.

**Structure of the answer:**

**Introduction:**

*In brief narrate what you understand by climate activism.*

**Body:**

*Explain the concerns involved as to what are the issues, why the movement of climate activism isn't achieving its true agenda.*

*What are the flaws? – Failure to recognise the need for a sustainable outcome.*

*Explain with suitable examples, take hints from the article.*

*Discuss what needs to be done to ensure the movement achieves true outcomes.*

**Conclusion:**

*Conclude with need to foresee and that fighting climate change is a mammoth task and we need all hands-on deck if we are to have a real shot.*

**Introduction:**

Climate change is the greatest threat faced by the world in history, according to a 26-country survey released by the Pew Research Center. The United Nations has called climate change as the “defining issue of our time”.

**Body:**

**More words than actions towards climate activism:**

- Awareness and support for climate action has risen rapidly in the recent years, especially amongst the youth.
- 2019 has been a momentous year for climate activism with millions of people protesting for climate action all over the world.
- On September 20, over four million protesters gathered in more than 150 countries making it the largest climate strikes in world history.<sup>7</sup>
- Crowds full of children, youth and even older people have come out and participated in these strikes happening throughout the year.
- Thus, the present climate activism movement has certainly helped the cause in terms of raising awareness.

**However, the issue with present climate activism lies in the fact that it spells out little in terms of meaningful action.** This is because

- Millions of people striking for a cause without defining what outcomes they expect.
- Asking the governments to declare a state of climate emergency seems a little meaningless, because there are no set actions a government needs to take to accompany that declaration.
- People continue with business as usual, while publicly being in a state of climate emergency accompanied by a loosely defined “action plan”.
- Another issue with the movement in its present form is that it doesn't hold companies or developed countries proportionately accountable.



- **Lack of common but differentiated responsibility:**
  - There is no clarity on responsibilities of the companies and developed nations who are historically responsible for greenhouse emissions
  - developing nations expected by the youth of the world to share equal burden of a problem which has been primarily created by some developed nations

#### Way forward:

- The climate movement in each city, state or country needs to define what steps they would like to see their governments and the private sector take in different areas such as transport, energy, waste management, urban development and ecosystem management, and protest specifically in demand of their fulfilment.
- There should also be a way for citizens to pledge individual actions, however small, in support of the movement.
- This would highlight the commitment of the supporters and ensure that climate consciousness becomes a part of people's everyday lives instead of being just a once a week 'event'.

“The oxygen bars are the new entrants in the field to tackle pollution in major cities in India”. Elucidate. (250 Words)

*The Hindu*

*Why this question:*

*The article is based on the concept of oxygen bars that are being seen as a new solution to the problems of pollution in the big cities of the country.*

*Key demand of the question:*

*One must discuss in detail the relevance of such new idea in controlling the menace of pollution.*

*Directive:*

*Elucidate – Give a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.*

*Structure of the answer:*

*Introduction:*

*In brief narrate that the popularity of packaged air began around four years ago when a Canadian company launched 'canned air' for people in China when air pollution in many cities became alarmingly high.*

*Body:*

*Explain that the newer addition — oxygen-bar — a recreational parlour or cafe which serves 'pure oxygen' is becoming a more attractive destination, particularly in cities with dangerous levels of air pollution. At times, the oxygen comes in different scented flavours.*

*Discuss first the issue of pollution facing the major cities in the country.*

*Explain what needs to be done.*

*Conclusion:*

*Conclude that It definitely calls for serious vigilance by the clinicians and policy makers to ensure the safety issues associated with recreational oxygen use, particularly flavoured oxygen in such bars, parlours and spas.*

#### Introduction:



The popularity of packaged air began around four years ago when a Canadian company launched 'canned air' for people in China when air pollution in many cities became alarmingly high. The newer addition — oxygen-bar — a recreational parlour or cafe which serves 'pure oxygen' is becoming a more attractive destination, particularly in cities with dangerous levels of air pollution. At times, the oxygen comes in different scented flavours.

**Body:**

**An oxygen bar** is an establishment, or part of one, that sells oxygen for recreational use. Individual flavored scents may be added to enhance the experience. The flavors in an oxygen bar come from bubbling oxygen through bottles containing aromatic solutions before it reaches the nostrils: most bars use food-grade particles to produce the scent, but some bars use aroma oils.

**Issue of pollution facing the major cities in the country**

- It is clear that the problem of air pollution has increased very seriously and over the years its intensity and seriousness has grown. In many places there is no proper air quality measurement mechanism. The main constituent of the pollutants is the particulate matter which breaches the standard prescribed by Central Pollution Control Board (CPCB)
- CPCB standards are fairly above the international WHO standards. The standards are breached for longer periods of time.
- The thrust towards renewable energy is time consuming and expensive. Construction and demolition are the two major sources of Particulate Matter in the atmosphere. Most of the vegetation has been denuded, there is deforestation taking place and soil erosion acts a source for Particulate Matter pollution.
- The bad air quality tells you that the governance is not upto mark.
- It is a huge problem and increasing geographically every year.

**Benefits of Oxygen bars:**

Most claims around the benefits of oxygen bars haven't been scientifically proven. Proponents of oxygen bars claim purified oxygen can help:

- increase energy levels
- improve mood
- improve concentration
- improve sports performance
- reduce stress
- provide relief for headache and migraine
- promote better sleep

**Are oxygen bars safe?**

- The benefits of oxygen bars haven't really been studied and neither have the risks.



- A healthy person's normal blood oxygen is between 96 and 99 percent saturated with oxygen when breathing normal air, which makes some experts question what value extra oxygen could have.
- Some medical conditions benefit from supplemental oxygen, but even for these people, getting too much can be harmful and even deadly, according to research.
- Administering oxygen to people admitted to the hospital with acute illnesses is a long-held standard practice. However, a study published in 2018 in The Lancet Trusted Source found evidence that oxygen therapy may increase the risk of death when given liberally to people with acute illness and trauma.
- The scents used are delivered by bubbling the oxygen through liquid containing either an oil-free, food-grade additive or an aroma oil such as an essential oil. Inhaling oily substances can potentially lead to a serious inflammation of the lungs, known as lipid pneumonia.
- The scents used in scented oxygen can also be harmful to some people, especially those with lung diseases. According to the Lung Association, the chemicals in scents and even those made from natural plant extracts can cause allergic reactions that can range from mild to severe.
- Unlike conventional oxygen therapies used in respiratory conditions that is administered for a short or long period in hospital or at home, people take oxygen for an ultra-short period in these bars (30 minutes or less).
- As per the standard clinical procedure, oxygen supplementation can be administered only in case of hypoxemia (lowering of oxygen saturation in the arterial blood below 95%) and it does not have any consistent beneficial effect on non-hypoxemic patients.

**Conclusion:**

It is unfortunate that no medical community has come forward to spread awareness among people for this increasingly captivating yet unscientific business with no known or established clinical benefit. It definitely calls for serious vigilance by the clinicians and policy makers to ensure the safety issues associated with recreational oxygen use, particularly flavoured oxygen in such bars, parlours and spas.

Evaluate the factors leading to the high levels of pollution in Indian rivers. What can be done to protect and prevent our rivers from degradation and slow death? Discuss. (250 words).

*The Hindu*

**Why this question:**

*A study conducted by Central Water Commission (CWC) from May 2014 to April 2018 revealed that India's major river systems are contaminated with heavy metals.*

**Key demand of the question:**

*One must evaluate the factors leading to the high levels of pollution in Indian rivers and discuss what can be done to protect and prevent our rivers from degradation and slow death.*

**Directive:**

*Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.*

**Structure of the answer:**

**Introduction:**

*State the findings of the report; quote the facts and relevant case study.*

**Body:**

*First discuss the main sources of river pollution – agriculture, mining, milling, plating and surface finishing industries that discharge a variety of toxic metals.*

*Discuss then their impact.*

*Quote the discussion provided by the report of CWC.*

*Take hints from the article and cover relevant aspects.*

**Conclusion:**

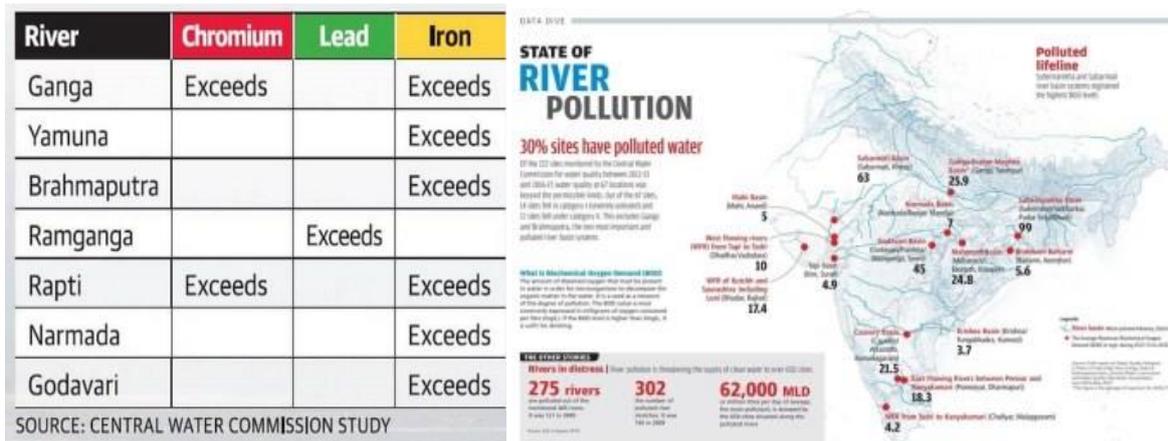
*Conclude with urgency to address the issue of River pollution in the country.*

**Introduction:**

Rivers are increasingly being treated as lifelines to an ever-growing population, the realisation of which is still to sink in as far as India is concerned. More than half the rivers in India are polluted, with the developing economic power unlikely to meet demand for fresh water from its still-growing population. Samples taken from two-thirds of the water quality stations spanning India's major rivers showed contamination by one or more heavy metals, exceeding safe limits set by the Bureau of Indian Standards.

**Body:****Findings from the third edition of an exercise conducted by the Central Water Commission (CWC) from May 2014 to April 2018:**

- The study spanned 67 rivers in 20 river basins.
- Samples from only one-third of water quality stations were safe.
- The rest, or 287 (65%) of the 442 sampled, were polluted by heavy metals.
- Samples from 101 stations had contamination by two metals, six stations saw contamination by three metals.
- Iron emerged as the most common contaminant with 156 of the sampled sites registering levels of the metal above safe limits.
- None of the sites registered arsenic levels above the safe limit.
- The other major contaminants found in the samples were lead, nickel, chromium, cadmium and copper.
- Lead, cadmium, nickel, chromium and copper contamination were more common in non-monsoon periods while iron, lead, chromium and copper exceeded 'tolerance limits' in monsoon periods most of the time.
- Arsenic and zinc are the two toxic metals whose concentration was always obtained within the limits throughout the study period.



**Factors behind high pollution of rivers:**

- **Chemicals & Effluents**
  - The main sources of heavy metal pollution are **mining, milling, plating and surface finishing industries** that discharge a variety of toxic metals into the environment.
  - Industrialisation along the river belt is polluting the water with chemicals and other industrial effluents.
  - While large corporations adopt advanced techniques to treat effluents and chemicals to negate or reduce their toxicity, smaller firms often have no such considerations and violate environment safety standards.
- **Failure of regulatory agencies and implementation of laws:**
  - According to the recent finding of the Central Pollution Control Board that the number of critically polluted segments of India’s rivers has risen to 351 from 302 two years ago is a strong indictment of the departments responsible for environmental protection.
  - The data show that the **plethora of laws** enacted to regulate waste management and protect water quality are **simply not working**.
  - The study by CPCB also underscores the **failure of many national programmes** run by the Centre for river conservation, preservation of wetlands, and water quality monitoring.
  - **Low priority is accorded to the enforcement of laws by SPCBs and pollution control committees.**
- **Garbage Dumping**
  - High population density around the river banks and the reckless dumping of non-biodegradable waste, especially plastics, is further adding to water pollution.
  - Despite warning and strict fines imposed by local administrations on those found dumping garbage into rivers and their estuaries, this uncivilised practice continues unabated.



- The other reasons for contamination are **population growth and rise in agricultural and industrial activities.**
- **Washing & Sewage**
  - Laundering clothes on river banks is a common sight in India. Modern detergents are made of chemicals that contaminate river waters.
  - Defecating around river banks is yet another horrible practice in rural parts of the country that contributes to rising pollution of rivers in India.
  - The situation is worsened by local administrations and private operators of sewage collection tankers dumping the waste in rivers and their estuaries.
- **Cremation & Last Rites**
  - Devout Hindus attach a lot of significance to life after death. Hence, cremation grounds in rural India are located on the banks of rivers.
  - Varanasi, also known as Kashi, is one such place with cremation grounds located right on banks of river Ganga which is also one of the longest rivers in India.
  - Unfortunately, lots of Indians families that cannot afford cremation consign mortal remains of loved ones to rivers. These human cadavers cause severe water pollution.
- **Sand Dredging**
  - High-quality sand from river beds is needed for India's booming construction industry. This has led to rising pollution in Indian rivers.
  - Dredging operators- usually the unlicensed ones- deploy kerosene and diesel-fueled cheap watercraft manned by cheap labour for sand dredging. Engines of these boats cause pollution.

#### **Measures needed to protect and prevent our rivers from degradation and slow death:**

- **CPCB** should be reporting more frequently on pollution, and carrying out intensive measures through State Pollution Control Boards to eliminate pollutants, starting with sewage and industrial effluents.
- Low priority accorded to enforcement of laws by the SPCBs and Pollution Control Committees. So the immediate plan should be to expand the supply of treatment plants. Sustained civil society pressure on governments is vital to ensure that this is done in a time-bound manner.
- On the industrial side, the plan to bring all liquid effluent discharge from textile units and tanneries to zero has to be pursued vigorously, giving industries the assistance to help them choose the best technologies for the recovery of waste water for reuse.
- These measures are urgently needed to revive India's many dying rivers, protect its agriculture, and prevent serious harm to public health from contaminated water.



- All state governments must make it mandatory to have rain water harvesting techniques in government as well as private buildings and make roof water and surface harvesting mandatory.
- **Include embankments, embankment roads, and roads on either side of the river** need to be developed as greenways, with walkways, cycle paths and recreational centres to facilitate the link between citizens and the river.
- **Rejuvenation of wetlands:** These wetlands can store millions of gallons of flood water and recharge ground water and also enhance the river flow during lean period
- **Reforestation and protection of forested catchments:** Forested catchments reduce soil erosion and siltation of the river, they regulate stream flows and micro climate. A protected catchment automatically means lesser silt in rivers
- **Vegetated and protected riparian banks:** These protect the river banks, reduce erosion and maintain water quality.

#### Way forward:

- The immediate plan should be to **expand the supply of treatment plants.**
- **Civil societies** pressure on the Government is the vital aspect.
- All liquid effluent discharge from the textile units and tanneries should be brought down to zero and it is to be pursued rigorously. Assistance to be given to industries to choose the best technologies for recovery of waste waters for reuse.
- By adopting a zero-waste lifestyle that consists of “**Rethink, Reduce, Reuse, Recycle, Compost and Close the Loop (4R2C)**”, we can limit our trash output and save tonnes of solid waste from ending up in landfills and rivers.
- The adoption of a river can also be done as a part of corporate sustainability responsibility programmes organised together with the local communities with the support of local government agencies.
- These measures are urgently needed to revive India’s many dying rivers, protect its agriculture, and prevent serious harm to public health from contaminated water.

“Agriculture will play a crucial role in addressing the planet’s future challenge and is a key to providing important adaptation, mitigation synergies to climate change as well as socio-economic and environmental co-benefits.” In the context of the statement discuss the concept of Climate Smart Farming Systems and its relevance. (250 Words).

*PIB Government of India*

*The question is based on the concept of Climate Smart Farming Systems.*

**Key demand of the question:**

*One must explain what is Climate Smart Farming Systems and relevance of agriculture and its contribution in mitigating the effects of climate change.*

**Directive:**

*Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.*

**Structure of the answer:**



### **Introduction:**

Start by stating that International Seminar on Climate Smart Farming Systems' for BIMSTEC countries is being held in Delhi.

### **Body:**

Define – Climate-Smart Agriculture (CSA) is an approach to help farmers respond effectively to climate change and ensure food security.

State the objectives of it –

*Sustainably increasing agricultural productivity and incomes;*

*Adapting and building resilience to climate change; and*

*greenhouse gas emissions mitigation*

*discuss the important aspects of it – methods, impact and utility,*

**Conclusion:** Conclude by highlighting the significance of it.

### **Introduction:**

Agricultural production systems are facing increasing competition from other sectors for limited natural resources. The availability of these resources and their quality are also being affected by unsustainable management practices and changing climatic and weather conditions. To respond to this situation, the agriculture sectors must improve their sustainability performance and adapt to the impacts of climate change in ways that do not compromise global efforts to ensure food security for all. **FAO defines Climate-smart agriculture (CSA)** as “agriculture that sustainably increases productivity, enhances resilience (adaptation), reduces/removes GHGs (mitigation) where possible, and enhances achievement of national food security and development goals

### **Body:**

**Climate-smart agriculture (CSA)** is an approach for transforming and reorienting agricultural production systems and food value chains so that they support sustainable development and can ensure food security under climate change.

### **Relevance of CSA:**

- **Increased productivity:** Produce more food to improve food and nutrition security and boost the incomes of 75 percent of the world's poor who live in rural areas and mainly rely on agriculture for their livelihoods.
- **Enhanced resilience:** Reduce vulnerability to drought, pests, disease, and other shocks; and improve capacity to adapt and grow in the face of longer-term stresses like shortened seasons and erratic weather patterns.
- **Reduced emissions:** Pursue lower emissions for each calorie or kilo of food produced, avoid deforestation from agriculture and identify ways to suck carbon out of the atmosphere.
- The climate-smart agriculture approach seeks to reduce trade-offs and promote synergies to make crop and livestock systems, forestry, and fisheries and aquaculture more productive and more sustainable.

### **Challenges:**

- With patchy rains, crop failures become common. There is hardly any greenery in many villages, making it difficult for farmers to even maintain cattle.



- Quick adaptation for new changes is hard, with farmers varying and mixing crops across seasons, along with heavy investments in borewells, tractors, and threshers.
- Because of continuous crop failures, farmers are increasingly abandoning their lands and heading to nearby towns to find work as laborers.
- Though India is fortunate to have the monsoon, it is also uniquely vulnerable to rising temperatures, with the country ranked 14th on the Global Climate Risk Index 2019.
- India has over 120 million hectares of land suffering from some form of degradation. This has consequences, especially for marginal farmers.
- According to one estimate, they may face a 24-58% decline in household income and 12-33% rise in household poverty through exacerbated droughts.
- With rain-fed agriculture practiced in over 67% of our total crop area, weather variability can lead to heavy costs, especially for coarse grains (which are mostly grown in rain-fed areas).
- A predicted 70% decline in summer rains by 2050 would devastate Indian agriculture.
- Within 80 years, our Kharif season could face a significant rise in average temperatures (0.7-3.3°C) with rainfall concomitantly impacted, and potentially leading to a 22% decline in wheat yield in the rabi season, while rice yield could decline by 15%.

**Measures needed:**

- Farmers, especially smallholder farmers, need advance warning of emergent weather conditions at a local level.
- Mobile telecommunication systems are increasingly cost-effective and an efficient way of delivering weather-based agro-advisories to farmers at a large scale.
- Radio (especially community radio), television, newspapers, folk media, and village level public address systems will also need to be used to bridge this “communication divide.”
- Weather-based agro-advisories must be locale-, crop-and farmer-specific; need to also recommend soil, water, and biodiversity conservation practices.
- Build adaptive capacities to climate variability and strengthen the sustainability of farming systems.
- On-site training and awareness campaigns, technology demonstrations, farmer-specialist interactions, and engagement with local governance bodies.
- Soil health and need-based irrigation management need to be addressed adequately.
- Closer collaboration between public, civil society, and private technology and financial service providers so that farmers get access to accurate information, and affordable technologies

**Conclusion:**

Climate-smart agriculture is not a new agricultural system, nor a set of practices. It is an innovative approach for charting development pathways that can make the agriculture sectors more productive and sustainable and better able to contribute to climate change adaptation and mitigation.



The Wular lake, once Asia's largest freshwater lake but today little more than a big pond. In the light of above statement, discuss the challenges faced in safeguarding the lake ecosystem and provide measures. (250 words)

### The Wire

#### **Why this question:**

Wular lake, once Asia's largest freshwater lake but today little more than a big pond. It once occupied an area of 272 sq. km but has since shrunk to 72 sq. km, with only 24 sq. km of open water left.

Key demand of the question:

One has to discuss the various reasons for degradation of the lake ecosystems in India and provide the measures for safeguarding the same.

#### **Directive:**

Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

Structure of the answer:

#### **Introduction:**

One can start off with the importance of lakes in a given environment. Further substantiate it with the context of the Wular lake itself.

#### **Body:**

Discuss the challenges faced in safeguarding the lake ecosystem?

Encroachment and increasing stress on the lake boundaries

Dumping of the solid waste, sewerage etc.

Industrial and residential effluents from the cities that discharge into the lake

spread of the invasive alligator weed is slowly destroying the beneficial vegetation growing in the lake

Increasing siltation etc.

How can this be overcome?

#### **Conclusion:**

Conclude with a way forward.

#### **Introduction:**

Lakes are kind of wetland which are areas where water is the primary factor controlling the environment and the associated plant and animal life. Healthy lakes and their shores not only provide us with a number of environmental benefits but they influence our quality of life and they strengthen our economy. Wular lake, once Asia's largest freshwater lake but today little more than a big pond. It once occupied an area of 272 sq. km but has since shrunk to 72 sq. km, with only 24 sq. km of open water left.

Body:

#### **Challenges to the lake ecosystem:**

- Lakes or wetlands near urban centres are under **increasing developmental pressure** for residential, industrial and commercial facilities. For e.g.: There are 42 villages with over nine lakh people living near Wular lake which has led to increased dumping of waste into the water, including detergents and other.



- Vast stretches of wetlands have been **converted to paddy fields**. Construction of a **large number of reservoirs, canals and dams** to provide for irrigation significantly altered the hydrology of the associated lakes.
- There is growing concern about the effect of industrial pollution on drinking water supplies and the biological diversity of lakes. For e.g.: **Industrial and residential effluents** from the cities that discharge into the Wular lake has deteriorated.
- **Increased air temperature; shifts in precipitation; increased frequency of storms, droughts, and floods; increased atmospheric carbon dioxide concentration; and sea level rise** could also affect lakes.
- The removal of material from a wetland or river bed. **Dredging of streams lowers the surrounding water table** and dries up adjacent lakes.
- Water is drained from wetlands by cutting ditches into the ground which collect and transport water out of the lakes. This lowers the water table and dries out the lakes.
- Indian lakes are threatened by **invasive alien species** – exotic introduced plant species such as water hyacinth and salvinia. They clog waterways and compete with native vegetation. E.g.: Invasive alligator weed is slowly destroying the beneficial vegetation growing in the lake
- **Over withdrawal of groundwater** has led to **salinization of the lakes**.
- **Administrative logjam:** For e.g.: Since Kashmir is a conflict zone, anything Baba wanted to do first required him to secure permissions from the army, the navy, the Central Reserve Police Force and the local police, as well as from the Water Conservation and Management Authority set up in 2012 to clean up the lake. Wular is the only lake in India to be guarded by the national navy.

#### Measures to safeguard the lake ecosystem:

- Dredging of dried lake beds and tank beds in the drought affected areas.
- Implementation of Wetland Conservation measures as per Ramsar Convention.
- Digging deep trenches surrounding the lakes to avoid waste dumping, especially in urban areas.
- Exclusive missions of various state governments like Mission Kakatiya of Telangana for rejuvenating lakes, ponds and tanks.
- Rejuvenation works taken up under MGNREGA, PMKSY etc.
- New Municipal and Solid Waste Management Rules mandates segregation, recycling and reuse of waste, and emphasis on waste treatment before discharging.
- The green tribunal incentivised the states to act against polluters in a **“polluter pays” model**.
- Hefty fines, for lax state and local governments as well as private sector polluters, will go a long way in ensuring action against pollution.

#### Conclusion:



Without making the citizens aware of the importance and benefits of lakes and wetlands in their lives, it is extremely difficult to implement laws effectively. Stakeholder participation and capacity building must be used as an important instrument for better management of urban waterbodies.

If climate change is the defining issue of the century, the UN conference in Madrid failed miserably in galvanising action to address it. Elaborate.(250 words)

*The Hindu*

*The Wire*

**Why this question:**

*At COP 25 in Madrid, the countries party to the Paris Agreement failed to agree on rules and procedures to govern a global carbon market, on finance for losses caused by extreme weather events, on meeting the commitments made before the agreement and on raising their ambitions. The final declaration was desultory, merely expressing serious concern at the emissions gap in seeking to limit temperature increase to 1.5° C.*

**Key demand of the question:**

*One has to discuss the reasons for failure of the COP25 meeting and the implications of failures of the talks on the planet Earth as well as the developing and small nations.*

**Directive:**

*Elaborate – Give a detailed account as to how and why it occurred, or what is the particular context. You must be defining key terms where ever appropriate, and substantiate with relevant associated facts.*

**Structure of the answer:**

**Introduction:**

*One can start off with the quoting the various facts of climate change using the scientific reports from the Intergovernmental Panel on Climate Change warning of near-certain catastrophic consequences of inaction, and an analysis from the UN Environment Programme on the gap between current greenhouse gas emissions and the limit over the coming decade.*

**Body:**

*Discuss in brief the challenges faced due to climate change effects. the real losses from extreme weather events that climate-vulnerable countries, India included, are facing with frightening regularity.*

*even insured losses worldwide during 2017 and 2018 together stood at a record \$225 billion*

*Now, discuss the various reasons for the failure of the COP25 talks.*

*unproductive wrangle over establishing a market system to trade in carbon credits earned through reductions in emissions, with some countries eager to cash in on poorly audited emissions savings from the Clean Development Mechanism of the Kyoto Protocol that preceded the Paris pact the divergence between the developed and developing countries grew over the course of two weeks as the developed world – led by the US – blocked any attempt at a compromise using a ‘take it or leave it approach’.*

*Developed countries also refused to relent on the question losses suffered by developing countries due to climate impact.*

*What are the implications of the failure of talks?*

*What are the measures needed to overcome?*

**Conclusion:**

*Conclude with a way forward.*

**Introduction:**

The UN Framework Convention on Climate Change (UNFCCC) conference (COP25) was held from 2 to 13 December 2019 in Madrid, Spain. Despite extending the meeting for 2 days, the outcome is disappointing. The countries party to the Paris Agreement **failed to agree on rules and procedures**



to govern a global carbon market, on finance for losses caused by extreme weather events, on meeting the commitments made before the agreement and on raising their ambitions.

**Body:**

**Outcomes of the COP25:**

- This year's UN talks **focused on narrow technical issues** such as the **workings of the global carbon markets**, a means by which countries can trade their successes in cutting emissions with other countries that have not cut their own emissions fast enough. However, **no agreement has been reached and the issue will be resolved next year.**
- The developed and the developing worlds had opposite views on each of these was clear from the beginning of COP25, but the divergence only grew over the course of two weeks as the developed world – led by the US – blocked any attempt at a compromise using a **'take it or leave it approach'**.
- The US was blamed for refusing to agree to developing countries' demands under what is known in the UN jargon as the **Warsaw International Mechanism (WIM).**
- At COP25, the **developed world didn't honour CBDR**, instead pushing back against any decision, often with strong language, on the provision of finance to developing countries to help them mitigate, adapt and deal with losses due to climate change.
- It also **blocked any commitments to meet its emissions reductions under the Kyoto Protocol**, the outgoing climate regime to be replaced by the Paris Agreement next year.
- Developed countries also refused to relent on the question losses suffered by developing countries due to climate impact.
- Weary negotiators wrangled over the wording of provisions for "loss and damage", by which developing countries are hoping to receive financial assistance for the ravages they face from climate breakdown.
- Climate negotiators might have tossed the more intractable questions — **raising \$100 billion a year from 2020 for developing countries**, creating a strong framework to address loss and damage from climate events and transferring technology to poorer countries on reasonable terms
- Few countries came to this year's talks with updated plans to reach the Paris goals, though the EU finally agreed its long-term target of reaching net zero emissions by 2050.
- A **"high ambition coalition"** made up of the EU and many smaller developing countries pressed for a resolution to ask all governments to formulate stronger national plans on cutting carbon. However, **no substantive decision on future emission cuts** was made.
- After two extra days and nights of negotiations, delegates finally agreed a deal that will see new, improved carbon cutting plans on the table by the time of the Glasgow conference next year.

**India's stand on the COP25:**

- India played a strong role in critiquing the developed world's continuing poor record on climate action.



- It argued that unless a stocktaking exercise of the fulfillment of various pre-2020 commitments by developed countries (such as those made at Copenhagen, Cancun and Kyoto) showed that they were making significant progress, India would not raise its climate ambition for its next round of Paris Agreement targets due in 2020.
- It is entirely appropriate for countries such as India to insist on not taking on an even more unfair share of the global mitigation burden unless developed countries deliver on the minimal parameter of fulfilling their existing promises.
- India also took a lead in calling for more finance for developing countries for climate action, with the minister emphasising that “not even 2 per cent” of the promised “\$1 trillion in the last 10 years” had been delivered.

#### Way forward:

- All parties will need to address the gap between what the science says is necessary to avoid dangerous climate change, and the current state of play which would see the world go past this threshold in the 2030s.
- As India prepares to face calls for higher ambition in 2020 and beyond, India has to involve its States in mitigation and adaptation efforts.
- It is crucial that India continue to push developed countries in this fashion as the entire global climate action framework has been put in jeopardy by the inaction of big polluters.

As the Prime Minister advises states along the river to shift focus from Namami to Arth Ganga, it is clear that the Ganga cannot be restored by only pollution-abatement measures. Discuss. (250 words)

#### Down To Earth

##### **Why this question:**

Recently, the Ganga Council headed by Prime Minister (PM), in its first meeting held on December 14, 2019, floated a plan to promote sustainable agriculture in the Gangetic plain by promoting organic clusters in a five-km stretch on both sides of the Ganga basin in Uttarakhand, UP, Bihar, Jharkhand and West Bengal.

It is a good policy move, considering the cumulative use of pesticides has doubled in the last one decade and most of it runs off in our rivers. For the short-term, the five-km stretch is fine, but the government should eventually plan to stretch it to cover more area in the basin. Agriculture along the entire riverbed should be organic.

##### **Key demand of the question**

The question is about analysing the significance of Namami Gange programme and the achievements made by it. One has to further discuss the challenges faced and measures needed to set the problems straight.

##### **Directive word**

Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

##### **Structure of the answer**

##### **Introduction:**

In a few introductory lines brief upon the background and mission objectives of NMCG.

##### **Body:**

The question must discuss the following points:

##### **The successes of NMCG so far:**



*Namami Gange has completed 114 projects and about 150 projects are in progress, while about 40 projects are under tendering, of which 51 sewage projects were approved before May 13, 2015 — the day Namami Gange was approved by the Union Cabinet.*

*Till April 2019, 1,930 MLD of sewerage treatment capacity in 97 Ganga towns has been developed, whereas the sewerage generation in these towns is 2,953 MLD.*

*It is further projected that the sewerage generation would touch 3,700 MLD by 2035.*

*The failures, challenges facing in the revival of Ganga*

*The industrial pollutants largely originate from tanneries in Kanpur, paper mills, distilleries and sugar mills in the Yamuna, Ramganga, Hindon and Kali river catchments.*

*Then, there is the huge load of municipal sewage which contributes two-thirds of total pollution load.*

*Water in India is a state subject and water management is not a truly knowledge-based practice.*

*The management of the Ganga lacked basin-wide integration and is not very cohesive between various riparian states.*

*Further, there is a greater challenge of upgrading the water supply and wastewater treatment infrastructure in the designated smart cities and of providing clean water supply to all rural households by 2024 under the Jal Jeevan Mission.*

*Critical steps needed to overcome the challenges:*

*Promote only decentralised sewage treatment plants (dSTP) at the colony level.*

*Develop and restore local storages (ponds, lakes, wetlands) as permanent solutions to both floods and droughts.*

**Conclusion:**

*Give a balanced way forward.*

**Introduction:**

Namami Gange Programme is an umbrella programme which integrates previous and currently ongoing initiatives by enhancing efficiency, extracting synergies and supplementing them with more comprehensive & better coordinated interventions. National Mission for Clean Ganga (NMCG) endeavours to deploy best available knowledge and resources across the world for Ganga rejuvenation. Clean Ganga has been a perennial attraction for many international countries that have expertise in river rejuvenation.

**Body:**

**Salient features of Namami Gange programme:**

- River front development.
- Conservation of Aquatic life and biodiversity
- Improvement of coverage of sewerage infrastructure in habitations on banks of Ganga.
- River Surface cleaning for collection of floating solid waste from the surface of the Ghats and River
- Afforestation
- Industrial Effluent Monitoring
- Development of Ganga Gram
- Creating Public Awareness

**Achievements of Namami Gange:**



- Namami Gange has a well-balanced spread of 221 projects, which include STP, ghat development, surface cleaning afforestation, sanitation, and public awareness, out of which 58 have been completed.
- There is a concerted focus on 10 towns that contribute to 64% of the total sewage discharged in Ganga.
- To address the cross-functional challenge faced by GAP, Namami Gange has synergized itself with government schemes by signing MoUs with 10 central ministries.
- More than 90 per cent villages across river Ganga have been declared open defecation free, and by October 2017, the rest of the villages would become ODF as well.
- The programme has also successfully renovated over 180 ghats and built 112 new crematoriums.
- 4,464 villages situated on the bank of Ganga have been declared as open defecation free (ODF). Moreover, Namami Gange was instrumental in constructing more than 12.7 lakhs household toilets.
- Trash skimmers have been deployed in 11 cities to collect any surface waste.
- Six public outreach programmes were organised in areas around Ganga basin:
  - Swachhata Pakhwada
  - Ganga Sankalp Divas
  - Ganga Nirikshan Yatra
  - Ganga Dusshera
  - Ganga Vriksharopan Saptah
  - Swachhta Hi Seva Pakhwada

#### Challenges:

- According to the Central Pollution Control Board (CPCB)'s estimates, approximately 8,250 million litres per day (MLD) of wastewater is generated from towns in the Ganga basin, while treatment facilities exist only for 3,500 MLD and roughly 2,550 MLD of this wastewater is discharged directly into the Ganga.
- The industrial pollutants largely originate from tanneries in Kanpur, paper mills, distilleries and sugar mills in the Yamuna, Ramganga, Hindon and Kali river catchments.
- there is the huge load of municipal sewage which contributes two-thirds of total pollution load
- The National Green Tribunal (NGT) in November 2019 had imposed a penalty of Rs 10 crore on the Uttar Pradesh (UP) government for failing to check sewage discharge containing toxic chromium into the Ganga at Rania and Rakhi Mandi in Kanpur.
- The cost of the damage was assessed by the state pollution control board (UPPCB) as compensation for restoration of environment and the public health in the area.



- Plastic has also caused significant damage to this stretch. “Kolkata produces 2,114 tonnes of solid waste per day of which 10 per cent is plastic
- There have been issues regarding untreated waste that flows into the river, restoring the flow of the river, sludge management in Ganga basin towns, cost overruns in execution of projects and governance glitches
- CAG in its report claimed that the NMCG neither circulated Ganga Rejuvenation Basin Management Programme (GRBMP) to different ministries/departments for consultation and seeking their opinion, nor finalised the Ganga Rejuvenation Basin Management Programme (GRBMP) for initiating the long-term intervention on the Ganga.

#### Way forward:

- **Promote only decentralized sewage treatment plants (dSTP)** at the colony level. Reuse treated wastewater for irrigation and empty into natural drains.
- For all upcoming cities, smart cities and for those, whose master plans are not in place, earmark land for dSTPs. dSTPs below 10 MLD should be encouraged and incentivised under urban development schemes and real estate development.
- **The existing and planned STPs need to be verified on efficiency,** reliability and technology parameters by independent agencies (tech-efficiency-reliability verification).
- This will allow assessing if the technology provides value for money and is sustainable. Many STPs are not performing up to desired standards due to choice of unrealistic assumptions and erroneous technology choice.
- A survey conducted by CPCB in 2016 found that most STPs in Kanpur fail to comply with environmental regulations.
- **Develop and restore local storages (ponds, lakes, wetlands)** as permanent solutions to both floods and droughts.
- Only 10 per cent of water received during monsoon rainfall is harvested. Restoration of ponds, lakes and wetlands should be an integral part of river restoration and conservation strategy.
- **Bring back glory to all natural drains that empty into rivers,** and transform and rejuvenate them into healthy water bodies — they have been converted to sewage carrying drains by our municipalities and planning bodies.
- **Start restoring lower order streams and smaller tributaries in the Ganga Basin.** Every river is important. The focus of Ganga Action Plan (Phase I and II) and Namami Gange has been on the main stem of the river.
- The tributaries that feed the river were overlooked. The Ganga has eight major tributaries (Yamuna, Son, Ramganga, Gomti, Ghaghra, Gandak, Kosi and Damodar).
- The majority of the funds were spent on pollution-abatement measures on the main stem of the Ganga and on the upper Yamuna basin, which constitute just 20 per cent of the Ganga basin.



- Further, these eight major tributaries are joined by smaller rivers, whose restoration is equally important.
- **Identify, define and protect 'river-corridors' as areas for no cement-concrete structures** — know that rivers have been formed after thousands of years of nature's work.
- Infrastructure development and destruction of river ecosystem through populist measures such as riverfront developments in the name of area and township development projects or urban / smart city development must be stopped to protect and conserve surface water sources.
- Map the entire looped length of each and every tributary of the Ganga and correct the land records.
- Many of the rivers have been underestimated which causes encroachment and jurisdiction conflicts.
- The existing methodology to measure river length is flawed and complete mapping of looped lengths is required for proper assessment of water resources and correct revenue maps.
- This will ensure that active flood plains and river-corridors are free from encroachments.
- Restore base flows through groundwater recharge. Groundwater contributes significantly to river-flows through base flows (average base flow in the order of 40- 55 per cent) especially during lean seasons in the entire Ganga Basin.
- The idea of Ganga rejuvenation is also linked to groundwater rejuvenation. There is a **need to have robust planning and regulation of withdrawal and recharge of groundwater across all orders of the river streams to make rivers perennial.**
- **Define the desired ecological flow regime(s) in the Ganga main stem and its tributaries** (not just a static figure) to allow the rejuvenation of the river.
- Evolve new and innovative ways to generate sufficient revenues for operation and maintenance (O&M) of water and wastewater infrastructure through pricing and valuing water.

#### Conclusion:

Ganga is an integral part of the socio-eco-cultural-political fabric of India. However, the longest river has faced the brunt of increasing industrialization, which has not only affected the flow but also the quality of its water. Namami Gange Programme aims to restore the purity and flow of water in the Ganga River through abatement of pollutants and treatment of discharged water. Namami Gange has not only taken lessons from the failure of GAP, but, it has also ensured cross-state cooperation as well as public support to expedite the processes.

**If India is to establish itself as a country of doers, containing pollution is one of the first things to be done. Discuss. (250 words)**

*Live Mint*

**Why this question:**

*According to a report by the Global Alliance on Health and Pollution (GAHP), based on a study that estimated the impact of contaminants in the air, water and workplace, India tops the world's chart on pollution-linked deaths, followed by China and Nigeria. More than 2.3 million premature deaths*



caused by pollution were reported in India in 2017, the latest year for which the figures are available. In comparison, about 1.9 million people died in China, while in Nigeria the death count was 279,318, according to the report.

**Key demand of the question**

The question is about analysing the worsening pollution conditions in India and the associated concerns. Discuss about the various short-term measures undertaken by the Government and how policymakers have displayed little urgency on the matter. Provide serious measures to tackle the same.

**Directive word**

Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.

**Structure of the answer**

**Introduction:**

In a few introductory lines brief upon the worsening pollution conditions in India and the associated concerns.

**Body:**

The question must discuss the following points:

Present some facts from the report, discuss the causes of the present condition.

Impact of the air pollution in Indian cities under various heads like Health, economy, society etc.

Provide for a detailed analysis of why have the problems turned into a menace and then move onto suggest measures to tackle the same.

**Conclusion:**

Give a balanced way forward.

**Introduction:**

Air pollution in India is not simply an environmental problem, but a major public health concern. It impacts all those breathing in the polluted air —children, the elderly, women and men alike. As Delhi's Air Quality Index crosses 500, the national capital has officially entered the public health emergency category.

**Body:**

**Current air pollution scenario:**

- According to a report by the Global Alliance on Health and Pollution (GAHP), based on a study that estimated the impact of contaminants in the air, water and workplace, India tops the world's chart on pollution-linked deaths, followed by China and Nigeria.
- More than 2.3 million premature deaths caused by pollution were reported in India in 2017, the latest year for which the figures are available.
- In comparison, about 1.9 million people died in China, while in Nigeria the death count was 279,318, according to the report.

**Challenges posed by air pollution:**

- The role of air pollution in climate change dynamics is a question that must be urgently addressed.
- For example, the importance of air pollution and greenhouse warming vs. aerosol cooling needs to be discussed with air pollution cooling, dominated by aerosol content



- Many open questions still remain, such as the measurement and monitoring of air pollution, including the exploration of new technologies and methods like remote sensing and in-situ observations.
- Air pollution also impacts historic and modern buildings and materials, affecting sites of cultural heritage by damaging structural materials of monuments, statues, and even paintings.
- Air pollution has become a year-round phenomenon particularly in north India which causes health impacts far beyond the seasonal rise of respiratory illnesses.
- It is now the leading risk factor for chronic obstructive lung disease in India, and a major contributor to pneumonia and lung cancer.
- In 2017, air pollution accounted for 12.4 lakh deaths in India, which included 6.7 lakh deaths due to outdoor particulate matter air pollution and 4.8 lakh deaths due to household air pollution.
- According to a report by the **United Nations Environment Programme (UNEP)**, India had the highest share of welfare costs (or a loss of income from labour), of about \$220 billion (about ₹1.4 trillion), in South and South-East Asia of a combined total of \$380 billion from mortality due to air pollution.
- In addition to human lives lost, there's an estimated global cost of \$225 billion in lost labour, and trillions in medical costs, Greenpeace report says.
- Government is keen to ascend the World Bank's "ease of doing business" chart, but images of people walking around Delhi in safety masks do little to attract investment.

#### India's actions so far:

- India's figures highlight the gravity of the crisis we face.
- While action needs to be taken, policymakers have displayed little urgency on the matter.
- Most public discourse centres on questionable short-term measures, like an odd-even scheme for private vehicles, while efforts to stop stubble-burning by farmers have yielded very few gains.
- India, however, has yet to formulate a credible policy mix that could achieve demonstrable results.
- Cases of respiratory diseases, especially among the elderly and children, are on the rise. Other health complications have arisen too.

#### Measures needed:

- Short term measures should be accompanied by measures that **increase the forest cover** of the land and provide farmers with an alternative to burning the remains of their crops.
- An innovative approach could be to **use climate change funds to turn farm residues into a resource**, using technological options such as converting them into **biofuels** and **biofertilizers**.
- **Proactive engagements are necessary to persuade and reassure farmers.**



- It is important to find other uses for stubble such as biomass, which may encourage farmers to look for **alternative sources of income**.
- India should at least now give high importance to the **WHO warning about air pollution being the new tobacco**. Sharply escalated, deterrent parking fees can be implemented.
- From an urban development perspective, large cities should reorient their investments to **prioritise public transport, favouring electric mobility**.
- **Incentives** for adoption of **alternate mobility technologies** should be promoted.
- The **World Bank** has said it is keen to enhance its lending portfolio to tackle air pollution, opening a new avenue for this.
- Governments should make the **use of personal vehicles in cities less attractive** through **strict road pricing mechanisms** like **Congestion tax, Green-house Gas tax**
- Need to speed up the journey towards **LPG and solar-powered stoves**.
- **Addressing vehicular emissions** is within India's grasp but requires a multi-pronged approach. It needs to combine the already-proposed tighter emission norms (in form of BS VI), with a push for shared mobility and public transport and adoption of alternate mobility technologies.
- NCAP should take precedence from emerging practices in the country—**pollution cess in Delhi on truck entry, big diesel cars, and diesel fuel sales and the coal cess**—to generate dedicated funds to finance clean air action plan.
- **Tackle road dust** by **mechanised sweeping** and **water-sprinkling** but what would be more beneficial is if the sides of the roads could be paved or covered with grass that holds the soil together and stops the production of the dust in the first place.
- Attention to non-technological aspects such as **urban planning, to reduce driving, and to increase cycling, walking, and use of public transport are needed**.

Carbon market has been a major contentious issue at Madrid climate talks, dividing the developed and developing world. What is the concept? Why was it felt necessary? And what are the major points of disagreement? Analyse. (250 words)

*Indian Express*

**Why this question:**

*Almost halfway through the climate conference in Madrid, one big thing it had to resolve was the disagreements over setting up a new carbon market that has remained contentious as ever. Thus the question aims to analyse the concept of carbon market in such pretext.*

**Key demand of the question:**

*One must provide for a detailed analysis of carbon markets and examine the mechanism in detail along with the associated pros and cons.*

**Directive:**

*Analyze – When asked to analyse, you have to examine methodically the structure or nature of the topic by separating it into component parts and present them as a whole in a summary.*

**Structure of the answer:**

**Introduction:**

*In first, explain the context of the question.*

**Body:**



*Carbon markets, which allow for buying and selling of carbon emissions with the objective of reducing global emissions, is an unfinished agenda from last year's meeting in Katowice, Poland. Under the Paris Agreement, every country has to take action to fight climate change. These actions need not necessarily be in the form of reduction in greenhouse gas emissions, which can constrain economic growth.*

*Explain then – what the points of contention are; the main tussle is over two or three broad issues – what happens to carbon credits earned in the Kyoto regime but not yet sold, what constitutes double-counting, and transparency mechanisms to be put in place.*

*Discuss the major points of disagreements.*

*Suggest way forward.*

**Conclusion:**

*Conclude that Carbon markets are not compulsorily essential to the implementation of Paris Agreement. But with the world doing far less than what is required to prevent catastrophic impacts of climate change; the markets can be an important tool to close the action gap*

**Introduction:**

Carbon markets, which allow for buying and selling of carbon emissions with the objective of reducing global emissions, is an unfinished agenda from last year's meeting in Katowice, Poland. Carbon markets also existed under the Kyoto Protocol, which is being replaced by the Paris Agreement next year. The market mechanisms being proposed under the Paris Agreement are conceptually not very different, but are supposed to have more effective checks and balances, and monitoring and verification processes.

**Body:**

**Carbon market mechanism and its necessity:**

- Carbon Markets can potentially deliver emissions reductions over and above what countries are doing on their own.
- Under the Paris Agreement, every country has to take action to fight climate change. These actions need not necessarily be in the form of reduction in greenhouse gas emissions, which can constrain economic growth.
- Only the developed countries have included absolute emission cuts in their action plans. Yet, there is scope for absolute emissions reductions in developing countries too.
- Markets can potentially deliver emissions reductions over and above what countries are doing on their own.
- For example, technology upgradation and emission reduction of a brick kiln in India can be achieved in two ways:
  - A developed country which is unable to meet its reduction target can provide money or technology to the brick kiln in India, and thus claim the reduction of emission as its own.
  - Alternatively, the kiln can make the investment, and then offer on sale the emission reduction, called **carbon credits**. Another party, struggling to meet its own targets, can buy these credits and show these as their own.

**Carbon markets provisions under Paris agreement:**



- The provisions relating to setting up a new carbon market are described in Article 6 of the Paris Agreement.
- Article 6.2 enables bilateral arrangements for transfer of emissions reductions.
- Article 6.4 talks about a wider carbon market in which reductions can be bought and sold by anyone.
- Article 6.8 provides for making 'non-market approaches' available to countries to achieve targets.

#### **Contentious points of Carbon Markets:**

- The main tussle is over two or three broad issues — what happens to carbon credits earned in the Kyoto regime but not yet sold, what constitutes double-counting, and transparency mechanisms to be put in place.
- Developing countries have several million unsold CERs (certified emission reductions), each referring to one tonne of carbon dioxide equivalent emission reduced, from the Kyoto regime. Under the Kyoto Protocol, only developed countries had the obligation to reduce emissions. In the initial phase, some of these were interested in buying CERs from projects in India or China, which were not obliged to make reductions.
- In the last few years, several countries walked out of the Kyoto Protocol, and those that remained did not feel compelled to full their targets. The second commitment period of the Kyoto Protocol (2012-20) never came into force. As the demand for CERs crashed, countries like India were left with projects generating CERs with no one to buy them.
- India has about 750 million unsold CERs and, along with other similarly robust; they want the new mechanism to start with a clean slate.
- The second issue is that of double counting, or corresponding adjustment. The new mechanism envisages carbon credits as commodities that can be traded multiple times among countries or private parties. It is important to ensure that in this process, credits are not counted at more than one place; whoever sells carbon credits should not simultaneously count these as emissions it has reduced.
- The developing countries argue that the country that reduced emissions should be able to show it even after selling the credits, and that adjustments should be made only for subsequent transfers, if any.

#### **Way forward:**

- Carbon markets are not essential to the implementation of Paris Agreement.
- However, the carbon market system must evolve towards something better than offsetting. It should aim to accelerate the transition, rather than offering a cheap way out and replacing somebody's efforts with those of someone else.
- The world should move away from offsetting mechanisms and towards financing climate projects that truly drive the zero-carbon transition.
- One way of achieving this is to use existing carbon markets to disburse climate finance by buying carbon credits and cancelling them, without claiming the actual emission reductions.



Provided the lack of effectiveness of the current global climate policy the alternative strategy of the low carbon social development model adopted by India and China needs more consideration. Examine.(250 words)

### The Hindu

#### Why this question:

The question is in the context of United Nations Framework Convention on Climate Change's 25th Conference of Parties that was held in Madrid recently.

#### Key demand of the question:

The article highlights the alarming concerns related to the current global climate policy and demands an analysis of what needs to be done to address the same.

#### Directive:

**Examine** – When asked to 'Examine', we must look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications.

#### Structure of the answer:

##### Introduction:

In short highlight the key facts from the article.

##### Body:

Explain the key factors responsible for the failure of the current global climate policy – the world's major emitter, the US has rejected multilateralism, premised on burden-sharing and has pulled out of the Paris climate deal. The planned emission cuts fall short of what needs to be done to contain global warming.

The existing Nationally Determined Contributions filed under the Paris Agreement fall short. There is a yawning gap between planned emissions cuts, and what needs to be done by 2030 to contain global temperature rise at 1.5°C etc.

Present the case of India and China and highlight some specific efforts in this direction by the two.

##### Conclusion:

Conclude that by 2040 more than half of the global wealth is again going to be in Asia; the low carbon social development model adopted by India and China will become the world system, ensuring global sustainability. The alternative strategies led by India and China should now move centre stage and replace the ineffective Climate Treaty.

#### Introduction:

The failure to limit the increasing levels of concentration of greenhouse gases despite the annual Climate Summits raises questions on the efficacy of the current global climate policy. The current global climate policy problem is that the Climate Treaty considers symptoms (emissions of greenhouse gases), rather than the causes (use of natural resources). India, which is responsible for just 3% of cumulative emissions, is the most carbon efficient and sustainable major economy.

#### Body:

##### **Failures of the current global climate policy:**

- USA, the world's major emitter, has rejected multilateralism, premised on burden-sharing and has pulled out of the Paris climate deal.
- The planned emission cuts fall short of what needs to be done to contain global warming.
- The existing Nationally Determined Contributions (NDC) filed under the Paris Agreement fall short.



- There is a huge gap between planned emissions cuts, and what needs to be done by 2030 to contain global temperature rise at 1.5°C.
- The European Union's ambition of 'net' zero emissions by 2050 neglects the needed societal change by ignoring the embedded carbon in its imports which accounts for a third of their emissions of carbon dioxide.

#### **Varying resource utilization patterns:**

- Excessive resource use by the West which constitutes 20% of the world's population consumes half of the global material use and is the major cause of climate change.
- Asia with half the world's population is responsible for less than half of the material use.
- The contribution of the United States to resource use or cumulative emissions of carbon dioxide peaked at 40% in 1950, declined to 26% and is likely to remain at this level.
- By 2015, the global population had doubled when emissions in China began to stabilise and accounted for 12% of the total cumulative emissions. Asia and Africa will peak at per-capita levels that are a third of those of the West.
- The developed world by failing to acknowledge its historical contribution to the issue of climate change is shifting the burden of controlling climate change onto developing countries.
- National natural resource-use accelerated in two distinct phases with very different origins and impacts.
- In North America and Europe, resource use accelerated after 1950, and not with industrial resource use from 1850. By 1970, three-quarters of their population had moved to cities, characterized as "unprecedented prosperity", leading to the trajectory towards climate change.

#### **Model adopted by India and China:**

- India and China, civilizational states with a population nearly eight times that of the U.S., have re-defined progress.
- Measures for global sustainability should draw lessons from India and China.
- India, which is responsible for just 3% of cumulative emissions, is the most carbon-efficient and sustainable major economy.
- The pathway adopted by China can now be compared and contrasted with the West, as it has come up to that level of urbanization and well-being.
- In China, electricity consumption per capita is a third of the European Union (EU) and a sixth of the U.S. Residential energy consumption has increased at a rate less than half the increase in GDP, and corresponds to the increase in urban population, showing a limited increase with more disposable household income.
- China also has less than a sixth of the number of cars with respect to population, than the EU, while the U.S. has nearly two times that number. In China, nearly 40% of the distance travelled is by public transport, which is two times that of the EU. While the number of cars in China is projected to double by 2040, half the new cars are expected to be electric vehicles.



- China has the world's most extensive electric high-speed rail system. In Beijing, three-quarters of public transport buses are already electric. Asian household savings as a per cent of GDP are two times that of the U.S.
- India and China are global leaders in sustainability not only because of their low per-capita resource use but also because of their commitment to peak oil consumption around 2035 as they adopt electric vehicles supported by solar and wind renewable energy.
- By 2035, India and China are expected to have half the global renewable capacity and electric vehicles.

Conclusion:

Transport emissions are the fastest growing emissions worldwide, projected to become half of global emissions. India and China are global leaders in sustainability not only because of their low per-capita resource use but also because of their contribution to peak oil around 2035 as they adopt electric vehicles supported by solar and wind renewable energy. The low carbon social development model adopted by India and China will become the world system, ensuring global sustainability.

## Role of external state and non-state actors in creating challenges to internal security.

While radicalisation is the primary problem, lone-wolf terror attacks across globe points to security, intelligence and systemic failures. Examine. Suggest how India should prepare itself to avoid such attacks.

*The Hindu*

*IDSA*

***Why this question:***

*The recent knife attack near London Bridge that killed two and injured three others is yet another reminder of the threat lone-wolf assaults pose to public security.*

*Key demand of the question:*

*One has to talk about the various reasons for increasing lone-wolf terror attacks and the measures needed to curb such attacks.*

*Directive:*

*Examine – When asked to 'Examine', we must look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications.*

*Structure of the answer:*

*Introduction:*

*Briefly narrate the lone-wolf attack in London. Also explain about the instances in India and world in the past.*

*Body:*

*Explain that a lone wolf attack is undertaken by a very small group or an individual in support of a larger cause, but without the overall supervision or support of a terrorist organisation.*

*Discuss the causes for rising lone-wolf terror attacks.*

*Radicalization of the youth- individuals who are influenced by either perceptions of injustice and persecution.*

*Lax gun controls in some places.*

*Failure of the intelligence of State*

*Other reasons.*



*Give measures to tackle such incidents in India like addressing the systemic issues — making policing more efficient; strengthening the intelligence network; state agencies need to work with civil society groups as well as community leaders and have deradicalisation programmes etc.*

*Conclusion:*

*Conclude about how there is no one-stop solution to terrorism and the need for global co-operation in fighting it.*

**Introduction:**

The knife attack on recently near London Bridge that killed two and injured three others is yet another reminder of the threat lone-wolf assaults poses to public security.

A lone wolf, lone-wolf terrorist, or lone actor, is someone who prepares and commits violent acts alone, outside of any command structure and without material assistance from any group. He or she may be influenced or motivated by the ideology and beliefs of an external group and may act in support of such a group. In its original sense, a “lone wolf” is an animal or person that generally lives or spends time alone instead of with a group.

### **Challenges to Undertaking Lone Wolf Attacks**

- Unlike in the US where sophisticated weapons can be easily bought by ordinary citizens, gaining access to such weaponry in India is difficult as is the ability to obtain licenses.
- Indians have not displayed the psychological willingness to undertake high risk attacks. There have not been any fidayeen attacks undertaken by Indians in the country. Such attacks in the past have either been undertaken by Tamil guerrillas from Sri Lanka or by Pakistan-sponsored foreign terrorists in Jammu and Kashmir.
- The only major indigenous terrorist group which has operated on a pan-Indian scale is the Indian Mujahideen (IM). There is a possibility that radicals associated with this group might attempt lone wolf strikes especially given that one of IM’s breakaway factions has joined the IS.
- Over a period of time, the deployment of private security at high value targets like malls, hotels and schools has been upgraded, which acts as a deterrent to an individual aiming to target them.
- The absence of past examples of lone wolf attacks in India inculcates the fear of the unknown in the minds of potential volunteers.
- The areas most affected by communal tensions and differences between religious groups can best be identified on the basis of the history of riots. States that have witnessed the maximum number of cases of communal riots include Uttar Pradesh, Madhya Pradesh, Maharashtra, Gujarat and Karnataka.

### **India’s Vulnerabilities:**

- Past cases of terrorist attacks suggest that the reactions of the local police remain inadequate. While this was clearly apparent during 26/11, which was a well-orchestrated attack sponsored by Pakistan, responses to subsequent terror attacks do not indicate police capacities that are necessary for undertaking clinical operations to limit potential damage.



- Heavy concentration of people in public areas offers a large number of potential targets. While some installations have utilised the limited protection offered by private security measures, a large number of public places continue to remain vulnerable.
- A fast growing population, especially youth with access to mass media and social media, opens limitless avenues of unrestrained radical propaganda. This increases the possibility of subversion, given the unverified yet powerful platforms of messaging that promise liberation from everyday frustrations of the youth at their places of work, in society and across borders in conflict zones.
- While the popular discourse seems to suggest an increasing level of intolerance, the reality is quite different. For instance, the number of incidents of communal violence increased only marginally from 644 in 2014 to 650 in 2015 (based on data till October, 2015).

#### **How India should prepare itself to avoid such attacks.**

- The approach must follow the sequence of awareness of the contagion, detection of potential and existing recruits and finally remedial action.
- The recent attacks in France and the large scale recruitment to IS has contributed to raising awareness regarding radicalization the world over. However, there is a need to focus attention on potential target groups through monitoring and infiltration of social media sites that are the principle source of radical propaganda.
- Big data analytics must be used to discern the level of radicalization of potential recruits, their networks and sources of information, funding and leadership in order to help unravel the roots of radicalization.
- The police and intelligence services are neither trained nor equipped to handle the vital aspect of rolling back radicalization in society. Helplines should be created and manned by professional counsellors and psychologists who can help reverse the process as part of the efforts of Non-Governmental Organizations (NGOs) supported by the state.
- While the above is a suitable course of action for potential and raw recruits, the hardened ideologues must be prosecuted under the counter terrorism laws of the state.
- The example of the IS suggests that their legal advisors carefully exploited existing loopholes and gaps in legal mechanisms to continue with propagation of radical ideologies in Europe. This raises the need for regular revision and tightening of laws to ensure that the same cannot be attempted in India.
- The formation of National Security Guard regional hubs in the aftermath of 26/11 is a welcome step to neutralize future terrorist strikes. However, recent attacks indicate that the reaction time to a terror strike is likely to be of the utmost essence in minimizing casualties. There is, therefore, a need for specialized police teams to be trained and organized in every state to act as first-responders.
- The nature of threat that groups like the IS represent is transnational in nature. Therefore, the momentum created in the aftermath of the Paris attacks must be carried forward to strengthen the “coalition of willing” to improve intelligence sharing mechanisms, reduce time for processing information requests, strengthen countering the finance of terrorism measures, and facilitate the extradition of hate mongers from their chosen place of



immigration. The example of Sikh and Kashmiri groups in Europe and Canada is a case in point.

### Conclusion:

Attacks by home grown terrorists is a threat that has proved its nefariousness in the recent past. This is likely to be expanded through volunteers encouraged to undertake lone wolf attacks. India remains an important target for groups like the IS, which visualize the country's democratic, secular and open social fabric as a threat to their concept of an Islamic Caliphate. It is therefore important to undertake suitable proactive measures to limit the potential damage that can be caused by such attacks.

Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention

Critically analyse the provisions of Personal Data Protection Bill which seeks to update the currently non-existent standards for privacy and consent.

[Deccan Herald](#)

[Livemint](#)

[The Economic Times](#)

**Why this question:**

*The government has listed the Personal Data Protection Bill in Parliament for the winter session. The Union Cabinet has approved the Bill and it is likely to be introduced for discussion before the on-going winter session of Parliament. It is essential to discuss the bill and its effect on freedom of individuals. Finally we need to provide a fair and balanced opinion on the provisions of the draft Bill and discuss the way forward.*

**Directive word**

*Critically examine – When you are asked to examine, you have to probe deeper into the topic, get into details, and find out the causes or implications if any. When 'critically' is suffixed or prefixed to a directive, all you need to do is look at the good and bad of something and give a fair judgement.*

**Structure of the answer**

*Introduction – Give a background of the data protection Bill and talk about the challenges emanating for RTI Act from all corners*

**Body**

*Highlight the provisions of the data protection bill*

*One of the most important aspects of the Bill is the setting up of the data protection authority (DPA). the bill proposes social media platforms to create a mechanism so that for "every user who registers their service from India or uses their service from India, a voluntary verifiable account mechanism has to be made*

*And so on.*

*Highlight the challenges posed by the bill.*

*The Bill calls for privacy by design, but ensuring accountability will be difficult since most design decisions are opaque*

*While the draft Bill sets up broad principles for privacy, a huge chunk of the work has been left for the DPA to carry forward.*

*in the interest of national security, certain agencies can have access to personal data for any investigation pertaining to offences.*

*The Personal Data Protection Bill only lists a set of broad principles that lay down the contours of privacy in the country. That in itself offers neither a clear road map for governance nor any of the*



*details that data principals, and fiduciaries alike, would need in order to understand their rights and obligations*

*And so on.*

*Provide measures to tackle the challenges posed.*

*Conclusion*

*Give a fair and balanced conclusion and discuss the way forward.*

Introduction:

The Union cabinet recently gave its approval to the Personal Data Protection Bill that seeks to lay down a legal framework to preserve the sanctity of “consent” in data sharing and penalize those breaching privacy norms. The Bill will update the currently non-existent standards for privacy and consent. The Bill is based on the previous draft version prepared by a committee headed by retired **Justice B N Srikrishna**.

Body:

**Decoding the data protection bill**

**WHAT IT MEANS FOR CONSUMERS**

- **DATA** can be processed or shared by any entity only after consent.
- **SAFEGUARDS**, including penalties, introduced to prevent misuse of personal data.
- **ALL** data to be categorized under three heads—general, sensitive and critical.

**THE GOVERNMENT & REGULATORY ROLE**

- **GOVT** will have the power to obtain any user's non-personal data from companies.
- **THE** bill mandates that all financial and critical data has to be stored in India.
- **SENSITIVE** data has to be stored in India but can be processed outside with consent.

**WHAT COMPANIES HAVE TO DO**

- **SOCIAL** media firms to formulate a voluntary verification process for users.
- **SHARING** data without consent will entail a fine of ₹15 crore or 4% of global turnover.
- **DATA** breach or inaction will entail a fine of ₹5 crore or 2% of global turnover.

Source: Mint research

**Proposals of the PDP Bill:**

- The Bill calls for the creation of an **independent regulator Data Protection Authority**, which will oversee assessments and audits and definition making.
- Each company will have a **Data Protection Officer (DPO)** who will liaison with the DPA for auditing, grievance redressal, recording maintenance and more.
- The Bill trifurcates data as follows:
  - **Personal data:** Data from which an individual can be identified like name, address etc..
  - **Sensitive personal data (SPD):** Some types of personal data like as financial, health, sexual orientation, biometric, genetic, transgender status, caste, religious belief, and more.



- **Critical personal data:** Anything that the government at any time can deem critical, such as military or national security data.
- The Bill **removes the requirement of data mirroring** (in case of personal data). Only individual consent for data transfer abroad is required.
- The Bill requires **sensitive personal data** to be stored only in India. It can be processed abroad only under certain conditions including approval of a Data Protection Agency (DPA).
- **Critical personal data** must be stored and processed in India.
- The Bill mandates fiduciaries to provide the government any **non-personal data** when demanded. It refers to anonymised data, such as traffic patterns or demographic data.
- The previous draft did not apply to this type of data, which many companies use to fund their business model.
- The Bill also requires **social media companies**, which are deemed **significant data fiduciaries** based on factors such as volume and sensitivity of data, to develop their own user verification mechanism.
- This intends to decrease the anonymity of users and prevent trolling.
- The Bill includes exemptions for processing data without an individual's consent for "reasonable purposes", including security of the state, detection of any unlawful activity or fraud, whistleblowing, medical emergencies, credit scoring, operation of search engines and processing of publicly available data.
- The Bill proposes "**Purpose limitation**" and "**Collection limitation**" clause, which limit the collection of data to what is needed for "clear, specific, and lawful" purposes.
- It also grants individuals the right to data portability and the ability to access and transfer one's own data. It also grants individuals the right to data portability, and the ability to access and transfer one's own data.
- It legislates on **the right to be forgotten**. With historical roots in European Union law, General Data Protection Regulation (GDPR), this right allows an individual to remove consent for data collection and disclosure.
- The Bill stated the **penalties** as: Rs 5 crore or 2 percent of worldwide turnover for minor violations and Rs 15 crore or 4 percent of total worldwide turnover for more serious violations.
- Also, the company's executive-in-charge can also face jail terms of up to three years.

#### Challenges posed:

- A common argument from government officials has been that data localisation will help law-enforcement access data for investigations and enforcement.
- Critical data will be defined by the government from time to time and has to be stored and processed in India
- National security or reasonable purposes are an open-ended terms, this may lead to intrusion of state into the private lives of citizens.



- Technology giants like Facebook and Google have criticised protectionist policy on data protection.
- They fear that the domino effect of protectionist policy will lead to other countries following suit.
- Protectionist regime suppress the values of a globalised, competitive internet marketplace, where costs and speeds determine information flows rather than nationalistic borders.
- Also, it may backfire on India's own young startups that are attempting global growth, or on larger firms that process foreign data in India.
- Civil society groups have criticised the open-ended exceptions given to the government in the Bill, allowing for surveillance.
- Moreover, some lawyers contend that security and government access are not achieved by localisation.
- There have only been limited studies on privacy in the Indian context but the most existing literature points to the collectivist nature of society to explain the low levels of privacy consciousness.
- While awareness is growing, if people display a high level of apathy towards ensuring the protection of their personal data it may push data fiduciaries down the path of non-compliance.

#### Way forward:

- The government should table the Bill at the earliest to allow sufficient time for discussing the finer aspects of the Bill on the floor of the house.
- The number of questions posed to MEITY on the topic of privacy and data protection indicates a high degree of interest in Parliament on the subject.
- The government should also endeavour to remain as transparent as possible when framing the remaining provisions.
- Simultaneously, society should not slide into complacency after the passage of the Bill.
- Instead, it must continue to stay engaged to ensure that we have a strong data protection regime that succeeds in safeguarding Indians' fundamental right to privacy.

India is widely considered to be a world leader in cutting off access to the Net. Critically discuss the issues and concerns raised against pre-emptive internet shutdowns as a security measure. (250 words)

*Indian Express*

#### *Why this question:*

*The Software Freedom Law Center (SFLC), the global tracker for Internet shutdowns, was inundated with messages of shutdowns across the country — a frequently recurring phenomenon in India over the past several years. The world's fastest growing Internet market is also the global leader by far in cutting off access to small and large sections of its population.*

*Key demand of the question*

*The question expects us to explain the concerns caused due to shut down of internet by the Government under the garb of maintenance of Internal Security. Further, explain the concerns*



*faced*

*Directive word*

*Critically discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments. When ‘critically’ is suffixed or prefixed to a directive, all you need to do is look at the good and bad of something and give a fair judgement.*

*Structure of the answer*

*Introduction:*

*Provide a brief outlook on the internet shutdowns in India recently. Discuss about the laws and the provisions under which it can be applied.*

**Body:**

*Discuss the reasons for which the internet shutdown is clamped by authorities*

- *To stop the unrest or communal violence from perpetuating*
- *To deter the influence of non-state actors and miscreants in shaping the future course of unrest.*
- *And so on.*

*However, the clampdown of internet has other effects too like:*

- *curtails the democratic principles and implicitly the fundamental rights of freedom and liberty*
- *economic cost to shutdowns is immense: Over the past five years, some 16,000 hours of Internet shutdowns cost the economy a little over \$3 billion*
- *and so on.*

*Provide the possible measures to tackle this.*

**Conclusion:**

*Give a balanced way forward.*

**Introduction:**

The Software Freedom Law Center (SFLC), the global tracker for Internet shutdowns, was inundated with messages of shutdowns across the country — a frequently recurring phenomenon in India over the past several years. Recently as protests over a controversial citizenship law rage across India, authorities resorted to shutting down the internet in cities where demonstrators flooded the streets. **A country that is now seen as the internet shutdown capital of the world.**

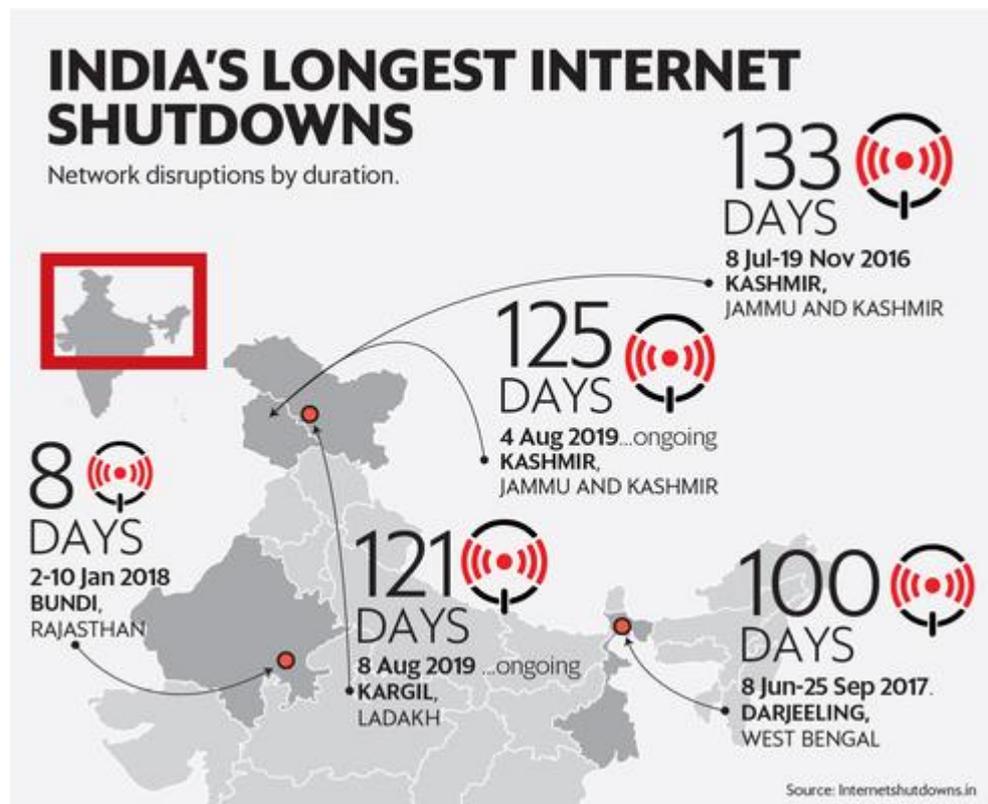
**Body:**

**Recent internet shutdowns in India:**

- **136 days and counting:** Internet services were suspended on 4 August in Jammu and Kashmir this year
- **133 days:** An internet shutdown in Indian-administered Kashmir which lasted from 8 July to 19 November in 2016
- **99 days:** Authorities shut off the internet in India’s West Bengal state from 18 June to 25 September in 2017
- Most internet shutdowns in India are ordered under article 144 of the Indian Penal Code, which empowers local authorities to issue prohibitory orders to deal with situations of potential unrest. (Software Freedom Law Center)
- The current sweeping shutdowns come after access to the Internet was cut off as a preventive measure in several states last month ahead of the Supreme Court’s Ayodhya verdict, when there were apprehensions of tension and violence



- The Internet was suspended around the death anniversary of the slain Hizbul Mujahideen commander Burhan Wani, and on Independence Day 2017, Republic Day 2016, and Eid 2015.



#### Type of Shutdown:

Of the 278 Internet shutdowns recorded between January 2012 and January 2019, 160 were observed to be preventive measures i.e. restrictions imposed in anticipation of law and order breakdowns, whereas 118 shutdowns were reactive in nature i.e. imposed in order to contain on-going law and order breakdowns.

#### Nature of Shutdown:

Of the 278 reported incidents, 224 were targeted at mobile Internet services alone (3 in 2012, 5 shutdowns each in 2013 & 2014, 8 in 2015 and 20 in 2016, 51 in 2017, 126 in 2018 and 6 till January 2019), 19 targeted both mobile and fixed-line Internet services (4 each in 2015 and 2016, 9 in 2017, and 4 in 2018), while only 2 shutdowns targeting fixed-line services alone were recorded during the period of study.

#### Issues and concerns involved:

- Shutdown is a violation of fundamental rights of Freedom of speech and expression.
- Internet shutdowns can erode democratic institutions and values. For example, if citizens are using the internet to mobilize themselves, then shutting down the internet is not different from suppressing dissent.
- Does a democratic government have the right to shut down the internet? Is a basic question regarding internet shutdown. After the Gujarat government suspended internet services for almost a week during the Patidar protest in 2015, the matter was taken to the courts.



- Internet shutdowns are not particularly effective—people always find other ways to communicate, and studies have shown that such censorship in times of political unrest actually leads to more violent uprisings as the information void fuels uncertainty and causes panic.
- The Internet is pretty much a basic human right, even if not legally defined as such, for most parts of the world — without access to the virtual world, a very large number of vital human activities simply stop.
- In countries that have “medium” Internet penetration — 49% to 79% of the population — a shutdown could dent daily economic activity by \$6.6 million per 10 million people, according to an analysis by Deloitte, quoted in The New York Times article.
- Between July 2015 to June 2016, Internet shutdowns caused global losses of more than \$2.4 billion, according to an analysis by The Brookings Institution quoted in the same article.
- Over the past five years, some 16,000 hours of Internet shutdowns cost the economy a little over \$3 billion, according to estimates in a report by the Indian Council for Research on International Economic Relations (ICRIER).
- Cutting off communication in itself is an enormous public safety risk. Citizens are left without access to information about emergency services like the volunteer-built solutions like chennairains.org.
- Because internet shutdowns affect every section of society – especially those who need it the most. And these restrictions, targeting the ‘common people’, are becoming increasingly ‘common’.

#### Way forward:

- Perhaps the solution can be found in renegotiating our law enforcement approaches in keeping with the changing times and technologies.
- Police and government agencies could increase their presence online so that they can actively fight back against rumour-mongering.
- Empowering local law enforcement so they can tackle tensions without shutting the Internet down.
- The solution to internet misuse is to build stronger laws for data privacy and protection. Stopping access to internet services altogether is definitely not the solution.
- Social media can be the solution, not just the problem: Particularly in the Kaveri River water dispute, the Bangalore police used texts, Twitter, and Facebook to send out information on emergency contacts to reassure people.

On a resolution on **“The promotion, protection and enjoyment of human rights on the Internet”**, the UN Human Rights Council, guided by the Charter of the UN, said it was **“deeply concerned by all human rights violations and abuses committed against persons for exercising their human rights and fundamental freedoms on the Internet, and by the impunity for these violations and abuses”**, and **“also by measures aiming to or that intentionally prevent or disrupt access to or dissemination of information online, in violation of international human rights law”**.

#### Conclusion:



Shutdowns, which are a negative expression of the idea of digital sovereignty, are not just for undemocratic societies any more. An internet shutdown compromises our democratic freedoms and should only be allowed in the rarest cases, rather than as a first response. Also an independent body could be a substitute for legislation which impose shutdown arbitrarily and that it also be empowered to review the necessity of shutdowns in the first place.

In the twentieth century, India saw an impetus in Information Technology (IT) and an enormous growth in e-commerce. Amidst such a scenario discuss the possible cyber security threats India is facing today. Also, comment upon India's preparedness to avert such cyber security threats. (250 words)

*Reference: Indian Express*

**Why this question:**

*While the number of cybercrimes in the city is on the rise, incidents of people being defrauded over promises of winning an online lottery, or availing services of a dating website, have become a cause for concern.*

**Key demand of the question:**

*Explain the possible concerns of cyber security threats posing the country, discuss what needs to be done to handle them and specifically provide for a detailed discussion on solutions to address.*

**Directive:**

*Comment— here we have to express our knowledge and understanding of the issue and form an overall opinion thereupon.*

**Structure of the answer:**

**Introduction:**

*Explain some recent cyber breaches to substantiate the question.*

**Body:**

*Explain why cyber security breaches are dangerous, what are the key concerns.*

*Discuss that in twentieth century, India saw an impetus in Information Technology (IT) and an enormous growth in e-commerce. Both these sectors ride on and reside in cyberspace involving electronic transactions, software, services, devices and networks which are highly susceptible to cyber-crimes. Hence to ensure its safety, cyber-security has become one of the most compelling priorities for the country.*

*Discuss the need for cyber security.*

*Explain the challenges; discuss the efforts taken by the government to tackle the security issues on this front.*

**Conclusion:**

*Conclude with solutions to address the issue.*

**Introduction:**

Cybercrime is a criminal action that encompasses mobile phones, laptop, network, and computer. It is a threat to country's external and internal security and monetary status. Crimes committed against publics with an illicit intention to cause physical or psychological harm, or loss to the victim directly or indirectly, by means of contemporary telecommunication networks such as social media network, the Internet and mobile phones. As per numbers obtained from Pune City Police, the Cyber Crime Cell has received 37 complaints of online lottery frauds and 32 on online dating frauds so far this year.

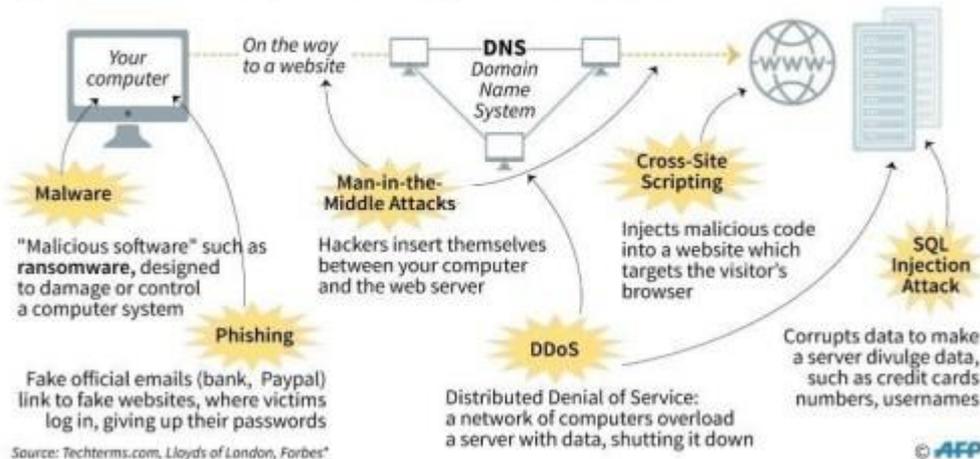
**Body:**



**Types of cyber security threats:** Cyber Security is protecting cyber space including critical information infrastructure from attack, damage, misuse and economic espionage.

## The different types of cyber attacks

Cyber crime worldwide cost \$400 billion in 2015 and is forecast to reach \$2 trillion in 2019\*



### Cyber frauds and their modus operandi:

- online fraudsters manage to collect a large amount of information about their potential victims.
- A huge amount of data, like phone numbers and email addresses, is collected in different ways.
- For example, asking someone to fill a form for some lottery prize in a mall or at a petrol pump.
- This bulk data is sold to cyber fraudsters, who then contact these people by making phone calls, sending SMSs and emails etc about fraudulent schemes like online lotteries.
- Fraudsters often ask their targets to transfer money into different bank accounts as various 'charges' for receiving the lottery prize, availing dating services and other fake reasons.
- cyber criminals lure people from poor backgrounds to open such accounts in different banks, and then keep their ATM cards.
- After money is transferred by the victims to the 'beneficiary' bank accounts, fraudsters withdraw it immediately. Some part of the money is given to 'beneficiary' account holders.

### India's attempts to tackle these issues:

#### Information Technology Act, 2000

- The act regulates use of computers, computer systems, computer networks and also data and information in electronic format.
- The act lists down among other things, following as offences:
- Tampering with computer source documents.
- Hacking with computer system



- Act of cyber terrorism i.e. accessing a protected system with the intention of threatening the unity, integrity, sovereignty or security of country.
- Cheating using computer resource etc.

#### **Strategies under National Cyber Policy, 2013**

- Creating a secure cyber ecosystem.
- Creating mechanisms for security threats and responses to the same through national systems and processes.
- National Computer Emergency Response Team (CERT-in) functions as the nodal agency for coordination of all cyber security efforts, emergency responses, and crisis management.
- Securing e-governance by implementing global best practices, and wider use of Public Key Infrastructure.
- Protection and resilience of critical information infrastructure with the National Critical Information Infrastructure Protection Centre (NCIIPC) operating as the nodal agency.
- NCIIPC has been created under Information Technology Act, 2000 to secure India's critical information infrastructure. It is based in New Delhi.
- Promoting cutting edge research and development of cyber security technology.
- Human Resource Development through education and training programs to build capacity.

**Cyber Surakshit Bharat Initiative:** It was launched in 2018 with an aim to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.

**National Cyber Security Coordination Centre (NCCC):** In 2017, the NCCC was developed. Its mandate is to scan internet traffic and communication metadata (which are little snippets of information hidden inside each communication) coming into the country to detect real-time cyber threats.

**Cyber Swachhata Kendra:** In 2017, this platform was introduced for internet users to clean their computers and devices by wiping out viruses and malware.

Training of 1.14 Lakh persons through 52 institutions under the Information Security Education and Awareness Project (ISEA) – a project to raise awareness and to provide research, education and training in the field of Information Security.

**International cooperation:** Looking forward to becoming a secure cyber ecosystem, India has joined hands with several developed countries like the United States, Singapore, Japan, etc. These agreements will help India to challenge even more sophisticated cyber threats.

#### **Preventive measures:**

- citizens should avoid submitting details like bank account numbers, ATM card numbers and other information with strangers or any unknown person over the phone.
- Suspicious online offers and messages, or emails sent by unknown persons, should be ignored.



- Citizens should report to the police any suspicious contact numbers and emails that offer fraudulent schemes.
- No money transfers should be made to any bank account without confirmation about the scheme offered online by any website.

#### Way forward:

- Real-time intelligence is required for preventing and containing cyber-attacks.
- Periodical 'Backup of Data' is a solution to ransomware.
- Using Artificial Intelligence (AI) for predicting and accurately identifying attacks.
- Using the knowledge gained from actual attacks that have already taken place in building effective and pragmatic defence.
- Increased awareness about cyber threats for which digital literacy is required first.
- India needs to secure its computing environment and IoT with current tools, patches, updates and best known methods in a timely manner.
- The need of the hour for Indian government is to develop core skills in cyber security, data integrity and data security fields while also setting stringent cyber security standards to protect banks and financial institutions.

### Various Security forces and agencies and their mandate.

What is Blue Water Force? Discuss the significance for India as she aspires to be a net security provider in the Indian Ocean region.

*The Indian Express*

*Why this question:*

*Mankind's progress has had unintended consequences on the environment. These include climate change, extreme weather events and the reduced availability of potable water.*

*Key demand of the question:*

*One has to find the reasons for reduced availability of potable water due to human actions, climate change and extreme weather events.*

*Directive:*

*Discuss – This is an all-encompassing directive – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments.*

*Structure of the answer:*

*Introduction:*

*Define what is blue water force and explain the context of our defence minister declaring it.*

*Body:*

*Discuss what is blue water navy.*

*Discuss the need and significance to Develop 'Blue Water' Capabilities for India?*

*What are the challenges faced in the quest?*

*How can this be overcome?*

*Conclusion:*

*Conclude with a way forward.*

**Introduction:**

On December 4, Navy Day, the office of Defense Minister stated that “Indian Navy is the Formidable Blue Water Force.” **Blue Water Navy** is one that has the capacity to project itself over a much bigger maritime area than its maritime borders. Simply put, it is a Navy that can go into the vast, deep oceans of the world. However, while most navies have the capacity to send ships into the deep oceans, a Blue Water Force is able to carry out operations far from its borders, without being required to return to its home port to refuel or re-stock.

**Body:****How does a nation become a part of this?**

- A blue-water navy implies force protection from sub-surface, surface and airborne threats and a sustainable logistic reach, allowing a persistent presence at the range.
- A hallmark of a true blue-water navy is the ability to conduct a replenishment at sea (RAS), i.e. transfer of fuel and ammunition underwater and the commissioning of underway replenishment ships is a definite sign of a navy’s blue-water ambitions.
- These are some of the attributes to be maintained by the country to be called as a blue water navy.

**Indian Navy – the quest to be a blue water navy:**

- Indian Navy has the designation of “leading power projection capability” in the region” and is, therefore, a blue water navy.
- India initially outlined its intentions of developing blue-water capabilities under the 2007 Maritime Capabilities Perspective Plan, with the navy’s priority being the projection of “power in India’s area of strategic interest”, the Indian Ocean Region.
- Since 2007 the navy has increased its presence in the Persian Gulf and the Horn of Africa to the Strait of Malacca, and routinely conducts anti-piracy operations and partnership building with other navies in the region.
- It also conducts routine two to three-month-long deployments in the South and East China seas as well as the western Mediterranean simultaneously. The navy has a listening post in Madagascar.
- All these power projection capabilities make Indian navy a blue water navy.

**Significance of Blue Water Navy for India:**

- While it is evident that Blue Water navies belong to the most powerful nations, there is no one internationally agreed upon definition.
- Owning one or more aircraft carriers is sometimes seen as a marker.
- The ability to undertake distant operations distinguishes a blue-water navy from a brown-water force. It requires strong integral capacity, including logistics, surveillance, networked operations, etc., and enabling capability, including equipment design, training, doctrine and organization.



- A blue-water navy is a maritime force capable of operating in the deep waters of the open oceans.
- The Most navies agree that a blue-water navy is capable of prolonged and sustained operations across the open oceans, and has a capacity to project “credible power” in the distant seas.

**Challenges:**

- The country has an aging naval fleet and replacement is often fraught with major delays. For instance, the INS Vikramaditya was delayed by five years, and an Indian Comptroller and Auditor General report criticized the navy’s operational readiness, given 74 percent of its refits between 2005 and 2010 were completed with a total delay of more than 23 years.
- The Indian Navy is currently weak on submarine capabilities. Most of India’s defense equipment is imported (mostly from Russia) and the country needs to develop its indigenous manufacturing capabilities.
- The navy’s allocation in the defense budget would force it to make crucial tradeoffs between developing one capability versus the other. Added to this is the strategic disconnect between the defense forces and the Ministry of Defense.
- Cost effective and timely modernization would be critical to fully realize India’s blue water dreams.
- India has the allocated funds, locational advantage, time and the opportunity to form strategic alliances on its side. But it needs to avoid getting this agenda mired in bureaucracy, inefficiency and a lack of strategic focus.
- And as acknowledged by its policy thinkers, India does have a window of opportunity to forge ahead on building its naval capabilities while China is still preoccupied with the Pacific Ocean.

**Conclusion:**

Just like the sea, naval maneuvers seem deceptively quiet for the most part, but in fact conceal deep underlying currents. The outcomes of India’s blue water quest will subtly but surely impact the region’s long-term strategic calculus.



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