



# INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

- IAS SELF STUDY GUIDE -

## **SECURE** SYNOPSIS

## MAINS **2019**

# GS-III

## MARCH **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.



## Table of Contents

### **General Studies Paper - III \_\_\_\_\_ 6**

#### **Topic: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment. \_\_\_\_\_ 6**

Q) How is fiscal federalism different from cooperative federalism ? What are the challenges to Indian fiscal federalism. Discuss. (250 words) \_\_\_\_\_ 6

Q) RBI's recent constricted monetary policy has kept real interest rates high, impacting investment flow and job creation. Critically analyze. (250 words) \_\_\_\_\_ 8

Q) Indian economic stability is often seen to be a hostage to commodity price shocks. Evaluate India's macro balance sheet in this regard and suggest what needs to be done to reform the economic structure to overcome the challenges of such shocks ? (250 words) \_\_\_\_\_ 10

Q) The nature of geo-politics and the rapid advances in digitisation require the Reserve Bank of India (RBI) to urgently rethink its extant supervisory policies. Examine. (250 words) \_\_\_\_\_ 11

Q) India does not have a jobs crisis but a wages crisis. Do you agree ? Present your argument with suitable justification. (250 words) \_\_\_\_\_ 13

Q) Real Estate Investment Trusts (REITs) are critical to property market development in India , but face unique challenges. comment. (250 words) \_\_\_\_\_ 15

Q) Discuss the salient features of Indian Accounting Standards why is it significant? Elaborate on the need to have an independent Accounting Standards. (250 words) \_\_\_\_\_ 16

Q) Do you think lack of employment opportunities is the biggest challenge facing India ? Discuss. (250 words) \_\_\_\_\_ 18

Q) The idea of an urban employment programme is gaining traction in political and policy debates. In the context of the above statement, Discuss the problems associated with urban employment in India. (250 words) \_\_\_\_\_ 20

Q) The easy drift in inflation is anticipated to continue, raising hopes of a promising policy shift by the RBI. Suggest what according to you should be the role of RBI in such a scenario ? (250 words) \_\_\_\_\_ 22

#### **TOPIC: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth. \_\_\_\_\_ 24**

Q) Examine the existing traditional mechanisms for resolution of financial and commercial disputes in India also discuss the need for an online dispute resolution system. What measures need to be taken in this direction to achieve a robust dispute redressal system ? (250 words) \_\_\_\_\_ 24

Q) Technological advances in the global value chain are often complemented with decline in Jobs , in the context of the statement applying to developing Asia. Evaluate the impact of such technological advances on India. (250 words) \_\_\_\_\_ 26

Q) Critically analyse the issues plaguing aviation sector in India. What needs to be done to overcome these issues and concerns ? Discuss. (250 words) \_\_\_\_\_ 28

Q) Discuss the key proposals of the National Mineral Policy 2019. Does it ensure environmentally and socially responsible mining ? Critically analyse. (250 words) \_\_\_\_\_ 30

#### **Topic– Inclusive growth and issues arising from it. \_\_\_\_\_ 32**

Q) Discuss the potential of Blue economy in India. What are the issues associated and what needs to be done to harness the available potential ? (250 words) \_\_\_\_\_ 32



Q) The concept universal basic income is now firmly etched in India's political discourse. Critically analyse. (250 words) \_\_\_\_\_ 35

**Topic: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers; Agrarian crisis, agrarian distress** \_\_\_\_\_ 38

Q) Loan waivers are often argued to vitiate credit culture and stress the budgets of the waiving state or central government. In this context discuss how the recently enacted Insolvency and Bankruptcy Code (IBC) proves to be method of providing relief for the distressed Indian farmer ? (250 words) \_\_\_\_\_ 38

Q) Discuss in what way the recently released agriculture export policy is an opportune step in the direction of doubling farmers' income by 2022. (250 words) \_\_\_\_\_ 39

Q) Do you think giving farmers unconstrained rights to sell any quantity of their produce to anybody, anywhere and at any time can resolve the widespread agrarian distress in India ? Discuss the need for a Kisan law in India. What are the challenges associated in bringing such a law? Suggest solutions. (250 words) \_\_\_\_\_ 42

**Topic: Technology missions; economics of animal-rearing. Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management.** \_\_\_\_\_ 44

Q) Discuss how the recently launched department of Fisheries in the union government will help in meeting the objectives of Blue Revolution in India ? What are the challenges being faced by the sector ? Suggest a way forward. (250 words) \_\_\_\_\_ 44

**Topic: Infrastructure: Energy, Ports, Roads, Airports, Railways etc., Investment Models.** \_\_\_\_\_ 46

Q) Solar power is turning rural India bright and shining. Discuss the recent initiatives taken by the Centre in this direction with special emphasis on agrarian economies of rural India. (250 words) 46

Q) pretty far from reaching the 175 GW renewable energy target by 2022, Will Reclassifying 'hydro' take the renewable energy capacity of India to higher levels ? Examine. (250 words) \_\_\_\_\_ 48

Q) India's water crisis is even more serious than its energy crisis. Discuss in the wake of India's urban water crisis and what steps are needed to tackle this. (250 words) \_\_\_\_\_ 50

Q) Discuss the problems associated with the development of North- east of India. Analyse the role of Infrastructure projects in the development of this region. (250 words) \_\_\_\_\_ 52

**Topic: 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.** \_\_\_\_\_ 55

Q) Discuss the role of Artificial intelligence in managing and mitigating floods. What are the issues and challenges involved ? Discuss in the light of Google's newly launched flood forecasting project in India. (250 words) \_\_\_\_\_ 55

Q) "We live in a society bloated with data yet starved for wisdom". Critically analyse. (250 words) \_\_\_\_\_ 57

Q) Has the recent Missile test Shakti in space paved the way for India's attempt to draw new red lines redefining its security calculus ? Examine. (250 words) \_\_\_\_\_ 59

**Topic: Awareness in the fields of IT, Space, Computers, robotics, nanotechnology, biotechnology and issues relating to intellectual property rights.** \_\_\_\_\_ 61

Q) 5G technology can fulfil the vast potential ascribed to it these past years. Examine. (250 words) \_\_\_\_\_ 61

Q) Recently SpaceX's new Dragon capsule was successfully docked on the International Space Station (ISS), the launch proved to be a key step towards resuming manned space flights. In this



context discuss the challenges of private participation in India's space program and what are its potentials ? (250 words) \_\_\_\_\_ 64

Q) What is CCR5-delta 32 often seen in news recently ? What are its implications for Indian bioinformatics industry ? Discuss. (250 words) \_\_\_\_\_ 66

Q) Discuss the objectives of National Digital Communications Policy 2018. What are the associated concerns? How can India overcome these concerns. (250 words) \_\_\_\_\_ 67

Q) India needs a robust IPR Policy to have growth and development. comment. (250 words) \_\_\_\_\_ 71

Q) Discuss the objectives and features of recently approved Global Trademark System by Government of India, What are its significance and benefits for India? Elaborate.(250 words) \_\_\_\_\_ 73

Q) With increasing advancement in science, antimicrobial drugs are increasingly faltering across the world and therefore the microbial infections are coming full circle. Discuss the causes and consequences of such a conundrum and suggest a strategy to fight against antibiotic resistance. (250 words) \_\_\_\_\_ 74

**Topic: Conservation, environmental pollution and degradation, environmental impact assessment. \_\_\_\_\_ 77**

Q) The Tiger population in India has more than doubled in the past decade with focused conservation efforts , however man-Tiger conflicts have also been on the rise in India. Does this call for a rethink of conservation policies ? Examine. (250 words) \_\_\_\_\_ 77

Q) In the light of recent Forest Survey report, discuss the significance of Forest Survey in India. What are the issues and challenges involved ? Elucidate. (250 words) \_\_\_\_\_ 79

Q) Reports have suggested nearly 50% of the country is currently facing drought with at least 16% falling in the "exceptional" or "extreme" category, in the light of the above statement, Discuss the significance of ground water recharge. What are the challenges being faced in India with respect to it and what needs to be done. (250 words) \_\_\_\_\_ 82

Q) India's biodiversity-rich regions are fast turning into 'hotspots' of human impacts. Evaluate. (250 words) \_\_\_\_\_ 84

Q) "Climate Change has made healthcare a bigger concern for vulnerable communities". Analyse the above statement in the light of recently released UN Environment Programme's Global Environmental Outlook (GEO6) report. (250 words) \_\_\_\_\_ 86

Q) In the light of recently released Climate variability index for Himalayan states, Discuss the role of socio-economic factors in determining the climate vulnerability of a region. (250 words) \_\_\_\_\_ 89

Q) "Carbon emissions have risen to a record high in 2018 as demand for energy has soared in countries such as the US, China and India, pointing to a seeming neglect of global warming concerns." Comment. (250 words) \_\_\_\_\_ 91

Q) With World heading towards ecosystem collapse and a climate-run riot .Discuss the need for India to reframe engagement with climate change. (250 words) \_\_\_\_\_ 93

Q) Strengthening adaptation is must to protect human health in face of climate change. Comment. (250 words) \_\_\_\_\_ 95

Q) Discuss the key proposals of island protection zone (IPZ) 2019 recently notified for Andaman and Nicobar . Discuss the Concerns raised over relaxation of certain norms under it. (250 words) \_\_\_\_\_ 97

**Topic: Disaster and disaster management. \_\_\_\_\_ 99**

Q) Discuss the objectives of recently launched Flood Management and Border Areas Programme (FMBAP) and analyze the need for a comprehensive policy and coordinated approach for flood management and border area programmes. (250 words) \_\_\_\_\_ 99



Q) While northern India is witnessing an extended winter season, the southern part of the country has started experiencing heat wave conditions this March, In this context discuss the significance and relevance of India Cooling Action Plan (ICAP). (250 words) \_\_\_\_\_ 102

Q) “The relationship between disaster and development depends on the development choices made by the individual, community and the nation”. Discuss. (250 words) \_\_\_\_\_ 103

Q) Discuss the need for Disaster risk reduction in India. What are the challenges involved and explain the global efforts in this direction. (250 words) \_\_\_\_\_ 105

Q) The frequency of tropical cyclones has decreased ever so slightly over the last 70 years in the Indian Ocean season and Instead, a much higher frequency of high-intensity storms are being witnessed, in the light of recent onset of Cyclone Idai discuss role of human-induced climate change in such events. (250 words) \_\_\_\_\_ 108

Q) It is not only the intensity of environmental disasters that makes disasters devastating but poverty also has a huge bearing. Critically analyse. (250 words) \_\_\_\_\_ 110

**Topic: Security challenges and their management in border areas; linkages of organized crime with terrorism** 112

Q) The recent Pulwama attacks have exposed the gaps in our security systems and the urgent need to have a well- defined national security doctrine. However the recent act of the Government agencies to monitor computers have sparked privacy fears among the people. Critically analyse. (250 words) \_\_\_\_\_ 112

Q) Terrorism emanating from Pakistan and the China-Pakistan axis working against India are two of the major geo-political challenges facing the country. Discuss. (250 words) \_\_\_\_\_ 114

**TOPIC: Linkages between development and spread of extremism; Role of external state and non-state actors in creating challenges to internal security.** \_\_\_\_\_ 116

Q) Discuss the need for a renewed attention on socio-economic re-integration of the Militants in the context of newly drafted Return Policy for militants in Jammu and Kashmir. What are the issues and concerns associated to it ? Suggest some solutions to tackle the same. (250 words) \_\_\_\_\_ 116

Q) The recent terrorist attacks in New Zealand depict obvious dangers of hate, intolerance, and rising Islamophobia across the world. Do these incidents reflect rising sentiments of racism and intolerance into a perverse and murderous ideology? Critically examine. (250 words) \_\_\_\_\_ 118

**Topic : Role of media and social networking sites in internal security challenges, basics of cyber security.** \_\_\_\_ 119

Q) Discuss Fake news problem in India. Is it a policy issue or is it due to the lackadaisical approach by the social media companies or is it a combination of both? (250 words) \_\_\_\_\_ 119



## General Studies Paper - III

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

**Q) How is fiscal federalism different from cooperative federalism ? What are the challenges to Indian fiscal federalism. Discuss. (250 words)**

Epw

**Why this question:**

*The article provides for an assessment of Fiscal federalism in India , its link with cooperative federalism and the challenges being faced by Fiscal federalism in India.*

**Key demand of the question:**

*The answer must discuss how the state of cooperative federalism in India is analyzed by focusing on the trends in vertical fiscal imbalances between the Centre and the states, the impact of Fiscal Responsibility and Budget Management acts on the fiscal space of the states, the implications of the Terms of Reference of the Fifteenth Finance Commission, and the need for empowering local governments in the context of Centre–state relations.*

**Structure of the answer:**

**Introduction:**

*Begin with what you understand by Fiscal federalism.*

**Body:**

*Discuss the following :*

*How fiscal federalism is linked to cooperative federalism.*

*Discuss trends in central and state taxes, the issues in sharing taxes and distribution of grants, the vertical fiscal imbalances, the impact of FRBM legislations, Fifteenth Finance Commission and empowering local governments (LGs), in the context of Centre–state relations.*

*Discuss the specific challenges.*

**Conclusion:**

*Conclude with what needs to be done to overcome the challenges.*

**Introduction:**

- Fiscal federalism is **the financial relations between units of governments in a federal government system**. It is part of broader public finance discipline. The term was introduced by the German-born American economist **Richard Musgrave** in 1959. Fiscal federalism deals with the division of governmental functions and financial relations among levels of government.
- India has a federal form of government, and hence a federal fiscal system. For successful operation of federal form of government, **financial independence and adequacy** forms the backbone. The Economic Survey 2017-18 highlighted the need for fiscal federalism.

**Body:**

The differences between fiscal federalism and Co-operative federalism are:

- Fiscal federalism** says that the **functions of macroeconomic stabilisation and distribution are considered to be in the domain of the federal government** and that of allocation in the realm of the tier of government closest to the beneficiaries whereas **Cooperative federalism** is a system in which **there is joint decision-making between several jurisdictions of government based on consensus**.
- Fiscal federalism** refers to the division of responsibilities with regard to public expenditure and taxation where as **cooperative federalism** ensures that government at various levels work in synergy for the development by passing their differences.
- Fiscal federalism** deals with **allocation of resources in an effective way** where as **cooperative federalism** mandates **cooperation in the developmental sphere**.





- Fiscal federalism **ensures economic stability** of the nation at all levels of federalism where is cooperative federalism ensures equitable growth across regions.
- Fiscal federalism is an integral part of cooperative federalism. The spirit of cooperative federalism requires both the Union and the State governments to sacrifice their fiscal autonomy in favour of a collective decision-making process.

The challenges to Indian fiscal federalism are:

- **Trends in Tax Revenue:**
  - A look at the composition of central and states' own taxes and expenditure reveal that the share of the own tax revenue and expenditure of the states is 38% and 58% respectively.
  - This reflects the more than proportionate expenditure obligations of the states and also the lesser revenue raising powers vis-à-vis the centre.
  - The centre has buoyant sources of revenue like personal income tax, corporation tax, excise duty, customs duty and service tax. However, the tax–gross domestic product (GDP) ratio of the centre has stagnated by 11% on an average, during the period 1970–71 to 2016–17.
- **Trends in Transfer of Central Resources:**
  - The transfer of resources to states comprises taxes collected by the Union, statutory grants under Article 275 based on the recommendations of the finance commissions, grants given as central share in centrally sponsored schemes (CSS), other discretionary grants, and until 2015–16, formula-based grants for state plans under the Gadgil formula.
  - The transfer of central resources can be broadly classified into tied and flexible grants. The former is a conditional grant which comes with a scheme and has conditionalities. The state has no flexibility in deciding how to spend it. The CSS grants fall under this category.
- **Trends in Tax Devolution:**
  - Under Article 270 of the Constitution, the net proceeds of all taxes levied by the union, except surcharges and cesses are shareable with the states after the 80th Constitutional Amendment.
  - **Net proceeds** are defined in Article 279 of the Constitution as gross tax revenue of the centre less surcharges and cesses, and cost of collection. However, the amount of net proceeds is not published in the budget documents of the union. But, the proportion of surcharges and cesses to gross tax revenue of the centre is rising, and this is neutralising the higher shares recommended by the successive finance commissions.
  - Surcharges and cesses are levied for the purpose of the union and are not shareable with the states, according to the provisions of Article 271 of the Constitution.
  - the lack of transparency in computation of net proceeds has also caused losses to the states.
- **FRBM Acts and Asymmetric Impacts:**
  - The FRBM acts were passed at the level of the centre and the states in the beginning of the 2000s.
  - It laid emphasis only on achieving targets. In the bargain, if revenues could not be raised, expenditure (even essential) would be cut.
  - the states have been forced to limit their deficits due to sanctions by the finance commissions, whereas the centre is not bound by any such conditionalities.
  - The FRBM review committee recommendations have been unilaterally accepted by the centre without consulting the states. This is against the basic tenets of cooperative federalism.
- **Inefficient Cash Management by States:**
  - The states do not spend essentially due to the fear of the consequences of non-adherence to deficit targets, which are not only a legislative constraint but also a conditionality imposed by the finance commissions.
  - The perversity of this is such that states are not only forced to adhere to deficit targets, but also to provide cheap financing to the centre, which has not adhered to deficit targets noted in the FRBM acts.
- **Post-GST Scenario**
  - The voting rights in the GST Council is in the provisions of Article 279A of the Constitution. The states have two-thirds and the centre one-third voting rights. But to pass a resolution, three-fourths majority is required. This in effect confers a **veto power for the centre**, even when states jointly propose a change. The states should be able to adopt a change in their tax structure without the centre's consent. The voting rights envisaged under Article 279A has made this impossible.





- The committee on **revenue neutral rates (RNR)** of the central government had suggested the apportionment between the states and the centre at 60:40 ratio, as almost 44% of states' own tax revenue was subsumed under the GST as against 28% for the centre. It still retains the power to levy additional excise duty on tobacco products, even though it has been brought under the GST. States do not have such a right.
- The centre also took a long time in implementing the anti-profiteering clause of the GST.
- **ToR of the Fifteenth Finance Commission:**
  - There is an apprehension that it will reduce the states' capacity to intervene in social and economic sectors.
  - ToR suggests **whether there should be revenue deficit grants** at all. This is ToR is a bolt from the blue with regard to the state finances that are already stressed by the impending pay commission award implementations, the obligation to bear the future interest burden from floating UDAY bonds and stagnation in the GST revenues.
  - The proposed enlargement of restrictive conditions is a move towards fiscal centralisation and acts counter to cooperative federalism.
  - The ToR 7 also mandates the Fifteenth Finance Commission to assess and monitor performance of several aspects, including GST implementation, and other governance and achievement indicators. The finance commissions becoming a monitoring agency of states' performance does not befit its constitutional role.
- **Empowering Local Governments:**
  - the LGs in India are still a shadow of "institutions of self-government" envisaged in the Constitution.
  - A major impediment for substantial progress in decentralisation to LGs is the lack of any initiative to restructure centre–state relations in India.
  - the vast differences in the decentralisation experience across the states, which is the consequence of the varying degrees of political will.

#### Conclusion:

- There is an urgent need to tackle the above challenges in fiscal federalism by using the co-operative federalism to ensure socio-economic development of India.

### Q) RBI's recent constricted monetary policy has kept real interest rates high, impacting investment flow and job creation. Critically analyze. (250 words)

[Indianexpress](https://www.indianexpress.com)

#### Why this question:

*The article captures the recent trends of RBI's tight monetary policy that has kept real interest rates high, affecting investment movement and job making.*

#### Key demand of the question

*The answer must critically analyze the changing policies of the RBI, discuss that the primary objective of monetary policy is to maintain price stability while keeping in mind the objective of growth and that price stability is a necessary precondition to sustainable growth. You must critically bring out the issues with current trends of monetary policy, what needs to be done.*

#### Directive word

*Critically 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. 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 judgement.*

#### Structure of the answer

##### Introduction:

*Briefly narrate the background of the issue.*

##### 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?*

**Conclusion:**

*Conclude with significance of resolving such issues and how role of government policies is also of prime importance in handling such issues.*

#### **Introduction:**

- Monetary policy is the process by which a central bank (Reserve Bank of India or RBI) manages money supply in the economy. The money supply can be directly affected through reserve ratios or open market operations and can be indirectly affected by using key interest rates to influence the cost of credit.
- RBI's tight monetary policy has kept real interest rates high, impacting investment flow and job creation.

#### **Body:**

##### **Role of RBI's Monetary Policy:**

The objectives of monetary policy include

- ensuring inflation targeting
- price stability
- full employment
- stable economic growth
- Controlled Expansion Of Bank Credit
- Promotion of Fixed Investment
- Reducing the Rigidity by encouraging more competitive environment and diversification

##### **Current issues facing RBI policies:**

- If businesses are borrowings at not less than 9%, then micro, small and medium enterprises would obviously be paying much more when inflation, whether based on the consumer or wholesale price index, is below 3 per cent, it is something serious.
- During 2012-13 and 2013-14, the last two years of the UPA government, consumer price inflation averaged 9.7 per cent, whereas benchmark prime lending rates ranged at 9.75-10.25 per cent.
- Under the current government, average consumer inflation has come down to 3.6 per cent in 2017-18 and 2018-19 (till January 2019).
- If despite that, even the sovereign's borrowing cost is now about 7.4 per cent and banks have actually hiked lending rates, the reason for the current economic slowdown is clear.
- High real interest rates for a prolonged period are why investments have slowed down and very few jobs are being created. The source of it has been the **RBI's tight monetary policy**.
- That made sense in the initial years of the current government, when a firm commitment to low inflation and macroeconomic stability helped restore investor confidence badly dented during the loose fiscal and monetary policies of the UPA years.
- But the tightening has gone on for too long, which the current government and the RBI under a new, less orthodox governor have realised.
- Core inflation remains sticky with recent unexplained spikes in certain components like rural health and education and hence remains cause for worry.
- Domestic high frequency indicators continue to point towards on-going cyclical slowdown led by the lagged impact of higher oil prices, weaker rupee, financial market tightness and weaker global demand.
- The fading private consumption growth is expected to keep the domestic growth muted in the coming quarters

##### **Way forward:**

- The RBI should cut its overnight lending or "repo" rate in the next policy review meeting in April;
- It can even go in for a 0.5 percentage point reduction, instead of the usual 25 basis points.
- The central bank could also consider more open market operations to bring down bond yields across all maturities.
- The government, too, should slash interest rates on the Employees Provident Fund, small savings and other administered schemes.

**Conclusion:**

- The seemingly in-part structurally benign food inflation along with softening growth should provide space for the MPC to shift the policy stance to neutral and keep the policy decisions in future data dependent. The Government's fiscal policies should complement the efforts of MPC.

**Q) Indian economic stability is often seen to be a hostage to commodity price shocks. Evaluate India's macro balance sheet in this regard and suggest what needs to be done to reform the economic structure to overcome the challenges of such shocks ? (250 words)**

[Livemint](#)

**Why this question:**

*The question is in the context of the economic instability India is facing due to rising commodity prices in the recent times. The article explains in detail the causes and provides a comparison of India's competitor – China and how it has been successfully tackling the issue with its robust export regime.*

**Key demand of the question:**

*The answer must provide for a detailed analysis of the current economic instability owing to rising commodity prices in the Market. One has to discuss in detail in what way the high commodity prices cut domestic purchasing power while low commodity prices add to it. And emphasis must be given to discuss the impact of oil as a commodity.*

**Directive word:**

*Evaluate – When you are asked to evaluate, you have to pass a sound judgement about the truth of the given statement in the question or the topic based on evidences. You have to appraise the worth of the statement in question. There is scope for forming a personal opinion here.*

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

*Explain briefly the current scenario of Economic instability in Indian markets.*

**Body:**

*Discuss briefly the causes of the rise in commodity prices, take few examples across the sectors. Narrate the oil import scenario; its effect on our economy. Discuss as to how other factors have also contributed along with rise in commodity prices to create the instability. Provide for a China's economic picture, how is it different from Indian scenario, What steps should India take.*

**Conclusion:**

*Conclude with way forward – What changes should India approach in its policies to overcome the issue.*

**Introduction:**

- Periods of commodity price shocks sharply coincide with moments of intense economic stress, which in turn have sometimes led to political upheavals. Rising commodity prices create stress. Inflation goes up. The trade gap widens. The rupee comes under pressure. Falling commodity prices bring relief on all three fronts.

**Body:**

- Commodities, raw or partially processed, are often the most significant exports of developing countries, and revenues obtained from them have an important effect on the economies and living standards in these countries.

**The causes of the rise in commodity prices:**

- India is a net importer of commodities, so the trends in global commodity prices are especially important. Eg: Oil imports
- Since 1960, India has faced three major commodity import price shocks.
- Severe droughts in last 6 years and continuing agrarian distress have reduced crop yields.
- Prospects for continued deterioration in the supply mean prices are likely to stay high in the near term.



- Oil prices, too, have picked up, driven by geopolitical risks.
- Populism could push up inflation and slow down government-led capital expenditure.

#### Implications for economic growth:

- Commodity price fluctuations, along with the globalisation of the world economy and increased liberalisation of commodity markets have led to profound changes that seriously affect the weaker economies of the developing world.
- Commodity price instability has a negative impact on economic growth, countries' financial resources, and income distribution, and may lead to increased poverty instead of poverty alleviation.
- High commodity prices cut domestic purchasing power while low commodity prices add to it.
- The most significant commodity in this context is oil.
- Indian economic stability is often hostage to what happens under the hot Arabian sands or in the air-conditioned rooms where the global oil cartel meets.
- The international terms of trade—or the ratio of the price at which a country sells to the world to the price at which it buys from the world—are thus a key concern for Indian policymakers.
- India's import basket is dominated by commodities while Indian exports have significant manufactured items such as engineering goods, textiles and pharmaceuticals.
- Commodity price shocks have stronger effects on domestic inflation in developing than in advanced economies.
- Food shocks are more likely to have sustained inflationary after-effects in countries with food as a sizable portion of the basket of goods and services measured by the consumer price index
- The India's balance of payments is also supported by software exports as well as NRI deposits.
- Periods of global commodity price shocks are associated with fall in net export earnings for India and a deterioration of terms of trade
- China has been less prone to topple over when terms of trade deteriorate because its exports are robust.

#### Way forward:

- Policymakers must strive to keep the surge in commodity prices from triggering a sustained overall increase in inflation—that is, to prevent the commodity price shock from passing through to so-called core inflation (inflation stripped of volatile fuel and food prices).
- Better overall governance, greater central bank autonomy, and, to a lesser extent, the adoption of inflation-targeting frameworks seem to help anchor inflation expectations and reduce second-round effects of international commodity price shocks.
- There is a need to find alternative sources of energy in the form of renewable energy which can tide away the oil price shocks. Strategic oil reserves can be a short-term measure.
- Reduced gold imports and lucrative financial options for people should be devised.
- Strengthening the manufacturing and MSME sector to push for more export-oriented growth.
- Better agrarian policies with inclusion of technology in agriculture to curb the food price shocks.

**Q) The nature of geo-politics and the rapid advances in digitisation require the Reserve Bank of India (RBI) to urgently rethink its extant supervisory policies. Examine. (250 words)**

#### Reference

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

*The question is in the context of urgent reforms required in the Reserve Bank of India (RBI), the need for the Bank regulations to adapt to the new reality of rapid advances in digitisation, as financial systems are the core to an economy's smooth functioning.*

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

*The answer should discuss in detail what are the issues RBI is currently facing, how changing geopolitics affect the functioning of financial systems and thus the need of RBI to change its existing supervisory functions and policies.*



### **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:**

*Briefly bring out the role of Reserve Bank of India and its significance in managing the economy of the country.*

#### **Body:**

*Discussion of the answer should cover:*

- *Effect of geopolitics, international economic stability on Indian economy vis a vis role of RBI to manage the effect.*
- *Effect of rapid digitization across the world and preparedness of RBI to manage the transformation or the great leap going forward.*
- *What changes are required to be brought in ? what are the issues and concerns facing RBI.*
- *Way forward.*

#### **Conclusion –**

*Conclude with what needs to be done, what path should Reserve bank of India take to empower the Indian economy in pace with the rapid digitization.*

#### **Introduction:**

- Reserve Bank of India (RBI) is India's Central bank. It plays multi-facet role by executing multiple functions such as overseeing monetary policy, issuing currency, managing foreign exchange, working as a bank of government. RBI is playing a vital role in ensuring economic and financial stability

#### **Body:**

##### **Effect of geopolitics, international economic stability on Indian economy:**

- United States position as both the preeminent world economy and largest world military, significantly impacts the intertwining of geopolitics and global economy.
- Trump's reversal from US policies towards ensuring 'global good' to outright nationalism of 'America-First' has had reverberating effects in the current global milieu.
- The current global economy is not only facing short-term cyclical slowdown, but is also on a declining slope supply chains.
- The US-China Trade War is essentially a power struggle. The trade might be a side issue and technology may be a bigger issue.
- China's Belt and Road Initiative has brought the failure of global financial institutions regarding developmental lending into spotlight.
- Trump's desire to renegotiate the entire spectrum of US' bilateral, regional and multilateral linkages with the global economy has put tremendous pressure of reform on World Trade Organization, International Monetary Fund and World Bank.
- There has been a surge in US sanctions against major rival oil and gas producers such as Iran and Russia. India being a global oil importer affects its CAD directly.

The above issues directly concern RBI as it **controls the monetary policy, inflation targeting (CPI), deciding on the benchmark interest rate, regulates foreign exchange and acts as Government's banker.**

##### **Effect of rapid digitization across the world and its impact on RBI:**

- The challenge of **Cryptocurrency** is a major point of deliberation as it can set up an alternate economy, thus sabotaging the Indian Economy.
- Increasing connectivity across the world has led to digitization of entire banking system. The **lack of strong data protection laws in India and poor Cybersecurity** as seen during WannaCry looms big danger to RBI.



- The new age war is fought on cyber-warfield with countries trying to cripple the opponent through **Cyber-warfare**. Most of RBI's financial operations are online and cyber-warfare poses a direct threat.
- Non-state actors have taken up to **Cyber-Terrorism** which is capable to wreaking great havoc as seen in the heist of Bangladesh Central Bank and hacking of credit cards in India.
- The disruptive technologies like Artificial Intelligence and Machine learning have threatened job security across globe which can lead to unemployment and possible stagflation.

RBI thus has a list of threats which necessitates it to urgently rethink its extant supervisory policies.

#### Way forward:

- The **necessary autonomy in its working** should be granted to RBI to avoid political interference.
- There is a need to diversify our source of energy imports and find alternatives like Solar energy to reduce the geopolitical influences on Indian economy.
- **RBI's technical arm** must be abreast with the cyber-security issues and loopholes to avoid any untoward incidents. New standards and protocols in digital operations must be brought in from time to time.
- The Government must come up with **strong Data Protection law as per Justice Srikrishna Committee's recommendations**.
- Revisiting our **National Cybersecurity Policy (2013) and IT Act, 2006** to make the necessary changes according to needs to avoid future threats.

**Q) India does not have a jobs crisis but a wages crisis. Do you agree ? Present your argument with suitable justification. (250 words)**

[The hindu](#)

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

*The article covers the theme of Job crisis facing India, it elaborates on how India's jobs crisis is an economic issue, not a political one. It paints a clear picture of demand and supply with respect to Jobs available for youth in India.*

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

*The answer must discuss first the Indian scenario of Job crisis, why is it not merely job crisis but more of a wage crisis. One must first acknowledge the statement in the question and justify it with relevant facts and support the argument thereafter.*

#### **Keywords:**

*economic parlance, wage, the price of labour, formalizing the economy etc.*

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

##### **Introduction:**

*Briefly bring out the current status of job scenario in India .*

##### **Body:**

- *First discuss the what is the Job crisis in India about.*
- *Then discuss how and why the Job crisis is more of a wage crisis.*
- *What should the govt. do to create jobs that best fit as a solution to the crisis?*
- *Quote policies that are in place to address these issues and what needs to be done in future.*

##### **Conclusion –**

*Conclude with significance of Job creation for driving the economy in the right direction.*

##### **Introduction:**

- Unemployment has become a chronic problem of India and in the recent years the situation has only worsened. The National Sample Survey Office's (NSSO's) report, "**State of Working India, 2018**" data shows a





record spike in unemployment in 2017-18. The overall unemployment was at a 45-year high, with youth between the ages of 15 and 29 facing higher rates of joblessness than others

#### Body:

- India's jobs crisis is an economic issue, not a political one. India is not unique in experiencing rising joblessness and, consequently, income inequality. Many developed and developing nations are grappling with this problem, too.

The reasons for issue of unemployment in contemporary India:

- The labour force is the sum of the employed and those unemployed who are seeking employment.
- A shrinking of the labour force is most unusual in an economy with a growing population, and thus a growing working age cohort.
- Low education and lack of skills** lead to loss of many job opportunities.
- Discouraged-worker effect:** A section of those hitherto willing to work may have simply dropped out of an already challenged labour market.
- Demonetization** has caused demoralisation among a section of the already unemployed who may have given up all hope of finding employment.
- About **90% of Indian Workforce is in the unorganized sector** which was majorly affected during Demonetization and GST introduction.
- Declining Capital formation** which is not backed by Public and Private Investment.
- Low female LFPR to the tunes of 24%** also adds to high unemployment rate.
- Automation and IR4.0** is a looming threat to many jobs which have repeated work or sequential work.
- Socially disadvantaged groups do not get enough exposure in the job market like the general castes and Other Backward Classes.
- Labour laws in India are complex and relatively strict. Employment protection legislation is restrictive, compared with other emerging economies and OECD countries. Thus, corporates in India tend to rely more on **temporary contract labour**, stay small or substitute labour for capital to avoid strict labour laws.

**Unemployment is due to jobs crisis and not wages crisis:**

- The wages crisis is due to **supply and demand issue**.
- The wages of a person are determined largely by the demand for skills and the supply of people with such skills.
- If demand is higher than supply, wages automatically rise; if not, they remain stagnant. To understand the unemployment issue as a wages problem shows ignorance.
- The proponents of the argument that there is a wage crisis and not a jobs crisis would do well to go back to economic history and study the work of Arthur Lewis, the Nobel Prize-winning economist from the West Indies.
- Lewis, in his seminal work in 1954, showed how in economies such as India and China, which have an "infinite supply of labour", there tends to be a two-sector economy — the capitalist sector and the subsistence sector.
- His summary finding was that the living standards of all citizens in such two-sector economies are determined by the wages of the people in the subsistence sector.
- If there is demand for labour and skills in the capitalist sector, then the endless supply of labour from the subsistence sector will transition, and wages will ultimately rise only when the demand for labour exceeds the supply of labour in the subsistence sector.

**Way Forward:**

- Increase public spending in education:**
  - At 3.8% of GDP, public spending on education in India is lower than countries like Brazil and Malaysia.
  - The focus of the government needs to shift to spending on enhancing the quality of education and vocational training.
- Similarly, allowing foreign investment in sectors like legal and accountancy services will create employment as more foreign firms will move to India.
- Infrastructure investment can also be utilised as an engine of job-creation.
- Investing in people through healthcare, quality education, jobs and skills helps build human capital, which is key to supporting economic growth, ending extreme poverty, and creating more inclusive societies.
- Educated unemployment:**
  - Besides promoting technical education, the government needs to focus more on creation of jobs and demand for workers since industries are unable to create sufficient job opportunities for all the technically educated people





- Policies should ensure that the education systems prepare young people for the skill demands of employers through outreach programmes, training, apprenticeships, and access to job-search assistance measures.
- New age sectors like defence and aerospace, education and healthcare, and burgeoning green sectors like solar energy and wind, present another massive opportunity to identify 'upcoming jobs' and prepare talent accordingly. India's ambition to create more than **one million new jobs in the green energy sector by 2022** is encouraging.
- **Educated unemployment:**
  - There should be **cluster development to support job creation in micro, small and medium enterprises (MSMEs)**. Most of the **unorganised sector employment** is in MSMEs, which tend to be concentrated in specific geographic locations.
  - Private sector leaders should build capacity among unskilled and semi-skilled workers to ensure sustainability of renewable energy projects and provide opportunities to rural communities.
  - Government officials should create public training programmes to prepare the poor and less educated people especially semi-skilled and unskilled for employment in the clean-energy sector.
  - People need to be made self employed by providing training in skills and latest technologies for agriculture and other avenues especially in rural areas.
  - Women in rural areas who are left behind by men due to migration need to look into other sources of livelihood other than agriculture like animal husbandry etc.

#### Conclusion:

- India has one of the youngest populations in an aging world. By 2020, the median age in India will be just 28. Demographics can change the pace and pattern of economic growth. While China's spectacular growth has already benefited from a demographic dividend, India is yet to do so.

### Q) Real Estate Investment Trusts (REITs) are critical to property market development in India , but face unique challenges. comment. (250 words)

[Hindubusinessline](https://www.insightsias.com/hindubusinessline)

#### Why this question:

*The article highlights the fact that REITs have an important role to play in the formalization of the Indian real estate sector. It also discusses in detail the associated challenges.*

#### Key demand of the question:

*The answer must trace the issues related to the Real estate investment trust in India, how these challenges and concerns should be overcome and REITs should be made to drive the property market in India.*

#### Directive word:

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

#### Structure of the answer:

##### Introduction:

*Introduce by highlighting the current scenario of REITs. Discuss in short the salient features of it.*

##### Body:

*In brief discuss the following points :*

- *What are REITs? Importance of REITs.*
- *Discuss the role of REITs in combining regular rental income with capital appreciation from property prices.*
- *Bring out the concerns related to REITs – lack of investor awareness, peculiar challenges that the Indian market poses to the REIT structure, complicated land acquisition, fragmented property market, complicated Taxation of REIT returns etc.*



- *Suggest what should be done.*

### **Conclusion:**

*Conclude with way forward.*

### **Introduction:**

- REITs are **collective investment vehicles that operate and manage property portfolios and give returns to investors**. REITs are similar to mutual funds. While mutual funds provide for an opportunity to invest in equity stocks, REITs allow one to invest in income-generating real estate assets.
- **Securities and Exchange Board of India (SEBI)** mandated that all REITs be listed on exchanges and make an initial public offer to raise money.

### **Body:**

#### **Salient features of REITs:**

- REITs can be used by **real estate players to attract private investment, while investors (both retail and institutional) can gain dividends** generated from income-producing real estate assets like office buildings, shopping malls etc.
- REITs are only for completed projects not the under-construction projects.
- They are primarily for commercial projects and mainly serve as an alternative investment.
- Its purpose is to improve the liquidity position of Real Estate developers and give a secure avenue to investors to invest in long term.

Recently, India's first real estate investment trust (REIT) was launched by Blackstone-backed Embassy Group seeks to raise Rs 4,750 crore from the market. REITs are critical to property market development, but **face unique challenges**

- Indian investors are partial to real estate and vastly prefer fixed income instruments over market-linked ones.
- The **lack of investor awareness** about the vehicle and the peculiar challenges that the Indian market poses to the REIT structure.
- The **fragmented property market and complicated land acquisition rules** make it necessary for REITs to take on leverage and adopt a multi-layered holding structure.
- The **grey component in property deals and the illiquid nature of the market** render Net Asset Value calculations tricky.
- Even though its assets are in cities offering good rental clients, the **rate of occupancy** is always a critical factor.
- **Taxation of REIT returns** for investors is a complicated affair too, with different tax rates applicable on dividend, rental and interest income.
- With **risk-free government schemes** offering **guaranteed returns as high as 8 per cent**, Indian REITs need to manage very high yields as well as capital appreciation to attract domestic investors.
- **Lack of investor familiarity** with the vehicle has also been a challenge, with confusion over the offer structure, gross versus net yield, applicable costs and taxation aspects.
- Since this is the first REIT issue, there is **no comparable data in terms of pricing and attractiveness** of the issue.

### **Way forward:**

- SEBI must kick off an investor education initiative to create greater awareness about REITs.
- A rejig of standard IPO offer documents/disclosures to reflect their unique characteristics is also in order.
- Advisors, who have struggled to evaluate this product, need to equip themselves.
- Learn best practices from Singapore where it has already been time-tested.

### **Conclusion:**

- Real estate has always been considered an illiquid and a big-ticket investment. REITs provide an opportunity to diversify across real estate as an asset class.
- REITs are primarily a hybrid investment seeking capital appreciation and even income (rent) from the underlying securities of the sponsor. With twin benefits of REIT and the rules in place, one should expect the REIT to provide a new investment option to the Indian investors soon.

**Q) Discuss the salient features of Indian Accounting Standards why is it significant? Elaborate on the need to have an independent Accounting Standards. (250 words)**

[The hindu](#)



### **Why this question:**

The question is in the context of recent move taken by RBI. The Reserve Bank of India (RBI) has deferred the implementation of new accounting rules, Indian Accounting Standards (Ind AS) for banks till further notice. This is the second extension provided by it. Earlier in April 2018, RBI had postponed the implementation of Ind AS by the banks by one year.

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

The answer must explain with the salient features of Indian Accounting Standards (Ind AS) and elaborate on its significance and explain why it is necessary for us to have such a system in place.

### **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:**

Briefly narrate the context/backdrop or simply define what are Indian Accounting standards.

#### **Body:**

Explain the following –

- What is it? – compromise formula that tries to harmonize Indian accounting rules with the International financial reporting standards.
- Briefly discuss its salient features; structure, current status, Legislative change required to implement IndAS etc.
- Significance
- Practical challenges to it from – revenue recognition, financial instruments and fixed asset accounting etc.

#### **Conclusion:**

Conclude with its importance.

#### **Introduction:**

- **Indian Accounting Standards or Ind AS** governs the **accounting and recording of financial transactions as well as the presentation of statements such as profit and loss account and balance sheet of a company**. Ind AS has been evolved as a compromise formula that tries to harmonise Indian accounting rules with the IFRS.
- The Reserve Bank of India (RBI) has deferred the implementation of new accounting rules, Indian Accounting Standards (Ind AS) for banks till further notice. This is the second extension provided by the RBI. Earlier in April 2018, RBI had postponed the implementation of Ind AS by the banks by one year.

#### **Body:**

##### **Significance of Ind AS:**

- Ind AS will not just change the way companies present their numbers, but may also **bump up or knock down the profits/losses of firms**.
- **Example:** Under the existing rules, incentives, discounts or rebates given to customers by a firm can be shown as part of advertising, sales promotion or marketing expenses, which figure in the costs. But under Ind AS, these will have to be deducted from sales (revenues). Excise duties which are currently netted off from revenues to show 'net sales', will have to be shunted under 'expenses' under Ind AS.
- **Intangible assets such as goodwill had to be amortised, or written off as expenses over a period of time until now.** Ind AS treats such items as having an indefinite life and hence they need not be amortised. This can lift the profits of firms which carry sizeable goodwill on their books.
- Ind AS advocates the **'fair value' method of accounting**. For example, currently, investments by a company in government securities or mutual funds are shown at the lower of cost and fair value (market value). Under Ind AS, these will have to necessarily be captured at fair value. For firms which have legacy or undervalued investments, this revaluation can expand the balance sheet size.



- The new Ind AS also promises **clearer disclosures to investors in certain cases**. So far companies reported their segment-wise performance based on a broad product/service grouping or even geographical segments (within India, Outside India).
- But Ind AS requires that segments reported to investors are the same as the firm uses for the purpose of assessing performance and allocating resources.
- Given that Ind AS is a **principle based standard**, the Regulators could provide simplified guidelines for ease of implementation and bringing consistency in implementation amongst banks.
- Under the proposed norms, financial institutions like banks will have to calculate expected credit losses (ECL) on their loans during each reporting period and make necessary adjustments to their profit-and-loss account even before a borrower may default on a certain loan.
- This is in contrast to the present accounting norms wherein banks incur credit losses in their books only after outstanding loans have been in a state of default over a certain number of days as stated in the rules laid down by the RBI.

#### Need for Ind AS:

- For long, there has been a heated debate about Indian companies moving to the globally accepted International Financial Reporting Standards (IFRS) for their accounts.
- But firms have resisted this shift, stating that this will lead too many changes in the capture and reporting of their numbers.
- Ind AS has been evolved as a compromise formula that tries to harmonize Indian accounting rules with the IFRS

#### Challenges posed due to shift to Ind AS:

- Adopting the Accounting Norms results in **addition to pile up of Bad Loans**. For example, the impact of expected credit losses may be spread systematically over a five-year period, thereby allowing time for banks to manage the increase in capital requirements.
- According to estimates made by India Ratings & Research, **public sector banks would have to make additional provision of over a trillion rupees means of over Rs. 1 lakh-Cr** if the norms are adopted right away.
- To adjust to the new norms, **banks will have to improve their ability to forecast future credit losses with precision**. Until this happens, bank earnings could experience volatility.
- The Central government, which has been trying to bail out public sector banks without carrying out the structural reforms required to clean up balance sheets, might also prefer to delay the enactment of the legislation.
- For the new norms will cause more outstanding loans to be added to the huge existing pile of bad loans and cause further headaches to the government.

#### Conclusion:

- ✓ In recent times, the banking regulator had raised concerns over 'divergence' in asset classification and provisioning, which means the reported numbers of a bank were lower than what RBI's inspection report had found. The implementation of Ind AS would have taken care of such issues.
- ✓ In the long run, moving to internationally acceptable accounting standards will help the Indian banking system in becoming more resilient and tapping international pools for their capital requirements. Introduction of GST, Ind AS, ICDS, etc., are transformational changes, which are steps in the right direction for the country's growth.

### Q) Do you think lack of employment opportunities is the biggest challenge facing India ? Discuss. (250 words)

[Livemint](https://www.insightsias.com/livemint)

#### Why this question:

*Human capital is now the fastest-growing component of India's wealth, but to reap the benefits of this 'demographic dividend', creation of sufficient new jobs is need of hour. Thus it is important for us to analyse the challenge of unavailability of Jobs in India*

#### Key demand of the question:

*The answer must discuss at length the challenge of Joblessness India is facing, by highlighting the inter relation between growth and jobs.*



### **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:**

*Introduce by stating the current conditions of the joblessness in India and highlight the problems associated with it.*

#### **Body:**

*In brief discuss –*

- *What are the challenges in the job scenario in India?*
- *Establish the link between lack of Jobs and growth. Here suggest facts and statistics to justify from various reports.*
- *what solutions are required to fix these concerns associated with it?*
- *Conclude with present policies and programmes in this direction.*
- *What needs to be done on this front – skilling, education etc.*

#### **Conclusion:**

*Conclude with way forward – suggest steps to overcome the crisis scenario.*

#### **Introduction:**

- Indians see the lack of employment opportunities as the biggest challenge facing them, says a survey by the US-based Pew Research Center—findings that resonate in a second report by Azim Premji University published.
- As many as 76% of those surveyed said the absence of jobs was a major problem and that little had changed on that front over the past year.

#### **Body:**

##### **State of Unemployment in India:**

- CMIE database on “**Unemployment Rate in India**” is based on the panel size of over 1,58,000 households in the country.
- The unemployment rate in December 2018 rose to 7.38% from 6.62% in November 2018 and 4.78% in December 2017, highest since September 2016 when it stood at a high of 8.46%, the CMIE data showed.
- The total number of people employed fell by about 1.09 crore, about 83% or 91.4 lakh jobs were lost in rural areas.
- There has been a decline in the estimated Labour Participation Rate— the proportion of working-age people who are willing to work and are either actually working or are actively looking for work, in line with a fall in the unemployment rate.
- The estimated labour participation rate also dropped from 43.57 in December 2017 to 42.47 in December 2018. The rate was at 45.15 in December 2016 and at 47.84 in September 2017, the data showed.

The reasons for issue of unemployment in contemporary India:

- The labour force is the sum of the employed and those unemployed who are seeking employment.
- A shrinking of the labour force is most unusual in an economy with a growing population, and thus a growing working age cohort.
- **Low education and lack of skills** lead to loss of many job opportunities.
- **Discouraged-worker effect:** A section of those hitherto willing to work may have simply dropped out of an already challenged labour market.
- **Demonetization** has caused demoralisation among a section of the already unemployed who may have given up all hope of finding employment.
- About **90% of Indian Workforce is in the unorganized sector** which was majorly affected during Demonetization and GST introduction.
- **Declining Capital formation** which is not backed by Public and Private Investment.



- **Low female LFPR to the tunes of 24%** also adds to high unemployment rate.
- **Automation and IR4.0** is a looming threat to many jobs which have repeated work or sequential work.
- Socially disadvantaged groups do not get enough exposure in the job market like the general castes and Other Backward Classes.
- Labour laws in India are complex and relatively strict. Employment protection legislation is restrictive, compared with other emerging economies and OECD countries. Thus, corporates in India tend to rely more on **temporary contract labour**, stay small or substitute labour for capital to avoid strict labour laws.

#### Way Forward:

- **Increase public spending in education:**
  - At 3.8% of GDP, public spending on education in India is lower than countries like Brazil and Malaysia.
  - The focus of the government needs to shift to spending on enhancing the quality of education and vocational training.
- Similarly, allowing foreign investment in sectors like legal and accountancy services will create employment as more foreign firms will move to India.
- Infrastructure investment can also be utilised as an engine of job-creation.
- Investing in people through healthcare, quality education, jobs and skills helps build human capital, which is key to supporting economic growth, ending extreme poverty, and creating more inclusive societies.
- Besides promoting technical education, the government needs to focus more on creation of jobs and demand for workers since industries are unable to create sufficient job opportunities for all the technically educated people
- Policies should ensure that the education systems prepare young people for the skill demands of employers through outreach programmes, training, apprenticeships, and access to job-search assistance measures
- There should be **cluster development to support job creation in micro, small and medium enterprises (MSMEs)**. Most of the **unorganised sector employment** is in MSMEs, which tend to be concentrated in specific geographic locations.
- Private sector leaders should build capacity among unskilled and semi-skilled workers to ensure sustainability of renewable energy projects and provide opportunities to rural communities.
- Government officials should create public training programmes to prepare the poor and less educated people especially semi-skilled and unskilled for employment in the clean-energy sector.

#### Conclusion:

- ✓ India has one of the youngest populations in an aging world. By 2020, the median age in India will be just 28. Demographics can change the pace and pattern of economic growth.
- ✓ While China's spectacular growth has already benefited from a demographic dividend, India is yet to do so.

**Q) The idea of an urban employment programme is gaining traction in political and policy debates. In the context of the above statement, Discuss the problems associated with urban employment in India. (250 words)**

[The hindu](https://www.insightsias.com/the-hindu)

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

*The article highlights the issues revolving around the increased political debates of recently announced agenda of a possible Common Minimum Programme of the Opposition parties for the 2019 general election. The question is thus to examine the significance and issues involved in this context.*

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

*The answer must discuss in detail the scenario of urban employment – unemployment in Urban India. Causes and consequences and why and how it has turned into a political tool for parties.*

#### **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:

*write a few introductory lines about the current ongoing debates of political parties, brief the context.*

#### Body:

*Discuss the present scenario of urban employment, quote some facts here to justify the findings using reports such as – Periodic Labour Force Survey (PLFS) report of the National Sample Survey Office (NSSO).*

*idea of an urban employment programme – pros and cons.*

*Why we need ways to promote the sustainable development of India's small and medium towns.*

*Associated problems in detail – skilling, livelihood, population -resource conflict etc.*

#### Conclusion –

*Conclude by suggesting a way forward.*

#### Introduction:

- ✚ India is in the midst of a massive jobs crisis. The unemployment rate has reached a 45-year high (6.1%) in 2017-18 as per leaked data from the Periodic Labour Force Survey (PLFS) report of the National Sample Survey Office (NSSO).
- ✚ According to the PLFS report, the unemployment problem is especially aggravated in India's cities and towns. Aside from unemployment, low wages and precarity continue to be widespread.
- ✚ In urban India the majority of the population continues to work in the informal sector.

#### Body:

##### Problems associated with Urban Employment in India:

- **Polarized view:**
  - Both State and Central governments tend to treat towns as “engines of growth” for the economy rather than spaces where thousands toil to make a living.
  - Programmes such as the **Swarna Jayanti Shahari Rozgar Yojana** (1997) that included an urban wage employment component have made way for those focussed on skilling and entrepreneurship.
- **Undermining of Small and Medium towns:**
  - India's small and medium towns are particularly ignored in the State's urban imagination.
  - National-level urban programmes such as the Smart Cities Mission and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) only benefit a fraction of them.
  - Most ULBs are struggling to carry out basic functions because of a lack of financial and human capacity.
  - Further, with untrammelled urbanisation, they are facing more challenges due to the degradation of urban ecological commons.
- **Rising Informal Sector:**
  - The huge influx of job seekers has led to a sprawling unorganized sector of unskilled labourers.
- **Poor pay:**
  - They are paid less than market standards with no social security benefits.
- **Congested Urban areas:**
  - Migration is mostly concentrated to a few metropolitan cities breaching the carrying capacities of the cities.
  - This has led to urban sprawl, rise of slums and unhygienic settlements.

##### Skilling and Apprenticeship is the need of the hour:

- Another novel aspect is the creation of a skilling and apprenticeship programme for unemployed youth with higher education who can sign up for a contiguous period of 150 days (five months), at Rs.13,000 a month for five months.
- These employed workers can assist with administrative functions in municipal offices, government schools, or public health centres, and for the monitoring, measurement, or evaluation of environmental parameters.
- While the first category of work is aimed at providing additional employment opportunities and raising incomes for those in low-wage informal work.
- The second category is to provide educated youth experience and skills that they can build-on further.





- There is an estimate that such a programme will cost between 1.7-2.7% of GDP per year depending on design, and can provide work opportunities to around 30-50 million workers.
- In light of the 74th Amendment, this programme should be administered by the ULB in a participatory manner by involving ward committees.

#### Way forward:

- Consider introducing an **employment guarantee programme in urban areas**.
- Bring in much-needed public investment in towns to improve the quality of urban infrastructure and services, restoring urban commons, skilling urban youth and increasing the capacity of ULBs.
- **ULB** should receive **funds from the Centre and the State** at the beginning of each financial year so that funds are available locally
- Urban informal workers with limited formal education can undertake standard public works such as building and maintenance of roads, footpaths and bridges for a guaranteed 100 days in a year, at ₹500 a day.
- A new set of “**green jobs**” which include the creation, restoration/rejuvenation, and maintenance of urban commons such as green spaces and parks, forested or woody areas, degraded or waste land, and water bodies can be created.
- A set of jobs that will cater to the “**care deficit**” in towns by providing child-care as well as care for the elderly and the disabled to the urban working class can be created.
- **Strong transparency and accountability structures, proactive disclosure of information based on Section 4 of the RTI Act, proactive measures through mandatory periodic social audits, public hearing and reactive measures through a “Right to Timely Grievance Redressal” for workers.**

#### Conclusion:

- ❖ An urban employment guarantee programme not only improves incomes of workers but also has **multiplier effects on the economy**.
- ❖ It will **boost local demand in small towns, improve public infrastructure and services, spur entrepreneurship, build skills of workers and create a shared sense of public goods**. Hence, the time is ripe for an employment guarantee programme in urban India.

**Q) The easy drift in inflation is anticipated to continue, raising hopes of a promising policy shift by the RBI. Suggest what according to you should be the role of RBI in such a scenario ? (250 words)**

[Livemint](https://www.insightsias.com/livemint)

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

*Following its hasty shift in monetary policy stance, RBI is in a tight spot currently. It is now looking for a respectable way out, thus the question in this context expects us to evaluate the role of RBI in such a scenario.*

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

*Provide for detailed analysis of the current fix RBI is in, discuss in detail the situation of rising inflation vis-à-vis role of RBI and suggest what needs to be done.*

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

##### **Introduction:**

*Brief upon the recent trends in the RBI policy, highlight the shifts..*

##### **Body:**

*Explain in short the causes and consequences of inflation recently in the country.*

*Discuss the policies adopted by the RBI off late – the unusual move of change in its monetary stance from accommodative to neutral.*

*Take hints from the article and suggest what should be the ideal role of RBI in such a scenario.*

##### **Conclusion:**

*Conclude with optimism and suggest how the issue is not beyond RBI's control and can be resolved with suitable steps in the right direction.*

**Introduction:**

- RBI's tight monetary policy has kept real interest rates high, impacting investment flow and job creation. Bridging liquidity gap—bank loans vs bank deposits—is necessary as it would work against RBI's intention to soften interest rates.
- RBI is trying to fill the liquidity deficit through all possible liquidity tools, even adding a new one by doing a forex swap auction

**Body:****Causes for inflation in India:**

Inflation can take place as a result of a **rise in aggregate demand or a failure of aggregate supply or both.**

- **Increase in public expenditure:** Public expenditure has risen from 18.6% of GDP in 1961 to around 28% in 2012-13. Around, 40% of the government expenditure in India is on non-developmental activities like defence, law and order, etc.
- **Deficit financing:** Deficit financing means financing of budget deficits either by borrowing from the banks or by printing of more currency. The Government of India has frequently resorted to deficit financing in order to meet its developmental expenditure. The budgetary deficit was ₹ 20,000 crores in the eighth plan, but the actual deficit was around ₹ 33,000 crores. In the ninth, tenth and eleventh plans, the Government decided not to raise money through deficit financing.
- **Erratic agricultural growth:** Agriculture is mainly dependent on monsoons and thus, crop failures have been a regular feature of agriculture. During times of scarcity of food grains, not only do the prices of food articles increase, but also the general price levels.
- **Inadequate rise in industrial production:** There is a huge demand for industrial good due to increase in money supply in the economy but the rise in industrial growth has been inadequate there by raising the prices of industrial products. This has led to cost-push inflation.
- **Large scale tax evasion and avoidance:** Failure of the Government to bring the increasing income of the people within the ambit of taxation.
- **Black marketing and hoarding of essential commodities; Unused capacity in industries**

**Consequences of inflation:**

- Inflation causes decrease in the real value of money and other monetary items over time.
- Inflation causes uncertainty over future and this may discourage investment and savings.
- High inflation may lead to shortages of goods if consumers begin hoarding out of concern that prices will increase in the future.

To tackle the inflation, there are host of direct and indirect measures. Monetary Policy Committee (MPC) controls the policy rates which indirectly affects the inflation.

**Recent Policy adopted by RBI:**

- Banks are giving out more loans than they are getting deposits; Indians are withdrawing more cash as the nation goes to polls within a fortnight; and the government has tightened its purse strings at the fiscal year-end to meet its target.
- The result is a growing deficit of funds within the banking system, which RBI is trying to fill through all possible tools.
- RBI added a new one by doing a forex swap auction earlier this week, which released rupee liquidity of ₹34,561 crore.
- Forex Swap is the exercise where the dollars with banks will be swapped with rupee by RBI. This is being done in order to increase liquidity and also control the likelihood of rupee appreciation.

**Way forward:**

- Bridging the liquidity gap is necessary as it would work against RBI's intention to soften interest rates
- The central bank needs to keep infusing liquidity if it wants its benign policy to reflect in market rates.
- After a rate cut in the previous policy, RBI cannot afford to allow market rates or even bank lending rates to rise.

**Conclusion:**

- ❖ RBI's liquidity management needs a deft touch, even as it uses all of the tools in its arsenal to make liquidity neutral in line with its policy stance.



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

**Q) Examine the existing traditional mechanisms for resolution of financial and commercial disputes in India also discuss the need for an online dispute resolution system. What measures need to be taken in this direction to achieve a robust dispute redressal system ? (250 words)**

Livemint

**Why this question:**

*The article provides for an assessment of existing traditional dispute redressal system in India and highlights the necessity of a robust online dispute settlement system.*

**Key demand of the question:**

*The answer must evaluate the current systems of dispute resolution available in India, enlist the existing mechanism for resolution of financial and commercial disputes in India and then examine them whether they are sufficient and thus highlight the necessity of Online system.*

**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:**

*Begin with dispute mechanism as a structured process that addresses disputes or grievances that arise between two or more parties engaged in business, legal, or societal relationships. Dispute mechanisms are used in dispute resolution, and may incorporate conciliation, conflict resolution, mediation, and negotiation.*

**Body:**

*Financial and commercial Dispute Redressal mechanisms in India.*

*India’s performance in dispute redressal is still poor; Challenges in the existing system , what needs to be done to overcome the present challenges.*

*Need for online resolution systems*

*Way forward – role of technology, online platform etc*

**Conclusion:**

*Conclude with optimism, that India is fast moving and It is not beyond its capabilities to harness the merits of technology in its governance systems.*

**Introduction:**

- A dispute resolution mechanism is a structured process that addresses disputes or grievances that arise between two or more parties engaged in business, legal, or societal relationships.
- Dispute mechanisms are used in dispute resolution, and may incorporate conciliation, conflict resolution, mediation, and negotiation.

**Body:**

- With India opening up its markets in the early 1990’s, the Indian legal and judicial system has had to come to terms with the reality of globalization as well. As a large country, both in terms of population and area, there is tremendous pressure on India’s resources and its institutions. The legal system is no exception to this.

The existing traditional mechanisms for resolution of financial and commercial disputes in India are

- **The Judiciary:** The **Supreme Court** is at the apex of the entire judicial system, followed by **High Courts in each state or group of states**. Below each state’s High Court lies a **hierarchy of subordinate courts**. **Panchayat Courts** also function in some states under various names like **Nyaya Panchayat, Panchayat Adalat, and Gram**



**Kachheri** to decide civil and criminal disputes of petty and local nature. **Lok Adalat** is another form of judicial forum that has been set up to dispose of smaller cases and to decrease the burgeoning case load.

- **Commercial Courts, Commercial Divisions and Commercial Appellate Divisions (“Special Courts”)**: Pursuant to the **Commercial Courts Act**, special Commercial Courts have been established in each state. ‘Commercial Disputes’ of a ‘Specified Value’ are to be heard by such Commercial Courts/Division. Further, **Commercial Appellate Divisions** within the High Courts have also been constituted.
- **Tribunals**: Specialized tribunals such as the **Income Tax Appellate Tribunal, the National Company Law Tribunal, the Goods and Services Tax Appellate Tribunal, the Consumer Forum, the Central and State Administrative Tribunals, the Debt Recovery Tribunal, and the Intellectual Property Appellate Tribunal** are established under various enactments. Appeals from the orders of these tribunals/appellate tribunals lie to the High Court and the Supreme Court, as the case maybe. The organization of the subordinate courts and tribunals varies slightly from state to state.
- **Subordinate Courts**: Next in the hierarchy of the courts are the subordinate courts and tribunals. The highest civil court in each district is that of the District Judge. Below such courts are several others, depending on the individual set up of each district, including the Court of Small Causes for petty matters
- **Insolvency & Bankruptcy Code, 2016**: The Bankruptcy Code is comprehensive insolvency legislation as it consolidates the existing laws relating to insolvency of companies, limited liability entities (including limited liability partnerships), unlimited liability partnerships, and individuals into a single legislation.
- **Alternative Dispute Resolution**:
  - **Arbitration**: It is the act of dispute settlement through an arbitrator, i.e. a third party, who is not involved in the dispute. It is an alternative dispute settlement mechanism, aiming at settlement outside the court. In 2015, **Arbitration and Conciliation (Amendment) Act** was enacted to improve the arbitration in India. The Act is based on the **1985 UNCITRAL** (The United Nations Commission on International Trade Law) **Model Law on International Commercial Arbitration and the UNCITRAL Arbitration Rules 1976**.
  - **Mediation**: The Process of mediation aims to facilitate the development of a consensual solution by the disputing parties. The Mediation process is overseen by a non-partisan third party – the Mediator. The authority of the mediator vests on the consent of the parties that he should facilitate their negotiations.
  - **Conciliation**: Conciliation is a less formal form of arbitration. This process does not require an existence of any prior agreement. Any party can request the other party to appoint a conciliator. One conciliator is preferred but two or three are also allowed. In case of multiple conciliators, all must act jointly. If a party rejects an offer to conciliate, there can be no conciliation.
  - **Negotiation**: Negotiation is a dialogue intended to resolve disputes, to produce an agreement upon courses of action, to bargain for individual or collective advantage, or to craft outcomes to satisfy various interests. It is the primary method of alternative dispute resolution.

Analysis of the **causes of delay in contracts** shows that the major reasons resulting in **time over-runs, and resultant cost over-runs**, are the ineffectiveness of Dispute Resolution Mechanism and the penalty clauses in contract documents. Although several modifications have been made in existing arbitration procedures, they have brought little comfort. Disputes amounting to a large sum (over Rs. 3, 50,000 crores) are pending with Arbitrators / Conciliators for periods ranging between 2 and 10 years

#### Need for online resolution systems

- Online Dispute Resolution Mechanism is a laudable initiative to fast-track dispute resolution and it shall go a long way in resolving disputes.
- Helps in attracting more foreign investment by projecting India as an investor-friendly country and strengthen economy.
- Country like India having a sound legal framework and ease of doing business can become a natural choice for investors
- This will help courts to concentrate on access to justice to people in better manner.
- The rapid development of the Internet and electronic commerce, Online Disputes Resolution has been labelled “a logical and natural step” as it facilitates expeditious resolution of disputes.
- Domestic and international trade and commerce has spurred competition provide more opportunities and imputed risks.



- The commercial arbitration in India is witnessing a steady transition and it should become more simpler.
- The flagship programs like establishment of Smart Cities in India would require a techno-legal smart dispute resolution mechanism.

#### Way forward:

- There is, therefore, a crying need to develop an appropriate complaint handling mechanism to address disputes that arise on these platforms.
- Any such system we build should be capable of functioning online and operating at a scale that enables it to deal with the high volume of disputes they will doubtless need to process.
- Ideally, they should be capable of processing some portion of the disputes using automated decision-making algorithms that leverage the digital nature of the platform and the underlying e-commerce transactions.
- We should actively resist the urge to merely place a digital layer on top of existing dispute resolution methods.
- We should look to develop solutions that take advantage of the auditability of electronic transactions by incorporating non-repudiability directly into the design to provide greater certainty of outcome.
- e-commerce workflow that will allow online dispute resolution frameworks to conclusively establish whether or not contractual obligations have been effectively performed—along the lines of principles that have been successfully experimented with in the context of blockchain-based smart contracts, should be incorporated.
- Regardless of the outcome, the process should be clear and transparent and the verdict fair on its face.

#### Conclusion:

- ❖ With the increase of e-commerce and e-businesses, many disputes arise between parties across borders and Online Dispute Resolution (ODR) is, therefore, the need of the hour. In order to ensure speedy resolution of commercial disputes and facilitate effective conduct of international and domestic disputes, it is necessary to adopt various dispute resolution mechanisms.

**Q) Technological advances in the global value chain are often complemented with decline in Jobs , in the context of the statement applying to developing Asia. Evaluate the impact of such technological advances on India. (250 words)**

[Livemint](#)

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

*The article covers the theme of growing use of technology in the global value chain of the industries, the article analyses that these jobs are now under threat from technology. It is justified by a study published by the Asian Development Bank.*

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

*The answer must capture the growing role of technological advances in the Asian continent among its industries, and how labor-intensive countries are now being replaced by robots in advanced countries. One has to analyse the such a negative employment impact of technological change on India.*

#### **Keywords:**

*The employment effects of technological innovation, consumption and participation in global value chains, effect of AI, robotics in industries etc.*

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

##### **Introduction:**

*Briefly bring out the current status of technology in Industries of India .*

##### **Body:**

*Answers to such questions are again best justified through use of statistics and facts that reveal the increasing trend of use of technology – robotics, Artificial intelligence etc. in the Industries of today. One has to closely analyse the studies that show increased use of technology have a direct impact on jobs, discuss the Indian industry scenario in depth, associated issues, what needs to be done to overcome such an issue etc.*



### Conclusion –

*Conclude with significance of Job creation for driving the economy in the right direction in context of growing technological advancements.*

#### Introduction:

- As per new research, technologies such as digital manufacturing and robots could result in job losses in the region. Tech advances along these value chains are associated with decrease in employment in both routine, non-routine occupations.
- The **present industrial revolution (IR 4.0)** seeks to disrupt the existing processes and enhance them with programmable logic.

#### Body:

- Robots and automated systems have made inroads into organizations where tasks may have been dangerous, impossible or just plain mundane for humans. **Market sentiments** suggest that the job market does not stay static but **changes constantly with innovation in technologies**.

#### Impact of technological advances in India:

- Automation threatens 69 per cent of the jobs in India, while 77 per cent in China, according to a **World Bank research** which has said that technology could fundamentally disrupt the pattern of traditional economic path in developing countries.
- There is no clearly stated policy document or vision statement for AI development.
- The negative effects of technological change exceed the favourable effects of task relocation, thus hurting overall employment.
- New technologies like AI and Robotics improve the functional efficiency drastically than manual methods. Thus large industries will increasingly shift towards the automation in the quest of higher productivity
- Textile workers in developing countries, who are an important example of how labour-intensive countries contribute to the global value chain, are now being replaced by robots in advanced countries.
- Asian Development Bank study also shows that in eight of the 12 developing Asian economies studied, there has been a change in the nature of jobs because of technology.
- In countries such as India, Indonesia, and China, non-routine jobs, which require more skill, have grown faster in comparison to routine jobs.
- Many tasks undertaken (manually) by humans about 20-30 years ago are no longer relevant.
- Manual tasks would become increasingly automated for business efficiencies and scale.
- Information technology (IT), IT-enabled services (ITeS) and security services, followed by banking, will be the first sectors to feel the heat, wherein manual transactions and processing jobs will become obsolete. Huge numbers of services jobs in these sectors will be made redundant as a few lines of code will be able to perform the same tasks efficiently and effectively.

#### Way forward

- Skill upgradation and training to cater the need of the industries.
- Incentivizing and encouraging automation in sectors where it is critically necessary.
- Focusing on increasing the efficacy and efficiency of Micro, Small and Medium scale industries.
- New regulations must be put in place to clearly predict and address legal issues that will surround AI in the near future. The use and availability of the technology must also be revised and regulated in a way to prevent or minimize ill use.
- Government needs to be inept in creating new employment-generating sectors and reform existing ones at a time when machines are systematically cutting down the workforce requirements in the principal labour-generating triumvirate of manufacturing and services sectors.
- Policymakers should make AI a critical component of the prime minister's flagship Make in India, Skill India, and Digital India programs
- Need to bring structural changes in employment-stagnated areas like Textile, cotton industries to increase employment opportunities in these areas.
- Government needs to bring more and more workers under formal economy so that they enjoy benefits of social security provided by government and companies.





**Q) Critically analyse the issues plaguing aviation sector in India. What needs to be done to overcome these issues and concerns ? Discuss. (250 words)**

[BusinessToday](#)

[NewIndianexpress](#)

**Why this question:**

*The question is in the context of recent issues being faced by Indian aviation industry.*

**Key demand of the question:**

*The answer must explain with necessary justification the issues and concerns that the aviation sector of India is facing ranging from finances to safety of Passengers. You must also suggest measures – in terms of policies, legislations, schemes required to overcome these challenges.*

**Directive word:**

*Critically analyze – When asked to analyze, 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. 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 judgement.*

**Structure of the answer:**

**Introduction:**

*Use some suitable facts to express the current crisis situation in the Aviation industry in India.*

**Body:**

*Explain the following –*

*Current Market size of the industry , Factors contributing to the growth of the aviation sector.*

- *challenges – global economic slowdown negatively impacts leisure, optional and business travel, rise in the price of fuel, Government interventions, High operational costs, High cost of aviation turbine fuel, High service tax and other charges, Shortage of maintenance facilities, High foreign exchange rate, Competition from foreign airlines, Congestion at airports, Lack of qualified pilots and technical manpower etc.*
- *suggest measures – liberalize foreign direct investment in the sector, more bilateral treaties for international routes, ore consolidation in the sector to lower down the cut throat competition in the sector etc.*

**Conclusion:**

*Conclude with way forward.*

**Introduction:**

- Of the 638 aircraft in Indian skies, all the 18 Boeing 737 Max's are grounded. Even if this crisis isn't grave enough and may blow over in a few months, India's aviation sector still has too many air pockets ahead to revive any time soon. From being one of the most preferred airlines, Jet Airways is now fighting for its survival.
- Despite the fact that the Indian civil aviation industry is currently considered the third largest domestic civil aviation market in the world, the industry is suffering from several problems.

**Body:**

Granted, the airline business is a risky one around the world with high capex and low profit margins. But India is a special case even so.

**The issues plaguing aviation sector in India:**

- **Increase in fuel prices**
  - Aviation turbine fuel (ATF) is one of the important sections of the industry.
  - The Centre charges 14% excise duty on ATF. The states pile on their own sales tax that can go as high as 29%.
  - ATF charges, vulnerable to currency movements, comprise a large chunk of Indian airlines' operating expenses—some 40% compared to 20% for foreign carriers.





- As the price for oil has shot up, it had led to difficulties for airlines as they have not been able to absorb in the short term due to their business model.
- **Rupee depreciation:**
  - The rupee's depreciation is hitting carriers hard as it did a few years ago.
  - About 25-30% of their costs, excluding fuel, are dollar denominated—from aircraft lease rents and maintenance costs to ground handling and parking charges abroad.
- **Excessive parking and landing charges:**
  - High Airport (aeronautical) Charges levied by Airport Authority of India.
  - These charges payable at the International airports are higher than those payable at the airports designated as Domestic airports.
  - As a result, the domestic airlines in India are incurring additional costs at the international designated airports without deriving any extra facilities.
- **Fare wars:**
  - There is a cut throat competition faced by the top airline due to ticket pricing.
  - Established Airlines are threatened by low cost carriers, which are eating up their market share.
  - In order to consolidate their market share, top premium airlines were forced to reduce their ticket fares to around 15- 20 per cent.
  - Such a slash down in price will lead to a price war in the long run amongst the airlines with the only goal of increasing their market share.
  - A growing market for low-cost carriers (SpiceJet, IndiGo and GoAir) that affected the profitability of a full-service carrier like Jet
- **Loads of debt:**
  - To keep the operations afloat, the carriers take loans.
  - But poor operational efficiency, steady losses in the wake of higher fuel costs and a weaker rupee leads to non-payment of debts.
  - No airlines company has been able to devise a **credible currency policy** to protect them against sharp currency movements.
- **Lack of Managerial Expertise:**
  - Indian aviation sector is struggling due to lack of managerial expert and expertise in the sector and lack of a regulator to monitor the industry
- **Government policies limitations:**
  - The new civil aviation policy (NCAP) 2016's regional connectivity scheme doesn't help.
  - Its goal is laudable and it may well benefit potential flyers in smaller towns.
  - But the ticket price caps it imposes under the scheme, the fact that the viability gap funding will last only for three years and various operational issues, such as the lack of slots for connecting flights at major airports, mean that carriers are, by and large, left holding the can.

However, there are many positives too

- According to the Directorate General of Civil Aviation, India's air passenger traffic has grown by at least 16% annually over the past decade.
- In 2000-01, it stood at a paltry 14 million passengers. In 2017, Indian airlines flew nearly 140 million passengers, most of them domestic.
- It is now the **third largest aviation market in the world** with growth rates that leave the US and China in the dust. There is no slowdown in sight.
- Airbus forecasts that domestic traffic will grow five and a half times over the next two decades.

#### Way forward:

- The government can lower the excise duty on jet fuel further to bring down the operational costs of the airlines.
- NCAP's liberalization of foreign direct investment in the sector needs to be ironed out to attract investors.
- Bilateral treaties for international routes that Indian carriers are unable to take full advantage need to be looked into at the earliest.
- **Insolvency and Bankruptcy code** can be used to quickly resolve the issues in case of defaults and bankruptcy by airline companies.



- Aviation sector should have been better prepared to handle such an unforeseen situation, learning from the past situations – as fuel prices and rupee volatility were among the top reasons for one of the biggest aviation disasters of recent times.
- There is a need to **set up simulators to develop the skills of unemployed pilots**
- A **clear long-term policy roadmap** which is aligned to the industry's requirements is yet to emerge. One method could be opening up international routes faster for our airlines that are successful.
- The industry stakeholders should engage and collaborate with policy makers to implement efficient and rational decisions that would boost India's civil aviation industry.
- With the right policies and relentless focus on quality, cost and passenger interest, India would be well placed to achieve its vision of becoming the third-largest aviation market by 2025

#### Conclusion:

- ✓ Above all, the industry experts and the government should be mindful of the fact that India's aviation industry is largely untapped with huge growth opportunities, considering that air transport is still expensive for majority of the country's population, of which nearly 40 per cent is the upwardly mobile middle class.

### Q) Discuss the key proposals of the National Mineral Policy 2019. Does it ensure environmentally and socially responsible mining ? Critically analyse. (250 words)

#### Reference

#### Why this question:

*The question is about evaluation of the recent government's National Mineral Policy 2019. The effects of policy on social and environmental aspects.*

#### Key demand of the question:

*The answer must discuss at length the key features of the policy, its certain effects upon social and environmental aspects. One is expected to critically analyse these two aspects in detail and give a firm opinion along with suggestions as to what needs to be done.*

#### 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.*

*Critically Analyse – When asked to 'analyse', 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 judgement.*

#### Structure of the answer:

##### Introduction:

*Narrate a brief background of the context of the question – salient features of the policy.*

##### Body:

*Key features of National Mineral Policy (NMP) – increase the production of major minerals by 200 per cent in 7 years, massive increase of domestic mineral production and reducing trade deficits in the mineral sector in the next 7 years, business-friendly policy etc.*

*What do you understand by responsible mining – discuss the social and environment factor.*

*Issues associated with mining – issues of unscientific mining, poor track records of environmental and social performance, and high instances of illegal activities. The regulatory environment, and capacity and accountability of our authorities.*

*Impact on social aspect – displacement of tribal pockets, Community concerns, Land Acquisition, Rehabilitation and Resettlement etc.*



*Environmental aspect – Environmental pollution, critically fragile ecological areas, Exclusive Mining Zones, clearance systems etc.*

### **Conclusion:**

*Conclude with what needs to be done, suggest way forward.*

### **Introduction:**

- The Union Cabinet has recently approved the National Mineral Policy 2019. The aim of National Mineral Policy 2019 is to have **a more effective, meaningful and implementable policy that brings in further transparency, better regulation and enforcement, balanced social and economic growth as well as sustainable mining practices.**
- It replaces the extant National Mineral Policy 2008. The impetus to review NMP 2008 came about by way of a direction from the Supreme Court vide its judgment in Common Cause v/s Union of India & Others.

### **Body:**

#### **Key features of National Mineral Policy (NMP) 2019 are:**

- **Higher Production:**
  - The latest mineral policy, which pertains to non-coal and non-fuel minerals, says that a major outcome expected from the policy proposals is to “increase the production of major minerals by 200 per cent in 7 years”.
- **Right of first refusal:**
  - Introduction of Right of First Refusal for reconnaissance permit (RP) or Permanent Licence holders
- **Private sector participation:**
  - This will give more opportunity to the private sector for participation in mining activities.
  - The Policy also mentions rationalize reserved areas given to PSUs which have not been used and to put these areas to auction, which will give more opportunity to private sector for participation.
- **Industry status:**
  - It proposes to grant status of industry to mining activity to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector..
- **Export Import:**
  - It proposes a Long term import export policy for mineral will help private sector in better planning and stability in business.
- **Transportation:**
  - It focuses on use of coastal waterways and inland shipping for evacuation and transportation of minerals.
  - It also encourages dedicated mineral corridors to facilitate the transportation of minerals.
- **Fund:**
  - The policy also underlines the need to harmonise India’s tax, levy and royalty rates to global benchmarks to draw higher private participation.
  - It calls for the utilization of the district mineral fund for equitable development of project affected persons and areas.
- **Regulation:**
  - For regulation of the Minerals sector, E-Governance, IT enabled systems, awareness and information campaigns will be incorporated.
  - Online public portal with provision for generating triggers at higher level in the event of delay of clearances by the state has been put in place.
- **Sustainable development:**
  - It introduces the concept of Inter-Generational Equity that deals with the well-being of both the present generation and future generations.
  - It also proposes to constitute an inter-ministerial body to institutionalize the mechanism for ensuring sustainable development in mining.

#### **Issues with the NMP-2019:**

- The NMP 2019 misses out on providing necessary guidance on some fundamental things that would have made it a guiding document to ensure environmentally and socially responsible mining.



- While the document mentions that mining should be environmentally sustainable and equitable, there remain serious questions on how effective this Policy will be to ensure environmental protection, ecological conservation and protect people's rights in the mining areas.
- With a focus to ramp up mineral production massively, the new Policy is largely guided by the penchant for 'ease of doing businesses' and attracting investments.
- **Creating exclusive mining zones and simplifying clearances:**
  - A key proposal that has been introduced in the NMP is the creation of '**Exclusive Mining Zones**'. These 'zones' will come with approved, in-principle clearances to "curtail delay in commencement of mining operations". In-principle clearance is tied to forest land diversion for non-forestry purposes.
  - Most major mining activities involve such land diversion, this will help to open up huge tracks of forest land to multiple companies and investors for mining in one go.
  - The proposal will also create major loopholes in obtaining successive clearances and permits by mining companies who will be part of the exclusive mining zone, and also in compliance of clearance and permit conditions.
  - Serious concerns arise about the impact of this proposal on forest ecology, wildlife corridors and forest-dependent communities.
- **Weak on controlling environmental pollution:**
  - Environmental pollution from mining activities is a major problem in most mining areas. This arises from **unscientific and rampant mining (and related) activities, poor pollution standards and pollution monitoring, and improper mines management and mine closure practices**.
  - Air, water and soil pollution problems in almost all key mining districts of India have severely affected people's health and their livelihood. However, the Policy provides little effective guidance to improve this.
  - There is no specific standard on environmental pollution from mining under our umbrella environmental legislations — the Environment (Protection) Act (1986), the Water Act (1974) and the Air Act (1981).
  - Among non-coal minerals, pollution standards have only been developed for iron-ore mining under Environment Protection Rules, 2010. Also, baseline pollution monitoring data in most mining areas is nearly non-existent or extremely poor.

#### Way forward:

- Two main pre-conditions for achieving sustainability are **good governance and self-regulating mining enterprises** which are economically viable, financially profitable and technically efficient.
- **Proper Environmental Impact Assessment and Social Impact Assessment** needs to be carried despite easing the clearances for mining activities.
- **Scientific techniques of mining** needs to be adopted to curb the pollution.
- **Specific standards on environmental pollution** from mining should be brought in for all minerals
- Mining operations must be carried out with concerns for the 'carrying capacity' of the environment and other infrastructural limitations.
- Occupational safety of the mining workers along with protection of the rights of local residents and the biodiversity needs to be taken into account.

#### Conclusion:

- ✓ Striking the balance between Development and Environment is a difficult task. A sustainable way of utilizing the resources needs to be adopted. The loopholes in the policy need to be rectified at the earliest to carry on sustainable mining.

*Topic– Inclusive growth and issues arising from it.*

**Q) Discuss the potential of Blue economy in India. What are the issues associated and what needs to be done to harness the available potential ? (250 words)**

The hindu

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

*Recently vice-president Venkaiah Naidu, cautioned against the further degradation of oceans and their ecosystem and harnessing the potential of blue economy in his visit to Goa. Thus it becomes important for us to ponder upon Blue economy in India and its significance.*



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

*The answer must discuss the enormous potential of the blue economy must necessarily be harnessed to achieve higher growth for the coastal regions, river regions etc of the country and initiate appropriate programmes for sustainable harnessing of ocean reserves.*

### **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:**

*Introduce by highlighting the significance of blue economy in India.*

#### **Body:**

*What do you understand by Blue economy.*

- ❖ *potential linkages between blue economy, economic growth, port*
- ❖ *development, international relations and security, and ocean resource conservation etc.*
- ❖ *discuss the need to develop technologies that enable deep sea mining, underwater vehicles and robotics, and the extraction of minerals from the sea.*
- ❖ *highlighting the opportunities and challenges for India etc.*

#### **Conclusion –**

*Emphasize the importance and suggest a way forward.*

#### **Introduction:**

- “Blue Economy” refers to strategic and sustainable use of Marine Resources for the development of Economy and the well-being of human.
- **Gunter Pauli’s book, “The Blue Economy: 10 years, 100 innovations, 100 million jobs”** (2010) brought the Blue Economy concept into prominence.
- It offers “Green Approach” to meet the aspirations of mankind.
- India is endowed with a vast coastline of approximately 7500 Km and hence better placed to harness the “potential of oceans” – **with an Exclusive Economic Zone (EEZ) of 2.02 mn. sq.km.** It is an upcoming **sunrise sector.**

#### **Body:**

#### **Potential of Blue economy in India:**

- **Economy:**
  - Blue economy, through sustainable use of oceans, has great potential for boosting the economic growth by providing opportunities for income generation and jobs etc.
  - It can support food security, and diversification to address new resources for energy, new drugs valuable chemicals, protein food, deep sea minerals, security etc.
  - At least 3-5% of global GDP is derived from oceans
- **Socio-Economic Development:**
  - Blue economy presents India with an unprecedented opportunity to meet its national socio-economic objectives as well as strengthen connectivity with neighbours.
  - Blue Economy can help in focusing on livelihood generation, achieving energy security, building ecological resilience, and improving health and living standards of coastal communities.
  - Blue economy would reinforce and strengthen the efforts of the Indian government as it strives to achieve the SDGs of hunger and poverty eradication along with sustainable use of marine resources by 2030.



- **Environmental Benefits:**
  - Mangroves and other vegetated ocean habitats sequester 25 percent of the extra CO<sub>2</sub> from fossil fuels, i.e., Blue Carbon.
  - Protection of coastal communities from disasters like floods and storms.
  - A Sustainable Blue Economy can help to achieve commitments under UN's Sustainable Development Goals 2030, Paris climate agreement 2015 and the UN Ocean Conference 2017
- **Renewable Energy:**
  - Sustainable marine energy can play a vital role in social and economic development.
  - As energy sources on the surface are limited, in the near future the dependency on marine resources will increase, which will require more human resource to be deployed in the field of environment engineering and marine resource protection
- **Mineral Wealth:**
  - According to ISA there are vast reserves of Poly-metallic Nodules, sulphides, cobalt rich ferro-manganese crust (rich in cobalt, bismuth, iron, lead, platinum).
  - ISA has notified two major areas "Clarion-Clipperton fracture zone" and Central Indian Ocean Basin.
  - India has already signed a contract and entered in the league with Japan, USA, China
- **Fisheries:**
  - Sustainable fisheries can generate more revenue, more fish and help restore fish stocks.
- **Maritime Transport:**
  - Over 80% of international goods traded are transported by sea.
  - Marine services sector could serve as the backbone of its blue economy and help India become 10 trillion dollar economy by 2022.
  - Indian Ocean is a major conduit of trade with as much as 80% of global oil trade happening through it.
- **Tourism:**
  - Ocean and coastal tourism can bring jobs and economic growth.
- **Climate Change and Bio-diversity:**
  - Oceans are an important carbon sink (blue carbon) and help mitigate climate change.
  - Oceans protect biodiversity, keep the planet cool, and absorb about 30% of global CO<sub>2</sub> emissions.
  - Oceans cover three-quarters of the Earth's surface, contain 97% of the Earth's water, and represent 99% of the living area on the planet.
- **Waste Management:**
  - Better waste management on land can help oceans recover.

#### Issues associated:

- **Threat of sea borne terror:**
  - Piracy and armed robbery, maritime terrorism, illicit trade in crude oil, arms, drug and human trafficking and smuggling of contraband etc.
- **Natural Disasters:**
  - Every year tsunamis, cyclones, hurricanes typhoons etc leave thousands of people stranded and property worth millions destroyed.
- **Man-Made disasters:**
  - Oil spills, climate change continue to risk the stability of the maritime domain.
- **Impact of climate change:**
  - Threats of both slow-onset events like sea-level rise and more intense and frequent weather events like cyclones.
  - Long-term climate change impacts on ocean systems like changes in sea temperature, acidity, and major oceanic currents.
- **Marine pollution:**
  - In form of excess nutrients from untreated sewerage, agricultural runoff, and marine debris such as plastics.
  - Deep sea mining can cause long term irreversible ecological damage to marine ecosystem.
- **Geopolitical issues:**
  - Geopolitical tussle between in various regions like South China Sea, Indian Ocean Region etc. and undermining International Laws like UNCLOS limits the countries from achieving the full potential of Blue Economy.





- **Overexploitation of marine resources:**
  - Illegal, unreported, and unregulated extraction of marine resources.
  - FAO estimates that approximately 57 percent of fish stocks are fully exploited and another 30 percent are over-exploited, depleted, or recovering.
- **Unsustainable development near marine areas:**
  - Physical alterations and destruction of marine and coastal habitats & landscapes largely due to coastal development, deforestation, & mining

#### Way Forward:

- India should look to adopt the sustainable approach of balancing economic benefits with sustainability for meeting the broader goals of growth, employment generation, equity and protection of environment.
- We need to come up with technology to explore the minerals deep down at seabed.
- India must focus on marine ICTs, and transport (shipping) and communication services, and the creation of a knowledge hub for marine research and development.
- An effective response mechanism to address humanitarian crises and natural disasters should be made for the evolving Indian Ocean security strategy.
- India should not look at its oceans as just water bodies, but as global stage for continued economic, social, and cultural dialogue.
- Ever increasing marine pollution must be abated and India's vow to curb plastic pollution must be pursued relentlessly.
- Tackling the Global warming and submergence of low lying islands as part of Paris Climate deal agreement and initiatives like FIPIC.

### Q) The concept universal basic income is now firmly etched in India's political discourse. Critically analyse. (250 words)

[Livemint](#)

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

*The opposition party has recently mooted its political agenda of universal basic income for BPL Indian citizens. In this context it is important to discuss the pros and cons of the UBI especially in the context of Indian economy.*

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

*The answer must discuss at length pros and cons associate with delivering basic income to the poor of the country*

#### **Directive word:**

*Critically Analyse – When asked to 'analyse', 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 judgement.*

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

##### **Introduction:**

*Narrate a brief background of the context of the question – declaration of minimum income guarantee for every poor person in the country by the Congress president.*

##### **Body:**

*How the mega welfare scheme would be an extension of the slew of pro-poor entitlement regimes of political parties in the past.*

*Discuss – The concept of UBI or universal basic income floated by former chief economic adviser Arvind Subramanian was part of the 2016-17 Economic Survey.*

- *Have a discussion on poverty line.*





*Discuss the pros and advantages of UBI. E.g A Universal Basic Income promotes many of the basic values of a society which respects all individuals as free and equal. It promotes liberty because it is anti-paternalistic, opens up the possibility of flexibility in labour markets. It promotes equality by reducing poverty. It promotes efficiency by reducing waste in government transfers. And it could, under some circumstances, even promote greater productivity etc.*

*Discuss the cons/ limitations of the UBI. E.g None of the places where UBI has been tried have levels of income disparity that exist in India. So, while the idea might work in Sikkim, it might not in, say, Bihar; The reason for maintaining conditional social assistance is to “prioritize those at the bottom of the [income] distribution; access to banking is poor in rural and backward areas; issue of gender equality as the income would be controlled by the males of the family; amount of financial resources required etc.*

### **Conclusion:**

*Conclude with way forward.*

### **Introduction:**

- Universal basic income is a form of social security in which **all citizens or residents** of a country regularly receive an **unconditional sum of money**, either from a government or some other public institution, in addition to any income received from elsewhere. The payment is enough to cover the cost of living. The goal is to provide financial security.

### **Body:**

- It characterises the basic income in five divisions — **Periodic** (being paid at regular intervals, not lump sum), **cash payment** (not in kind or vouchers, leaving it on the recipient to spend it as they like), **individual** (not to households or families), **universal** (for all), and **unconditional** (irrespective of income or prospects of job).

### **Recent political discourse on UBI:**

- The state of **Sikkim** recently announced that UBI will be implemented in state by 2022.
- The incumbent government announced an income support scheme for marginal farmers named **PM-Kisan** in its budget presented on 1 February assuring **₹6,000 per annum to each of the 120 million farmer families in India who own less than two hectares of land**.
- The scheme, which came against the backdrop of a prolonged period of agrarian distress marked by droughts and nosediving crop prices was, however, considered a poor cousin of the **Rythu Bandhu scheme of Telangana** and **Kalia scheme of Odisha** for leaving out the tenant and landless farmers.
- Most recently, Indian National Congress president proposed **Nyay scheme** aims to provide ₹72,000 annually to 20% of the poorest families.

### **The pros of UBI include:**

- **Fights Poverty and vulnerability:** Poverty and vulnerability will be reduced in one fell swoop. It increases equality among citizens as envisaged in our DPSP.
- **Choice:** A UBI treats beneficiaries as agents and entrusts citizens with the responsibility of using welfare spending as they see best; this may not be the case with in-kind transfers. Nobel laureate **Amartya Sen** had also propounded that **choice** should be given to people, which will lead to development.
- **Better targeting of poor:** As all individuals are targeted, **exclusion error** (poor being left out) is **zero** though inclusion error (rich gaining access to the scheme) is 60 percent.
  - **Example:** The India Human Development Survey found that in 2011-12 about half of the officially poor did not have the BPL card, while about one-third of the non-poor had it.
- **Fighting technological unemployment:** With **0** on the rise, there is an increase in the automation leading to loss of many white and blue collared jobs. UBI can act as a sort of security net for the millions of people who will be left jobless by the tech revolution.
- **Supporting unpaid care workers:** Those with ill or differently abled relatives are often forced to quit their jobs and look after them full-time. UBI would allow care-workers to support themselves, encouraging care work and taking pressure off public services that provide care to the sick and elderly.
- **Expanding the middle class:** The economic growth of high-income countries is making the rich richer, but having very little effect on the working classes. UBI would help balance inequality and expand the ever-shrinking middle class.
- **Insurance against shocks:** This income floor will provide a safety net against health, income and other shocks.



- **Improvement in financial inclusion Payment:** transfers will encourage greater usage of bank accounts, leading to higher profits for banking correspondents (BC) and an endogenous improvement in financial inclusion. Credit – increased income will release the constraints on access to credit for those with low income levels.
- **Psychological benefits:** A guaranteed income will reduce the pressures of finding a basic living on a daily basis.
- **Ending abuse:** Those who suffer domestic abuse, mainly women, become trapped in violent situations because they don't have the means to leave them. UBI would make leaving an abusive partner easy, and would unleash the potential of countless people trapped by domestic violence.
- **Administrative efficiency:** A UBI in place of a plethora of separate government schemes will reduce the administrative burden on the state.

The cons of UBI:

- **Conspicuous spending:** Households, especially male members, may spend this additional income on wasteful activities.
- **Moral hazard:** A minimum guaranteed income might make people lazy and opt out of the labour market.
- **Gender disparity** induced by cash Gender norms may regulate the sharing of UBI within a household – men are likely to exercise control over spending of the UBI. This may not always be the case with other in-kind transfer
- **Implementation:** Given the current status of financial access among the poor, a UBI may put too much stress on the banking system.
- **Poor fiscal capacity:** India doesn't have the fiscal capacity to implement Universal Basic Income. Economic Survey calculations showed that a **75% universality rate with an annual Universal Basic Income of Rs 7,620 per year at 2016-17 prices will cost about 5% of the GDP.** Economist Pranab Bardhan showed that inflation-indexed Universal Basic Income of Rs 10,000 at 2014-15 prices—about three-quarters of that year's poverty line—will cost about 10% of the GDP.
- **Distort labour Market:** Universal Basic Income can create distortions in the labour market. A steady, permanent and guaranteed income without any work is likely to affect labour mobility and participation. It can cause a rise in the wages too.
- **Political economy of universality:** ideas for self-exclusion Opposition may arise from the provision of the transfer to rich individuals as it might seem to trump the idea of equity and state welfare for the poor.
- **Exposure to market risks (cash vs. food):** Unlike food subsidies that are not subject to fluctuating market prices, a cash transfer's purchasing power may severely be curtailed by market fluctuations.

**Economic Survey 2017 views:**

- Universal Basic Income should replace the welfare scheme. The Economic survey wants UBI to replace and NOT supplement the existing social welfare, anti-poverty schemes like MGNREGA, PMJSY etc
- Economic Survey has suggested replacing all current cash transfers with universal basic income.
- Survey in a bold step ensured that universal basic income will not be distributive in nature. The burden to distribute the income will not be shared by the rich.

**Way Forward:**

- **QUBRI (quasi-universal basic rural income):**
- It is targeted only at poorer people in the rural areas.
- The scheme is no longer universal.
- It excludes the not-so-poor in rural areas as morally it should.
- All the schemes, rural and urban, could be cash transfer schemes, which Aadhar and the digitisation of financial services will facilitate.
- Strengthening of institutions of the state to deliver the services the state must (public safety, justice, and basic education and health), which should be available to all citizens regardless of their ability to pay for them.
- The institutions of the state must be strengthened also to regulate delivery of services by the private sector and ensure fair competition in the market.
- A better solution to structural inequality is **universal basic capital (UBC)**. People own the wealth they generate as shareholders of their collective enterprises. Amul, SEWA, Grameen, and others have shown a way.



*Topic: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers; Agrarian crisis, agrarian distress*

**Q) Loan waivers are often argued to vitiate credit culture and stress the budgets of the waiving state or central government. In this context discuss how the recently enacted Insolvency and Bankruptcy Code (IBC) proves to be method of providing relief for the distressed Indian farmer ? (250 words)**

[Economictimes](https://economictimes.com)

**Why this question:**

*The article provides for a detailed analysis of How the recently enacted bankruptcy code can help fix India's agrarian crisis and provides for a 'fresh start' process in a systematic manner of waiving debts overseen by a judicial body.*

**Key demand of the question:**

*The main demand of the question is to explain the importance of private participants in the Indian space industry. What are the Challenges, Opportunities, and Strategic Concerns associated with it.*

**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:**

*Narrate as to how historically, farm loan waivers have been used as a quick-fix solution to agrarian distress in India.*

**Body:**

*In such questions it is important to ensure one doesn't ignore the statement, you are expected to first justify the statement – "Loan waivers are often argued to vitiate credit culture and stress the budgets of the waiving state or central government" with suitable examples or illustrations and then move on discuss the role of IBC as a sure method of providing relief for the distressed Indian farmer.*

**Conclusion:**

*Conclude that the problem cannot be fixed with a solution that is one size fits all but rather with a multi – integrated approach.*

**Introduction:**

- Farm loan waiver is the practice of **writing off the loans given to farmers owing to their inability to pay them back due to reasons like calamity, disaster, political policies etc.** Since 2014, there have been similar moves in Telangana, Karnataka, Andhra Pradesh, Maharashtra, Uttar Pradesh, Punjab, Rajasthan, Madhya Pradesh and Chhattisgarh which are States run by various parties.

**Body:**

Loan waivers have often vitiated the credit culture and stressed budgets of state and central governments:

- The loan waivers has become a **big political tool in hands of political parties** that has ruined capital status of Indian agriculture economics.
- The **NSSO Situation Assessment Survey of Agricultural Households (2013)** shows that 52% of farming households are indebted, with rates as high as 89-92% in some States.
- In August 2017, RBI's Monetary Policy Committee (MPC) noted that the implementation of farm loan waivers could hurt the finances of states, undermine the quality of public spending, and stoke inflation.
- Farm loan waiver does not cater to the vast small and marginal farmers who don't have access to formal credit and are indebted to local money lenders. A study by **RythuSwarajyaVedika** in June 2018 showed that **75% of farmer suicides in Telangana are by tenant farmers, who have no or least access to formal credit.**



- In December 2018, **NITI Aayog** pointed out that farm loans waivers essentially only benefit 10-15% of farmers, since the rest don't have access to institutional loans. Further, the process of selection of beneficiary farmers may not be objective, making the system susceptible to leakages.
- Farm loan waivers are at best a temporary solution and entail a **moral hazard** even those who can afford to pay may not, in the expectation of a waiver.
- States with farm loan waivers has led to increased burden on states which are already deviating from FRBM targets.
- Such measures can **erode credit discipline and may make banks wary of lending to farmers in the future**. It also makes a **sharp dent in the finances of the government that finances** the write-off. Ex- RBI chiefs like Urjit Patel and Raghuram Rajan have also expressed similar views of 'Moral Hazard'
- Also a recent study by the **International Food Policy Research Institute** reveals that at the national level, **48% of agricultural households do not avail a loan from any formal source**. Among the borrowing households, 36% take credit from informal sources.

#### The role of IBC as a sure method of providing relief for the distressed Indian farmer

- IBC provides **three insolvency procedures for individuals**.
- While the **insolvency resolution and bankruptcy processes are available to all**, IBC provides a **'fresh start' process for individuals** who fall **below certain asset and income-based thresholds**.
- The aim is to **enable certain debtors to get their debts waived** — after adjudication under a time-bound process and taking the creditors' views into account. A debtor who qualifies the threshold limits can file for a 'fresh start' order.
- If her application is admitted, a resolution professional is appointed to her case to examine objections that any creditor may have to discharge of the debtor's debts. Based on this, the resolution professional submits a final list of debts to the **adjudicating authority (AA)**.
- The AA can then write off these debts, giving the debtor a 'fresh start'. However, the AA can refuse this waiver if there is **any change in financial circumstances of the debtor, or any noncompliance by the debtor**.
- Instead of **being plagued with political motivations and uncertainty in implementation** of farm loan waivers, the IBC's 'fresh start' process provides a **systematic manner of waiving debts overseen by a judicial body**.
- It places the opportunity to access the system with an individual farmer, instead of placing it with the government. This will provide a farmer autonomy to choose the effect a debt waiver will have on his credit history.
- the 'fresh start' process **only excludes some kinds of debts** from being capable of discharge. These include any fine imposed on the debtor by courts, student loans, maintenance to be paid under any law, and secured debt.
- So, unlike farm loan waivers, a 'fresh start' process may actually provide the debtor relief from most of her debts and not just bank loans

#### Way forward:

- To make the provisions operate effectively, GoI may consider setting up designated benches for the 'fresh start' process, or vesting jurisdiction with other judicial or quasi-judicial authority with local presence.
- GoI can consider recognising a special category of resolution professionals (who understand the microfinance and agricultural credit sectors) and develop a system that encourages them to take up 'fresh start' cases.
- The debt, credit and asset thresholds in IBC may have to be reviewed to ensure proper coverage.

#### Conclusion:

- ❖ Unlike farm loan waivers, a 'fresh start' process may actually provide the debtor relief from most of her debts and not just bank loans. It places the **opportunity to access the system with an individual farmer**, instead of placing it with the government.
- ❖ This will provide a **farmer autonomy** to choose the effect a debt waiver will have on his credit history. Additionally, the effect on creditors will also be considered when the resolution professional examines creditor objections to the debt waiver.

**Q) Discuss in what way the recently released agriculture export policy is an opportune step in the direction of doubling farmers' income by 2022. (250 words)**

[Livemint](https://www.livemint.com)

**Why this question:**



*The article discusses the salient features of the agriculture export policy which has been recently released in line with the government's commitment to double the farmers' income by 2022.*

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

*The answer must elaborate in detail about the recently released agriculture export policy, its salient provisions and how it is a positive step in the direction of doubling farmers' income by 2022.*

### **Directive word**

*Discuss— this is an all-encompassing directive which mandates us to write in detail about the key demand of the question. we also have to discuss about the related and important aspects of the question in order to bring out a complete picture of the issue in hand.*

### **Structure of the answer**

#### **Introduction:**

*One can start with some facts that justify the importance of doubling farmer's income.*

#### **Body:**

*Discuss – the salient provisions of the policy and how it will help in doubling farmers' income by 2022. Viz. the aspects of agricultural exports including modernizing infrastructure, standardization of products, streamlining regulations, curtailing knee-jerk decisions, and focusing on research and development activities; also how it seeks to remove all kinds of export restrictions on organic products etc.*

#### **Conclusion:**

*Based on your discussion, form a fair and a balanced justification of the topic.*

#### **Introduction:**

- India produces about 280 million tonnes of food grain every year. India leads the world in the production of basmati rice, millets, pulses, chickpea, ginger, chilli, okra, banana, mango and papaya. For dairy, marine, poultry and meat products, India is a significant player in the global market.
- Despite such riches, farmers' income are miserly and suffer from poor remunerative prices for their products. Government presented the vision of doubling farmer incomes by 2022-23. To achieve government's goal by 2022-23, the **Ashok Dalwai Committee** points out that **farmers real incomes need to grow at 10.4 % per annum** that is **2.8 times the growth rate achieved historically**.

#### **Body:**

##### **India's Agri Export Status:**

- India's share in **global exports of agriculture** products was merely **2 % in 2016**.
- India has remained at the lower end of the global agriculture export value chain given that the majority of its exports are low value, semi-processed and marketed in bulk.
- The share of India's high value and value-added agriculture produce in its agri-export basket is less than 15% compared to 25% in the US and 49% in China.
- India is unable to export its vast horticultural produce due to lack of uniformity in quality, standardization and its inability to curtail losses across the value chain.

A small step in the right direction was taken with the recent cabinet approval of an **Agriculture Export Policy (AEP)**.

##### **The objectives of the AEP are:**

- **Establishment of Monitoring Framework at Centre with Commerce** as the nodal Department to oversee the implementation of Agriculture Export Policy.
- To double agricultural exports from **present ~US\$ 30+ Billion to ~US\$ 60+ Billion by 2022** and reach US\$ 100 Billion in the next few years thereafter, with a stable trade policy regime.
- To **diversify our export basket, destinations and boost high value and value added agricultural exports** including focus on perishables.
- To promote **novel, indigenous, organic, ethnic, traditional and non-traditional Agri products**
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.





- To **strive to double India's share in world agri exports** by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.

The recommendations in the Agriculture Export Policy have been organised in two categories .

- **Strategic** : Policy measures; Infrastructure and logistics support; Holistic approach to boost exports; Greater involvement of State Governments in agri exports; Focus on Clusters; Promoting value-added export; Marketing and promotion of "Brand India"
- **Operational**: Attract private investments into production and processing; Establishment of strong quality regimen; Research & Development; Miscellaneous

The AEP is a **welcome development for several reasons**:

- First, the policy has been developed in **close consultation with states** recognizing the geographic diversity of production and states' constitutional role in nurturing agricultural development.
- Second, it is a **nuanced approach by geography and products** rather than the previous approach of simply increasing inputs.
- Finally, it tackles the **entire ecosystem related to enabling market access and acceptability** based on the introduction of agricultural clusters.
- The states have agreed to remove a lot of restrictions, including mandi taxes, and APMC (Agricultural Produce Market Committee)-related conditions.
- Policy for **sensitive farm goods such as onions** will be reviewed from time to time.
- **Clustering** is at the root of branding agricultural commodities (like coffee and beef) and value-added products (like wine).
- For the **average farmer who holds a small plot** in India, clustering is a very good idea and can bring great benefits.
- Examples: The most famous example of a successful cluster in India is that of the Gujarat Cooperative Milk Marketing Federation (branded **Amul**).
- The grape cluster in Maharashtra situated in the Pune area is a lesser known success. **Mahagrapes** was formed specifically to reduce the transaction costs of marginal farmers and to increase their incomes.
- Focus on **Export centric Clusters** for pre- and post-harvest management of the production as well as in upgrading the supply chain to attain much higher levels of export from those clusters.
- It used **transparent standards of quality, a mutually-owned insurance system provides risk mitigation to all members**.
- The policy can **address challenges to exporting agricultural products** from India like **low farm productivity, poor infrastructure, global price volatility to market access**.
- The policy has recommended setting up of an **agri-startup fund**.
- Promoting **Value Added Exports** of indigenous and tribal products through the National Programme on Organic Production (NPOP), organic food parks and by the uniform quality and packaging standards India can tap the potential for increasing organic exports.
- **Research and Development** led by private industry along with higher infrastructure spend by the government will be the key to boosting agricultural exports.
- **Infrastructure and Logistics Boost** by identifying **ports** for the export of agricultural products. Development in port infrastructure like dedicated perishable berths.
- **Post-Harvest Infrastructure** that can support the smooth logistical movement of agri-produce exports. This will have a direct co-relationship in increasing export volumes, assuring quality & ensuring better price realization per unit.

#### Conclusion:

- ❖ The vision of doubling farmers' income by 2022 will require a series of interventions to improve production and productivity along with economizing the cost of production.
- ❖ This would also require India to augment its exports to the global market. The AEP brings a comprehensive yet nuanced approach to agricultural product development by involving the states.





**Q) Do you think giving farmers unconstrained rights to sell any quantity of their produce to anybody, anywhere and at any time can resolve the widespread agrarian distress in India ? Discuss the need for a Kisan law in India. What are the challenges associated in bringing such a law? Suggest solutions. (250 words)**

[Indianexpress](https://www.insightsias.com/indianexpress)

**Why this question:**

*The Article talks about Kisan Swaraj – meaning freedom for farmers; mainly the freedom to sell any quantity of their produce to anybody, anywhere and at any time. In this context it becomes necessary to evaluate the policies and legal provisions available to the farmers in our country.*

**Key demand of the question**

*One has to detail about the measures that need to be taken in order to address the agrarian distress in the country. Discuss the specific issues; mainly with respect to market reforms in farming sector and role of the government in addressing it with a robust and powerful Kisan law.*

**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 briefly the statement, what it signifies and its importance.*

**Body:**

*What are the critical issues associated with Agriculture; mainly the market related issues that are aggravating farmer distress.*

*Then move on to discuss the reforms already carried out for Agri sector such as with respect to MSP, crop insurance, irrigation, e-NAM etc and discuss how impactful they have been in terms of alleviating issues faced by the sector.*

*Then discuss the need for Farmer law, why and how it can bridge the gaps in policies and give the farmers freedom to exercise .*

**Conclusion:**

*Conclude with need to relook at the current available policies and how a uniform farmer friendly law giving her freedom can be a game changer.*

**Introduction:**

- The stifling Agrarian crisis in India is an opportunity for the government to enact a law giving farmers the right to sell any quantity of their produce to anybody, anywhere and at any time.

**Body:**

**The critical issues associated with Agricultural Marketing:**

- **Rigid Market Structure:**
  - Prevalence of APMC markets, trader cartels due to which low price for agri produce is offered specially due to bumper crop production.
- **Poor Infrastructure and Logistics:**
  - Lack of diffusion of adequate storage facilities lead to wastage. For instance farmers dump truckloads of vegetables on road.
  - **Food Parks projects** concentrated near to cities and poor maintenance leads to spoilage of the crops.
  - Cold storage units exist in less than one-tenth of the markets and grading facilities in less than one-third; electronic weigh-bridges are available only in a few markets.



- **Government Policies:**
  - The government continues to use old draconian measures, including stocking restrictions and bans on exports and futures trading, to even small increase in food prices. Such steps may bring temporary relief to consumers, but end up hurting farmers.
- **Pro-Consumer bias:**
  - In most years, for the majority of agri-products, the policymakers used restrictive export policies to keep domestic prices low. This showed the pro-consumer bias in the policy complex.
- **Middlemen troubles:**
  - As pointed out by Ramesh Chand, in Punjab, there are as many as 22,000 commission agents and innumerable middlemen in each market.
  - According to Ashok Gulati, former chairman of the Commission for Agricultural Costs and Prices, commission agents in Delhi charge exorbitant fees ranging from 6 per cent to 15 per cent.
- **Information Asymmetry:**
  - A bumper crop can pull down prices in wholesale markets. Price spikes after a poor crop are inevitably dealt with through cheap imports in a bid to protect consumers. The opposite is done less frequently. This is due to lack of information.
  - The bountiful rains of 2016 resulted in record farm output. Prices crashed. Farmers are reported to have not been able to even recover the cost for some crops.
  - The prospects of a good monsoon pushed up rural wages. The reality of rock bottom prices then destroyed profit margins.
- **Aggressive cultivation led to plunge in demand:**
  - Once prices have increased farmers cultivated the crop aggressively leading to plunging of prices.
  - Two years ago, garlic fetched an average Rs 60 per kg rate in Rajasthan's Kota mandi. Enthused by it, farmers in the Hadoti region planted more area, only to see prices halve last May.
  - Similar was the case for other vegetables. Example: Tomato, Toor Dal etc.
- **Farmers income remained low:**
  - India had record food production in 2017-18, but farmers' income remained low and stagnant.
  - According to Ashok Dalwai committee, farmer's income remained about 15-40% of consumer's price.
  - Studies conducted by the International Food Policy Research Institute and World Bank have confirmed this.

**The need for Farmer law** arises from the presence of above critical issues which is hindering the farmer's income.

- **Freedom to the Kisan law**, giving farmers' unfettered rights to sell any quantity of their produce to anybody, anywhere and at any time.
- This omnibus legislation will, at one stroke, dismantle all provisions, whether under the ECA or state-level Agriculture Produce Market Committee acts, that enable restrictions on sale, stocking, movement and export of farm produce.
- There shall be no ban on export of onion, potato, pulses, sugar or milk powder and no limits on how much quantity of produce a trader or processor can buy and stock.
- It will take away the powers of the department of consumer affairs or director-general of foreign trade to impose such curbs on any agricultural commodity at the slightest instance of price rise.
- Power shall, instead, devolve on Parliament, which may approve these only under the exceptional circumstances of war or nationwide calamity — as opposed to executive orders and departmental notifications issued in "public interest"

#### **Challenges associated:**

- Indian agriculture is today crying for investment in processing as well as backend procurement, grading, warehousing, cold storage and transport infrastructure.
- The above cannot happen if farmers and agri-businesses continue to operate in an environment of uncertainty about the government's next "supply-side management" action.
- Agriculture is a state subject and consensus to bring such changes is a political uphill task.

#### **Way forward:**

- The government can procure, stock, and distribute grains in the interest of consumers, so long as this does not infringe upon the commercial freedom of farmers and agri-businesses
- Consumer interest can be better secured by learning to trust the supply response of Indian farmers.



- Better seeds, agronomic practices, crop protection chemicals, machinery, and also rural roads, electricity, irrigation and communication infrastructure have reduced the supply response time to just the next season in most crops.
- e-NAM is a good step in this way. Budget 2018 announced developed **GRAMS** which would be integrated to the e-NAM Structure.
- A consolidation of farm produce, which can be successfully done through farmer-producer organisations.
- Agro-processing and trade will require investment in developing infrastructure.
- Existing agri-export zones need to be revisited and strengthened in this changing scenario.
- States alone cannot revamp the agricultural marketing sector, primarily due to paucity of funds and technology.
- Private investment on a massive scale needs to be invited to upgrade and build large storage and warehousing systems that are climate resilient.

#### Conclusion:

- ❖ It is time to concede that **production and marketing** should march together in order to benefit farmers and consumers. Farmers need to be empowered to decide when, where, to whom and at what price to sell.

*Topic: Technology missions; economics of animal-rearing. Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management.*

**Q) Discuss how the recently launched department of Fisheries in the union government will help in meeting the objectives of Blue Revolution in India ? What are the challenges being faced by the sector ? Suggest a way forward. (250 words)**

[Indianexpress](https://www.indianexpress.com)

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

*The article is in the context of formation of a separate department for fisheries in the Union government. It discusses how fresh policies have given a spurt to productivity of fish farms.*

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

*Department of Fisheries and its effect on Blue revolution.*

*Challenges facing the sector*

*performance of this sector in India – past to present*

*what needs to be done?*

#### **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:**

*Start with how Blue Revolution aims to recognize the potential and possibilities in the fisheries sector of the country by unlocking country's latent potential through an integrated approach.*

##### **Body:**

*The body should cover – the scope and reach on creating an enabling environment for integrated and holistic development and management of fisheries for socio economic development of fishers and fish farmers. The importance of the department, its role, various schemes and policies of the government, what are the challenges in the sector, what needs to be done to make it a success.*

##### **Conclusion:**

*Conclude by relating it to the vision of doubling farmers' income by 2022.*

**Introduction:**

- **Blue Revolution**, the **Neel Kranti Mission** has the vision to **achieve economic prosperity** of the country and the fishers and fish farmers as well as contribute towards **food and nutritional security** through full potential utilization of water resources for fisheries development in a **sustainable manner**, keeping in view the bio-security and environmental concerns.

**Body:**

Current status of Indian fisheries:

- Fisheries are the **primary source of livelihood** for several communities.
- India is the **world's second-largest fish producer** with **exports worth more than Rs 47,000 crore**.
- Fisheries are the **country's single-largest agriculture export**, with a **growth rate of 6 to 10 per cent in the past five years**.
- Its significance is underscored by the fact that the growth rate of the farm sector in the same period is around 2.5 per cent.
- It has a marine fisher population of 3.5 million; 10.5 million people are engaged in inland fishery and fish farming.

**The importance of the department and its role:**

- The new department will give **undivided attention to creating and strengthening infrastructure facilities in marine and inland fisheries and give a boost to aquaculture and post-harvest activities**.
- The investment of **Rs 3,000 crore in the Blue Revolution** is being supplemented through the **Rs 7,523-crore Fisheries and Aquaculture Infrastructure Development Fund**. This will meet the capital investment requirement of this sector.
- The productivity of **freshwater fish farms has gone up to more than 3 metric tonnes per hectare from the 2.5 tonnes per hectare**.
- Productivity of **brackish water coastal aquaculture has touched 10 to 12 metric tonnes per hectare** — a sharp increase from the previous two to four tonnes per hectare.
- Thirty thousand hectares have been added to the area under fish farming.
- The government has invested in hatcheries to meet the ever-increasing demand for good quality fish seed.
- The expansion of aquaculture would increase this demand exponentially.
- The **introduction of cage culture** in reservoirs and other open water bodies has led to an increase in output. Nearly 8,000 cages have been installed and even though a cage gives a modest yield of three tonnes of fish, this translates into a more than 1,000 per cent increase in productivity.
- This new practice gives **freedom to fishermen** from the **risk of traversing dangerous rivers and restricted reservoirs**.

**Challenges faced:**

- **Sustainability:** The **Food and Agriculture Organisation's State of World Fisheries and Aquaculture reports** note that **nearly 90 per cent of the global marine fish stocks have either been fully-exploited or over-fished or depleted to an extent that recovery may not be biologically possible**. While the near-shore coastal waters are highly overfished, the high value fish stock proliferates in the deep seas.
- **Increasing demand:** In order to meet the ever-increasing demand for animal protein, global fish production should touch 196 million tonnes by 2025 — it currently stands at 171 million tonnes. Taking into account the current depletion rate of marine fish stocks that seems next to impossible.
- **Productivity:** the productivity in both sectors is low — **in terms of per fisher, per boat and per farm**. In Norway, a fisherman/farmer catches/produces 250 kg per day while the Indian average is four to five kg.
- **Insufficient Mechanization:** Marine capture fishery comprises largely of small fishermen who operate traditional boats — either **non-motorised vessels or boats with a basic outboard motor**. These vessels cannot operate beyond near shore waters. High value species such as tuna cannot be caught by fishermen who use these vessels.
- The lack of refrigeration facilities leads to spoilage of the huge catch. Use of formalin to keep the stock fresh has led to ban on export of fish catch.
- Bottom-trawling, improper demarcation of fishing boundaries has posed problems in form of killing, arresting of fishermen by neighbouring countries like SL, Pakistan etc.

**Way forward:**

- The new **National Policy on Marine Fisheries** talks of introducing **deep-sea fishing vessels** and **assisting fishing communities to convert their vessels and gears** for the waters beyond.
- There is a need to factor in the sustainability challenges and acknowledge that fishing is a primary livelihood activity for a large number of communities and individuals.
- The policies framed by the new department should aim at enhancing productivity, better returns and increased incomes.
- The policy envisages **intensive fish farming through increased stocking of seed**, better feed quality and **diversification of species**.
- Innovative practices such as **re-circulatory aquaculture system** aim to realise the goal of more crop per drop.
- We must **prioritise seed production** in order to attain self-sufficiency in the sector.
- **Open sea cage culture** is at a pilot stage and the initial trials have given promising results. This may prove another game changer.

**Conclusion:**

- ❖ A concentrated effort by an independent department could help the government achieve its objective of doubling farmers' income, provided its policies address the challenge of sustainability.
- ❖ The country should be producing more than 15 million tonnes fish by the end of 2019. It should be on its way to become a hub for sustainable fish production.

*Topic: Infrastructure: Energy, Ports, Roads, Airports, Railways etc., Investment Models.*

**Q) Solar power is turning rural India bright and shining. Discuss the recent initiatives taken by the Centre in this direction with special emphasis on agrarian economies of rural India. (250 words)**

[Indianexpress](http://www.indianexpress.com)

**Why this question:**

*The question is in the context of central government's recent initiatives of providing farmers with solar pumps and other incentives to use renewable solar energy to aid their agriculture practices along with an opportunity to earn an extra income.*

**Key demand of the question:**

*The answer must discuss briefly the importance of solar energy in the rural regions of India, its contributions in the development and growth of the villages, agrarian systems and in realizing the dream of doubling farmer's income.*

**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:**

*Begin with the importance of the Solar energy specifically in the context of rural regions, establish the interlinkages.*

**Body:**

*The answer should mainly focus upon listing out the different Initiatives of the Centre in this direction; the aims and objectives of such policies and schemes along with examples justifying the significance of the same.*

*Discuss how Solar energy would enhance livelihood prospects, improve efficiency in rural households, provide for opportunities and bridge massive infrastructure gaps and improve the social, economic, environment aspects of rural India.*



### Conclusion:

*Conclude with key role of Centre in expediting this process. It must develop new and affordable sources of solar energy, besides educating the rural masses about the benefits of switching to solar.*

### Introduction:

- Rural India continues to be the heart of the country, accounting for 67 per cent of the total population and 37 per cent of its GDP. The primary hindrance to growth in rural productivity and subsequent economic growth, is the lack of basic infrastructure such as electricity, clean water and sanitation. Although India is the fifth largest producer and consumer of electricity, the latter is still a luxury for many.
- Solar power offers an opportunity to bridge this massive infrastructure gap and improve the social, economic, environment and health indicators of 30 per cent of India's population.

### Body:

#### Current Scenario:

- Nearly 300 million people in rural India lack access to grid-connected power, promoting use of archaic sources of energy such as kerosene, diesel, wood-fired chulhas, etc.
- It not only results in huge government subsidies, but also substantial health and environmental hazards.
- Although solar power has been around for a while, **historically high costs** have necessitated it to be driven by philanthropic capital or government subsidy, thus limiting its scope.

#### Government's recent Initiatives:

- A drop in capital cost by nearly 70 per cent over the last four years, solar energy has now become commercially mainstream, thus attracting private capital and entrepreneurs.
- **Electricity:**
  - Government's vision of '**Electricity for all by 2019**' has placed special emphasis on **incentivising distributed solar power**, having already sanctioned 4,604 distributed solar project in rural area to power 4,745 villages/hamlets.
  - India plans to install 10,000 small-scale solar-power grids across the country to bring basic electrical power to communities without it.
  - Under the **Saubhagya scheme**, the government has given more emphasis on encouraging distributed solar power.
- **Lighting:**
  - Solar lighting, for example, not only provides a high quality solution to improve rural productivity, but also substantially reduces health hazards by enabling replacement of kerosene lamps.
  - Even 4-5 hours of additional lighting can improve productivity and income of rural household by nearly 30 per cent.
  - Nearly 3.5 million solar lighting solutions have been installed till date, making it a \$200-million market in FY 15.
  - Solar micro and mini grid are logical extensions of standalone solar lighting solutions as they have the capability to provide incremental benefits to households like powering fans, mobile charging, community television, as well as facilitating Internet access
- **Smarter farming:**
  - **Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM)** scheme was launched with the objective of providing financial and water security to farmers.
  - The proposed scheme consists of three components:
    - Component-A: **10,000 MW of Decentralized Ground Mounted Grid Connected Renewable Power Plants.**
    - Component-B: **Installation of 17.50 lakh standalone Solar Powered Agriculture Pumps.**
    - Component-C: **Solarisation of 10 Lakh Grid-connected Solar Powered Agriculture Pumps.**
  - They have the potential to substantially improve productivity of Indian farmers.
  - Solar agri pumps are an economic and environmentally-friendly alternative to nearly **26 million agri pumps installed in India, of which 10 million are diesel-fired.**
  - Replacement of 1 million diesel pumps could, over its life, improve agricultural output by ₹30,000 crore, mitigate usage of diesel by 9.4 billion litres — **translating into a reduction of diesel subsidy by ₹84,000 million and CO2 abatement of 25.3 million tonnes.**
  - Central and State governments have introduced multiple favourable schemes to promote usage of solar pumps, by providing subsidy for the upfront costs.





- KUSUM scheme has direct employment potential. Besides increasing self-employment the proposal is likely to generate employment opportunity equivalent to 6.31 lakh job years for skilled and unskilled workers.

#### Potential applications:

- **Clean drinking water** remains a big challenge in rural India, since water treatment requires power. Solar energy is finding important applications in this field. For example, Nagaland recently installed a solar powered water treatment plant in Tsiesma, a village near Kohima, which works on an advanced membrane filtration system producing pure drinking water.
- The access to the Internet and television, which can enhance — **rural employment, solar-powered basic healthcare centres, solar-powered tablets** like those developed by **edZilla** (which is transforming the scene of education in rural Karnataka), and **solar telecom towers**, which have the potential to provide economic and hassle-free solutions to nearly 150,000 telecom towers plagued by unreliable energy supply.
- Solar energy also provides a **multiplier effect** by providing employment and entrepreneurial avenues to rural youth. Given the simple and modular nature of solar systems, large number of semi skilled labourers in rural India can be employed for installation and after sales services of these systems.
- By tapping the potential of **Self-Help Groups** operated by Village Level Entrepreneurs in the rural areas, the energy sector is helping women become pioneers of clean energy.
- Solar energy has the potential to power the **education system** in rural areas by providing adequate electricity as well as access to education. It helps in improving the living standards of rural households through **solar energy-based interventions and learning facilities in the underserved community**. With easy access to electricity through solar energy, new avenues of **self-learning by digital content** have opened up for the students.

#### Conclusion:

- ❖ The **decentralised and modular nature** of solar power makes it easy to deploy for multiple rural applications, impacting key facets of rural population such as productivity, safety, health benefits, access to clean water, heating solution and livelihood.
- ❖ It is evident that adoption of solar power as an alternative source of energy could **alter the socio-economic fabric of rural India**, for the better.

**Q) pretty far from reaching the 175 GW renewable energy target by 2022, Will Reclassifying 'hydro' take the renewable energy capacity of India to higher levels ? Examine. (250 words)**

The hindu

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

*The article throws light upon the recent decision taken by the government in re-classifying large hydroelectric projects in the new hydroelectricity policy.*

*It discusses in detail how this reclassification will catalyze the ambition of 175 GW renewable energy target by 2022.*

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

*The answer must discuss in detail the new hydroelectricity policy, the impact of recent decision of the government to re-classifying large hydroelectric projects. One is expected to elaborate in total and draw a big picture upon the future success and achievements of the policy, what needs to be done etc.*

#### **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:**

*Begin with the highlights of the New policy.*



### Body:

*Discuss at a broader level, the importance of renewable energy, the targets set by the government, the new dimension of re-classification, its impact on the target. One should not alone discuss the merits but also discuss any challenges associated with it. How should the government overcome issues and concerns involved in the process of re-classification and how should it overcome them. Quote examples wherein such a reclassification can show benefits to the program.*

### Conclusion:

*Conclude with optimism, India is at a turning point of energy management and renewable energy is one such dimension that India can hope with.*

### Introduction:

- India, with its commitment for a greener Earth, has pledged to generate 175 GW of renewable energy target by 2022.
- The Union Cabinet recently approved a **new hydroelectricity policy** that, among other things, included large hydro projects within the ambit of renewable energy. Prior to the policy, only small hydro projects of a capacity of less than 25 MW were treated as renewable energy. Large hydro projects were treated as a separate source of energy.

### Body:

The measures taken up include:

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

### How the hydro policy has changed India's energy mix numbers

Installed Capacity		
	Before policy	After policy
Renewable sources (in MW)	75,055.92	1,20,455.14
Renewable sources (% share in energy mix)	21.43	34.40
Share within renewables (In %)		
Source	Before policy	After policy
Hydro	6.03	41.45
Wind	47.02	29.30
Bio-power	12.28	7.65
Solar	34.68	21.61

SOURCE: CENTRAL ELECTRICITY AUTHORITY, GOVERNMENT OF INDIA

### Major Impact including employment generation potential:

- The re-classification of hydro as renewables adds all that capacity to the renewable energy kitty.
- Renewable energy capacity would now be 1,20,455.14 MW or 34.4% of the overall energy mix.
- As most of the hydro power potential is located in the higher reaches of Himalayas and North- East Region, it will result in **overall socio-economic development of the region** by providing direct employment in the power sector.
- **Provide indirect employment/ entrepreneurial opportunities** in the field of transportation, tourism and other small scale businesses.



- It provides a **stable grid considering 160 GW capacity addition** by 2022 unlike infirm sources of power like solar and wind and a **better energy mix**.
- The effect on the **stock prices of State-run hydroelectric companies** such as NHPC and SJVN at a point when the government is looking to sell its stake in these companies

#### Challenges ahead:

- DISCOMS are reluctant sign Power Purchase Agreements (PPAs) Hydro Power due to higher tariff, particularly, in the initial years.
- One of the reasons for high tariff of hydropower is the loading of cost of flood moderation and enabling infrastructure in the project cost.
- Due to inherent risks associated with the sector, such as **geological surprises, natural calamities, environmental & forest issues, and rehabilitation and resettlement issues** apart from commercial risks and change of river basin during operation, many developers are averse to enter into the sector.
- The **major commercial deterrents for the private developers are high capital cost and long payback period** due to high gestation period which may also create issues in financing.
- The other issue related to Hydropower projects is **financing and evacuation**. Hydro Power projects are **capital-intensive and financing** them for long such as 20 years is really a challenge.
- Further, a number of hydropower projects are **located in remote sites in states** which **do not have enough demand for electricity** that presents geographical constraints in developing requisite transmission infrastructure for evacuation.

#### Conclusion:

- ❖ There has been a **huge imbalance in the thermal-hydro mix** for the last few years because of a sharp growth in thermal and complete stagnation in hydro power sector. The importance of hydropower is increasing even more as the country has targeted to add 160 GW of intermittent Solar and Wind power by 2022 and 40% of the total capacity from non-fossil fuel sources by 2030 to honour its Nationally Determined Contribution for Climate Change.

**Q) India's water crisis is even more serious than its energy crisis. Discuss in the wake of India's urban water crisis and what steps are needed to tackle this. (250 words)**

[The hindubusinessline](https://www.insightsactivelearn.com/online/india-express/2019/07/24/the-hindubusinessline/)

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

*The article is in the backdrop of world water day, the question highlights the situation of water crisis world is facing. With special focus on urban water crisis scenario.*

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

*The answer must explain with necessary justification how India's water crisis is even more serious than its energy crisis. One has to elaborate the crisis the Indian urban areas are facing and suggest what measures are required to be taken in this direction.*

#### **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:**

*Use some suitable facts to express the current water crisis situation in the country in general and Urban India in particular.*

##### **Body:**

*Crisis of water , why is it different from other energy resource crisis?*

*Highlight the sectors that require water both in rural and urban regions.*

*challenges posed by unsustainable water use and its degradation.*

*Shrinking availability of water in Urban India – causes and consequences.*



*Measures to tackle the crisis, how to manage the Water and the Economy around it.*

### **Conclusion:**

*Re-assert the significance of water and importance of saving it.*

### **Introduction:**

- The **NITI Aayog report on Composite Water Management Index (CWMI)** said that India is facing its 'worst' water crisis in history. Taps in Shimla went dry in summer of 2018, posing an unprecedented water crisis in the hill town.
- According to a forecast by the Asian Development Bank, India will have a water deficit of 50% by 2030. Recent studies also ranked Chennai and Delhi at the top of the 27 most vulnerable Asian cities in terms of low per-day water availability. Mumbai and Kolkata follow close.

### **Body:**

#### **India's water crisis is more serious than its energy crisis:**

- The water crisis in India is more dire than imagined.
- The annual per capita availability of water continues to decline sharply from about 5,177 cubic metres in 1951 to about 1,720 cubic metres in 2019.
- The NITI Aayog in its report on Composite Water Management Index (2018) has underlined that currently 600 million people face high to extreme water stress.
- Twenty-one cities, including Delhi, Bengaluru, Chennai and Hyderabad will run out of groundwater by 2020, affecting 100 million people.
- Apart from mega cities, many fast-growing small and medium cities such as Jamshedpur, Kanpur, Dhanbad, Meerut, Faridabad, Visakhapatnam, Madurai and Hyderabad also figure in this list.
- The demand-supply gap in most of these cities ranges from 30 per cent to as much as 70 per cent.
- About two lakh die every year due to inadequate access to safe water, about three-fourths of the household do not get drinking water at their premise and about 70 per cent of water is contaminated.
- The rate of groundwater extraction is so severe that NASA's findings suggest that India's water table is declining alarmingly at a rate of about 0.3 metres per year.
- At this rate of depletion, India will have only 22 per cent of the present daily per capita water available in 2050, possibly forcing the country to import water.
- About 81 per cent of India's ultimate irrigation potential, estimated at 140 million hectares, has already been created and thus the scope for further expansion of irrigation infrastructure on a large scale is limited.
- Climate experts have predicted that there will be fewer rainy days in the future but in those days it would rain more.

#### **Measures needed:**

- **Structural measures:**
  - Putting in place an efficient piped supply system (without leakage of pipes) has to be top on the agenda.
  - Ancient India had well-managed wells and canal systems. Indigenous water harvesting systems need to be revived and protected at the local level. Examples: Karez, Bawli, Vav etc
  - Digging of rainwater harvesting pits must be made mandatory for all types of buildings, both in urban and rural areas.
  - **Treating the greywater and reusing it** needs to be adopted by countries like Israel (upto 85%). It could be used to recharge depleted aquifers and use on crops.
  - Initiatives such as **community water storage and decentralized treatment facilities, including elevated water towers or reservoirs and water ATMs**, based on a realistic understanding of the costs involved, can help support the city's water distribution.
  - Technologies capable of converting non-drinkable water into fresh, consumable water, offering a potential solution to the impending water crisis are needed. Example: **Desalination technologies in Coastal areas, Water-sterilization in polluted water areas.**
- **Non-structural measures:**
  - The **World Bank's Water Scarce Cities Initiative** seeks to promote an integrated approach, aims at managing water resources and service delivery in water-scarce cities as the basis for building climate change resilience.



- Groundwater extraction patterns need to be better understood through robust data collection
- Decentralisation of irrigation commands, offering higher financial flows to well-performing States through a **National Irrigation Management Fund**.
- **Public awareness campaigns, tax incentives for water conservation and the use of technology interfaces** can also go a long way in addressing the water problem. **Example**, measures such as water credits can be introduced with tax benefits as incentives for efficient use and recycling of water.
- A collaborative approach like the adoption of a public-private partnership model for water projects can help. **Example**, in Netherlands, water companies are incorporated as private companies, with the local and national governments being majority shareholders.
- Sustained measures should be taken to prevent pollution of water bodies and contamination of groundwater.
- Ensuring proper treatment of domestic and industrial waste water is also essential.

#### Conclusion:

- ❖ Primarily water is not valued in India. “People think it is free”. In order to meet the future urban water challenges, there needs to be a shift in the way we manage urban water systems.
- ❖ An **Integrated Urban Water Management approach** must be adopted which involves managing freshwater, wastewater, and storm water, using an urban area as the unit of management.

**Q) Discuss the problems associated with the development of North- east of India. Analyse the role of Infrastructure projects in the development of this region. (250 words)**

[Epw](#)

[Livemint](#)

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

*The question is in the context of development of North east region of India and issues associated with it.*

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

*The answer must discuss in detail the challenges and concerns associated with its development and how one can harness its true potential. One of the main constraints to development in North East India is the lack of connectivity, answer must emphasize thus on role of infrastructure development in increasing connectivity vs-a-vis harnessing its true potential.*

#### **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:**

*Briefly narrate the importance of North -East for India and its potential.*

##### **Body:**

*First discuss the key challenges related to the development of the North-East region, major constraints to development in the region.*

*Then state how not only is the region poorly connected to the rest of India, it is also poorly connected to neighboring countries in Southeast Asia.*

*Discuss the link between Inadequate infrastructure and poor connectivity in India’s north-east.*

*Analyse its impact on – economy, society and politics of the region.*

*Quote examples of recent infrastructure development projects.*





### Conclusion:

*Conclude with importance of infrastructure projects from the development of the region.*

### Introduction:

- North Eastern Region of India consists of eight states namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. (Seven Sisters and Sikkim)

### Body:

Key challenges related to the development of the North-East region are:

- **Geographical Challenges:**
  - Very high rainfall, shifting river courses, poor drainage system and narrow valleys are regularly causing severe floods, erosion, landslides and sand deposition in the North East causing loss of huge areas of valuable agricultural land.
  - Hilly, inaccessible and undulating terrain has led to underdeveloped transport links.
  - Large area of land is under 'Jhum cultivation' which leads to large scale deforestation resulting in soil erosion and loss of soil fertility.
- **Disaster Proneness of North East:**
  - High rainfall and large river basins of the Brahmaputra and the Barak along with their narrow valleys regularly cause severe floods, erosion, landslides and sand deposition leading to loss of huge areas of valuable agricultural land and thereby reduction of the average size of land holdings in the region.
  - The region is highly prone to Earthquakes and post the great earthquake of intensity of 8.5 in Richter scale of 1950 in Assam, flood and erosion have increased in the state and till date about 5000-6000sq.km of land has been lost due to erosion by rivers. This has made lakhs of people landless and homeless in the state.
- **Historical Challenges:**
  - Despite the above mentioned challenges, the North-eastern region was at par with rest of the country at independence but post-independence events have retarded the development of the region.
  - **Partition of the country:** When the major road, rail and river routes connecting North East to the rest of the country suddenly got snapped.
  - **The Bangladesh Liberation was of 1971:** When crores of people from Bangladesh entered some states of North East as refugees which changed the demographic situation in some state of North-East bordering Bangladesh.
  - **Insurgencies:** From the end of the seventies of the last century problems of insurgency started in states like Assam, Meghalaya, Tripura and Manipur, Insurgency affected the present day Nagaland and Mizoram in the fifties and sixties of the last century. Now, of course, due to various actions taken by the Central and State governments, insurgency in this region is no longer a matter of great concern.
- **Infrastructural Factors:**
  - NER has about 6 per cent of the national roads and about 13 percent of the national highways. However, their quality is not good due to poor maintenance.
  - The prominent indicators of shortfalls in infrastructure in this region are: increasingly congested roads, power failures, shortage of drinking water etc.
- **Political challenges:**
  - Chinese Aggression on Arunachal Pradesh (called NEFA at that time) in 1962, apparently refrain large scale investment from private player in North East.
  - Large scale Migration from Bangladesh led to various socio-economic- political problem
  - The culture of 'bandhs' is peculiar problem of NER, widely prevalent in Assam, Manipur and Nagaland.
  - Three fourth of NER have no proper land records and Individual ownership of land is not well established
- **Social Challenges:**
  - Remarkable growth of migration from the North East to different parts of the country mostly in search of education and job opportunities gives big blow to the local society.
  - Drug abuse is a serious problem among youth of North east with more than 30% of its youth being drug abusers.
  - The pandemic of HIV/AIDS, spreading fast in Manipur, Nagaland and Mizoram, is also a matter of grave concern.





- Migration from surrounding areas of NERs (Bangladesh and states of Bihar and Bengal) reduced the average size of land holding to about one hectare.
- **Lack of Social Infrastructure:**
  - Inadequate number of polytechnics and higher institutions for engineering, medical and nursing studies etc.
  - Teachers' Training is poor thereby leading to poor standards of education

#### Impacts of Infrastructure projects in NE India:

- **Political:**
  - **Strategic Importance:** north-eastern states provide an important gateway to both China and the Southeast Asian states, these corridor projects will be crucial for India's economic and strategic relationship with these countries.
  - **Boost to India's Act East Policy:** better co-ordination with the south East Asian nations.
  - **Regional Development:** These corridor-based development projects may generate further economic activities and regional development, which in turn will influence economic growth through higher production and consumption
- **Economic:**
  - **Increases Connectivity:** Not only is the region poorly connected to the rest of India, it is also poorly connected to neighbouring countries in Southeast Asia. However, this could change.
  - **Boosts Trade:** Increased road density, because of these corridors, would lead to both greater freight volumes as well as greater gross domestic product growth in the states. They estimate the EWC itself will increase freight volumes by up to 90% in the states that are part of the corridor.
  - **Encourages Investment:** with better infrastructure, FDI and local investments increase leading to better economic opportunities.
- **Social:**
  - **Increase Socio-economic growth:** A new study suggests that the completion of current and proposed infrastructure projects in the north-east could herald greater economic growth for the region and increase its geopolitical importance.
  - **Strengthens Human Development:** With better connectivity, there will be an emphasis on social sectors like education, healthcare leading to better human development indicators.

#### Recent Steps taken for Development

- **North East Special Infrastructure Development Scheme (NESIDS)** launched by Centre in Dec2017 to fill the gaps in creation of infrastructures in two sectors
- One is physical infrastructure relating to water supply, power, connectivity and especially projects promoting tourism.
- The other is social sector projects of education and health. The remarkable feature of this scheme is that this is a 100 per cent centrally funded scheme as against the NLCP, where 10 per cent contribution had to come from the State Governments
- National projects such as the **East-West Corridor (EWC)**, which runs from Porbandar in Gujarat to Silchar in Assam.
- International projects such as the **Trilateral Highway** connecting Manipur to Thailand via Myanmar, the Bangladesh-China-India- Myanmar Economic Corridor, and the **Kaladan Multimodal Transit Transport Project**, that comprises a sea route for shipping cargo from ports in eastern India to Myanmar, as well as a land route to the country from the North-East.
- **Tuirial Hydro-power project** is the first major Central Sector projects to be successfully commissioned in Mizoram to boost the socio-economic development of the State. With this, Mizoram becomes the third power-surplus State in NER after Sikkim, and Tripura.
- **Relaxation of restrictive regulatory regime of Bamboo:** Given its importance in livelihood of NorthEast there will be no more requirement of any permit for producing, transporting and selling Bamboo products. This will benefit lakhs of farmers and will add to the efforts to doubling farmers' income by 2022.
- In the latest budget (2018-19), the Government has allocated funds for revival of 50 airports and improving aviation infrastructure.

#### Way Forward:

A **six-fold strategy** for the comprehensive development of the region has been proposed-

- Empowering people by maximizing self-governance and participatory development through grass-root planning to promote inclusive development.



- Creation of development opportunities for the rural areas through enhancing productivity in agriculture and allied activities such as animal husbandry, horticulture, floriculture, fisheries and generation of livelihood options through rural non- farm employment.
- To develop sectors in the region having a comparative advantage such as agro-processing, Hydro-power generation.
- Enhancing the skills and competencies of the people and building the capacities for institutions with the Government and outside.
- Creating a hospitable investment climate to encourage investment by the private sector particularly for infrastructure.
- Harnessing the resources of the Government and the private sector to realize the objectives of the Vision.

#### Conclusion:

- ✓ Innovation, Initiatives, Ideas and Implementation—all the four needs to go together. Inclusive growth is possible through improved governance, doing away with the draconian laws and ensuring the local communities are empowered to implement basic services. For this, all the stakeholders need to formulate a comprehensive realistic plan for the overall development of North East.

*Topic: 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.*

**Q) Discuss the role of Artificial intelligence in managing and mitigating floods. What are the issues and challenges involved ? Discuss in the light of Google's newly launched flood forecasting project in India. (250 words)**

Livemint

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

*The article is in the background of the Google's recent efforts of leveraging machine learning to predict India floods*

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

*The answer must discuss the significance of the Artificial intelligence in managing and mitigating floods; achieve social good in the sense of preventing fatalities.*

#### **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:**

*Begin with what do you understand by Artificial intelligence, how can it be put to use to manage and mitigate hazards and disasters like floods .*

##### **Body:**

*Discuss the importance of Artificial intelligence, how advancement in Information Technology in the form of Internet, GIS, Remote Sensing, satellite communication, etc. can help a great deal in planning and implementation of hazards and provide for reduction measures.*

*highlight the role of information technology in management of natural disasters in India.*

*Discuss the significance of Google's flood forecasting project in India, issues and challenges involved and the achievements it can make.*

##### **Conclusion:**

*Conclude with the importance of the use of technology and suggest way forward.*

**Introduction:**

- Artificial intelligence is the branch of computer science concerned with making computers behave like humans. It is the study of ways in which machines can be made to have sufficient creative reasoning power to perform mental task. AI can be used in places where you have to take a decision and recommend solutions.
- **Google Flood Forecasting Initiative** that aims to provide flood forecasts and warnings in developing countries like India. About 20% of fatalities worldwide from flooding occur in India

**Body:****Google flood forecasting initiative:**

- This Flood Forecasting Initiative is Google's effort to provide high accuracy, high resolution flood forecasting.
- It uses the **Google's machine learning (ML) expertise** and our computational power as well as our access to various types of resources and data to substantially improve flood forecasting systems, their accuracy, their lead time and so on.
- Google partnered with the **Central Water Commission** and the two organizations agreed to share technical expertise and data to work on the predictions, with the Commission calling the collaboration a "milestone in flood management and in mitigating the flood losses."
- Predicting events like earthquakes and floods means sorting through huge troves of complex data to uncover previously overlooked connections.

**Unique features:**

- **Generating high resolution elevation maps:**
  - Google has developed a method of generating elevation maps at 1 meter resolution, based solely on **completely standard optical imagery** and that allows you to do this anywhere in the world.
- **Hydraulic modelling:**
  - It is the modelling of how the water will behave when it moves across the floodplain, which areas it will go to, and which areas are going to be affected and which ones are going to be safe

**Challenges:**

- **No detailed data:**
  - The current modelling systems are only physics-based, and the data is not detailed enough, while Google is using a system that combines physics modelling plus AI learning, and combines that with elevation and satellite map data.
  - It is a region of uncharted waters which needs more precision and experimentation.
- **Varying topographies:**
  - The challenge of getting elevation maps is the major impediment currently.
  - India has a diverse relief and same model cannot be replicated across.
- **High Cost:**
  - There is also the challenge of **computational complexity**. If you want to have a high resolution model, it becomes incredibly **computationally expensive**.
  - Creation of artificial intelligence requires huge costs as they are very complex machines. Their repair and maintenance require huge costs.
  - They have software programs which need frequent up gradation to cater to the needs of the changing environment and the need for the machines to be smarter by the day.
- **Technical Impediments:**
  - Lack of trained personnel to make use of the technology is another impediment.
- **No Replicating Humans:**
  - Intelligence is believed to be a gift of nature. An ethical argument continues, whether human intelligence is to be replicated or not.
  - Machines do not have any emotions and moral values. They perform what is programmed and cannot make the judgment of right or wrong.
  - They cannot take decisions if they encounter a situation unfamiliar to them. They either perform incorrectly or breakdown in such situations.
  - Mastering human behaviour is tougher as that a vast majority of brain activities occur at a non-conscious level.

**Way forward:**

- For India to maximally benefit from the AI revolution, it must adopt a deliberate policy to drive AI innovation, adaptation, and proliferation in sectors beyond consumer goods and information technology services.



- Policymakers should make AI a critical component of the prime minister's flagship Make in India, Skill India, Disaster management, socio-economic sectors like health and education.
- Policymakers should consider ways to encourage human-centered AI at work and to provide training and social welfare programs to ease the transition to what can be a more productive and humane workplace of the future.
- India must view AI as a critical element of its national security strategy and evaluate models of defense research in collaboration with the private sector and universities.

#### Conclusion:

Although AI is always seen with suspicion of taking away jobs, creating a robot world. There is a necessity of AI in the cases such as flood forecasting, disaster management to help the State to perform better and reduce the risk to lives of man and material.

**Q) “We live in a society bloated with data yet starved for wisdom”. Critically analyse. (250 words)**

Hindustantimes

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

*The Article highlights the 30 years completion of Internet and the wisdom shared by its founder Tim Berners-Lee that the online population is continuously growing and also the spread of hatred on the web.*

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

*The answer should bring out how the world is overflowing with huge amounts of data everywhere but is lacking wisdom to use it, with just 30 years of Internet's inception, the world from real to virtual has turned into a tour, one needs to discuss the need to control seamless flow of data and its ill effects.*

#### **Directive word**

*Critically analyze – When asked to analyze, 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. 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 judgement.*

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

##### **Introduction:**

*Explain briefly the statement, what it signifies.*

##### **Body:**

*The answer to such questions should mainly be substantiated with good coverage of examples, one should justify the pros and cons of the Internet, how it is leading to discovery of newer technologies, access to wider world, and thus eventually causing data bloating and promoting web as a source of voice to those who spread hatred, and make all kinds of crime easier to commit instead of it being a platform of public square, a library, a doctor's office, a shop, a school, an office, a bank, and so much more.*

##### **Conclusion:**

*Conclude with need to relook at the incentives of Web against the drawbacks and need for reforms.*

#### **Introduction:**

The web has become a public square, a library, a doctor's office, a shop, a school, a design studio, an office, a cinema, a bank – and so much more. While the web has created opportunity, given marginalised groups a voice, and made our daily lives easier, it has also created opportunities for scammers, given a voice to those who spread hatred, and made all kinds of crime easier to commit.



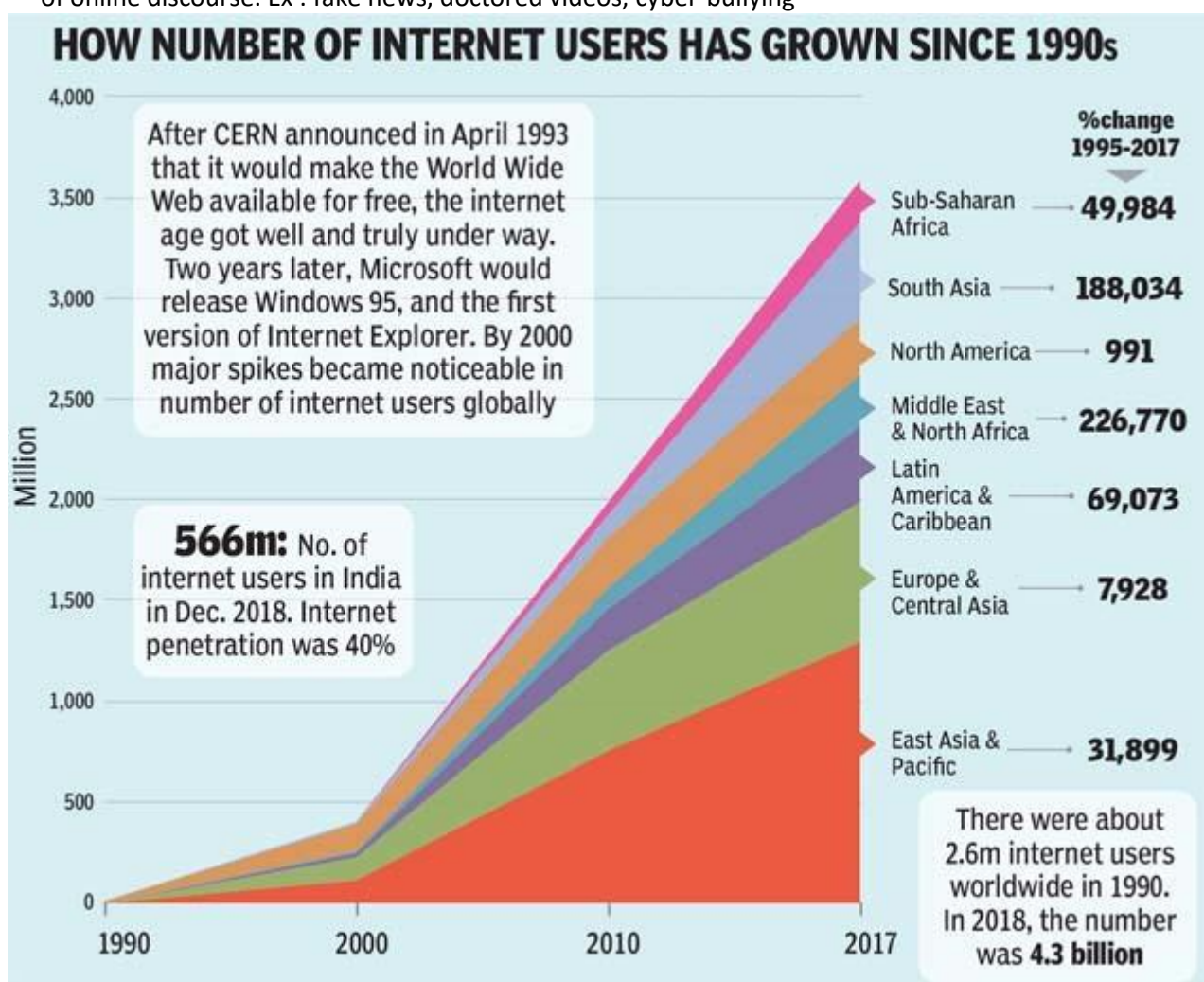
## Body:

### Relevance for India:

- Internet usage in the country has exceeded half a billion people for first time, pegged at 566 million, driven by rural internet growth and usage.
- The country has 366 million Internet subscribers in urban locations and 194 million in rural areas
- By 2021, there will be about 635.8 million internet users in India.
- Despite the large base of internet users in India, only 26 percent of the Indian population accessed the internet in 2015.
- Men dominated internet usage in India with 71 percent to women's 29 percent.

### The three sources of dysfunction affecting today's web:

- Deliberate, malicious intent, such as state-sponsored hacking and attacks, criminal behaviour, and online harassment. Ex: cyber-attacks like DOS attack, Ransomware, Cyber-terrorism
- System design that creates perverse incentives where user value is sacrificed, such as ad-based revenue models that commercially reward clickbait and the viral spread of misinformation. Ex: Phishing, cryptojacking
- Unintended negative consequences of benevolent design, such as the outraged and polarised tone and quality of online discourse. Ex : fake news, doctored videos, cyber-bullying



### Way forward:

- The first category is impossible to eradicate completely, but we can create both laws and code to minimize this behaviour, just as we have always done offline.
- The second category requires us to redesign systems in a way that changes incentives.
- The final category calls for research to understand existing systems and model possible new ones or tweak those we already have.
- Digital companies must do more to ensure their pursuit of short-term profit is not at the expense of human rights, democracy, scientific fact or public safety
- Citizens must hold companies and governments accountable for the commitments they make, and demand that they respect the web as a global community with citizens at its heart.





- **The Contract for the Web** must not be a list of quick fixes but a process that signals a shift in how we understand our relationship with our online community.
- India needs to come up with a **data protection law** as envisaged by **Srikrishna Committee**.

#### Conclusion:

- ❖ Today, half of the world is online. It is more urgent than ever to ensure the other half are not left behind offline, and that everyone contributes to a web that drives equality, opportunity and creativity.
- ❖ The web is for everyone and collectively we hold the power to change it.
- ❖ It won't be easy. But if we dream a little and work a lot, we can get the web we want.

**Q) Has the recent Missile test Shakti in space paved the way for India's attempt to draw new red lines redefining its security calculus ? Examine. (250 words)**

[Livemint](#)

[The hindubusinessline](#)

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

*India has rewritten the rules of global engagement by downing a live satellite in low earth orbit on Wednesday and adding space to its strategic lexicon.*

*Thus the question is to evaluate significance of Missile test Shakti and the significance it holds for India.*

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

*The effective space deterrence has heralded India's entry into an exclusive club of powers with space, land, air and sea-based weapons delivery platforms, thus the answer must elaborate on the India's capabilities and run up to strengthening its security dimensions.*

#### **Directive:**

*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:**

*Brief upon the recent achievement of Missile test Shakti.*

##### **Body:**

*Explain in short the present capabilities of Indian Defense system.*

*How the test has added to the current capabilities.*

*Have a discussion on India's willingness to rewrite the rules of the game and in what way it marks a geostrategic shift.*

*The discussion should balance around India's achievement vs deterrence capabilities.*

##### **Conclusion:**

*Conclude with optimism, India is proving its capabilities to the world and marching forward.*

#### **Introduction:**

- **Mission Shakti** is a joint programme of the **Defence Research and Development Organisation (DRDO)** and the **Indian Space Research Organisation (ISRO)**. As part of the mission, an **anti-satellite (A-SAT)** weapon was launched and targeted an Indian satellite which had been decommissioned.
- Mission Shakti was carried out from DRDO's testing range in Odisha's Balasore.





## Body:

### Rationale behind Mission Shakti:

- India has a long standing and rapidly growing space programme. It has expanded rapidly in the last five years. The Mangalyaan Mission to Mars was successfully launched. Thereafter, the government has sanctioned the Gaganyaan Mission which will take Indians to outer space.
- India has undertaken 102 spacecraft missions consisting of communication satellites, earth observation satellites, experimental satellites, navigation satellites, apart from satellites meant for scientific research and exploration, academic studies and other small satellites.
- India's space programme is a critical backbone of India's security, economic and social infrastructure.
- Space is being turned into a battlefield, making counter-space capabilities critical. In this light, India's successful 'kill' with an A-SAT weapon is significant.
- The test was done to verify that India has the capability to safeguard our space assets. It is the Government of India's responsibility to defend the country's interests in outer space.
- A-SAT weapon is likely to be the most potent military tool for the armed forces over the next few decades, notwithstanding a revolutionary technological breakthrough.

### Mission Shakti marks a geostrategic shift:

- The effective space deterrence has heralded India's entry into an exclusive club of powers with space, land, air and sea-based weapons delivery platforms.
- This not only helps safeguard space assets from long-range missiles, but also signifies India's strategic repositioning by leveraging the interceptor, part of the ongoing ballistic missile defence programme, as an offensive option.
- The leitmotif of this Indian stratagem was in play during the air strikes against terror training camps in Pakistan.
- The action sends a powerful signal to countries such as China and is an attempt by India to draw new red lines to redefine the security calculus.
- To 'defend' its satellites, India has to deter China's use of its direct ascent missiles and laser weapons
- The test demonstrates India's technological capability to design, build and intercept a satellite in outer space using indigenous technology.
- This may also pave the way for the creation of a new space command on the lines of what the US has.

### Mission Shakti is a deterrence measure:

- India has **no intention of entering into an arms race in outer space**. We have always maintained that **space must be used only for peaceful purposes**. We are **against the weaponisation of Outer Space** and support international efforts to reinforce the safety and security of space based assets.
- The principal international treaty on space is the 1967 Outer Space Treaty. India is a signatory to this treaty and ratified it in 1982.
- India believes that Outer space is the common heritage of humankind and it is the responsibility of all space-faring nations to preserve and promote the benefits flowing from advances made in space technology and its applications for all.
- India is a party to all the major international treaties relating to Outer Space. India already implements a number of **Transparency and Confidence Building Measures (TCBMs)** – including **registering space objects with the UN register, pre-launch notifications, measures in harmony with the UN Space Mitigation Guidelines, participation in Inter Agency Space Debris Coordination (IADC)** activities with regard to space debris management, undertaking **SOPA** (Space Object Proximity Awareness) and **COLA** (Collision Avoidance) **Analysis** and numerous international cooperation activities, including hosting the UN affiliated Centre for Space and Science Technology Education in Asia and Pacific.
- India has been **participating in all sessions of the UN Committee on the Peaceful Uses of Outer Space**.
- India supported **UNGA resolution 69/32 on No First Placement of Weapons on Outer Space**. We see the No First Placement of weapons in outer space as only an interim step and not a substitute for concluding substantive legal measures to ensure the prevention of an arms race in outer space, which should continue to be a priority for the international community.
- India supports the substantive consideration of the issue of **Prevention of an Arms Race in Outer Space (PAROS)** in the Conference on Disarmament where it has been on the agenda since 1982.

### Conclusion:

- ❖ The test also comes against the backdrop of simmering tensions in the sub-continent with China's security concerns in South Asia historically been centred around its desire to use Pakistan to thwart India's rise as a



challenger to its dominance in Asia. The capability achieved through the Anti-Satellite missile test provides **credible deterrence against threats to our growing space-based assets** from long range missiles, and proliferation in the types and numbers of missiles.

*Topic: Awareness in the fields of IT, Space, Computers, robotics, nanotechnology, biotechnology and issues relating to intellectual property rights.*

**Q) 5G technology can fulfil the vast potential ascribed to it these past years. Examine. (250 words)**

[Livemint](#)

### **Why this question**

*The article brings out the huge potential of 5G technology and discusses its application and the impact on various sectors. The technology has been in news for quite some time and the article provides an interesting insight into its various applications.*

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

*The question expects us to first explain about 5g technology and thereafter discuss its potential in various areas and how it can prove useful. The question also expects us to discuss the impact of these applications and discuss how India can make use of it in the best possible manner.*

### **Directive word**

*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 .*

### **Structure of the answer**

**Introduction** – Explain what do you understand by 5g technology.

### **Body**

*Discuss the various applications of the technology such as*

- *5G not only represents a generational leap in connectivity speeds, the new network standard will also introduce lower latency (for improved response) and the ability to connect more devices at once*
- *5G will revolutionize the mobile experience with supercharged wireless network, which can support up to 10 to 20 GBPS of data download speed. It is equivalent to a fiber optic Internet connection accessed wirelessly. Compared to conventional mobile transmission technologies, voice and high-speed data can be simultaneously transferred efficiently in 5G etc*

*Discuss the various areas in which the technology can be employed for better results*

- *Industry 4.0,*
- *mixed reality (MR) applications, which is augmented reality (AR) plus virtual reality (VR),*
- *sports and entertainment,*
- *fixed wireless access*
- *autonomous vehicles etc*

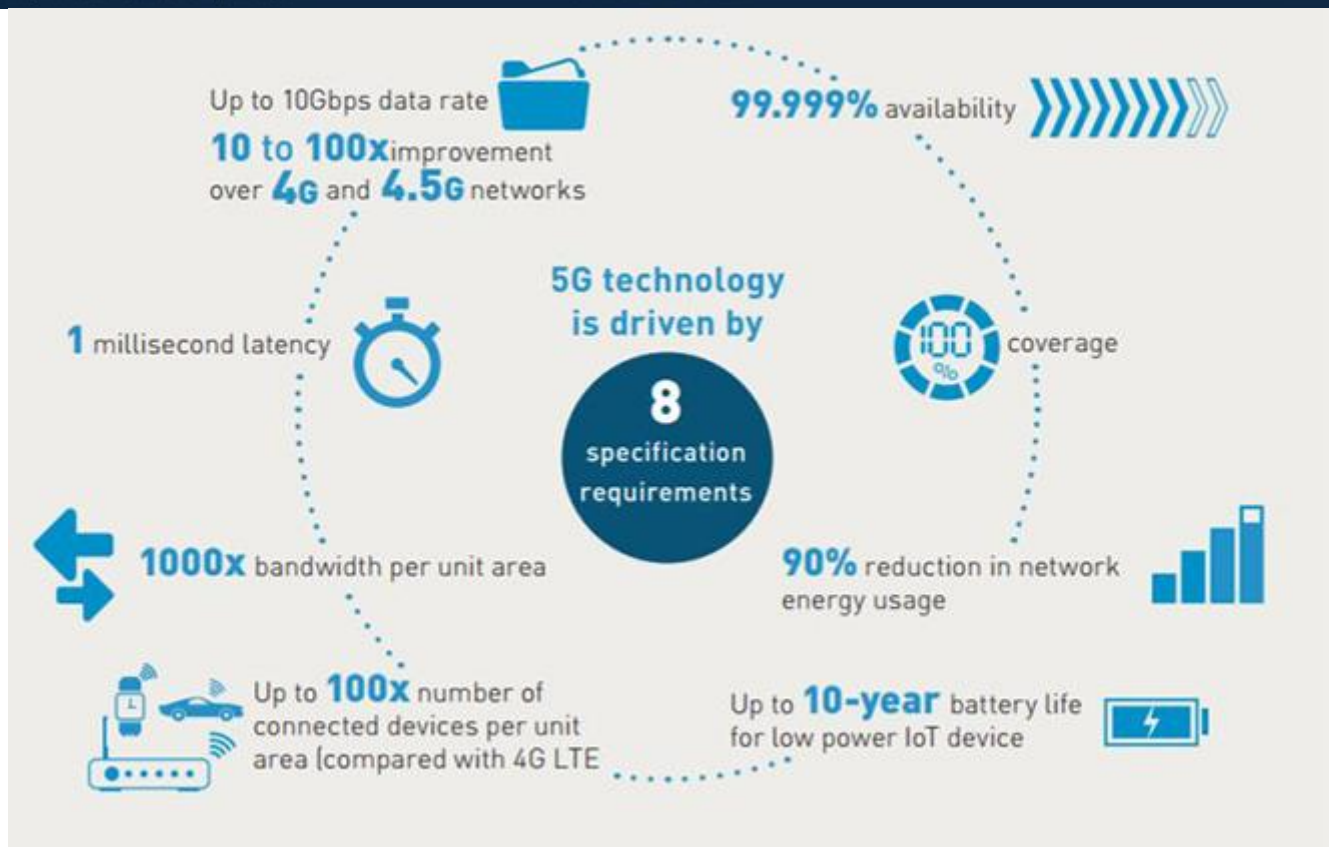
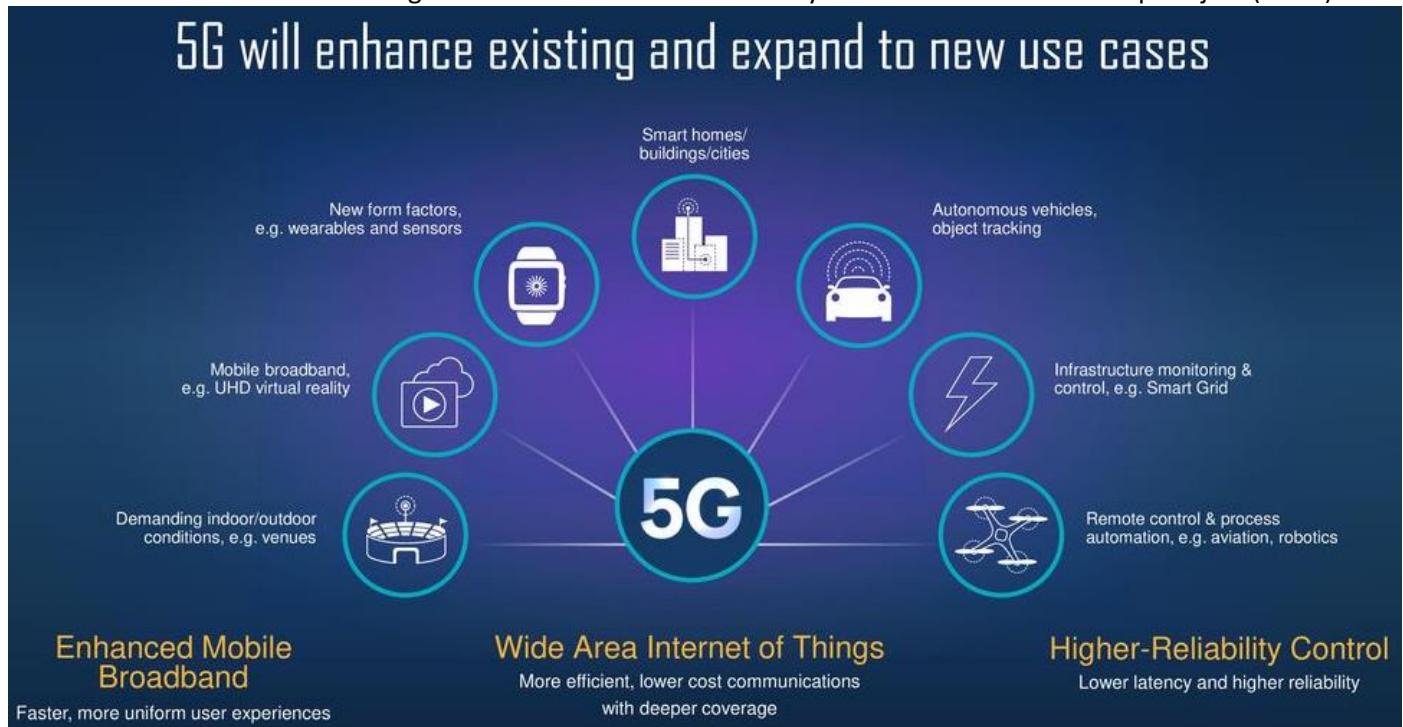
*Discuss the limitations of the technology – High investment cost which makes telecom companies unsure about RoI, in India the telecom sector is facing capital augmentation issues which need to be resolved etc*

**Conclusion** – Give your view on the potential of the technology and the way forward.



### Introduction:

- 5G is **the fifth generation mobile network**. It's a unified platform which is much more capable than previous mobile services with more capacity, lower latency, faster data delivery rate and better utilisation of spectrum. The standards for the usage of 5G are defined and driven by 3rd Generation Partnership Project (3GPP).



### Body:

Characteristics of 5G technology:

The various areas in which the technology can be employed for better results:

- **Industry 4.0:**
  - The manufacturing industry is going through a digital revolution.



- Within the context of Industry 4.0, manufacturers are becoming more efficient through the application of automation and data exchange to their existing factory processes to enable better integrated workflows and smarter manufacturing.
- Industrial IoT technologies are streamlining and simplifying many manufacturing processes in revolutionary ways.
- **Mixed reality (MR) applications:**
  - The MR Apps comprise **augmented reality (AR) plus virtual reality (VR) apps**.
  - Beyond the consumer market (think Pokémon Go), interesting applications are also likely to be found in **industrial and medical contexts**.
  - Remote medical procedures, engineering, public safety and field-service applications are all strong use case opportunities for the application of low latency 5G services.
- **Sports and entertainment:**
  - A combination of VR and AR with ultra high-fidelity enabled by 5G could transform the way fans interact in these events.
  - Motorsports is ideal for VR in particular: equipped with their mobile device or headset, fans could be served information like lap or technical information about cars as they race on the track in a sport like Formula 1
- **Fixed wireless access:**
  - Fixed wireless access could also be used to bring high bandwidth digital services to under-served rural areas.
  - Mobile operators will then be able to compete with wireline, satellite and cable companies, offering new revenue streams and faster RoI.
- **Autonomous vehicles:**
  - The idea that much of the car, if not all of it, is controlled not by the driver but by technology.
  - 5G is critical to realize this as it will offer the connectivity and speed needed to deliver vast amounts of data to one another as well as other objects simultaneously.
  - 5G can provide a completely seamless mobile experience is a must so that cars can stay constantly connected.

**Challenges** present to adapt to 5G are:

- **Frequency allocation:** Indian operators have **far less spectrum** in comparison to international operators. The **high investment cost** which makes telecom companies unsure about Return on Investment.
- **Network investment:** In India, the telecom sector is **facing capital augmentation issues** which need to be resolved.
- **Non-availability of funds for investment:** Many of the Indian operators are also **weighed down by debt**.
- **Regulatory restrictions:** Faster rounds of new technology introduction when prior technology investments have not been recouped add further complexity.
- **Technical Challenges:** Designing IT architecture that can be deployed globally, while still allowing for localized technology to cater for different regions is a challenge.

**Way forward for India:**

- Need to align Digital India with 5G technology.
- Incentivize design and manufacture of 5G technologies, products and solutions in India.
- Allocate funds and incentivise local technology and telecom firms to develop their internal capacities which would in turn help 5G technology succeed in the country
- Promote 5G start-ups that enable this design and manufacturing capabilities.
- Promote generation of IPR backing the above designs.
- Manufacture of 5G chipsets, this may require massive investments.
- Appropriate test-beds and technology platforms to enable and help Indian technical ecosystem to have an edge in 5G.
- Accelerated deployment of next generation ubiquitous ultra-high broadband infrastructure with 100% coverage of 10 Gbps across urban India and 1 Gbps across Rural India.
- Coverage, reliability, and scalability must be optimized and seamless mobile networks will require a unified management policy to ensure consistent standards

**Conclusion:**

- ❖ The **World Economic Forum** predicts that by 2023 there will be a staggering 9.1 billion mobile subscriptions. 5G will act as the catalyst for Digital India—a watershed moment in digital transformation. India is at the cusp of a next generation of wireless technology 5G.





- ❖ It provides an opportunity for industry to reach out to global markets, and consumers to gain with the economies of scale. It can help in better service delivery, faster access to services and deeper penetration of digital services.

**Q) Recently SpaceX's new Dragon capsule was successfully docked on the International Space Station (ISS), the launch proved to be a key step towards resuming manned space flights. In this context discuss the challenges of private participation in India's space program and what are its potentials ? (250 words)**

[The hindubusinessline](http://www.hindubusinessline.com)

**Why this question:**

*The question is in the backdrop of launch of SpaceX's new Dragon capsule that was docked on the International Space Station (ISS), the launch proved to be a key step towards resuming manned space flights. The Indian space program has changed in the last decade with renewed focus on military applications of space, thus the question becomes important with respect to GS paper III.*

**Key demand of the question:**

*The main demand of the question is to explain the importance of private participants in the Indian space industry. What are the Challenges, Opportunities, and Strategic Concerns associated with it.*

**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:**

*Narrate the background of the SpaceX's success with respect to launch of Dragon capsule – a step towards resuming manned space flights.*

**Body:**

*Discuss how an important development in the U.S. space program over the last decade has been the emergence of private sector partners, What role does the private sector play in the Indian space program, and what challenges to further private sector development exist for India. Discuss the most important foreign partners for India in the history of its space program; the relative importance of these partnerships changing, and what opportunities for collaboration has India identified.*

**Conclusion:**

*Conclude with optimism as India can achieve greater heights in Space given its current capabilities.*

**Introduction:**

- Dragon is a **partially reusable spacecraft** developed by SpaceX, an American private space transportation company based in Hawthorne, California. Dragon is launched into space by the SpaceX Falcon 9 two-stage-to-orbit launch vehicle, and is capable of both manned and robotic operation.
- SpaceX's new crew capsule "**Dragon**" arrived at the International Space Station on Sunday, 2<sup>nd</sup> March 2019. Dragon will remain at the space station until Friday, when it undocks and aims for a splashdown in the Atlantic, a couple hundred miles off the Florida coast.

**Body:**

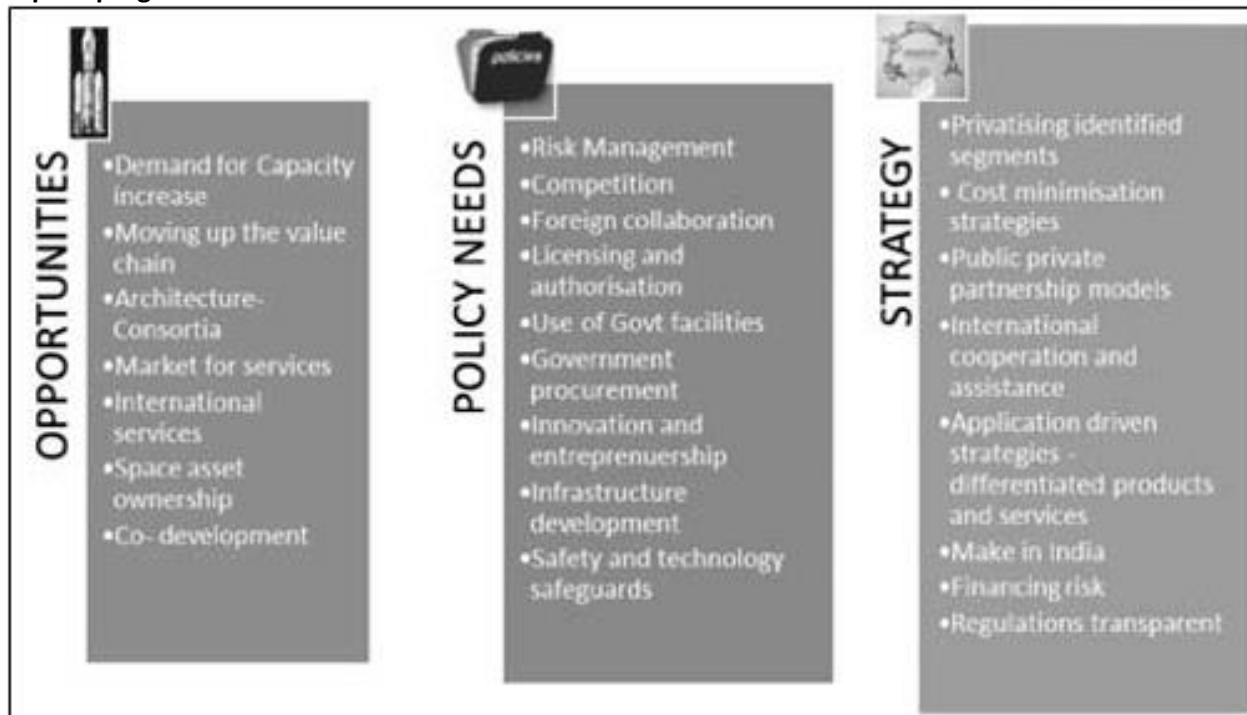
**Importance of Dragon capsule:**

- The test mission is rigged with sensors to measure noise, vibration and stresses, and to monitor the life-support, propulsion and other critical systems throughout the flight.
- It docked autonomously under the ISS astronauts' watchful eyes, instead of relying on the station's robot arm for berthing.
- No one was aboard the Dragon capsule launched Saturday on its first test flight, only an instrumented dummy.
- But the three ISS astronauts had front-row seats as the sleek, white vessel neatly docked and became the first **American-made, designed-for-crew spacecraft** to pull up in eight years.



- If the six-day demo goes well, SpaceX could launch two astronauts this summer under NASA's commercial crew program.
- While SpaceX has sent plenty of cargo Dragons to the space station, crew Dragon is a different beast.
- NASA is paying the two private companies (SpaceX and Boeing) \$8 billion to build and operate the capsules for ferrying astronauts to and from the space station.
- Astronauts have been stuck riding Russian rockets ever since NASA's space shuttle program ended in 2011. Russian Soyuz seats go for up to \$82 million apiece.

### India's space program



### Challenges:

- **Monopoly:** In India 'Space' means Indian Space Research Organisation. Globally the technology is highly protected because of its dual use capability. Even if it was not, it would be prohibitively expensive.
- **Funding:** A major challenge in setting up a space business in India is funding. Space industry is capital intensive and upstream activities come with a long gestation period.
- **Investor's Dilemma:** The lack of clarity among the investors and lack of the ecosystem required for significant contribution is a challenge for the investors.
- **Lack of Regulation:** India is a party to the **Outer Space Treaty**, where one of the fundamental requirements laid upon states is the supervision of space activities within its borders, the country did not have any formally legislated laws. This is a potential roadblock for commercialization.
- **Growth Challenges:** Scaling up, international marketing and funding are challenges.
- **Lack of Support:** the Indian ecosystem has neither incubation support nor pointers to seek support of leaders such as ISRO for space start-ups.
- **Political and bureaucratic hurdles** limits private space operations in India.
- Low in-house capacity of ISRO restricts them to very few launches in a year. Privatization can offload 30-40% of the work and help them work more efficiently.

### Way forward:

- India should have **national space activities legislation** which takes on board all stakeholders.
- A **public-private partnership (PPP) model** can be looked into to realise ISRO's workhorse Polar Satellite Launch Vehicle (PSLV), with a joint venture between ISRO and the private sector.
- In the UK, space ventures are treated as a complement to big organizations and not a competitor. This should be encouraged in India too.
- A **supportive international partner and likeminded local partners** helps to set up a space business.
- The idea should be to let the private industry build their own facilities after gaining enough expertise.
- ISRO has built a space technology park spread over 25 acres in Bengaluru where the entire range of facilities have been set up for use by the industry.



**Conclusion:**

- ❖ The private sector already supplies majority of the sub-systems in satellite manufacturing. This can be further scaled up into other activities with proper regulation and partnership of the ISRO and private sector.

**Q) What is CCR5-delta 32 often seen in news recently ? What are its implications for Indian bioinformatics industry ? Discuss. (250 words)**

[Indianexpress](https://www.indianexpress.com)

**Why this question:**

*The article discusses the recent developments of CCR5-delta 32: The rare mutation that could help stop HIV. It brings out the detailed analysis of case of the London Patient in which case the scientists have successfully duplicated Dr Hütter's CCR5-delta 32 experiment.*

**Key demand of the question**

*The answer must elaborate in detail concept of CCR5-delta 32 in the context of London patient experiment -the remarkable research breakthrough that appears to have cured the anonymous "London Patient" of HIV that was based on a stem cell transplant involving CCR5-delta 32 homozygous donor cells.*

**Directive word**

*Discuss– this is an all-encompassing directive which mandates us to write in detail about the key demand of the question. we also have to discuss about the related and important aspects of the question in order to bring out a complete picture of the issue in hand.*

**Structure of the answer**

**Introduction:**

*One can start with facts and details of the research on the anonymous "London Patient" of HIV and the stem cell transplant involving CCR5-delta 32 homozygous donor cells.*

**Body:**

*Discuss the details of the research, details of Dr Hütter's CCR5-delta 32 experiment, relate it to the famous gene editing – CRISPR technology, in what way it is an improvement over it, discuss how it is indeed a path-breaking technology.*

*Significance of it to the Indian bioinformatics sector etc.*

**Conclusion:**

*Conclude with way forward in the Health industry sector at a global level.*

**Introduction:**

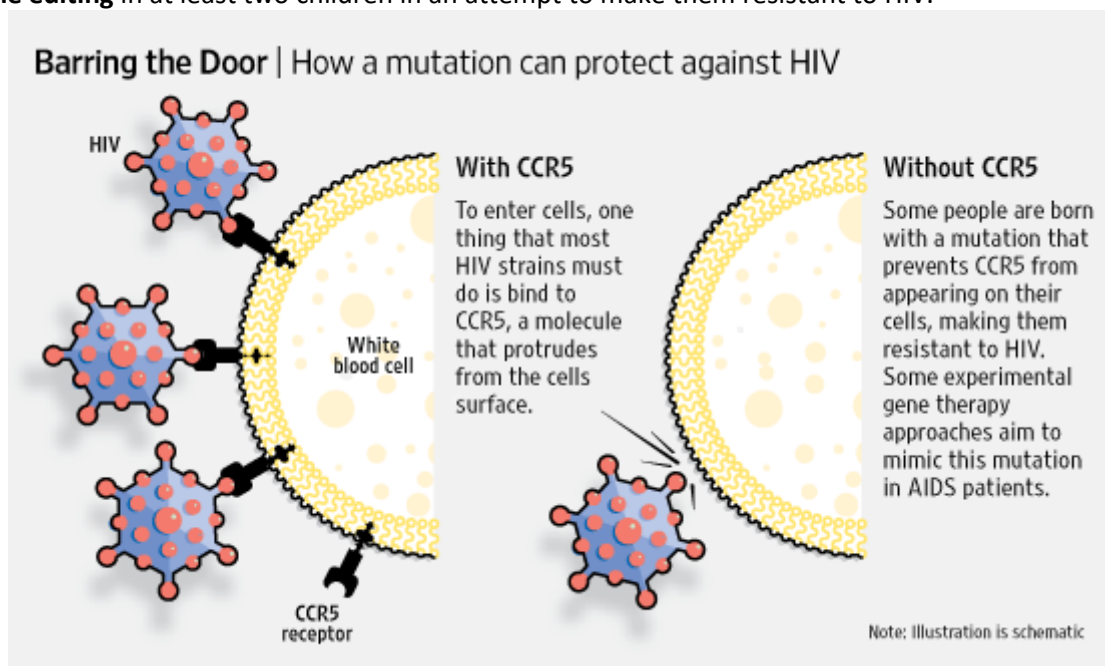
- The remarkable research breakthrough that appears to have cured the **anonymous "London Patient"** of HIV is based on a **stem cell transplant involving CCR5-delta 32 homozygous donor cells**. This is the same treatment that cured Timothy Ray Brown, known as the **"Berlin Patient"** when he received two stem cell transplants in 2007 and 2008.
- The news comes nearly 12 years to the day after the first patient known to be cured, a feat that researchers have long tried, and failed, to duplicate. The **surprise success now confirms that a cure for HIV infection is possible**, if difficult, opine researchers.

**Body:**

**Mechanism behind CCR5-delta 32:**

- HIV uses the CCR5 protein to enter immune cells, but it can't latch on to cells that carry the delta 32 mutation.
- About 1% of people of Northern European descent, mainly Swedes, are born with a **mutation known as CCR5-delta 32**, which "locks 'the door' which prevents HIV from entering into the cell.
- An **allogenic stem cell transplant**, which involves replacing the immune system of HIV Patient with **donor hematopoietic stem cells** (usually found in bone marrow) using **gene editing technology**, so that the former's **immune system could be regenerated**, with no malignant cells.

- Incidentally, CCR5 is the protein that **Chinese scientist He Jiankui** claimed to have modified with **CRISPR/Cas9 gene editing** in at least two children in an attempt to make them resistant to HIV.



### India and HIV/AIDS

- According to **National AIDS Control Organization of India**, the prevalence of AIDS in India in 2015 was 0.26% i.e about 2.11 million people.
- India is home to the world's third-largest population suffering from HIV/AIDS.
- India aims to end HIV/AIDS by 2030 and is a signatory of UNAIDS programme 90-90-90 strategy by 2020.
- It is also enshrined in Government of India's National Health Policy (NHP 2017)
- In 2017, 79% of people living with HIV were aware of their status, of whom 56% were on antiretroviral treatment (ART)

### Way forward:

- With India emerging as Biotechnology hub, more R&D efforts can be channelled towards such researches.
- There is a need to develop gene-therapy approaches to knock out CCR5 on immune cells or their predecessor stem cells. Resistant to HIV infection, these modified cells should eventually clear the body of the virus.
- To treat HIV, the virus that causes AIDS, scientists have been experimenting with using gene therapy to boost the immune system.
- An increase in budgetary allocation to public health care but also a more concentrated effort to increase AIDS awareness.
- Offering direct care to people suffering from HIV/AIDS, general awareness campaigns and the care of children orphaned due to HIV/AIDS-related scenarios.
- Various organisations are working on innovative projects to tackle the stigma and discrimination that hinders access to effective HIV/AIDS prevention, treatment and care services amongst high-risk populations
- The **long-awaited legislation** that seeks to end stigma and discrimination against HIV positive persons in workplace, hospitals and society, while also ensuring their privacy should be brought in to protect the dignity and ensure Right to life for the HIV/AIDS patients.

### Conclusion:

The CCR5-Delta 32 is still in the testing phase. It must be well-tested to confirm the effectiveness of the therapy before commercializing it as dangers of side-effects always lurk in new medical technologies. However, it opens new avenues and offers a ray of hope to many AIDS patients across the globe.

**Q) Discuss the objectives of National Digital Communications Policy 2018. What are the associated concerns? How can India overcome these concerns. (250 words)**

[Indianexpress](https://www.indianexpress.com)  
[vikaspedia](https://www.vikaspedia.com)



### **Why this question:**

World has entered into an era of modern technological advancements in technology sector such as, Internet of things (IoT), Machine to machine (M2M) communication, Artificial intelligence, Big Data etc. a need was felt to introduce customer focused and application driven policy for Indian telecom sector. The policy's aims to serve as the main pillar of Digital India by addressing emerging opportunities for expanding not only availability of telecom services, but also telecom based services.

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

The answer must discuss in detail the objectives of National Digital Communications Policy 2018. The associated issues, challenges and solutions to move forward.

### **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:**

Begin with the importance of the new telecom policy, how it aims to cater the modern needs of the digital communications sector of India.

#### **Body:**

listing out the detailed objectives of the policy – Broadband for all;

Creating four million additional jobs in the Digital Communications sector; Enhancing the contribution of the Digital Communications sector to 8% of India's GDP, Propelling India to the Top 50 Nations in the ICT Development Index of ITU; Enhancing India's contribution to Global Value Chains; and Ensuring Digital Sovereignty.

Vision and mission

Discuss the challenges, issues and concerns associated.

#### **Conclusion:**

Conclude with how the policy will facilitate the unleashing of the creative energies of citizens, enterprises and institutions in India and play an important role in fulfilling the aspirations of all Indians for a better quality of life.

#### **Introduction:**

- With a view to cater to the modern needs of the digital communications sector of India, the Union Cabinet has approved the **National Digital Communications Policy-2018 (NDCP-2018)**.
- The new telecom policy has been formulated in place of the **existing National Telecom Policy-2012** and aims to facilitate India's effective participation in the global digital economy. The policy aims to ensure digital sovereignty and the objectives are to be achieved by 2022.

#### **Body:**

The new policy addresses the following issues of facing telecom sector :-

- The industry is going through a financial crisis as a result of which as many as five operators have shut shop. Overall debt burden of the remaining players has burgeoned to alarming levels due to expensive spectrum auctions and huge reduction in cash flows.
- Telecom consumers are no better today than they were two decades ago when it comes to quality of services. Call drops, unwanted telemarketing calls, patchy data networks and unfair practices to get users pay more are rampant. To make matters worse, consumers do not have access to a reliable and neutral complaint redressal mechanism.
- Public sector companies in this sector continue to languish under high manpower costs and red tape.
- There is a big worry over the huge imports of telecom equipment and devices at a time when India's trade deficit is ballooning.





# National Digital Communications Policy 2018




## Objectives by 2022

- 50 Mbps broadband connectivity to every citizen
- 1Gbps connectivity to all Gram Panchayats by 2020 and 10Gbps by 2022
- Ensure connectivity to all uncovered areas
- Attract investments of USD 100 billion in the Digital Communications Sector
- Train one million manpower for building New Age Skill
- Expand IoT ecosystem to 5 billion connected devices
- Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals
- Facilitate India's effective participation in the global digital economy
- Enforce accountability through appropriate institutional mechanisms to assure citizens of safe and secure digital communications infrastructure and services.

Source: Department of Telecommunications, Gol

## National Digital Communications Policy, 2018

### STRATEGIC OBJECTIVES BY 2022

Connect India	Propel India	Secure India
<p><i>Creating a robust digital communication infrastructure</i></p>  <ul style="list-style-type: none"> <li>▪ Provide universal broadband access with 50 Mbps speed to every citizen</li> <li>▪ Provide 1 Gbps connectivity to all Gram Panchayats of India by 2020 and 10 Gbps by 2022</li> <li>▪ Enable fixed line broadband access to 50% of households</li> <li>▪ Achieve 'unique mobile subscriber density' of 55 by 2020 and 65 by 2022</li> </ul>	<p><i>Enabling next-gen technologies and services through Investments, Innovation, Indigenous manufacturing and IPR generation</i></p>  <ul style="list-style-type: none"> <li>▪ Attract Investments of \$100 billion in the digital communications sector</li> <li>▪ Creation of Innovation led start-ups in digital communications sector</li> <li>▪ Creation of globally recognised IPRs in India</li> <li>▪ Development of Standard Essential Patents in the field of digital communication technologies</li> <li>▪ Train/re-skill one million manpower for building new age skills</li> <li>▪ Accelerate transition to Industry 4.0</li> </ul>	<p><i>Ensuring digital sovereignty, safety and security of digital communications</i></p>  <ul style="list-style-type: none"> <li>▪ Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals and facilitates India's effective participation in the global digital economy</li> <li>▪ Ensure that Net neutrality principles are upheld and aligned with service requirements, bandwidth availability and network capabilities including next generation access technologies</li> <li>▪ Address security issues relating to encryption and security clearances</li> <li>▪ Enforce accountability through appropriate Institutional mechanisms to assure citizens of safe and secure digital communications Infrastructure and services</li> </ul>

Associated concerns to achieve the target:

- **Finances:**
  - The industry is going through a financial crisis as a result of which as many as five operators have shut shop.



- Overall debt burden of the remaining players has burgeoned to alarming levels due to expensive spectrum auctions and huge reduction in cash flows.
- **Quality issues:**
  - Telecom consumers are no better today than they were two decades ago when it comes to quality of services.
  - Call drops, unwanted telemarketing calls, patchy data networks and unfair practices to get users pay more are rampant.
  - To make matters worse, consumers do not have access to a reliable and neutral complaint redressal mechanism.
- **Public Sector failure:**
  - Public sector companies in this sector continue to languish under high manpower costs and red tape.
- **Investments:**
  - Annual investments by mobile phone companies are in the region of around \$10 billion annually, which the government aims to increase significantly.
  - However, the telecom industry is, mostly, in deep trouble and feature in list of stressed companies.
- **Levies:**
  - The policy has still not cut the very high levels of government levies in this regard.
  - India's levies, including the 18% GST, range from 29-32% as compared to just an 11% VAT rate in China.
- **Spectrum prices:**
  - There are also no significant plans in cutting high spectrum prices.
  - While 100% of spectrum put on auction in 2015 remained unsold due to high spectrum prices, this was as high as 59% in 2016.
  - No auctions could take place in 2017 or 2018 due to telcos being cash-strapped.
  - Resultantly, revenues accruing to the government from the sector have fallen by around 37% in just the last two years.
- **Old wine in new bottle:**
  - Almost all the solutions offered find mention in earlier regulations and vision statements. Some of the major targets listed in the 2012 policy are still to be achieved.
  - Instead of delving into why these targets were missed and how things can be improved, the National Digital Communications Policy 2018 lists out more and new targets.
  - Does not have any fresh ideas in terms of addressing the issues being faced by the telecom sector.
  - While restating the Centre's intent to address the problems, it neither spells out how it plans to achieve the stated objectives nor gives a specific timeframe to implement the various proposals.

#### Way forward:

- **Judicious use of the Universal Service Obligation Fund:**
  - USOF was established with an aim to fund projects to boost connectivity in rural areas. The fund must be disbursed fairly to ensure that affordable communication services are available to most citizens.
- **Affordable spectrum prices:**
  - Department of Telecom (DoT) should make available the right of way and spectrum at very affordable price points to provide much-needed relief to the Telecom operators who are operating at a loss.
  - Subsidies towards the roll-out of communication infrastructure can help Telecom operators to become profitable. This will facilitate them in enhancing their R&D and investments towards future expansion.
- **Effective Collaborative initiatives:**
  - The policy's focus on Industry 4.0 techs like IoT and M2M is commendable but there are other initiatives with similar vision like Bharat Udyog.
  - It is important that all such initiatives collaborate for optimal use of funds and share the benefits towards the common vision.
- **Learn from mistakes:**
  - It is important to do a reasonable analysis of the past gaps and study the challenges. This will help in achieving the desired objectives of the policy and not repeat the same mistakes again.

#### Conclusion:

- ❖ The NDCP aims to prepare the country and its citizens for the future. Achieving these goals would require that the key stakeholders – namely the Centre, the States, local governments, Telecom Service Providers, Internet



Service Providers, handset and equipment manufacturers, the academic community, the innovators and start-ups come together to forge a coalition to deliver this national policy and missions.

- ❖ NDCP seeks to **unlock the transformative power of digital communications networks** to achieve the **goal of digital empowerment and well-being of the people of India**; and towards this end, attempts to outline a set of goals, initiatives, strategies and intended policy outcomes.

## Q) India needs a robust IPR Policy to have growth and development. comment. (250 words)

[Livemint](#)

### **Why this question:**

*The article highlights the fact that India has posted highest growth in patent applications in 2018. Thus signifying India's participation in the international patent system, this necessitates us to analyse the need for a robust IPR Policy in India.*

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

*The answer must trace the issues related to intellectual property rights in India and discuss why we are still lacking a robust IPR regime that can harness India's potential in global race of patenting.*

### **Directive word:**

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

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

#### **Introduction:**

*Introduce by highlighting the current scenario of Indian patent system.*

#### **Body:**

*What are Patents? Importance of Patents.*

*Discuss the present India's National Intellectual Property Rights (IPR) Policy; its objectives.*

*The need for robust IPR policy in India is amidst the fact that emerging countries faces fresh challenges from the developed world and mega regional trade agreements.*

*Discuss the issues associated with the current policy and what needs to be done to make it more robust.*

#### **Conclusion:**

*Conclude with necessity of having a robust IPR policy in India.*

#### **Introduction:**

- India filed 2,013 international patent applications in 2018 with the World Intellectual Property Organization (WIPO), registering the highest growth of 27% among countries but falling way below China and the US in volume of patent filings. But India has a long way to catch up with China which is expected to overtake the US as the leading hub for global innovation.

#### **Body:**

- **Intellectual Property Rights (IPRs)** are legal rights, which result from intellectual invention, innovation and discovery in the industrial, scientific, literary and artistic fields. These rights entitle an individual or group to the moral and economic rights of creators in their creation. For ex: In India, **patents are granted for a period of 20 years** from the date of filing of the patent application.
- It is also to be noted that the patents are valid only within the territory where they have been granted. Once a patent expires, protection ends and the invention enters the public domain. In India, **Patent Acts, 1970** regulate the IPRs.

#### **Importance of IPRs:**

- They allow creators, or owners, of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation.





- These rights are outlined in **Article 27 of the Universal Declaration of Human Rights**, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions.
- Patents provide incentives which encourage innovation, which in turn enhances the quality of human life.
- In return for patent protection, all patent owners are obliged to publicly disclose information on their inventions in order to enrich the total body of technical knowledge in the world. This ever increasing body of public knowledge promotes further creativity and innovation.
- The legal protection of new creations encourages the commitment of additional resources for further innovation
- The promotion and protection of intellectual property spurs economic growth, creates new jobs and industries, and enhances the quality and enjoyment of life.
- It ensures credibility and quality of a product thereby enhancing consumers confidence through reliable, international trademark protection and enforcement mechanisms to discourage counterfeiting and piracy.

#### Important highlights from India's present National Intellectual Property Rights (IPR) Policy

- The Policy aims to push IPRs as a **marketable financial asset**, promote innovation and entrepreneurship, while protecting public interest.
- In order to have strong and effective IPR laws, steps would be taken — including review of existing IP laws — to update and improve them or to remove anomalies and inconsistencies.
- The policy is **entirely compliant with the WTO's agreement on TRIPS**.
- **Special thrust on awareness generation and effective enforcement of IPRs**, besides encouragement of IP commercialisation through various incentives.
- India will engage constructively in the negotiation of international treaties and agreements in consultation with stakeholders
- The government will examine accession to some multilateral treaties which are in India's interest, and become a signatory to those treaties which India has de facto implemented to enable it to participate in their decision making process, the policy said.
- It suggests making the department of industrial policy and promotion (DIPP) the nodal agency for all IPR issues. Copyrights related issues will also come under DIPP's ambit from that of the Human Resource Development (HRD) Ministry.
- Films, music, industrial drawings will be all covered by copyright.
- The Policy also seeks to **facilitate domestic IPR filings**, for the entire value chain from IPR generation to commercialization. It aims to promote research and development through tax benefits.

#### Issues with the current policy:

- Policy is aimed at a **gold rush towards IPR**. A blind rush towards IP could be a **deterrent to innovation itself by restricting knowledge flow**.
- Policy recommends scientist and professors to convert all their discoveries into IP which in turn has the potential to curb the free flow of knowledge
- IPR policy is driven by the **agenda of IP maximalism**, where IP owners' rights will be maximised at the cost of public interest. This (policy) will influence courts and judges who might consider rights of patentees above that on common man in certain cases.
- Connection between patenting and application of patented knowledge is yet to be established. Hence, patenting and not applying the new invention could deter progress
- Policy recommends **criminalization of unauthorised copying of movies** — which is just a civil wrong.
- Not understanding the modes of creativity and sharing in "**shadow economy**", the policy leans towards **superimposition of formal IP framework**.
- While IP could accelerate innovation in certain technologies it in turn impedes in others. Policy recommends scientist and professors to convert all their discoveries

#### Way forward:

- Fostering an environment where innovation flourishes and a knowledge economy is built, is the key idea. Hence, the policy should have a balance.
- It should encourage patenting and at the same time ensure that patentability of a product/process does not deter further innovation and progress.
- Intellectual Property must not be about patents on paper but dearth of application in reality. T
- The organisations such as CSIR and others must be encouraged to work upon socially useful applications of their patents.



- Support for innovation has to be accompanied with instruments that guard local companies against the misuse of market power, coercive bargaining and aggressive acquisition strategies.
- India needs to spread awareness on IPR in public and for its traditional industries to enable fair monetisation of IP Rights.
- It needs to safeguard its patents, copyrights and traditional knowledge by ensuring easy IPR rules.

**Q) Discuss the objectives and features of recently approved Global Trademark System by Government of India, What are its significance and benefits for India? Elaborate.(250 words)**

[The hindubusinessline](http://www.insightsias.com/the-hindubusinessline)

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

*The question is in the context of the recent decision of the cabinet – of approving the proposal for India's Accession to the Nice, Vienna and Locarno Agreements, that would harmonize the classification systems for examination of trademark and design applications, in line with the systems followed globally.*

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

*The answer should bring out the benefits of such a decision, as to how the accession is expected to instill confidence in foreign investors in relation to protection of IPs in India. How the accession will facilitate in exercising rights in decision-making processes regarding review and revision of the classifications under the agreement among others.*

#### **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 briefly the context of these agreements and highlight the significance.*

##### **Body:**

*The aims and objectives of the agreements .*

*Significance and benefits for India: Accession to the Nice, Vienna and Locarno Agreements will help the Intellectual Property Office in India to harmonise the classification systems for examination of trademark and design applications, in line with the classification systems followed globally. It would give an opportunity to include Indian designs, figurative elements and goods in the international classification systems. The accession is expected to instil confidence in foreign investors in relation to protection of IPs in India. The accession would also facilitate in exercising rights in decision making processes regarding review and revision of the classifications under the agreement.*

*Way forward.*

##### **Conclusion:**

*Conclude with optimism and the benefits it would bring to India.*

#### **Introduction:**

- A trademark is a recognizable sign, design, or expression which identifies products or services of a particular source from those of others. Trademark registration can be obtained for a business name, distinctive catch phrases, taglines or captions. In India, Trademarks Act 1999 governs it.
- The Cabinet recently approved the proposal for **India's Accession to the Nice, Vienna and Locarno Agreements**, that would **harmonise the classification systems for examination of trademark and design applications**, in line with the systems followed globally.



**Body:**

**Aims and objectives of the agreements:**

- **Nice Agreement**
  - The Nice Agreement establishes the international classification of goods and services for the registration of trademarks and service marks. It was formed in the year 1957 and is classified on the basis of a multilateral treaty governed by WIPO (World Intellectual Property Organization).
- **The Vienna Agreement**
  - The Vienna Agreement establishes a classification for marks that include figurative elements. The agreement was formed in the year 1973 and later amended in 1985.
- **The Locarno Agreement**
  - The Locarno Agreement establishes a classification for industrial designs. It was formulated in 1968 and later amended in 1979.
- All three agreements are administered by the **World Intellectual Property Organization**.

### Significance and benefits for India:

- Accession to the Nice, Vienna and Locarno Agreements will help the Intellectual Property Office in India to harmonise the classification systems for examination of trademark and design applications, in line with the classification systems followed globally.
- It would give an opportunity to include Indian designs, figurative elements and goods in the international classification systems.
- The accession is expected to **instil confidence in foreign investors in relation to protection of IPs in India.**
- The accession will also **facilitate in exercising rights in decision-making processes regarding review and revision of the classifications under the agreement.**
- These distinctive signs seek to stimulate, ensure healthy competition, and protect consumers by helping them to make informed choices among various goods and services.
- The three agreements:
  - Create a Union, which has an Assembly. Every State that is a member of the Union is a member of the Assembly.
  - Among the most important tasks of the Assembly is the adoption of the biennial program and budget of the Union.
  - Set up a Committee of Experts in which all members of the Union are represented. The main task of the Committee is the periodical revision of the Classification.

### Conclusion:

- ❖ The accession is part of the government's commitment to strengthen the Indian Intellectual property regime. It is in line with the objectives of **National Intellectual Property Rights Policy 2016**.

**Q) With increasing advancement in science, antimicrobial drugs are increasingly faltering across the world and therefore the microbial infections are coming full circle. Discuss the causes and consequences of such a conundrum and suggest a strategy to fight against antibiotic resistance. (250 words)**

Hindustantimes

**Why this question:**

*The article discusses in detail the present puzzle of growing antibiotic resistance amidst peaking research of anti-microbial drugs.*

**Key demand of the question:**

*The answer must trace the issues involved in the antimicrobial resistance, what are the causes of such a scenario, why is the research in science failing to address the issue, what are the ground causes and the consequences of such resistance on the health of human beings. One has to suggest a way forward as to what needs to be done to overcome the menace.*

**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:**

*Introduce by highlighting the current scenario of antimicrobial resistance across the world.*

#### **Body:**

*Phenomenon of antimicrobial resistance.*

*Causes – misplaced priority on healthcare than on the public health system, high disease burden of infectious diseases due to rampant malnutrition, low immunity to microbial infections; sorry state of waste disposal facilities which results in mixing of antibiotic compounds with the water resources; drug companies manufacturing drugs containing substandard dosages; failure of medical education to impart precise diagnostic capabilities to medical practitioners etc.*

*Consequences – severe health, medical and financial costs etc.*

*Explain the above with necessary examples, preferably from India.*

*Suggest what needs to be done to overcome this situation.*

#### **Conclusion:**

*Conclude that the government should come up with multi-pronged strategy to fight against antibiotic resistance.*

#### **Introduction:**

- The **WHO** defines antibiotic resistance (AMR) as a condition wherein microbes survive when exposed to the drug which would have normally caused them to die. Antibiotics that once cured ailments across the spectrum are now turning into a potential source of prolonged illness, disability and death.
- It is not a country specific issue but a global concern that is jeopardizing global health security. Antimicrobial resistance is one of the major public health problems. In India the infectious disease burden is among the highest in the world.

#### **Body:**

Other causes:

- WHO survey shows that three quarters (75%) of respondents think, incorrectly, that colds and flu can be treated with antibiotics.
- Discharge of antimicrobial waste into the environment from pharmaceutical industry.
- Growing antibiotic use in the animal sector and increased demand for meat and poultry.
- Nexus between doctors and pharmaceutical companies where doctors routinely receive compensation in exchange for antibiotic prescriptions.
- Lack of new antibiotics being developed.
- Poor infection control in hospitals and clinics.

#### **Concerns due to increase AMR:**

- Inadequacy of public finance which will result in the conditions favourable for development of drug resistance.
- Antimicrobial resistance will result in difficulty in controlling the diseases in the community and ineffective delivery of the health care services.
- Neonates and the elderly both are more prone to infections and are vulnerable.
- A very significant part of out-of-pocket expenditure on health care is on medicines. The ineffective drugs and/or second line expensive antibiotics is pushing the treatment costs higher.
- WHO has published its first ever list of antibiotic-resistant 'priority pathogens' —a catalogue of 12 families of bacteria that pose the greatest threat to human health and most of these 12 superbugs have presence in India.

#### **Steps taken to deal with the menace:**

- Indian Association of Paediatrics, the Global Antibiotic Resistance Partnership, and **the Chennai Declaration** have helped build awareness about the problem.
- To prevent over-the-counter (OTC) sales of antibiotics, the Central Drugs Standard Control Organization (CDSCO) order prohibits medical stores from selling 24 key antibiotics without a doctor's
- ICMR has set up **National Anti-Microbial Surveillance Network** for understanding of mechanisms of resistance.
- **National Policy for Containment of Antimicrobial Resistance (2011)**, to address the problem of multi-drug resistance.



- India developed **National Action Plan to combat Antimicrobial Resistance** as part of India's commitment to the **WHO's Global Action Plan**.

# CAUSES OF ANTIBIOTIC RESISTANCE



Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.



Over-prescribing of antibiotics



Patients not finishing their treatment



Over-use of antibiotics in livestock and fish farming



Poor infection control in hospitals and clinics



Lack of hygiene and poor sanitation



Lack of new antibiotics being developed

[www.who.int/drugresistance](http://www.who.int/drugresistance)

**#AntibioticResistance**



World Health Organization

## Way forward:

- Rationalizing antibiotic use to limit antibiotic resistance in India.
- Improving regulation of drug production and sales
- Better managing physician compensation
- Encouraging behavior change among doctors and patients** are of immediate priority.
- Regulation of the e-Pharmacies** which gives an easy access to drugs.
- Improved management of the health care delivery systems, both public and private, will minimize conditions favourable for the development of drug resistance.
- Improved awareness of antimicrobial resistance through effective communication. WHO's World Antibiotic Awareness Week is one such event.
- Reducing the incidence of infection through effective infection prevention and control. As stated by WHO, making infection prevention and hand hygiene a national policy priority.
- Discourage non-therapeutic use of antimicrobial agents** in **veterinary, agriculture and fishery** practices as growth-promoting agents.
- Promoting investments for antimicrobial resistance activities, research and innovations
- Strengthening India's commitment and collaborations on antimicrobial resistance at international, national and sub-national levels.
- Regulate the release of antibiotic waste** from pharmaceutical production facilities and monitoring antibiotic residues in wastewater.





*Topic: Conservation, environmental pollution and degradation, environmental impact assessment.*

**Q) The Tiger population in India has more than doubled in the past decade with focused conservation efforts, however man-Tiger conflicts have also been on the rise in India. Does this call for a rethink of conservation policies? Examine. (250 words)**

The hindu

**Why this question:**

*The article provides for an assessment of rising man-animal conflict and on how development projects in tiger habitats and the fragmentation of migration corridors have called for a rethink of conservation policies.*

**Key demand of the question:**

*The answer must first appreciate how the dedicated conservation policies have helped double the Tiger population in the past decade, however the policies have missed to take into account the limited habitat for the increased population leading to man-animal conflicts. You must analyse the current conservation policies, what needs to be done to manage the situation in the best interest.*

**Structure of the answer:**

**Introduction:**

*Begin with quoting some facts justifying rising population of the wild cats due to directed conservation programmes in the country. Also highlight the recent examples of man-animal conflicts.*

**Body:**

*Causes of Man-Animal conflict: specific to Wild cats*

*Impact of Man-Animal Conflict*

*Case-Studies like Tiger-Human Conflict- Pilbhit Tiger reserve,*

*Government Initiatives in this direction – Ministry of Environment and Forest and Climate Change Guidelines on Man-Animal conflict, Best International Practice etc.*

*What changes are needed in the current conservation policies to overcome the problem.*

**Conclusion:**

*Conclude with Environmental justice and man -animal harmony as the need of the hour.*

**Introduction:**

The 2006 tiger census by the **National Tiger Conservation Authority** had pegged the number of tigers at 1,411. In 2010, there were 1,706 tigers, and in 2014, the number jumped to 2,226. Officials involved with the 2018 tiger census operations say that the number is now closer to 2,600. Aided by **excellent conservation efforts, more awareness, and forest management and control over poaching**, the overall tiger population in the country has gone up.

**Body:**

The rising tiger population is news to rejoice as the conservation efforts are being paid off well. However, there is an increase in the man-tiger conflicts as well. Man- tiger conflict is an existential crisis not only for the animals, but for human beings as well with data showing that about one person has been killed every day for the past three years by roaming tigers or rampaging elephants. The causes and impacts of the man-tiger conflicts are:

- A rising tiger population is forcing the animal to seek out new hunting grounds, as tigers need a **huge prey base**.
- **Unsustainable development:**
  - Continued destruction and divergence of forest lands.
  - Tiger reserves, national parks and sanctuaries exist only as islets in a vast sea of human, cattle and unsustainable land use.





- People are **increasingly encroaching** into the country's traditional wild spaces and animal sanctuaries, where people compete with wildlife for food and other resources.
- These conflicts have increased as elephants increasingly find their usual corridors blocked by **highways, railway tracks and factories**
- **Urbanisation and growth agendas** alter landscape dynamics, which has a cascading effect on the ecological dynamics of wildlife. This results in ecological dislocation of sorts, wherein endangered wild animals like tigers either cause distress or land themselves in trouble
- **Failure of government measures:**
  - 'Human-Tiger conflict mitigation' said most of the measures are **dysfunctional, haphazardly implemented and therefore not effective**
  - Tigers are used to travelling long distances, most of which fall outside the protected areas.
  - **Example:** A tiger, fitted with a tracking collar, was found to have travelled 500 km in 72 days, starting from its habitat in the 138 sq. km Bor Tiger Reserve in Wardha district. It travelled through Amravati and Nagpur before getting electrocuted on a farm in Wardha.
  - Wildlife experts' claim that **territorial animals do not have enough space within reserves** and their prey do not have enough fodder to thrive on. This is forcing the wild animals to move out and venture close to human habitation in search of food.
  - **Example:** The Pench Tiger Reserve has 30 tigers. While an adult tiger requires 25-40 sq km of forested area to enjoy sufficient quantity of prey, now there is one tiger for every 8-10 sq km, leading to spillage says Vinod Thakur, a Veterinary doctor and conservation activist.
  - There is **no mapping of the tiger corridors, or any of the well-defined routes that the tigers may be using for migration and resettlement**. Adding to the confusion is that there are **many forest tracts that abut the roads**.
- Primary reason for the increasing human-animal conflicts is the **presence of a large number of animals and birds outside the notified protected areas**. Wildlife experts estimate that **29 per cent of the tigers in India are outside the protected areas**.
- **Example:** Monkeys along with grey langurs have adapted to urban habitats over the years.
- There is **no proper land use planning and management, cumulative impact assessments or wildlife management**.
- There is **no buffer zone between wildlife and human settlements**. The hamlets on the fringes of the jungle have expanded rapidly. **Example:** Sarati, which didn't exist before 2003, has 1,057 voters, Vihirgaon has 719 voters, and Lone, another village where Avni claimed a human life, has 417 voters near Tipeshwar Wildlife Sanctuary, Maharashtra.
- **Road kill of wild animals** and Electrocuting are the new enemies to India's tigers. **Example:** road kill incidents are quite common on NH 44 (connecting Srinagar to Kanyakumari), which passes through some of the most picturesque river valleys, ridges, and forested zones in central India. About **16 tigers have been killed** in road and train accidents over the past five years. Forty-two leopards have also come under wheels.
- The **'four-laning' of the national highway** running through the Pench Tiger Reserve and Kanha Tiger Reserve, and **the widening of the railway line in central India** from narrow gauge to broad gauge, for the fragmentation of the habitat.
- The **large-scale projects** that are coming up near the sanctuaries. **Example:** Forest Department officials have trans-located a village called Agarzari on the border of the Pench Tiger Reserve. But the resorts that cropped up there after changes in land use continue to operate. These use barbed wire and electrified fencing to keep animals at bay, leading to accidents.
- Avni (T-1), the tigress that is said to have killed 13 villagers in and around Yavatmal district of Maharashtra

#### Impacts of Man-Tiger conflicts:

- Crop Damage.
- Animal Deaths.
- Loss of Human Life.
- Injuries to People.
- Injuries to Wildlife.
- Livestock Depredation.



### Government Initiatives to reduce the man-tiger conflicts are:

- **Awareness programmes** to sensitize the people about the Do's and Don'ts to minimize conflicts
- **Training programmes for forest staff and police** to address the problems of human wildlife conflicts
- Approach by **wildlife protection act, 1972** is that the model of conservation enshrined in is premised on **creating human-free zones for the protection of rare species based on the erroneous notion that local people are the prime drivers of wildlife decline**. This approach has been successful in protecting certain species, not all species.
- Providing **technical and financial support** for **development of necessary infrastructure and support facilities for immobilization of problematic animals**.
- Providing LPG to villagers: LPG should be provided to those villagers who frequently go to the forest areas specially wildlife habitats to fetch fuel wood for their chullahs so that they may stop penetrating into forest and stop inviting Man- Animal Conflicts.
- **State governments:**
  - Assistance to state government for construction of boundary walls and solar fences around the sensitive areas to prevent the wild animal attacks
  - Supplementing the state government resources for payment of ex gratia to the people for injuries and loss of life in case of wild animal attacks
  - Encouraging state government for creation of a network of protected areas and wildlife corridors for conservation of wildlife.
  - **Eco development activities in villages** around protected areas to elicit cooperation of local community in management of the protected areas.
  - Supporting involvement of the research and academic institutions and leading voluntary organisations having expertise in managing human wildlife conflict situations.
  - To control poaching: Poaching of wild animals should be stopped so that the no of wild animals can stabilize at its carrying capacity which would reach equilibrium in the ecosystem and this equilibrium between the numbers of prey animals and predators in the forest ecosystem would be maintained.
- **Technology:**
  - Information technology like radio collars ,GPS, satellite uplink facilities are used by research institutions to monitor the movement of wild animals
  - Centrally sponsored schemes of project tiger, project elephant and integrated development of wildlife habitats
  - **Solar Fencing around agriculture fields:** Agriculture fields situated near wildlife habitat/forest areas can be protected by stone fencing or solar fencing. Solar fencing has been tried with quite good effect in Wardha District of Maharashtra.

### Way Forward:

- **Forest corridors** linking protected areas must be maintained where they exist.
- Existing habitats have to be surveyed and improved to provide food for the elephants
- **Local communities** need to be educated to have reduced stress levels in elephants during conflict mitigation, no fire, no firecracker and no mob crowds.
- There is a need for a **monitoring mechanism** which will record and disperse information on such conflicts
- Experts suggest the other way to reduce the man-animal conflict is to increase the population of wild ungulates, namely hares and the wild boars, both of which are prolific breeders, as a prey for wild carnivores. Separate big enclosures can be made in the jungles to breed them. The excess stock can be released in the jungles at regular intervals for the wild carnivores to prey upon.
- The **draft National Forest Policy** will be an overarching policy for forest management. Also there is a proposal for National Community Forest Management (CFM) Mission which will be launched soon.
- In order to be truly effective, prevention of human-wildlife conflict has to involve the full scope of society: international organizations, governments, NGOs, communities, consumers and individuals. Solutions are possible, but often they also need to have financial backing for their support and development.

**Q) In the light of recent Forest Survey report, discuss the significance of Forest Survey in India. What are the issues and challenges involved ? Elucidate. (250 words)**

The hindu



### Why this question:

The article is in the background of the recent recommendations made by the high-power committee constituted by the Ministry of Environment, Forest and Climate Change (MoEFCC) that forest surveys — the biennial exercise by the government to estimate forest cover — should explicitly demarcate trees grown in forests from those grown outside, that is, in plantations and private lands.

### Key demand of the question:

The answer must discuss the significance of the forest surveys in India; importance, issues and challenges involved and how do we address such challenges.

### 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:

Begin with the importance of forests as a key natural resource, forest surveys as a prime most step in conservation efforts to save forests .

#### Body:

Discuss the importance of forests, bring out the role of forest surveys – in terms of assessment, analysis of the status of the natural resources. Bring out how they highlight the conditions of forests effectively, what are the issues involved in these surveys, what needs to be done, government's role in dealing with these challenges.

#### Conclusion:

Conclude with the importance of the survey and suggest way forward.

#### Introduction:

- Forests provide renewable raw material; and energy, maintain biological diversity, mitigate climate change, protect land and water resources, provide recreation facilities, improve air quality and help alleviate poverty. At the same time forests are affected by fire, grazing, pest and invasive species and are also the primary targets for agricultural and urban expansion.
- India is among top ten nations in the World in Terms of Forest Area. As per the latest FAO report, India is placed 8<sup>th</sup> in the list of Top Ten nations reporting the greatest annual net gain in forest area. 24.4% of land area under forest and tree cover.

#### Body:

- **Forest Survey of India**, an organization under Ministry of Environment Forests & Climate Change recently published 'India State of Forest Report 2017' based on **satellite imagery**.

#### Significance of Forest Survey in India:

- The Report provides **state/district wise forest cover** of the country and change thereon with the previous assessment.
- It also provides the **estimates of growing stock within and outside the forest areas, forest cover in hill, tribal and north eastern states**.
- Survey serves as an important tool to **monitor the country's forest resources and plan suitable scientific and policy interventions for their management**.
- The Tree cover is estimated by using sampling based exercise and estimated partly through high resolution satellite data (RESOURCESAT-II with a spatial resolution of 23.5 meters) and partly through field level inventory data.
- In the recent survey report, along with Tree cover, information on Carbon stock in India's forest and Bamboo resources have been incorporated.
- Forests play an important role in **mitigation and adaptation of climate change**. Carbon data by FSI was reflected in India's initial National communication submitted to UNFCCC.



- **Carbon stock information** has been used for deciding the target for India's INDC (Intended Nationally Determined Contributions).
- FSI has been carrying out real time forest fire monitoring at national level since 2004 using Remote Sensing and GIS Technology. The objective is to **detect and inform state forest departments about active forest fires on near real time basis**.

The Special Features of current FSI report (ISFR-2017) report are:

- Forest cover in the country is assessed **irrespective of ownership, legal status and land use**.
- This information provides **qualitative and quantitative attributes for effective forest management and devising appropriate strategies**.
- FSI has given **information on forest cover in and outside green wash area** for those states from where digitized records are not present. Green wash areas are represented by forests by Survey of India during its survey.
- Information has been given for **633 districts** by using new and updated district boundaries.
- **State wise information on Carbon stock** in the country's forests has been provided.
- **FSI fire alerts** issued to State Forest departments during last five years has been provided.
- For the first time, the report contains information on the **decadal change in water bodies in forests**.

The various issues and challenges involved in the Forest Survey are:

- **No explicit demarcation of trees grown** in forests from those grown outside, that is, in plantations and private lands.
- The ecosystem services performed by plantations that have a lot of trees grown for commercial purposes cannot be equated with those of an undisturbed assemblage of plants, trees and animals.
- Currently, the government counts both towards estimating the portion of India's geographical area covered by forest. This gives a wrong estimate of forest cover in India.
- Forest cover is different from 'recorded forest area' which the ISFR defines as legally notified forests
- Independent critics have for long pointed out that including both isn't an ecologically sound principle.
- The government also includes substantial patches of trees outside areas designated as forests, such as plantations or greenlands, in its assessment.
- An estimate listing very dense, moderately dense, open and scrub forests mapped through remote sensing does not really provide deep insights into the integrity of the green areas.
- A cumulative loss of forests is recorded in Mizoram, Nagaland and Arunachal of nearly 1,200 sq km. The impact of such a loss must be seen against the backdrop of the Northeast representing a global biodiversity hotspot.
- Any gains achieved through remediation programmes in Odisha, Assam, Telangana, Rajasthan, Himachal Pradesh, Uttar Pradesh, Jammu and Kashmir and Manipur cannot compensate for it adequately.
- There is an ongoing debate on the resolution of satellite imagery the government uses to conduct the forest survey.
- The scientific reports are based on a mix of satellite data, ground vegetation observations and historical maps. This is at odds with the latest Forest Survey of India report that assesses India's forest cover.

**Way forward:**

- FSI should consider reporting India's green cover under more explicit categories, including plantations, orchards etc.
- It could also help to make the GPS data for each forest unit available for public audits.
- Expanding forest cover should be prioritised in the years to come and non-conventional green cover such as home gardens and urban forests should also be considered.

**Conclusion:**

- ❖ India's forests are critical for its ecosystem because they **absorb 11.25 percent of the country's greenhouse gases**. The value of what is technically called an "**ecosystem service**" would amount to **Rs 6 lakh crore (\$120 billion) or 4.2 percent of India's gross domestic product**.
- ❖ The increase in forests is important to improving biodiversity and reducing damage caused by natural disasters like floods. States that have reported damage by floods had fewer forests compared to states that had reported less damage. Forest Survey helps in assessment of the forests and take up the necessary actions by the State.



**Q) Reports have suggested nearly 50% of the country is currently facing drought with at least 16% falling in the “exceptional” or “extreme” category, in the light of the above statement, Discuss the significance of ground water recharge. What are the challenges being faced in India with respect to it and what needs to be done. (250 words)**

[Hindustantimes](https://www.hindustantimes.com)

**Why this question:**

*Groundwater is a critical resource whose comprehensive management is unconditionally essential. Various reports have pointed out the shocking drop in groundwater levels across the country. The issue compels us to inspect the causes behind this shortage and suggest steps to overcome the problems associated with the issue.*

**Key demand of the question:**

*Scenario of acute shortage of groundwater in the country with facts and statistics justifying it. Examine the various factors that have led to this crisis*

*What are the challenges involved in providing for a solution and what needs to be done.*

**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:**

*Begin with the highlights of the above report, what it points to, and paint a picture of current conditions of ground water management in the country.*

**Body:**

*The problem of groundwater shortage in India (the article discusses the management of river systems and their role in groundwater replenishment)*

*Examine the causes behind groundwater shortage under various heads – policy lacunae, overexploitation, lack of legal provisions, indiscriminate pollution etc.*

*Suggest ways to deal with the crisis. Quote from research articles, policy strengthening, legal provisions like groundwater management bill etc*

**Conclusion:**

*Re-stress on the importance of groundwater as a natural resource and the necessity to manage it well for our own good keeping into account the growing water crisis.*

**Introduction:**

- In a report released recently, the Indian Institute of Technology, Gandhinagar, the University of California, and the India Meteorological Department, Pune, said nearly 50% of the country is currently facing drought with at least 16% falling in the exceptional or extreme category.
- India is on the threshold of a very serious groundwater crisis, which needs mitigation both in the fields and at the policy corridors of the country.

**Body:**

**The problem of groundwater shortage in India:**

- India is the **largest user of the groundwater in the world** with almost **90% being used for drinking water and almost 60-70% for irrigation.**
- According to the assessment of the **Central Ground Water Board (CGWB)**, total 1,034 out of 6,584 assessed blocks in the country are over-exploited
- Current statistics also show that **nearly 50% of urban water supply comes from groundwater.**





- At **260 cubic km per year**, the country is the highest user of groundwater in the world. We use **25% of all groundwater extracted globally**, ahead of the US and China.
- This was not the case in the 1960s and 1970s but the need to grow more food (the Green Revolution) changed that. In 1947, the share of groundwater in agriculture was 35%; today it is 70%.

#### Causes for ground water exploitation in India:

- **Water intensive crops:**
  - Government encourages farmers to produce water-intensive crops like rice and sugarcane through increased minimum support prices (MSP). This has also led to groundwater depletion, income inequality and unsustainable agriculture.
  - Farmers are digging more and more borewells, but the sources of the problem are many, including transition to water-intensive crops and spate of construction activity along catchment areas.
- **Droughts:**
  - Successive droughts and erratic rainfall have led to excess extraction of groundwater. That explains 61 per cent decline in groundwater level in wells in India between 2007 and 2017.
- **Dams and river-dying:**
  - The critical relationship that exists between adequate river flows and aquifer recharge, and the reasons behind its current broken state.
  - When a river flows, almost **20-30% of its monsoon water feeds aquifers, saturating the water table**; 30-40% evaporates; and 40-50% flows on the surface.
  - But when we hold the monsoon flow in a reservoir behind a dam, both the surface flow and the associated aquifers suffer.
- **Government failure:**
  - The government finance for well digging and pump installation with capital subsidies, massive rural electrification and pervasive energy subsidies all have enabled this process to aggravate.
  - Zero marginal cost of pumping and lack of restriction on volume of water resulted in inefficient and unsustainable use of the resource.
  - Lack of adequate planning, crumbling infrastructure, indiscriminate drilling of borewells, large-scale consumption of water, and a false sense of entitlement in using water carelessly are causing water shortages.
- **Policy lacunae:**
  - Existing rules on groundwater access that give landowners the right to pump on their land
  - Subsidies on electricity are thought to play a central role in the Indian groundwater crisis. The vast majority of groundwater pumps are unmetered, and if charged, are billed at a flat, non-volumetric, and highly subsidized tariff.
  - In the north western parts of India and southern peninsula, the early and rapid rural electrification, free or subsidised power to the farm sector, large productive farmers and attractive procurement prices for major cereals led to intensive use of groundwater.
- **Urbanization:**
  - India's huge groundwater-dependent population, uncertain climate-reliant recharge processes and indiscriminate land use changes with urbanization are among the many factors that have rendered the Indian groundwater scenario to become a global paradigm for water scarcity, for both quantity and quality.
  - Cities like Bengaluru are losing its capacity to recharge groundwater as the number of water bodies like lakes has reduced by 79%
  - Commercial establishments like shopping malls, hotels, hospitals and high-rise apartments are using borewells in large number to meet the demand for the occupants.

#### Steps to make India water secure:

- **Sustainable Agricultural practices:**
  - Growing less water-intensive crops in the dry season and transitioning away from irrigation-intensive systems where there is little water.
  - we must restrict groundwater withdrawal to shallow aquifers, which get annually recharged during the monsoon season, thanks to the flowing streams
  - Crisis can be tackled by restoring and enhancing groundwater recharge areas, stopping polluted water from recharging groundwater, rainwater and roof top harvesting and the restoration of ponds, lakes and other river systems.





- **Micro-irrigation techniques:**
  - Encouraging farmers to adopt micro-irrigation techniques such as drip irrigation and micro-sprinklers.
  - According to the NITI Aayog's **CWMI report**, adopting micro-irrigation techniques can save roughly 20% of the groundwater used annually on irrigation in India.
- **Curbing subsidies:**
  - An analysis of panel data across 370 districts in India found that a reduction in electricity subsidy was correlated with a decrease in groundwater extraction .
  - Most empirical studies are in favour of pricing electricity on the basis of actual consumption. They show that the energy prices at which the farmers start responding to tariff changes in terms of reducing the demand for water and electricity would be socio-economically viable.
- **Technology:**
  - Solar desalination, wastewater management and groundwater recharge for improving water security
  - Technical expertise from countries which have managed their groundwater resources well like Israel, Japan etc.
- **Proper implementation of initiatives:**
  - 12th five-year plan proposed a policy of **participatory groundwater management (PGM)**, which involves a collaborative approach among government departments, researchers, NGOs and community members.
  - Government has come up with a Rs. 6,000-crore **World Bank-aided Atal Bhujal Yojana** with **community participation to ensure sustained groundwater management** in overexploited and ground water-stressed areas in seven States.
  - **World Bank's Water Scarce Cities Initiative** seeks to promote an integrated approach to managing water resources and service delivery in water-scarce cities as the basis for building resilience against climate change.
- **Awareness Generation:**
  - Behavioural changes that promote conservation and adoption of efficient water use practices to reduce ground water use for irrigation
  - Successful **community-based groundwater management** experiences from different states like Andhra Pradesh, Maharashtra, Gujarat and Rajasthan must also be studied.
  - Collaboration, combination of ideas and community partnerships hold the key to the success of groundwater management in India.
  - Creating sustainable change would require a bottom-up approach by empowering the local community to become active participants in managing groundwater.

**Q) India's biodiversity-rich regions are fast turning into 'hotspots' of human impacts. Evaluate. (250 words)**

[The hindu](#)

**Why this question:**

*The article examines closely the recent study titled "Hotspots of human impact on threatened terrestrial vertebrates", published in the journal PLOS Biology, that has reported human impacts on species occur across 84% of the earth's surface. Thus analyzing the impact of human beings on biodiversity hotspots.*

**Key demand of the question:**

*The answer must provide for a detailed analysis of how with the growing and aspirational population, there is no doubt that there will be great pressure on forest areas in India and thus a no-go zone or a complete restriction on human activity, as suggested by the experts committee is an alarming yet a necessity step way forward.*

*of the current degradation of biodiversity hotspots in India mainly due to human impact.*

**Directive word:**

*Evaluate – When you are asked to evaluate, you have to pass a sound judgement about the truth of the given statement in the question or the topic based on evidences. You have to appraise the worth of the statement in question. There is scope for forming a personal opinion here.*



### Structure of the answer:

#### Introduction:

*Explain briefly the significance of Biodiversity hotspots, necessity of their conservation.*

#### Body:

*Human impact on biodiversity – exponential growth of population vs carrying capacity of Earth, impact on species richness and species diversity etc.*

*Human-mediated causes of biodiversity loss – Land-use change, pollution, Resource exploitation, introduction of alien invasive species, faulty agricultural practices etc.*

*Bring in an angle of human impact- Biodiversity and climate change.*

*Significance of 'coolspots' that act as refuges from threats.*

*Way forward.*

#### Conclusion:

*Re- assert the need to conserve our biodiversity hotspots.*

#### Introduction:

- A biodiversity hotspot is a **biogeographic region with significant levels of biodiversity that is threatened with humans and destruction**. They represent just **2.3% of Earth's land surface**, but between them they contain around **50% of the world's endemic plant species and 42% of all terrestrial vertebrates**.

#### Body:

There are 3 biodiversity hot spots present in India. They are:

- The Eastern Himalayas [Arunachal Pradesh, Bhutan, Eastern Nepal]
- Indo-Burma and [Purvanchal Hills, Arakan Yoma, Eastern Bangladesh]
- Sundalands: Includes Nicobar group of Islands (and Indonesia, Malaysia, Singapore, Brunei, Philippines)
- The Western Ghats and Sri Lanka

#### Human impact on biodiversity:

- Human impacts on species occur across 84% of the earth's surface, finds a study published in PLOS Biology, an international journal dedicated to biological science.
- Southeast Asian tropical forests — including India's biodiversity-rich Western Ghats, Himalaya and the north-east — also fall in this category.
- India ranks 16th in such human impacts, with 35 species impacted on average. It includes those in India's Western Ghats, Himalaya and north-east — are among the 'hotspots' of threatened species.
- The average number of species impacted in the South Western Ghats montane rainforests is 60 and in the Himalayan subtropical broadleaf forests, 53.
- The maps show that **roads and croplands are extensive in India and conversion of habitat for such activities** could be a main threat.
- From the recently-updated **Human Footprint data**, it was found that a staggering 1,237 species are impacted by threats in more than 90% of their habitat; 395 species are affected by threats across their entire range. While the impact of roads is highest (affecting 72% of terrestrial areas), crop lands affect the highest number of threatened species: 3,834.

#### Human-mediated causes of biodiversity loss:

- The primary cause for this erosion of diversity is **human greed**. Never before has one species influenced the environmental conditions all over the planet to such a magnitude as today.
- The human species now uses **40 per cent of the planet's annual net photosynthesis production**.
- The **consumption of two-fifths of the planet's net food resources** by one species is incompatible with biological diversity and stability.
- **Loss and fragmentation of natural habitats, overexploitation of plant and animal species, the impact of exotics and invasive alien species, industrial effluents, climate change** and, above all, the greed of man are causing the erosion.
- The introduction of **exotic species** can pose a threat to indigenous diversity. Invasive alien species include plants, animals and pathogens that are non-native to an ecosystem and that may cause economic or environmental harm or adversely affect human health.



- According to CBD reports, **invasive alien species** have contributed to nearly **40 per cent of all animal extinction**.
- Introduced fish species threaten to decimate the diverse fish fauna of big African lakes. Exotic weeds such as lantana and parthenium pose forest management problems.
- **Pesticide, troposphere ozone, sulphur and nitrogen oxides** from **industries** also contribute to the degradation of natural ecosystems.
- **Poaching** puts pressure on wild animals.
- **Global warming and climate change** pose threats to plant and animal species as many organisms are sensitive to carbon dioxide concentration in the atmosphere that may lead to their disappearance.

#### Significance of 'coolspots':

- Coolspots are the **world's last refuges where high numbers of threatened species still persist**.
- Cool-spots could be the result of protection or because of intact habitat that has not been cleared yet
- India still has crucial refuges that need protecting. Identifying such areas could aid conservation and development planning for countries.

#### Way forward:

- Sustainable use of biodiversity in production sectors such as agriculture, fisheries, forestry, tourism, and mining.
- For example, in agriculture, strategies to minimise the use of and optimise the application of chemical fertilizers and pesticides reduce negative impacts on soil, groundwater, surrounding habitats and wildlife.
- Include biodiversity considerations in poverty reduction and national sustainable development plans.
- Community-based joint forest management, promotion of traditional multi-species and multi-variety agricultural practices
- Securing access to medicinal resources for local use, strengthening traditional and cultural practices, and governing the use of wild resources.
- Fair and equitable sharing of the benefits arising out of the use of biological resources
- The active involvement of Central/State Ministries and Departments is needed.
- Public and private entrepreneurs and entities as well as the public need to come forward to mainstream biodiversity.

**Q) "Climate Change has made healthcare a bigger concern for vulnerable communities". Analyse the above statement in the light of recently released UN Environment Programme's Global Environmental Outlook (GEO6) report. (250 words)**

[NewIndianexpress](https://www.indianexpress.com)

[Reference](#)

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

*The article examines Global Environment Outlook report that has been released recently. The report is the sixth and is the UN's most comprehensive report on the state of the global environment since the fifth edition in 2012.*

*The report highlights the concerns arising out of climate change. The question is with a special focus on healthcare of vulnerable sections.*

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

*The answer must analyse the impact of climate change on healthcare of vulnerable sections. One has to evaluate the biological and social link between climate change and health through a deeper analysis of the report.*

#### **Directive word:**

*Analyse – When you are asked to analyse, you have to pass a sound judgement about the truth of the given statement in the question or the topic based on evidences. You have to appraise the worth of the statement in question. There is scope for forming a personal opinion here.*



### Structure of the answer:

#### Introduction:

Narrate in short the significance of the findings of the report.

#### Body:

*Such questions are best answered with substantial facts and statistics quoted from the report like Seventeen of the hottest years in history were all within the last 18 years, A quarter of all premature deaths and diseases worldwide are due to manmade pollution and environmental damage, Deadly emissions, chemicals polluting drinking water, and the accelerating destruction of ecosystems crucial to the livelihoods of billions of people are driving a worldwide epidemic that hampers the global economy. There is a growing chasm between rich and poor countries as rampant overconsumption, pollution and food waste in the developed world leads to hunger, poverty and disease elsewhere.*

*Suggest the impact, discuss what needs to be done, paint a picture of Indian scenario and provide for a way forward.*

#### Conclusion:

*Conclude with current efforts in terms of policies, laws by the government along with global efforts in progress in this direction to tackle climate change.*

#### Introduction:

- The **sixth edition of the Global Environment Outlook (GEO-6)** from the **UN Environment Programme (UNEP)** on the theme “**Healthy Planet, Healthy People**” was released recently.
- It painted a dire picture of a planet where **environmental problems interact with each other to make things even more dangerous for people.**
- The report concludes ‘**unsustainable human activities globally have degraded the Earth’s ecosystems, endangering the ecological foundations of society.**’
- The report details **climate change impacts on human health, air, water, land and biodiversity.**

#### Body:

#### Key highlights of the report:

- **Premature deaths:**
  - A quarter of all premature deaths and diseases worldwide are due to manmade pollution and environmental damage.
  - Deadly emissions, chemicals polluting drinking water, and the accelerating destruction of ecosystems crucial to the livelihoods of billions of people are driving a worldwide epidemic that hampers the global economy.
- **Rising Inequality:**
  - There is a growing chasm between rich and poor countries as rampant overconsumption, pollution and food waste in the developed world leads to hunger, poverty and disease elsewhere.
  - The top 10% of populations globally, in terms of wealth, are responsible for 45% of GHG emissions, and the bottom 50% for only 13%.
  - Pollution impacts are, however, borne more by the poorer citizens.
- **Health:**
  - Poor environmental conditions cause approximately 25% of global disease and mortality, with around 9 million deaths in 2015 alone.
  - Nearly 1.4 million people die each year from preventable diseases with lack of access to clean drinking supplies. For instance, diarrhoea and parasites linked to pathogen-riddled water and poor sanitation
  - Air pollution alone causes 6-7 million early deaths annually.
  - Unchecked use of antibiotics in food production will result in drug-resistant superbugs becoming the world’s number one cause of premature death by mid-century.
- **Food Waste**
  - Thirty-three percent of edible food is wasted worldwide, with more than half thrown out in industrialized nations, the report says.
  - Food waste for instance, which accounts for 9% of global greenhouse gas emissions, could be slashed.



### • Species Extinction

- Land degradation through mega-farming and deforestation occurs in areas of Earth which are home to 3.2 billion people.
- Species extinction rates also continue to increase at a pace that could compromise Earth's ability to meet human needs, the report says.
- Among invertebrates, 42% of land dwellers, 34% of freshwater species and 25% of marine species are at risk of extinction.

### Impacts:

- As greenhouse gas emissions continue to rise amid a preponderance of droughts, floods and super storms made worse by climbing sea levels, there is a growing political consensus that climate change poses a future risk to billions.
- But the health impacts of pollution, deforestation and the mechanised food-chain are less well understood. Nor is there any international agreement for the environment close to covering what the 2015 Paris accord does for climate.
- Poor environmental conditions “cause approximately 25% of global disease and mortality” — around 9 million deaths in 2015 alone.
- Lacking access to clean drinking supplies, 1.4 million people die each year from preventable diseases such as diarrhoea and parasites linked to pathogen-riddled water and poor sanitation.
- Chemicals pumped into the seas cause “potentially multi-generational” adverse health effects, and land degradation through mega-farming and deforestation occurs in areas of Earth home to 3.2 billion people.
- Species extinction rates also continue to increase at a pace that could compromise Earth's ability to meet human needs, the report says.

### Way forward:

- It encourages policy-makers to recognise that global or regional action is often essential due to the trans-boundary nature of many environmental problems.
- There is an urgent need for retooling of the global economy to more sustainable production lines.
- Urgent action at an unprecedented scale is necessary to arrest and reverse the present environment situation.
- The report called for a root-and-branch detoxifying of human behaviour while insisting that the situation is not unassailable.
- Food waste for instance, which accounts for 9% of global greenhouse gas emissions, could be slashed. The world currently throws away a third of all food produced. In richer nations, 56% goes to waste.
- The report also advises adopting less-meat intensive diets.
- It also called for a rapid drawdown in greenhouse gas emissions and pesticide use to improve air and water quality.

### Way forward for India:

- Every other international environmental report showed that India will be the most hit due to climate change.
- Now, the GEO report on environmental damage causing health emergencies is another thing that the country should worry due to its burgeoning population and weak public healthcare sector.
- By emphasising on “synergies” between “the efforts to meet climate change targets and policies to reduce air pollution, this is particularly significant for India, whose **Paris Climate Treaty commitments rely heavily on a shift to renewable energy (RE)**.
- Steps like **India Clean Air Program (ICAP)**, **Ayushman Bharat** should be strengthened to tackle the challenges arising.
- More steps are needed to be taken by the policy makers to rapidly reduce emissions in the country.
- Effective policies must be brought out to reduce over-consumption in the country and promote sustainable ways of living.

### Conclusion:

- ❖ The Global Environment Outlook should be seen as a call for such creativity by breaking down the silos in environmental policy-making.
- ❖ GEO came at the right time to awaken the world to take effective steps in tackling the environmental issues which has become an existential question for the mankind.





**Q) In the light of recently released Climate variability index for Himalayan states, Discuss the role of socio-economic factors in determining the climate vulnerability of a region. (250 words)**

#### Reference

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

*The question is in the context of the recently launched Climate Vulnerability Index that has been developed as a common framework for assessment of climate change vulnerability in all the states in the Himalayan region. It is an index based on socio-economic factors, demographic and health status, sensitivity of agricultural production, forest-dependent livelihoods and access to information, services and infrastructure.*

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

*The answer should bring out the significance of the index and vulnerability of Himalayan states and the need for a policy framework to address the challenges.*

#### **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.*

*Keywords: Receding apple lines, changing cropping patterns, more disasters like landslides and floods, drying springs in hills, spread of vector-borne diseases etc.*

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

##### **Introduction:**

*Explain briefly the context of these the index and its significance.*

##### **Body:**

*The aims and objectives of the index, its importance for the Himalayan states .*

*Discuss mainly how socio economic factors play a major role in determining the climate vulnerability – provide for case studies of the Himalayan states.*

*Suggest what changes are required in the policy dimensions to address the current scenario.*

*Way forward.*

##### **Conclusion:**

*Conclude with importance of such assessment to India.*

#### **Introduction:**

- Researchers at IIT Guwahati, IIT Mandi and IISc Bengaluru have developed a **climate change vulnerability map for 12 Himalayan states in India** that will help **prioritise resource allocation to address these vulnerabilities**.
- Receding apple lines, changing cropping patterns, more disasters like landslides and floods, drying springs in hills, spread of vector-borne diseases etc — are being felt all over the Himalayan region, which is one of the most sensitive climate zones globally.

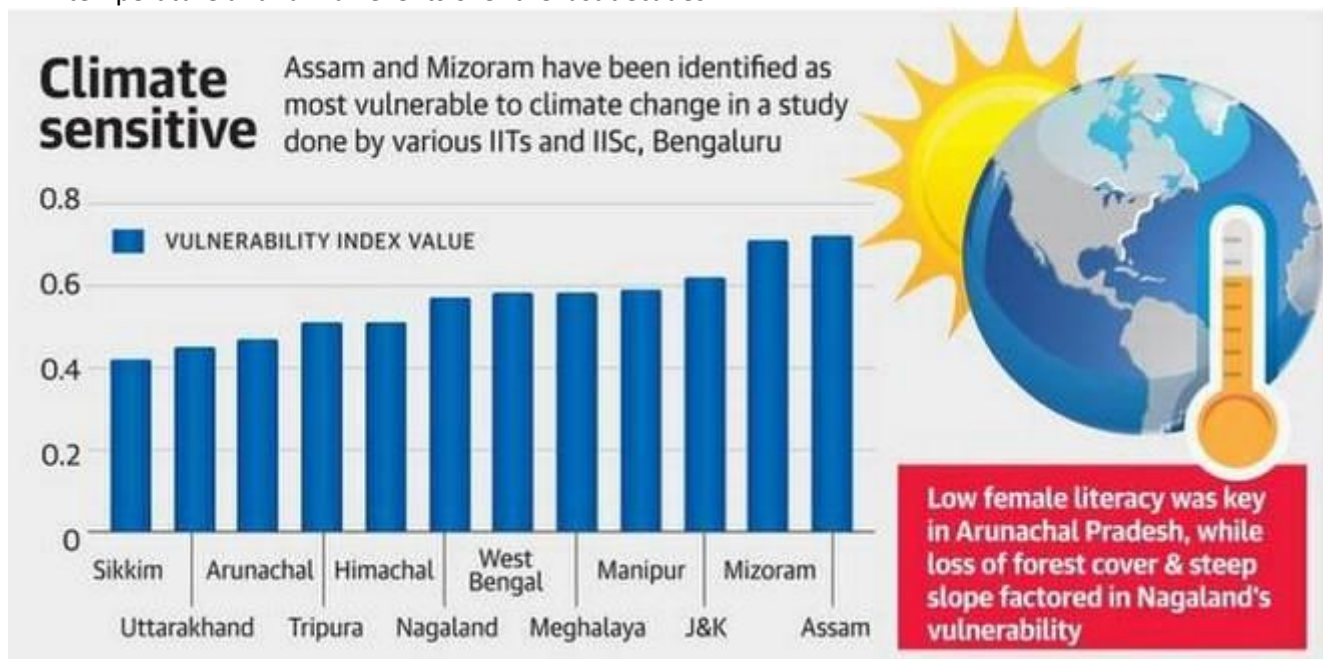
#### **Body:**

##### **Aims and objectives of the index:**

- The over-arching aim of the analysis was to give actionable inputs to States.
- The exercise is unique because for the first time all the **12 Indian Himalayan Region (IHR) States** have used a **common framework resulting in the production of comparable state level and within state, district level vulnerability maps**.
- The maps will enable them to assess which states in IHR are more vulnerable, what has made them vulnerable and how the government might address these vulnerabilities.



- Such comparable vulnerability assessments are useful for officials, implementers, decision makers, funding agencies and development experts, to have a common understanding on vulnerability and enable them to plan for adaptation.
- The framework can be applied to states in the rest of the country as well, with suitable modifications.
- The need for such an exercise is due to the fact that **IHR is one of the most sensitive regions to climate change and variability.**
- Most parts of the region underwent significant long-term changes in frequencies and intensity of extreme temperature and rainfall events over the last decades.



#### Socio economic factors play a major role in determining the climate vulnerability:

- They have developed an index based on **socio-economic factors, demographic and health status, sensitivity of agricultural production, forest-dependent livelihoods and access to information, services and infrastructure.**
- The assessment shows that the vulnerability index is the highest for Assam (0.72) and Mizoram (0.71), followed by Jammu & Kashmir (0.62), Manipur (0.59), Meghalaya and West Bengal (both 0.58), Nagaland (0.57), Himachal Pradesh and Tripura (0.51 both), Arunachal Pradesh (0.47) and Uttarakhand (0.45).
- **Sikkim** is the **least vulnerable state** with the index being 0.42. Districts within a state face different degrees of vulnerability based on difference in geographic, climatic, socio-economic and demographic conditions.
- **Assam** is **highly vulnerable to climate change** because of factors like low per capita income, deforestation, large number of marginal farmers, least area under irrigation, lack of alternative sources of income and high rates of poverty.
- More than 60% of population in Assam rely on climate sensitive agriculture as a primary source of income. There is high yield variability of food grains, which indicates fluctuations in agro-climatic conditions over time. The population living below the poverty line (BPL) is also greater than national average, and there is lack of access of information.
- Major drivers of vulnerability in Mizoram are highest yield variability, no area under crop insurance, largest area under open forests, and largest area under slope >30% as compared to other states.
- While vulnerability of J&K is driven by least road density, no area under crop insurance, low area under forests per 1,000 rural households, high percentage of marginal farmers, low percentage area under horticulture crops, low livestock to human ratio and low percentage of women in the overall workforce.
- The assessment found low per capita income, low open forest area per 1,000 households and lack of irrigation coverage to be the most important drivers of vulnerability in Himalayan states.

#### Government Initiatives for Indian Himalayan states

- **National Mission for Sustaining the Himalayan Ecosystem (NMSHE):**
  - It is one of the eight missions under India's National Action Plan on Climate Change.
  - State Climate Cells/Centers have been established in 11 out of the 12 Himalayan States for building institutional capacity of Himalayan States in the area of climate change adaptation.



- These centers are working on areas of climate vulnerability assessment, raising public awareness and training and capacity building for climate change adaptation planning.

#### Way forward:

- Percentage of area in districts under forests should be increased by Afforestation.
- Yield variability of food grain should be made comparable by adopting practices like Organic farming, ZBNF etc.
- Female literacy rate and Female labour participation rate must be promoted by programs like BBBP, Mudra etc.
- MGNREGA 2.0 to scale up the old one and reduce the percentage of people below poverty line.

#### Conclusion:

- ❖ **Climate adaptation** is a collaborative effort between appropriate use of technology, vision that produces policies, change at ground level and engagement of local communities.
- ❖ These vulnerability maps will play a crucial role in this effort.

**Q) “Carbon emissions have risen to a record high in 2018 as demand for energy has soared in countries such as the US, China and India, pointing to a seeming neglect of global warming concerns.” Comment. (250 words)**

[Livemint](#)

[The hindu](#)

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

*The article discusses the International Energy Agency report on climate change making us aware of the situation related to climate – it has established that China, India and US account for 85% of the net increase in carbon emissions. Examining the options available to us in light of the new report and brainstorming over way forward is the focus of this question.*

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

*The question expects us to first discuss the findings of the International Energy Agency report and highlight the risk that faces it. Thereafter, we need to bring out the impact that unprecedented carbon emissions will have on weather, natural disasters etc. We need to discuss ways through which this situation can be addressed and suggest way forward.*

#### **Directive word:**

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

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

##### **Introduction:**

*Begin with brief introductory lines on highlights of the findings by the International Energy Agency.*

##### **Body:**

*Discuss the outline of the main findings of the report – China, India and US account for 85% of the net increase in carbon emissions.*

*In India, emissions rose by 4.8%, although the nation’s per capita release remained low at 40% of the global average.*

*Global carbon dioxide emissions rose 1.7% in 2018, the highest rate of growth since 2013, and 70% higher than the average increase since 2010.*

*Then move on to discuss the effectiveness of the global fight against climate change amid rising energy demand in detail.*

*Discuss the effect and what needs to be done to mitigate the challenge the world is facing.*



### Conclusion:

*Conclude with importance of immediate attention by the world community to look into the issue urgently and come up with an immediate fix to the problem.*

### Introduction:

- India emitted **2,299 million tonnes of carbon dioxide in 2018, a 4.8% rise from last year**, according to a report by the **International Energy Agency (IEA)**.
- India's emissions growth this year was higher than that of the United States and China — the two biggest emitters in the world — and this was primarily due to a rise in coal consumption. **China, the United States, and India together accounted for nearly 70% of the rise in energy demand.**

### Body:

#### Main findings of the report:

- China, India and US account for **85% of the net increase in carbon emissions**.
- India's **per capita emissions were about 40% of the global average** and **contributed 7% to the global carbon dioxide burden**. The **United States, the largest emitter, was responsible for 14%**.
- India's **energy intensity improvement declined 3% from last year** even as its renewable energy installations increased 10.6% from last year.
- Global energy consumption in 2018 increased at nearly twice the average rate of growth since 2010, driven by a robust global economy and higher heating and cooling needs in some parts of the world.



#### Concerns due to rising CO<sub>2</sub> emissions:

- As per its commitments to the United Nations Framework Convention on Climate Change, India has promised to reduce the emissions intensity of its economy by 2030, compared to 2005 levels.
- It has also committed to having 40% of its energy from renewable sources by 2030 and, as part of this, install 100 GW of solar power by 2022.
- However, the IEA report showed that India's energy intensity improvement declined 3% from last year even as its renewable energy installations increased 10.6% from last year.
- India says it will cost at least \$2.5trillion (Rs. 150 trillion approx.) to implement its climate pledge, around 71% of the combined required spending for all developing country pledge
- India is also at the frontlines of facing the impacts of climate change. Shifting rainfall patterns, recurring floods, stronger cyclones and droughts or soil erosion are exacerbating the challenge of poverty eradication and necessitate the allocation of scarce national resources for preventing loss of human life.

Recognising the need to cut down on carbon emissions to tackle climate change, the **government of India has taken the following steps** to reduce the carbon emissions:

- Despite resource constraints, India is undertaking ambitious actions to undertake adaptation and mitigation actions, including thorough lowering of the energy intensity of our economic growth, increasing energy efficiency across sectors and making greater use of renewable.
- India has doubled the **Clean Energy Cess on coal**, which very few countries have, and the Clean Energy Fund already has over 3 billion US dollars to be used for promoting clean technologies



- India's **National Solar Mission** is being scaled up five-fold from 20,000 megawatts to 100,000 megawatts. This will mean an additional investment of 100 billion dollars and savings of about 165 million tonnes of CO<sub>2</sub> emissions per year.
- India is releasing 6 billion US dollars in one go for intensive afforestation which will result in more carbon sinks.
- India has allocated about 200 million US dollars for the 'National Adaptation Fund', setting-up of Ultra Mega Solar Projects, Ultra-Modern Super Critical Coal Based Thermal Power Technology, and the development of Solar Parks on canals.
- The "100 Smart Cities" with integrated policies for adaptation and mitigation to reduce the vulnerability and exposure of urban areas to climate change and also to improve their energy efficiency for which 1.2 billion US dollars have been allocated.
- Crop diversification programme under Rashtriya Krishi Vikas Yojana (RKVY), National Food Security Mission (NFSM) and Bringing Green Revolution to Eastern India (BGREI).
- Increasing the area under System of Rice Intensification (SRI) as an alternative to the widely used practice of transplanted paddy.
- India has also fast-tracked its investment and promotion of decentralized renewable energy as a resource to empower populations who are vulnerable.
- India has initiated preparations to develop a National Air Quality Index and have launched a National Air Quality Scheme

#### Way forward:

- Addressing the distortion in the cropping towards water intensive crops like rice and promoting agro-climatic farming
- Increased community engagement in the adaptation measures.
- Expansion in the community forestry and Joint forest management to contain the loss to green cover due to industrial activity.
- Increased international collaboration for finances and technology with an outcome based approach
- Strict enforcement of building code and expansion of rooftop solar power program to reduce dependence on the coal energy
- Better urban planning focusing on solid waste management and public transport

### Q) With World heading towards ecosystem collapse and a climate-run riot .Discuss the need for India to reframe engagement with climate change. (250 words)

#### The hindu

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

*The article provides a detailed analysis of the frame of engagement of India with respect to climate change and how the way it would handle land use change will decide whether it can improve lives without warming the world.*

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

*The question expects us to first discuss the alarming climate change scenario owing to increased carbon emissions of world countries. We need to discuss ways through which this situation can be addressed and suggest way forward.*

#### **Directive word:**

*Discuss– This is an all-encompassing directive which mandates us to write in detail about the key demand of the question. we also have to discuss about the related and important aspects of the question in order to bring out a complete picture of the issue in hand.*

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

#### **Introduction:**

*Begin with brief introductory lines on highlights of the findings by the N's Intergovernmental Panel on Climate Change that warned – without radical course correction, the world will exhaust its carbon budget to keep global temperature increase below 1.5°C by 2030.*





**Body:**

*State facts from various report and re-assert the statement in question about climate riot.*

*Then move on to discuss the effectiveness of the global fight against climate change amid rising energy demand in detail.*

*Discuss the effect and what needs to be done to mitigate the challenge the world is facing with special emphasis on India.*

*Indian scenario to be explained in detail – take cues from the article.*

**Conclusion:**

*Conclude with importance of immediate attention to mitigate the perils of rising climate change.*

**Introduction:**

- IPCC released a “special report” on the actions the world needs to take to prevent global average temperatures from rising beyond 1.5°C as compared to pre-industrial times. It warned that climate change could have **“irreversible” and “catastrophic” impacts** if the global average temperatures were allowed to rise beyond 2 degrees Celsius.

**Body:**

- In October 2018, IPCC warned that without radical course correction, the world will exhaust its carbon budget to keep global temperature increase below 1.5°C by 2030
- In March 2018, UN’s Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services warned that human societies are using up nature faster than it can renew itself and compromising its ability to sustain life on the planet.

**Effectiveness of Indian efforts against climate change and misses:**

- The government acknowledges that **sea levels can rise by 3.5 to 34.6 inches by 2100 and inundate India’s coastline.**
- India’s obsession with 100 GW solar electricity targets may fetch high ratings from the international green energy cheerleaders. However, that alone will do nothing to fortify ordinary Indians from the impending disasters.
- Indian government changed laws to dilute **environmental protection, facilitate corporate land grabs, disempower local communities and criminalise any dissent against its grand schemes.**
- The Union government proposed amendments to the Indian Forest Act, 1927, that will make the draconian Act even harsher.
- According to **Campaign for Survival and Dignity**, these amendments would give forest officials the power to shoot people without any liability; allow forest officials to relocate people against their will; to hand over forests to private companies for afforestation, and to grab other forests in the name of ‘carbon sequestration’.
- These amendments are a targeted attack on forest dwellers; if passed, they will criminalise the cultures that hold the key to rebuilding our broken relationship with nature.
- The **Coastal Regulation Zone Notification**, which regulates “development” along India’s 7,500-km shoreline, was diluted to allow denser construction closer to the sea.
- The notification cites tourism jobs to justify the construction of temporary facilities within 10 m of the waterline. Mega infrastructure, such as ports and roads, will be permitted anywhere — inside the sea, over dunes, through mangroves and tidal marshes — if they are declared to be “strategic” projects.
- Renewable energy systems will not make an inherently unsustainable economy sustainable or correct an unjust social system. They may even make it worse.

**Effects of a failed climate change impact reduction:**

- Across the country, people are rising up to protest against certain kinds of ‘development’ — for example, the Mumbai coastal expressway, and the proposed ports in Ennore and Kanyakumari.
- Farmers are mobilising against the bullet train, and indigenous people are fighting against the opening up of forests for mines and dams.
- Paved surfaces, the hallmark of built-earth economies, disrupt water flows, reduce groundwater recharge and obliterate biodiversity.
- Such economies impoverish local communities and increase their vulnerability to natural shocks.
- In places like Chennai, which witnessed disastrous flooding in 2015, paved surfaces increased from 47 sq km in 1980 to 402 sq km in 2010, according to a study by the Chennai-based research group Care Earth. Meanwhile, wetlands dipped from 187 sq km to 71 sq km during the same period.



- Urban flooding, though, is not only a third world phenomenon. Hurricane Sandy and the New York floods of 2015, the 2017 floods in Mumbai and Houston, the 2018 floods in Japan, all expose the vulnerabilities of urban areas where climate change meets mindless land use change. In all these instances, land had been paved over, unmindful of the need for water to flow and stay.

**Way forward:**

- According to climate scientists, the world would need to reframe its engagement with climate change and abandon its myopic preoccupation with greenhouse gas emissions and carbon budgets.
- A manifesto for the protection of the commons and open lands, and for the re-creation of economies that derive value out of healing wounded landscapes and covering open lands with diverse vegetation, water and life.
- To limit ourselves to 1.5°C, global net anthropogenic CO<sub>2</sub> emissions should reduce by about 45 per cent from 2010 levels by 2030, and should reach net-zero around 2050.
- Real emission reductions can be achieved through a combination of new and existing technologies, including sustainable bio-based feedstocks, product substitution, and carbon capture, utilisation and storage (CCUS).
- Real resilience will result only from improving the health of the lands they live in and depend on.
- In the land-use sector, some amount of pasture and non-pasture agricultural land for food and feed crops needs to be converted for energy crops.
- Use of coal should reduce steeply and its share in electricity mix should be reduced to close to 0 per cent by 2050.
- They can start by scaling up ambition on nationally determined contributions.

**Q) Strengthening adaptation is must to protect human health in face of climate change. Comment. (250 words)**

[Reference](#)

[Reference](#)

**Why this question:**

*The article provides a detailed analysis on the effect of climate change on Human health. During the Second Global Conference on Health & Climate, participants warned that without adequate mitigation and adaptation, climate change poses risks to public health.*

**Key demand of the question:**

*The question expects us to first discuss the alarming climate change scenario and its impact on human health, the discussion should center around the importance of mitigation necessary to overcome the issue.*

**Directive word:**

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

**Structure of the answer:**

**Introduction:**

*Begin with brief introductory lines on importance of interrelationship between public health and climate change.*

**Body:**

*State facts from various report and re-assert the statement in question about alarming issue of climate change and its impact on human health.*

*Take cues from the article and quote reports.*

*Then move on to discuss the effectiveness of the global fight against climate change amidst increasing effect on public health.*

*Discuss the effect and what needs to be done to mitigate the challenge the world is facing in the health paradigm.*



### Conclusion:

*Conclude with importance of immediate attention to mitigate the threats of mounting climate change.*

### Introduction:

- Climate scientists argue that global warming is exacerbating extreme weather events. And natural disasters are often the source of health crises, particularly in fragile settings. Strengthening adaptation is a must in the face of climate change. This includes plans to protect the human health from air pollution, heat waves, floods, droughts and the degradation of water resources.
- At present, more than 7 million deaths occur worldwide every year due to air pollution.

### Body:

#### Alarming issue of climate change and its impact on human health:

- The **World Health Organization** estimates that climate change is causing tens of thousands of deaths every year.
- These deaths arise mainly from epidemics such as cholera, dengue and extreme weather events such as heat waves and floods.
- Experts predict that by 2030, climate change will cause an additional 250,000 deaths each year from malaria, diarrhoeal disease, heat stress and undernutrition alone.
- Certain groups have higher susceptibility to climate-sensitive health impacts owing to their **age** (children and elderly), **gender** (particularly pregnant women), **social marginalization** (associated in some areas with indigenous populations, poverty or migration status), or **other health conditions like HIV**. The socioeconomic costs of health problems caused by climate change are considerable.
- Many infectious diseases, including water-borne ones, are highly sensitive to climate conditions.
- **climate change and air pollution** share many major common sources (fossil fuel and biomass burning), climate-driven changes in weather patterns and higher carbon dioxide levels could also worsen air quality in many regions of the world.
- Elevated CO<sub>2</sub> levels in occupied buildings are a well-known indoor air quality concern, with studies reporting associations with declines in cognitive performance and increased risk of sick building syndrome in office workers and schoolchildren.
- **Climate change lengthens the transmission season and expands the geographical range of many diseases like malaria and dengue.**
- Climate change will bring **new and emerging health issues**, including heatwaves and other extreme events. Heat stress can make working conditions unbearable and increase the risk of cardiovascular, respiratory and renal diseases.
- Additionally, it is estimated that **5 million people are displaced annually by climate or weather-related disasters**, and these figures are expected to increase in the future. **Climate-induced human mobility has a socioeconomic cost** and can affect **mental and physical health**.
- **Malnutrition and undernutrition** are highlighted as a concern for a number of developing countries in Africa, Asia and Latin America, which discussed the impacts of climate change on food security, particularly in relation to floods and drought. Climate change threatens food and nutrition security

#### Strengthening Adaptation measures are the way forward:

- **Adaptation** means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause. **Mitigation** is an intervention to reduce the emissions sources or enhance the sinks of greenhouse gases.
- new building codes to adapt future climate change.
- Developing drought tolerant crops and setting aside land corridors to help species migrate.
- More secure facility locations and infrastructures
- Landscape restoration (natural landscape) and reforestation
- Flexible and diverse cultivation to be prepared for natural catastrophes
- Research and development on possible catastrophes, temperature behavior, etc.
- Preventive and precautionary measures (evacuation plans, health issues, etc.)
- Moving on to more sustainable food production and healthier diets to improve the environment and reduce the burden of non-communicable diseases. One way to do this would be to promote diets rich in fruits and vegetables, including local in-season varieties.



Measures undertaken in India towards combating climate change:

- The **National Adaptation Fund for Climate Change (NAFCC)** is a Central Sector Scheme which was set up in the year 2015-16. The overall aim of NAFCC is to support concrete adaptation activities which mitigate the adverse effects of climate change. The projects related to adaptation in sectors such as agriculture, animal husbandry, water, forestry, tourism etc. are eligible for funding under NAFCC
- **National Action Plan on Climate Change (NAPCC):** The Action plan covers eight major missions on Solar, Enhanced Energy Efficiency, Sustainable Habitat, Water, Sustaining the Himalayan Ecosystem, Green India, Sustainable Agriculture and Strategic Knowledge on Climate Change.
- **International Solar Alliance (ISA):** ISA was jointly launched by the Prime Minister Narendra Modi, and the then President of France, Francois Hollande in Paris on the side-lines of CoP 21 in 2015. The vision and mission of the alliance is to provide a dedicated platform for cooperation among solar resource rich countries that lie completely or partial between the Tropics of Capricorn & Cancer.
- **State Action Plan on Climate Change (SAPCC):** State governments have drafted climate strategies aligned with the eight National Missions under the NAPCC. The strategies focus on issues ranging from climate mitigation, energy efficiency, and resource conservation to climate adaptation.
- **FAME Scheme for E-mobility:** Union Government in April 2015 launched Faster Adoption and Manufacturing of Hybrid and Electric vehicles (FAME) – India Scheme with an aim to boost sales of eco-friendly vehicles in the country. It is a part of the National Mission for Electric Mobility.
- **Atal Mission for Rejuvenation & Urban Transformation (AMRUT) for Smart Cities.**
- **Pradhan Mantri Ujjwala Yojana:** The scheme provides LPG connections to five crore below-poverty-line beneficiaries. The connections are given in the name of women beneficiaries to reduce their dependence on fossil fuels and conventional fuel like cow dung for cooking food, thus reducing air pollution.
- **UJALA scheme:** The scheme was launched by the Prime Minister Narendra Modi in January 2015 with a target of replacing 77 crore incandescent lamps with LED bulbs. The usage of LED bulbs will not only result in reducing electricity bills but also help in environment protection.
- **Swachh Bharat Mission:** Swachh Bharat Abhiyan (Clean India Movement) is a campaign that was launched by Prime Minister Narendra Modi on October 2, 2014. The campaign seeks to clean the streets, roads and infrastructure of the country's 4041 statutory cities and towns.

#### Conclusion:

- ❖ Unprecedentedly, today, the world population is encountering unfamiliar human-induced changes in the lower and middle atmospheres and world-wide depletion of various other natural systems (e.g. soil fertility, aquifers, ocean fisheries, and biodiversity in general).
- ❖ Adaptation and Mitigation together will help in tackling the health impacts of Climate change.

**Extra information:** inspiring examples of adaptation solutions for health worldwide:

- *The Climate Adaptation Management and Innovation Initiative of the World Food Programme develops climate-induced food insecurity analyses and practices to inform programming and decision-making. The initiative focuses on 16 countries across Asia, the Middle East, and Eastern, Central and Northern Africa.*
- *In France, the Tiger Mosquito Surveillance Network monitors the tiger mosquito's movements.*
- *The Smart Health Facilities Initiative and Smart Hospitals Toolkit is being implemented through the Pan American Health Organization in the Caribbean with the aim of supporting the governments of the selected countries to assess and prioritize vulnerability reduction investments in their health facilities.*
- *Some countries integrate health into their national adaptation plans (NAPs) and programmes. For example, Macedonia and six additional countries are part of an initiative of WHO and the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety that brings health into adaptation plans.*
- *There are also a number of training and awareness-raising activities, including the Self-Learning Course on Climate Change and Health, developed by Mexico's National Institute of Public Health in line with the joint Pan American Health Organization/WHO Strategy and Plan for Action on Climate Change. The training aims at raising awareness and improving knowledge on the health effects of climate change among the general public and other sectors.*

**Q) Discuss the key proposals of island protection zone (IPZ) 2019 recently notified for Andaman and Nicobar . Discuss the Concerns raised over relaxation of certain norms under it. (250 words)**

[Hindustantimes](https://www.hindustantimes.com)

[www.insightsonindia.com](http://www.insightsonindia.com)



### **why this question:**

The union environment ministry has notified island protection zone (IPZ) 2019 for Andaman and Nicobar recently. The legal changes in the IPZ are aligned with the Niti Aayog's proposal for holistic development in the Islands which is being taken forward under the guidance of the Island Development Agency. Thus the question is important to ponder upon from the point of view of GS paper II and III.

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

The answer must discuss at length the key features of the policy, its certain effects upon social and environmental aspects of Andaman and Nicobar region. Analyse in detail the policy and concerns associated and give a firm opinion along with suggestions as to what should be the way forward.

### **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:**

Narrate a brief background of the context of the question – salient features of the policy.

#### **Body:**

Key features of notified island protection zone (IPZ) 2019 for Andaman and Nicobar – allows eco-tourism projects 20 metres from the high tide line (HTL) in smaller islands like Baratang, Havelock and Car Nicobar, and at 50 metres in larger ones, allows for eco-tourism activities like mangrove walks, tree huts and nature trails in island coastal regulation zone, allows a number of new activities in the inter-tidal zone between low tide line and HTL etc.

Discuss the social and environment impact associated with it – displacement of tribal pockets, Community concerns, Land Acquisition, Rehabilitation and Resettlement etc.

Environmental aspect – Environmental pollution, critically fragile ecological areas, eco-tourism, activities in the inter-tidal zone, construction activities, clearance systems etc.

#### **Conclusion:**

Conclude with what needs to be done, suggest way forward.

#### **Introduction:**

- The Union Ministry of Environment, Forest and Climate Change has notified Island Protection Zone (IPZ) 2019 for Andaman and Nicobar.
- The legal changes in the IPZ are aligned with the NITI Aayog's proposal for holistic development in the Islands which is being taken forward under the guidance of the Island Development Agency.

#### **Body:**

#### **Key highlights of IPZ 2019:**

- It allows **eco-tourism projects 20 metres from the high tide line (HTL) in smaller islands** like Baratang, Havelock and Car Nicobar, and at **50 metres in larger ones**.
- It allows for **eco-tourism activities like mangrove walks, tree huts and nature trails in island coastal regulation zone** IA (classified as the most eco-sensitive region of the islands which includes turtle nesting grounds, marshes, coral reefs etc).
- The notification also allows for **construction of roads, roads on stilts by reclaiming land in exceptional cases for defence installations, public utilities or strategic purposes in eco-sensitive zones**.
- It states that in case construction of such roads pass through mangroves, **a minimum three times the mangrove area destroyed during the construction process shall be taken up for compensatory plantation of mangroves elsewhere**.
- It also allows a **number of new activities in the inter-tidal zone between low tide line and HTL**.





- This includes **land reclamation and bunding** for foreshore facilities like ports, harbours, jetties, wharves, quays, sea links etc, transfer of hazardous substances from ships to ports, manual mining of atomic minerals, and mining of sand for construction purposes with permission from local authorities in non-eco-sensitive sites.

#### Concerns:

- The notification relaxes development norms in the islands compared to the IPZ notification of 2011, which stipulated a no-development zone (NDZ) of 200 metres from the HTL for all islands.
- This brings the norms for Andaman and Nicobar at par with coastal regulation zone (CRZ) norms for other islands close to the mainland and backwater islands where an NDZ only 20 metres from HTL has been stipulated.
- Only pipelines, transmission lines, trans-harbor links to be laid in the eco-sensitive zone were permitted. Now road construction is allowed.
- the Comptroller and Auditor General (CAG) of India pointed out that the frequent amendments, made to the notification, have paved way for commercial and industrial expansion in coastal areas, while natural disasters have become more frequent causing severe loss to human lives and property.
- The changes introduced have impact on the fragile ecology of this region like our marine biodiversity including corals and turtle nesting sites.

#### Conclusion:

- ❖ Promulgation and enactment of a new Act for protection of the coastal zones—with clear classification of various zones, after due consultations with the fishing communities, stakeholders, scientists and the department concerned—is the need of the hour.

*Topic: Disaster and disaster management.*

**Q) Discuss the objectives of recently launched Flood Management and Border Areas Programme (FMBAP) and analyze the need for a comprehensive policy and coordinated approach for flood management and border area programmes. (250 words)**

[pib](https://pib.gov.in)

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

*The Union Cabinet has approved the “Flood Management and Border Areas Programme (FMBAP)” for Flood Management Works in entire country and River Management Activities and works related to Border Areas (RMBA).*

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

*The answer should discuss the salient features of the programme, the objectives of it.*

*you must also detail and emphasis on the need for a comprehensive policy and coordinated approach for flood management and border area programmes.*

#### **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:**

*Briefly narrate the background of the programme.*

##### **Body:**

*Importance of the programme.*

*Salient features and objectives.*

*Benefits of the scheme, challenges and issues faced in implementation.*

*Need for such schemes , suggest a way forward.*

**Keywords:**

*effective flood management, erosion control, anti-sea erosion, Pancheshwar Multipurpose Project, Sapta Kosi-Sun Kosi Projects in Nepal,*

**Conclusion –**

*Conclude with need for holistic approach to address the requirements of border areas and river regions.*

**Introduction:**

- While 40 million hectares of land were “prone to floods” till 1978 as per the **Rashtriya Barh Ayog (RBA)** that studied figures since 1953, the 12th Plan working group on flood and management subsequently increased the area to 49.815 million hectares in 2011.
- An assessment by **India’s Union home ministry** has found that India’s most flood-prone states are Punjab, West Bengal, Bihar, UP, Andhra Pradesh, Haryana, Kerala, Assam, Gujarat and Odisha.

**Body:**

- The Union Cabinet chaired by Prime Minister recently approved the “Flood Management and Border Areas Programme (FMBAP)” for Flood Management Works in entire country and River Management Activities and works related to Border Areas for the period 2017-18 to 2019-20 with a total outlay of Rs.3342.00 crores.

**Salient features of the Program:**

- The Scheme “FMBAP” has been framed by merging the components of two continuing XII Plan schemes titled “**Flood Management Programme (FMP)**” and “**River Management Activities and Works related to Border Areas (RMBA)**”.
- The aim of the Scheme is to **assist the State Governments to provide reasonable degree of protection against floods in critical areas by adopting optimum combination of structural and non-structural measures and enhancing capabilities of State /Central Government officials in related fields.**
- The works under the scheme will **protect valuable land from erosion and flooding** and help in **maintaining peace along the border.**
- The Scheme aims at **completion of the on-going projects** already approved under FMP.
- Further, the scheme also caters to **Hydro-meteorological observations and Flood Forecasting on common rivers with the neighbouring countries.**
- The Scheme also includes **survey and investigations**, preparation of DPR etc. of water resources projects on the **common rivers with neighbouring countries** like **Pancheshwar Multipurpose Project, Sapta Kosi-Sun Kosi Projects in Nepal** which would benefit both countries.

**Funding pattern:**

- **General category States:** The funding pattern for FM Component for works in general category States will continue to be 50% (Centre): 50% (State)
- **Special Category states:** for projects of North Eastern States, Sikkim, J&K, Himachal Pradesh and Uttarakhand, the funding pattern will continue to be 70% (Centre): 30% (State).
- **Border States:** RMBA component being specific to activities in border areas with neighbouring countries and in accordance with bilateral mechanisms, the projects / works will continue to be funded as 100% grant-in-aid / central assistance.

**Benefits of the scheme:**

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

**Challenges and issues faced in implementation:**

- Despite various steps taken over the last 5 decades, the trend of **increasing damage and devastation** caused by floods pose challenge to Government and people.
- Floods in some part of India are as regular as the monsoon itself. But **human-made factors** have compounded this annual problem.
- Agencies which should be working together to keep the floods in check, have operated along different lines.
- **States do not take the problem seriously** since the **constitution does not mention flood management under union, state or concurrent list.**
- Earlier floods were mainly a rural problem. Now floods hit urban areas and last for months.



- The coverage of rain-gauge stations in hilly areas is still inadequate.
- Wild animals tend to move to high grounds at the time of floods. Many animals are not killed by nature but by the opportunistic killing of those, mainly for their meat.

### Way Forward

- **Structural Measures:**
  - In view of climate change and varying precipitation and river flow patterns, the **embankments and reservoirs** must be designed to accommodate worst case scenarios.
  - **Watershed management** should be prioritised. It include measures for developing and conserving the vegetative and soil covers and also construction of structural works like check-dams, detention.
  - **Improvement of river channels and surface drainage** and most importantly checking erosion of land on river banks.
  - **The tree plantation drives** at all levels are steps in the right direction.
  - **River-basin specific flood inundation modelling** with climate change simulations is a necessary first step to understand the full impact of potential unprecedented flooding. This includes worst-case scenarios such as twice the maximum historical rainfall, as was recently done by a Department for International Development, U.K.-supported project for the Mahanadi in Chhattisgarh.
  - Flood control can be effected through an **Integrated Dam Management System**, which is totally computerised and automated, the only exception being lifting and lowering of shutters which has to be done manually. This system which can be called IDMS, has to be evolved and developed independently.
  - **Diversion of flood waters:** This method can be used in case of unusual floods around cities. Important projects under construction or under planning are the supplementary drain in Delhi, the Thottapally Spillway diversion in Kerala, the Kolleru lake diversion into the sea in Andhra Pradesh, etc.
  - **Detention basins:** They are formed by improving the capacity of natural depressions/ swamps and lakes. The Ghaggar detention basin in Rajasthan is a good example. This method is relatively inexpensive as the land under marshes may hardly require much compensation.
- **Non-Structural measures:**
  - Causes for annual floods are well-known. It's now time to put lessons from research on the rivers into practice.
  - The **Centre-states mechanism** needs to be further strengthen with focus on greater coordination.
  - **Integrated approach to managing floods** requires a sound understanding of the patterns that rivers such as the Ganga and its tributaries display during the monsoon. Governmental understanding of the problem generally relies not so much on advanced techniques such as **mapping based on satellite imagery and Geographic Information Systems**, but on **ground-level surveys and anecdotal reporting**. This needs to change.
  - **Flood forecasting** has been recognized as one of the most important, reliable and cost-effective non-structural measures for flood management.
  - **Advance town planning and yearly preparations** should be done to mitigate the effects of urban planning. **Flood proofing measures** involve raising villages above the pre-determined floods levels.
  - **Discouraging creation of valuable assets /settlement of people** in the areas subject to frequent flooding.
  - **Facilitating timely evacuation of people** and shifting of their moveable property to safer grounds by having advanced warning of incoming floods.
  - The **local community** should be encouraged to **co-manage water resources** with the government (by planning intermediate storage, drainage and emergency responses).
  - There must be **massive awareness generation**, to ensure that airports are not extended into river floodplains, that road culverts let storm water through without hindrance, and that excess water is not blocked but allowed to saturate the soil strata so that it does not cause mudslides.

### Conclusion:

- ❖ The approach to flood management need to have a relook to have an integrated strategy for policy and management related to floods. A flood management strategy will need to cover flood warnings, flood mitigation, any necessary evacuation and post-flood recovery.



**Q) While northern India is witnessing an extended winter season, the southern part of the country has started experiencing heat wave conditions this March, In this context discuss the significance and relevance of India Cooling Action Plan (ICAP). (250 words)**

[Indiatoday](#)  
[Reference](#)

**Why this question:**

*The articles provide for a coverage of the recent anomaly in the weather conditions of India and importance of India Cooling Action Plan (ICAP). Thus making it important from the point of view of GS III paper.*

**Key demand of the question:**

*The answer should discuss the salient features of the programme, the objectives of it. you must also detail and emphasis on the need for a comprehensive policy and coordinated approach to deal with such anomalies in weather condition that can affect multiple sectors of economy such as agriculture, health etc.*

**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:**

*Briefly narrate the background of the issue, discuss the importance of the programme in the same context.*

**Body:**

*What is the issue ? why is there a changing trend in weather/climatic conditions.*

*Importance of the programme – ICAP.*

*Salient features and objectives of ICAP.*

*Benefits of the scheme, challenges and issues faced in implementation.*

*Need for such schemes , suggest a way forward.*

**Conclusion –**

*Conclude with need for holistic approach to address the issue and suggest a way forward.*

**Introduction:**

- India is currently battling **two different weather extremes** in two different directions. While northern India is witnessing an extended winter season due to a **flurry of intense western disturbances (WDs)** in February and early March, the southern part of the country was under heat wave conditions on March 6, 2019, according to data from the India Meteorological Department (IMD).
- According to the IMD, “heat wave need not be considered till maximum temperature of a station reaches at least 40 degree Celsius for plains and at least 30 degree Celsius for hilly regions for two or more days continuously.”

**Body:**

- Last year, heat waves had started affecting parts of northern and north western India in late March, which spurred the formation of a series of unusual dust and thunderstorms in the region. This time around the same states are undergoing an extended winter.
- **Heat waves** are the **third highest cause for deaths** among natural disasters in India, **after lightning strikes and earthquakes**; but the **Indian government does not consider it as a natural calamity**. In fact, the IMD came up with advisories for heat waves only in 2016 — the first time in the institution’s 140 year-history.



### India Cooling Action Plan:

- India is one of the first countries in the world to develop a **comprehensive Cooling Action plan** which has a long term vision to address the cooling requirement across sectors and lists out actions which can help reduce the cooling demand.
- **Importance:** Cooling requirement is **cross-sectoral and an essential part for economic growth** and is required across different sectors of the economy such as residential and commercial buildings, cold-chain, refrigeration, transport and industries. ICAP provides an **integrated vision towards cooling** across sectors encompassing inter alia **reduction of cooling demand, refrigerant transition, enhancing energy efficiency and better technology options with a 20-year time horizon.**

### The India Cooling Action Plan seeks to

- Reduce cooling demand across sectors by 20% to 25% by 2037-38
- Reduce refrigerant demand by 25% to 30% by 2037-38
- Reduce cooling energy requirements by 25% to 40% by 2037-38
- recognize “cooling and related areas” as a thrust area of research under the national S&T Programme
- Training and certification of 100,000 servicing sector technicians by 2022-23, synergizing with Skill India Mission. These actions will have significant climate benefits.

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

- Thermal comfort for all – provision for cooling for EWS and LIG housing
- Sustainable cooling – low GHG emissions related to cooling
- Doubling Farmers Income – better cold chain infrastructure – better value of products to farmers, less wastage of produce
- Skilled workforce for better livelihoods and environmental protection
- Make in India – domestic manufacturing of air-conditioning and related cooling equipment’s
- Robust R&D on alternative cooling technologies – to provide the push to innovation in a cooling sector

### Challenges:

- ICAP has not indicated the benchmark for thermal comfort that needs to guide energy efficiency measures for all – users of active as well as passive cooling.
- ICAP’s actual intent is “myopically” focused on only the market for personal air conditioners, ignoring the fact that demand for cooling is driven by people and not by sale of air conditioners.
- ICAP must capture equity issue, ensure thermal comfort for all without over dependence on active cooling.
- ICAP must take note of the fact that about 60 per cent of current space cooling energy consumption is by top 10 per cent of the population.
- Over 96 per cent of transport cooling energy consumption is due to personal cars (13.5 per cent of population) and this small minority skews electricity demand and locks in enormous carbon energy guzzling.

### Way forward:

- The ICAP must emphasize the urgency and need for better planning, zoning and building regulations to prevent Urban Heat Islands.
- ICAP can be strengthened further by calling for a mapping exercise by local jurisdictions of vulnerable populations and their cooling needs.
- The ICAP must provide some guidance to states and articulate the role of non-state actors such as builders, manufacturers, consumer groups, industry associations in supporting the recommendations.
- ICAP must provide recommendations to set up robust data collection frameworks needed for monitoring, verifying, enforcing and improving the proposed interventions.
- The ICAP must say more on moderating cooling demand from rich through price signals and regulations, sensitising consumers to the environmental and social impact of AC buying.

### Conclusion:

- ❖ Sustainable cooling for India cannot be achieved by technological solutions alone. It has to respond to India’s unique needs that vary across the country.
- ❖ The overarching goal of ICAP is to provide sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society.

**Q) “The relationship between disaster and development depends on the development choices made by the individual, community and the nation”. Discuss. (250 words)**

[Reference](#)  
[The hindu](#)





### **Why this question:**

*The question is in the backdrop of recent incidence of foot over bridge that collapsed in Mumbai. The incidence hints at the relationship between man made disasters and the role played by Man in his development policies.*

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

*The question is about the fact that while focusing on development goals, the countries have to adjust their policies and priorities to rearrange valuable resources to deal with occurrences and challenges of a variety of natural, man-made, and technological disasters, which are directly or indirectly related to economic development. In this case the incidence of collapse of foot over bridge is not the first of its type.*

### **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:**

*Introduce with a few lines on importance of disaster management and highlight the need with respect to Man made disasters.*

#### **Body:**

*Bring out the importance of Disaster management in managing man-made disasters.*

*Discuss the Socio-Economic and Political Consequence of such disasters.*

*Explain the implications, positive or negative ones, and how it depends on the unique social and cultural setup of local communities and the managerial capacity of their disaster and development.*

*What can be done? – suggest policy changes required in this direction.*

#### **Conclusion:**

*Conclude as – It is high time that India takes stringent measures*

*Have a robust disaster recovery system in the country to manage and mitigate such losses.*

#### **Introduction:**

- A disaster is an unforeseen event, which can overwhelm the capacity of the affected people to manage its impact. Disaster management efforts aim to reduce or avoid the potential losses from hazards, assure prompt and appropriate assistance to the victims of a disaster, and achieve a rapid and effective recovery.
- India has been **traditionally vulnerable to the natural disasters** on the account of its unique geo-climatic conditions. Off late, there is an **increase in the man-made disasters**. The **Gas leaks, oil spills, nuclear meltdowns, industrial disasters, breaching of structures like Dams, foot-bridges, unregulated congregations** are instances of such man-made disasters.

#### **Body:**

##### **Socio-Economic and Political Consequence of such disasters:**

- Mortality and morbidity of many individuals as seen during the Bhopal Gas tragedy and recent train accident over congregation of people.
- In the aftermath of disaster, people may experience a range of physical, psychological, emotional or behavioural reactions that, while perfectly natural, can significantly impact their ability to cope with the situation
- Scarcity for basic needs may lead to problems like law and order problems.
- Sudden loss of livelihood until recovery is established.
- There is also a huge loss to the public health system, transport and communication and water supply in the affected areas.



- Epidemic breakdowns are frequent.
- The destructions caused due to disasters leads to wiping out of biodiversity in the nearby areas.
- The economic resources in the form of labour are lost.
- Any time a disaster hits it can cause millions in damage and even more to repair the wreckage.
- It can pull many families into poverty as the bread-winners may lose lives or most of their income is spent on treatment of the injured.
- There is a reduction of tourism in the area.

#### Importance of Disaster management in managing man-made disasters:

- Disaster management occupies an important place in this country's policy framework as it is the poor and the under-privileged who are worst affected on account of calamities/disasters.
- Disasters affect sustainable developments in both generation equity and environment protection because disaster outcomes produce negative effects on local natural and environmental conditions and disaster policies and program affect not only recovery efforts for the current generation, but also development opportunities for future generations

#### Relationship between disaster and development:

- To support the connection between disaster and development, researchers also stress the importance of creating participatory and collaborative processes, allowing civil society to engage in and take responsibility in disaster risk management and sustain-able development.
- They suggest consultation procedures to integrate technical scientific modelling.
- In order to make progress in the development stages of disaster reduction, inter-disciplinary studies must occur to develop better risk reduction strategies and until.
- It is important to create a participatory process, allowing civil society to engage in and take responsibility in disaster risk management.
- Participatory actions provide opportunities for a wide range of actors to interact and share knowledge. This process, it is hoped, will bring about connections between environmental knowledge and risk reduction.
- Important characteristics for an effective disaster recovery and redevelopment include **commitment, cooperation, creativity, inclusivity, and flexibility.**

#### Approach by Government:

- The Government of India have brought about a paradigm shift in the approach to disaster management.
- The new approach proceeds from the conviction that **development cannot be sustainable unless disaster mitigation is built into the development process.**
- Another corner stone of the approach is that mitigation has to be multi-disciplinary spanning across all sectors of development.
- The new policy also emanates from the belief that investments in mitigation are much more cost effective than expenditure on relief and rehabilitation.
- The approach has been translated into a National Disaster Framework [a roadmap] covering institutional mechanisms, disaster prevention strategy, early warning system, disaster mitigation, preparedness and response and human resource development.
- The recent **National Disaster Management Plan** seeks to provide a framework and direction to government agencies for prevention, mitigation and management of disasters involving all stakeholders.

#### Conclusion:

- ❖ The holistic approach to integrating disaster with development has been emphasized and practiced by policymakers and public managers of local communities.
- ❖ Disasters can be seen as a "**window of opportunity**" for development and **well-planned development** can certainly reduce impacts of disasters.

**Q) Discuss the need for Disaster risk reduction in India. What are the challenges involved and explain the global efforts in this direction. (250 words)**

[pib](#)  
[The hindu](#)



### **Why this question:**

*An International Workshop on Disaster Resilient Infrastructure (IWDR) has been organized by the National Disaster Management Authority (NDMA) in collaboration with United Nations Office for Disaster Risk Reduction (UNISDR), and in partnership with the Global Commission on Adaptation, United Nations Development Programme and the World Bank. Thus the question is important from this point of perspective for GS Paper III.*

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

*The answer must discuss in detail the need for Disaster risk reduction in India, the associated challenges and way forward with special emphasis on global efforts in this direction.*

### **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:**

*Start with importance of disaster management or quote a fact that signifies or highlights the same.*

#### **Body:**

*Define first what you understand by DRR, detail upon its significance .*

*Then explain the need for inclusive disaster risk management, discuss the factors holding back the process of risk reduction; the challenges involved.*

*Such questions are best answered with the aid of case studies.*

*Then move on to narrate global efforts in this direction – International Workshop on Disaster Resilient Infrastructure (IWDR), 3rd Indo-Japan Workshop on Disaster Risk Reduction etc.*

#### **Conclusion:**

*Suggest way forward.*

#### **Introduction:**

- Disaster is a catastrophic situation in which normal pattern of life and or ecosystem has been disrupted and extraordinary emergency interventions are required to save and preserve lives and or environment.
- Disaster preparedness means the steps or activities and precautions taken collectively before a disaster to reduce the impact and to cope with it effectively.

#### **Body:**

The need for Disaster risk reduction in India is:

- The **Vulnerability Atlas of India** reveals that about 60% area is vulnerable to Earthquakes, 8% to Cyclones, 12% to Floods and 68% of land under cultivation is prone to Drought.
- According to **the United Nations International Strategy for Disaster Reduction (UNISDR)**, India ranked second after China for natural disasters.
- According to **World Bank report**, India's direct loss due to disaster is around **2% of its GDP**.
- Rapid increase of population and urbanization along prone areas and other developments have increased the level of exposure to hazards.
- Floods are becoming a common phenomenon in India. Ignoring all the safety guidelines, dwellings, factories and infrastructure facilities have been constructed in areas that are potentially vulnerable to natural hazards like floods.
- As India is still not catching up with the developed countries in adopting disaster management strategies effectively, the losses are mounting.
- A report published in **2017 by the Comptroller and Auditor General (CAG)** about India's performance audit on flood control and management schemes categorically stated that only 7% of dams (349 out of 4,862) have Emergency Action Plans.



- Man-made factors have compounded the scale of the disaster. Unabated expansion of hydro-power projects and construction of roads to accommodate ever-increasing tourism, especially religious tourism, are also major causes for the unprecedented scale of devastation.
- India has been ranked as the sixth most climate change-vulnerable country by the Climate Risk Index 2018.
- Dealing with current vulnerabilities and projected climate change impacts needs innovative thinking and participatory planning and action.

#### Challenges involved:

- Vulnerability quotient of many cities is high because they are located in eco-sensitive areas such as coastlines, rivers and floodplains.
- **Lack of governance:**
  - Most city governments struggle to deal with other day-to-day development challenges such as education, infrastructure and health, and so climate resilience and adaptation figure low on their priority list.
  - Big cities such as Delhi and Mumbai have no city resilience plans because there is not just multiplicity of problems but also of authorities, which tend to work in silos whereas climate change cuts across several departments: public health, water, environment, energy, and social justice to name a few.
- **Lack of financial management:**
  - While the upfront capital costs of climate change mitigation and adaptation are being increasingly well understood, decision making and investment planning are hindered by uncertainty in the indirect costs and lack of simplified and transparent methods for assessing cost-benefit analysis of the steps that a city takes.
  - They are not equipped with the financial management systems and processes required to access climate financing, such as green bonds
- **Lack of awareness:**
  - Lack of active citizens who are informed and engaged on the subject of climate change and sustainability, which is essential to mitigate and build resilience, and demand accountability including transparency and information on liveability indicators such as air pollution levels, percentage of garbage segregated, modal share of public transport, walking and cycling.
- **Lack of manpower:**
  - Then there is a shortage of skilled personnel specialised in areas such as environmental engineering transportation, traffic management, disaster management, and related areas.
- **No Environmental Impact Assessment:**
  - Roads, railway lines and housing colonies being laid and built without regard for natural water ways, but with formal planning permission.
  - The State Disaster Management Agency also ignores them.
  - Despite India being a signatory to the UN's Sendai Framework for Disaster Risk Reduction, little has changed on the ground.
- **Land use:**
  - Injudicious use of land is responsible for making states more prone to floods and landslides.
  - However, other factors such as a change in land use patterns and climate change could have contributed to the situation on the ground.
- **Deforestation:**
  - Unfettered development activity had increased the chances of landslides, a major cause of casualties during the floods.
  - Wetlands have been lost to development projects, construction of roads, and buildings at places too close to rivers.
  - Other issues mentioned such as deforestation, encroachment and unplanned construction are self-evident priorities when development is viewed using the lens of climate-resilient water management (CRWM).
- **Disaster management constraints:**
  - There is a need to enhance the role of Civil Defence in Disaster Management process and formulating an effective National Plan for Disaster Management.
  - Even now, the communication systems at the local level haven't been much developed.
  - There are **no Standard Operating Procedures** for the deployment of National Disaster Response Force.



- There have been many cases where there has been a relief and rescue mobilization but by the time the teams reach the damage would have already been done.
- Ignoring all the safety guidelines, dwellings, factories and infrastructure facilities have been constructed in areas that are potentially vulnerable to natural hazards like floods.
- Disaster management plans exist on paper, but implementation remains a challenge.
- Despite the emphasis on a paradigm shift to a preparedness approach by the government, most parts of the country continue to follow a relief-centric approach in disaster management, rather than a proactive prevention, mitigation and preparedness path.
- Disaster maps and vulnerability profiles by the Ministry of Housing and Urban Poverty Alleviation of the Government of India identify winds and cyclones, earthquakes, and floods as disaster risks.
- It is unclear if the maps have been updated to include weather and climate extremes and the associated crop losses or loss of lives or health risks.

#### Global Efforts:

- For each hazard, the approach used in this national plan incorporates the four priorities given in the **Sendai Framework** into the planning framework for Disaster Risk Reduction under the five Thematic Areas for Actions: **Understanding Risk; Inter-Agency Coordination; Investing in DRR – Structural Measures; Investing in DRR – Non-Structural Measures; Capacity Development**
- The **United Nations Office for Disaster Risk Reduction (UNISDR)** was established to ensure the implementation of the International Strategy for Disaster Reduction.
- UNISDR supports the **implementation, follow-up and review of the Sendai Framework for Disaster Risk Reduction** adopted by the Third UN World Conference on Disaster Risk Reduction on 18 March 2015 in Sendai, Japan.
- Such international cooperation and shared commitment are needed to “future-proof” our cities and lock-in resilience for generations to come.
- In India, The **national disaster management plan (NDMP)** was introduced by NDMA based on the Sendai Framework for Disaster Risk Reduction 2015-2030

**Q) The frequency of tropical cyclones has decreased ever so slightly over the last 70 years in the Indian Ocean season and Instead, a much higher frequency of high-intensity storms are being witnessed, in the light of recent onset of Cyclone Idai discuss role of human-induced climate change in such events. (250 words)**

#### Reference

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

*The question is in the backdrop of the Cyclone Idai that swept through Mozambique, Malawi and Zimbabwe over the past few days, the devastating cyclone that hit south-eastern Africa may be the worst ever disaster to strike the southern hemisphere.*

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

*The answer must revolve around the role of human-induced climate change in such disastrous events. The cyclone Idai has led to devastating floods, killing and injuring thousands of people and ruining crops. More than 2.6 million people have been affected across the three countries. Thus the answer must highlight and discuss in detail the causes and consequences of such events.*

##### **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:**

*Begin with quoting the facts related to cyclone Idai; location, impact spread etc.*



**Body:**

*Discuss in brief what are cyclones, their impact in general, then move on to explain the current context of Idai cyclone.*

*Then justify why – The frequency of tropical cyclones has decreased ever so slightly over the last 70 years in the Indian Ocean season and Instead, a much higher frequency of high-intensity storms are being witnessed.*

*Discuss the role of climate change, mainly the human induce ones.*

*Suggest measures to tackle such incidences – disaster management, early detection etc.*

**Conclusion:**

*Conclude with way forward – global efforts to tackle climate change and others.*

**Introduction:**

- Cyclone Idai is the seventh major storm of the Indian Ocean season – **more than double the average for this time of year** – the long-term trend does not support the idea that these type of events are now more frequent.

**Body:**

- Cyclone is any large system of winds that circulates about a centre of low atmospheric pressure in a counter-clockwise direction north of the Equator and in a clockwise direction to the south.

**Conditions Favourable for Cyclone Formation:**

- Large sea surface with temperature higher than 27° C
- Presence of the Coriolis force enough to create a cyclonic vortex
- About 65 per cent of cyclonic activity occurs between 10° and 20° latitude.
- Small variations in the vertical wind speed
- A pre-existing weak low-pressure area or low-level-cyclonic circulation
- High humidity (around 50 to 60 per cent) is required in the mid-troposphere, since the presence of moist air leads to the formation of cumulonimbus cloud.

The interesting thing is that the **frequency of tropical cyclones has decreased** ever so slightly over the last 70 years. Instead, we are getting a **much higher frequency of high-intensity storms**. The reasons for the same are:

- Climate change is affecting a number of factors in the background that are contributing to making the impact of these storms worse.
- Climate change makes the rainfall intensities higher, increased influences of warming on specific events.
- Warmer seas mean there is more energy available for cyclones, which only form when the water reaches 26 degrees Centigrade.
- Global warming causes a sea-level rise, the resulting flooding is more intense than it would be without human-induced climate change.
- In previous decades, the further away you were from the Equator meant the cooler the seas became and so any tropical cyclones that formed didn't have the energy to keep going. Now climate change is impacting that relationship.
- Under increasing sea-surface temperatures, we are seeing the line of constant temperature required for these storms to form moving further and further towards the South Pole

**Cyclone Management in India:**

- India is highly vulnerable to natural disasters especially cyclones, earthquakes, floods, landslides, and drought. Natural disasters cause a loss of 2% of GDP every year in India. According to the Home ministry, 8% of total area in India is prone to cyclones.
- In 2016, **National Disaster Management Plan** was unveiled to tackle disaster. It provides a framework to deal with prevention, mitigation, response and recovery during a disaster.
- Due to increased awareness and tracking of Cyclone, the death toll has been reduced substantially. For example, Very severe cyclone Hudhud and Phailin claimed lives of around 138 and 45 people respectively, which might have been more. It was reduced due to the early warning and relocation of the population from the cyclone-hit areas.
- But the destruction of infrastructure due to cyclonic hit is not been reduced which leads to increase in poverty due to the economic weakening of the affected population.



Measures to tackle such incidences:

- The **National Cyclone Risk Mitigation Project (NCRMP)**, to be implemented with financial assistance from the World Bank, is envisaged to have four major components:
  - Component A: Improvement of early warning dissemination system by strengthening the Last Mile Connectivity (LMC) of cyclone warnings and advisories.
  - Component B: Cyclone risk mitigation investments.
  - Component C: Technical assistance for hazard risk management and capacity-building.
  - Component D: Project management and institutional support.
- These components are highly interdependent and have to be implemented in a coherent manner.
- The **NDMA** had come up with its National Guidelines of Management of Cyclones in 2008. The basic premise of these guidelines is that the mitigation has to be multi-sectoral.
- Developing Integrated Coastal Zone Management (ICZM) frameworks for addressing the sustainability and optimal utilisation of coastal resources as also cyclone impact minimisation plans.
- Ensuring cyclone resistant design standards are incorporated in the rural/ urban housing schemes in coastal areas
- Implementing coastal flood zoning, flood plain development and flood inundation management and regulatory plans.
- Coastal bio-shields spread, preservation and restoration/ regeneration plans.
- There is a need for private sector participation in designing and implementing policies, plans, and standards.
- Need of Disaster Management program to be inclusive including women, civil society, and academia.

#### Conclusion:

- ❖ India should prepare to mitigate and deflect the destruction caused by Cyclones. We need to employ technology, strict following of command structure and most importantly the participation and cooperation of local communities in the affected area.

**Q) It is not only the intensity of environmental disasters that makes disasters devastating but poverty also has a huge bearing. Critically analyse. (250 words)**

#### Reference

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

*The article evaluates the tropical cyclone Idai that recently rampaged south-eastern Africa – one of the worst disasters ever to strike the southern hemisphere. It evaluates the reports from the Intergovernmental Panel on Climate Change (IPCC) in this context.*

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

*One is expected to discuss the that the intensity of environmental disasters is not alone due to the natural or man made causes but also because of the alarming problem of poverty that has huge influence on its intensity.*

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

##### **Introduction:**

*Brief upon the recent event of cyclone Idai, its devastating impact on the region.*

##### **Body:**

*Explain in short the causes and consequences of the disaster.*

*Discuss that It is not only the intensity of environmental disasters that makes them devastating – poverty also has a huge bearing on how things play out. Houses in poorer areas often are less stable, storm barriers may be weaker, sanitation is often a problem, emergency services will be poorly resourced – and preventing disease outbreaks may be hindered by the poor state of public health services. The list of disadvantages goes on and on.*

*You can have a case study from Indian context.*

*Conclude what needs to be done and suggest way forward in terms of – policy measures, community actions etc.*



### Conclusion:

*Re-assert the significance of disaster management and importance of development and vis-à-vis eradication of poverty.*

### Introduction:

- The tropical cyclone rampaging south-eastern Africa has been described as one of the worst disasters ever to strike the southern hemisphere, with up to 2.6 million people potentially affected in Mozambique, Malawi and Zimbabwe.
- The death toll may not be known for months, but it is already likely to have run to hundreds and possibly thousands of people. The brunt of the disaster has been borne by the coastal city of Beira in central Mozambique, 90 per cent of which has been reportedly destroyed.

### Body:

Environmental disasters fall into two general categories.

- Some disasters are caused by **natural climate or weather events**.
- These include wild fires, landslides, floods, earthquakes, droughts, tornadoes, tsunamis, and volcanic eruptions.
- Although the causes of these natural environmental disasters do not involve human activities, in some cases the effects are worsened by the influence of people.
- A second category of environmental disasters includes those caused by human activities.
- Examples of human-induced environmental disasters include oil spills, chemical spills, and nuclear incidents.
- In addition, wars and terrorist activities can be disastrous to ecosystems.
- In many cases, environmental disasters caused by humans have longer lasting effects on the environment than catastrophes brought on by natural events.

### Impacts of environmental disasters:

- Natural disasters can have a life-altering impact on the individuals, families and society.
- But the effect of natural disasters can be felt at the community, city and state level, or many times can impact an entire country
- Disasters not only reveal underlying social, economic, political and environmental problems, but unfortunately contribute to worsening.
- Disasters create substantial environmental degradation and ecological imbalance, hinder socioeconomic development and retard the process of improving the quality of life of the people.

However, it is not only the intensity of environmental disasters that makes disasters devastating but poverty also has a huge bearing. Natural catastrophes are as much a **result of poverty** and weak government as plate tectonics and weather – that's why they hit the world's poor hardest.

- Population increase, climate change, increasing urbanization and environmental degradation are some of the drivers of future disaster risk for poor people worldwide. In recent decades, there has been a rise in both the number and impact of natural disasters.
- Developing countries are most exposed to the risks of disasters as their inhabitants often lack the ability to cope with or adapt to such events.
- As more than half the world's population lives in cities, poorly planned and managed urban development is a key driver of disaster risk.
- Poor housing, lack of health facilities and infrastructure put nearly one billion urban dwellers living in informal settlements at risk of disasters.
- The lives and livelihoods of people living in flood plains, low lying coastal areas and steep slopes are particularly in danger.
- Deforestation, overgrazing and land degradation have damaged ecosystems and are exacerbating the risks of disasters such as floods or landslides.
- Very often, it is women who are most affected by disasters. More women than men are injured or killed during hurricanes and floods.
- Sanitation is often a problem and it is an dangerous source of diseases post disaster. Old aged, women and children will be highly vulnerable.
- Emergency services will be poorly resourced post disaster which will increase the mortality rates.



### Redistribution of wealth from Richer to poorer nations: A scheme of climate financing

- Richer countries in the world have responsibility in changing the current approach to disaster aid.
- In major donor countries such as the US and UK, the guiding modus operandi of disaster relief has been reactive as opposed to proactive measures.
- Earmarking more resources for disaster prevention and preparedness than on emergency responses such as humanitarian interventions in post disaster situations.
- Donor countries need to prioritise identifying the most vulnerable people both before and after a disaster, and ensure they receive the required support and are granted the agency to be actively involved in the process.
- Besides the high-profile attempts to reduce global emissions, countries such as the UK should be offering support to poorer countries with everything from building flood defences to supporting social services to transferring technology.
- They should be forgiving national debt, redistributing wealth or at least giving them preferential trade deals to help them adapt to climate change themselves. This requires a rethinking not just of humanitarian aid but of development assistance in general.

### Other measures:

- Poverty alleviation measures like assured income, better health and education facilities need to be provided across the globe to reduce the North-South disparities.
- Developing Integrated Coastal Zone Management (ICZM) frameworks for addressing the sustainability and optimal utilisation of coastal resources as also cyclone impact minimisation plans.
- Ensuring cyclone resistant design standards are incorporated in the rural/ urban housing schemes in coastal areas
- Implementing coastal flood zoning, flood plain development and flood inundation management and regulatory plans.
- Coastal bio-shields spread, preservation and restoration/ regeneration plans.
- There is a need for private sector participation in designing and implementing policies, plans, and standards.
- Need of Disaster Management program to be inclusive including women, civil society, and academia.

### Conclusion:

- Climate change and the resultant disasters are a reality. Nations should prepare to mitigate and deflect the destruction caused by disasters.
- We need to employ technology, strict following of command structure and most importantly the participation and cooperation of local communities in the affected area

*Topic: Security challenges and their management in border areas; linkages of organized crime with terrorism*

**Q) The recent Pulwama attacks have exposed the gaps in our security systems and the urgent need to have a well- defined national security doctrine. However the recent act of the Government agencies to monitor computers have sparked privacy fears among the people. Critically analyse. (250 words)**

[Indianexpress](https://www.indianexpress.com)

### **Why this question:**

*Department of Science and Technology (DST) recently launched National Mission on Inter Disciplinary Cyber Physical Systems dealing with self-driven cars, autonomous unmanned vehicle and aircraft navigation systems.*

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

*The main demand of the question is to analyse the debate of national security vs privacy of individual in the context of recent government's step of monitoring computers in the name of national security.*

### **Directive word:**

*Critically analyze – When asked to analyze, 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. 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 judgement.*



### Structure of the answer:

#### Introduction:

*Narrate the background of the Pulwama attack, failure of the Indian Intelligence to forecast.*

#### Body:

*Weigh the pros and cons of such an act, how there needs to be a balance between the two elements, one shouldn't be compromised at the cost of the other.*

#### Keywords:

*Right to privacy, Checks and balances, Information Technology Act of 2000, Section 69 of IT Act, online monitoring etc.*

#### Conclusion:

*Conclude with a fair and balanced opinion and discuss way forward.*

#### Introduction:

- The Pulwama terrorist attack is one of the worst in recent years with over 40 CRPF jawans killed in a terrorist attack. Lapses in the **quality and timeliness of intelligence inputs and the standard operating procedures (SOP)** being followed by the armed police force convoys is highlighted. India remains **deficient in intelligence-analysis, inter-agency coordination, and, above all, a national security doctrine.**

#### Body:

- The Union Home Secretary promulgated an order authorising 10 Central agencies to **monitor, intercept and decrypt information which is transmitted, generated, stored in or received by any computer.** Under the order, an individual who fails to assist these government agencies with technical assistance or extend all facilities can face up to seven years of imprisonment or be liable to be fined.
- An affidavit was filed in response to **petitions challenging the Constitutional validity** of Section 69 of Information Technology Act, 2000, Section 5(2) of the Indian Telegraph Act, 1885, the order dated December 20, 2018 issued under Section 69(1) of the IT Act and Rule 4 of the Information Technology Rules, 2009 which enables government agencies to intercept personal information of citizens under certain conditions.

#### The pros of order:

- **Grave threats to the country** from terrorism, radicalisation, cross border terrorism, cyber crime, organised crime, drug cartels cannot be understated or ignored.
- There is **no blanket permission to any agency for interception or monitoring or decryption**, as the authorised agencies still require permission of the competent authority i.e. Union Home Secretary in each case as per due process of law and justification for interception or monitoring or decryption.
- Cases shall be restricted strictly to the purposes mentioned in Section 69 (1) of the Information Technology Act, 2000, viz., in the interests of the **sovereignty of India, defence of India, security of the State, friendly relations with foreign states or public order, or for preventing incitement to the commission of any cognisable offence relating to above or for investigation of any offence.**
- It **ensures that right to privacy of law-abiding citizens is not violated** by any intermediary, agency or person
- A strong and robust mechanism for timely and speedy collection of actionable intelligence, including signal intelligence, is imperative to counter threats to national security.

#### The concerns regarding the order:

- Section 69 allows mass surveillance even when only law and order is affected while public order prevails: merely for precluding the incitement of the commission of an offence
- Section 69 of the IT Act after *K.S. Puttaswamy v. Union of India* — 'the right to privacy case', in 2017 — seems to fail the litmus test of constitutionality
- Phrasing of "intercept" in the rules might include traffic diversion, which may permit code injections and malware attacks. Such a broadly worded provision can have **potential ramifications on free speech**
- The notification also **permits decryption, which might require the service provider to break their encryption protocols.**
- The home ministry says that each case will continue to be approved by the Union home secretary. But a specific clearance on each case is obviously meaningless because the record shows about 100 clearances daily on average.
- The scrutiny is therefore remains only on paper, and there is no safeguard against misuse.
- The rules provided that the home secretary's clearance should be obtained within a week.





- This could make the agencies to tap at will without clearance.
- There is a blanket authorisation being given to security agencies, without any safeguards regarding its misuse.
- This was given even to foreign-focused agencies that have no business on surveillance of Indian citizens such as the Research & Analysis Wing.
- Many of the agencies named in the order from the home ministry are neither under parliamentary scrutiny nor are their actions subject to judicial control.
- A **heavily bureaucratised and minimally accountable regime** of surveillance does nothing to enhance security, but does have **significant privacy costs**. Example: while examining the U.S. National Security Agency's programme of mass surveillance, an American court found that out of more than 50 instances where terrorist attacks had been prevented. Not even a single successful pre-emption was based on material collected from the NSA's surveillance regime.

#### Way forward:

- The courts have made the home secretary accountable for all surveillance by central agencies and created a monitoring committee in 1996.
- There is a need to increase the capacity available, and not to subvert the due process.
- Reason should be given before taking up any case and responsibilities should be assigned for the surveillance agencies.
- Such cases also need authorisation from a magistrate, who has to record the specific reasons in each case.
- Any well-constructed system of surveillance should balance both public security and individual rights.
- It can be considered an opportune moment to reform India's intelligence apparatus and bring it on a sound legal and constitutional footing.

#### Conclusion:

- ❖ A system of government surveillance has a chilling effect upon the exercise of rights, across the board, in society.
- ❖ In the famous '**privacy-security trade-off**', therefore, it is exceedingly important to assess the balance on the basis of constitutional principles and fundamental rights, rather than blindly accepting the government's rhetoric of national security.

### Q) Terrorism emanating from Pakistan and the China-Pakistan axis working against India are two of the major geo-political challenges facing the country. Discuss. (250 words)

#### The hindu

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

*The article is in the backdrop of recently placed hold on the listing of Pakistan-based terror group Jaish-e-Mohammad (JeM)'s leader Masood Azhar at the United Nations Security Council (UNSC) by China.*

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

*The question must explain the dichotomy that in India there is no stomach for any kind of dialogue with Pakistan. And yet with China, every time there is a pushback and this is pretty much when China refuses to list Masood Azhar despite the kind of push India has made diplomatically after the Pulwama attack. Thus in such a background one is expected to analyse geopolitics amidst the current situation and threats of terrorism emanating from Pakistan.*

#### **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:**

*Re- assert the importance of TB elimination in India.*

**Body:**

*Explain Terrorism emanating from Pakistan and the China-Pakistan axis working against India are two of the major geo-political challenges facing the country, then move onto explain the other geo-political challenges to India including the uncertainty around the incoming Donald Trump-led US administration's policies vis-a-vis China, Pakistan and India. Discuss how Bilateral ties between India and Pakistan are rock-bottom and explain the need to change it by imposing economic and political sanctions. Then discuss what should be India's stand in such context.*

**Conclusion:**

*While India's geo-political challenges will have to be dealt with by itself primarily, it would help if there is clarity on position of China and US vis-à-vis India and Pakistan.*

**Introduction:**

- China again placed a hold on the listing request for Pakistan-based terror group Jaish-e-Mohammad (JeM)'s leader Masood Azhar at the United Nations Security Council (UNSC). The JeM has carried out many terrorist attacks on Indian soil with the most recent being Pulwama attack where more than 40 jawans were martyred.

**Body:**

- **Terror from across the north-western borders:**
  - Terrorism emanating from Pakistan and the China-Pakistan axis working against India are two of the major geo-political challenges facing the country.
  - The increasing terror attacks on Indian military forces bases like the Pathankot air force station in Punjab and the Indian army's garrison in Uri in Jammu and Kashmir is guided from the terrorist base camps set up in the PoK region.
  - Other geo-political challenges to India include the uncertainty around the incoming Donald Trump-led US administration's policies vis-a-vis China, Pakistan and India.
  - Pakistan is devolving into a lesser challenge given that it was a "derived power", that is most of its heft – economic and political – is derived from China.
- **China's support to Pakistan:**
  - Pakistan has been given military and nuclear arms support by China in the past besides economic support.
  - With the major investment in terms of the **China-Pakistan Economic Corridor** being announced, China is only underlining its support for Pakistan.
  - China is supplanting the US as the biggest supporter of Pakistan.
  - China has also been making inroads into India's neighbourhood like Nepal, Bangladesh and Sri Lanka besides the Maldives, with investments.
  - Beijing's increasing cooperation with Russia, seen as a stalwart partner of India till recently is also a concern to India.
- **India-Pakistan relations:**
  - The bilateral relations between India and Pakistan has hit rock-bottom with India denying talks until Pakistan state stops state-sponsored terrorism.
  - The recent moves of India to cancel MFN Status to Pakistan and impose duties upto 200% have virtually choked the **economic ties too**.
  - Bilateral relations stalled in 2016 following the Pathankot and Uri attacks.
  - The inaction of Pakistan towards the non-state actors on its soil has further added to the mistrust between neighbours.
  - With the rampant use of high calibre weapons such as mortars and even artillery in the borders in Jammu and Kashmir, civilian casualties and the destruction of their habitats have risen steadily.
  - Pakistan has violated the ceasefire over 600 times so far this year, the highest in the last one decade.
  - In September 2016, India launched 'surgical strikes' as retaliation for the Uri attack but this has not reduced infiltration.

**Way forward:**

- Managing the discontent and law and order problems in Kashmir, would give Pakistan less scope to interfere and cause problems.
- India should seek global co-operation in cornering Pakistan and forcing it to take action against terror breeding grounds. Moves from FATF to blacklist Pakistan, USA's wrap against misuse of F-16s etc.



- India should use its bilateral goodwill with other permanent members in the UNSC to push China to blacklist Mazood Azhar.
- The India-China dialogue which has terror on board should be used to explain and convince China to stop vetoing the proposal.
- Other common forums like BRICS, SCO where China is also a member-partner should be used to put pressure on China to act against Global Terrorism.
- This must be bolstered with **Dialogues at the highest level to track 2 diplomacies with Pakistan**
- More avenues for **people to people contact** need to be encouraged between India and Pak.

#### Conclusion:

- ❖ There is a need to embrace an overarching strategic stability regime and to shun aggressive security doctrines to reduce the possibility of a nuclear conflict.
- ❖ The problems of terrorism and Non-State Actors need to be addressed jointly through institutionalised mechanisms. Indeed, India should focus on a different type of a surgical strike; it's a strike that could push Pakistan out of its terror past and military dependency.

*TOPIC: Linkages between development and spread of extremism; Role of external state and non-state actors in creating challenges to internal security.*

**Q) Discuss the need for a renewed attention on socio-economic re-integration of the Militants in the context of newly drafted Return Policy for militants in Jammu and Kashmir. What are the issues and concerns associated to it ? Suggest some solutions to tackle the same. (250 words)**

[Indianexpress](https://www.indianexpress.com)

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

*The question is in the context of the new policy by Jammu and Kashmir government to encourage militants from the state to give up arms.*

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

*The answer must provide for a detailed analysis of the proposed scheme as to how it is a revised version of earlier initiatives, but with a fresh focus on socio-economic re-integration.*

#### **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 briefly the importance of encouraging militants to join the mainstream, emphasis on need for rehabilitation.*

##### **Body:**

*Discuss first the previous approaches to this problem, then move on to discuss the need for rehabilitation through a two-pronged approach including reformative measures and opportunities of livelihood. Explain why it is essential for the government to show its determination to reach out to alienated youth. Explain why successful implementation of a surrender policy is of utmost importance in Jammu and Kashmir.*

##### **Conclusion:**

*Conclude with way forward.*

#### **Introduction:**

- The insurgency in Jammu and Kashmir began in 1989 and has ebbed and flowed in the intervening years. In 2018, the death toll for militants and security forces in Kashmir touched the highest point in a decade, according to official figures, with more than 400 killed. The state of J&K is now under President's rule owing



to the failure of the coalition government, thereby wiping out of the people's mandate. The absence of any meaningful political process to address Kashmiri grievances points to a more violent situation in the coming years.

## Body:

### Previous approaches to this problem:

- In **2004**, a fresh “rehabilitation policy” was implemented by the then PDP government under Mufti Mohammad Sayeed.
- It sought to provide “facility to those terrorists who undergo a change of heart and eschew the path of violence and who also **accept the integrity of India and Indian Constitution** to encourage them to join the mainstream and lead a normal life”.
- This policy had made provisions to **provide vocational training for militants who surrender** if they wished to pursue a trade, and a **monthly stipend of Rs 2,000 for the first three years**.
- One of the key decisions in the 2004 policy was the **establishment of counselling centres** “where all the returnees along with their wives and children would be lodged for a period of three months or for such longer time as would be necessary”.
- In 2010, the focus was on facilitating the return of ex-militants from J&K who had crossed over between January 1989 and December 2009 for training but later gave up insurgent activities “due to a change of heart and are willing, to return to the state”.

### Challenges of the previous policies:

- Those who intend to return saw surrender as an insulting process and there was a sense of defeat attributed to the word ‘surrender’ or even ‘rehabilitation’.
- Senior police officers acknowledged that these counselling centres never came up and no one returning to the mainstream was committed to counselling.
- Social stigma attached is very difficult to be erased.
- The money given and the rehabilitation measures were paltry.

### The newly drafted Return Policy for militants in Jammu and Kashmir:

- The proposed policy is essentially a revised version of earlier initiatives but with a **renewed focus on socio-economic re-integration**.
- The policy draft “is presently at the pre-SAC stage” and is subject to clearance by the state Home Department and the chief secretary.
- Jobs, reformatory measures, and a monthly stipend of Rs 6,000 are the key points of a new “reintegration policy” draft that is under the consideration of the J&K government under Governor’s rule currently, to encourage militants hailing from the state to give up arms.
- According to the draft, the new initiative addresses the need for rehabilitation at a policy level through a **two-pronged approach: reformatory measures and opportunities of livelihood**.
- The idea of developing this policy is to initiate reconciliation and institutional-level integration of people who left or joined armed groups.
- The initiative, however, will not cover militants found to have been involved in “heinous crimes”.

### Rationale behind the new draft policy:

- The Army after the deadly Pulwama attack has made it very clear that anyone who picks up the gun, will be executed unless he surrenders.
- There is a very good surrender policy being initiated by the government so that they can join the mainstream.
- It is essential for the government to **demonstrate its will to reach out to alienated youth**.
- The successful implementation of a surrender policy is of utmost importance in J&K as there are a large number of surrendered or released militants (around 25,000).
- The successful rehabilitation of one hardcore surrendered or released militant will motivate others to follow suit.

### Conclusion:

- ❖ The policy is a step in the right direction. Although time consuming, it will bear the necessary fruits of peace and harmony in J&K.
- ❖ It will take a lot of effort on the part of everyone to implement it successfully, especially the civil society and political establishment have a major role in motivating and bringing them back into the mainstream.



**Q) The recent terrorist attacks in New Zealand depict obvious dangers of hate, intolerance, and rising Islamophobia across the world. Do these incidents reflect rising sentiments of racism and intolerance into a perverse and murderous ideology? Critically examine. (250 words)**

The hindu

**Why this question:**

*The question is in the backdrop of Christchurch shootings of New Zealand that portrayed an act of heinous terrorist attack, manifesting Islamophobia and racist tendencies among people.*

**Key demand of the question:**

*The question must critically analyse the rising incidences of hatred in the name of Racism, hate and intolerance towards a community . One must analyse an extremist, right-wing, violent terrorist tendencies growing across the World.*

**Directive word:**

*Critically examine – When asked to critically examine, 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. 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 judgement.*

**Structure of the answer:**

**Introduction:**

*Introduce with condemnation of such attacks and as to how these incidences are a blot on humanity.*

**Body:**

*In brief discuss the incidence , explain how the incidence has cast a spotlight on the global scope of white supremacist rhetoric and violence.*

*Changing language of modern white nationalism and its impact.*

*Discuss that New Zealand and Australia have had a long history of white supremacist policy and discourse in the past and both of which the countries have yet not fully confronted.*

*Discuss the need for modern commitment to multiethnic democracy.*

*What needs to be done to resolve such sentiments and social outrage in the name of white supremacy and islamophobia.*

**Conclusion:**

*Conclude as – It is high time that the countries around the globe come together and come up with a strong policy against such unacceptable societal behaviors of intolerance and hatred.*

**Introduction:**

New Zealand was shaken to its core recently when at least 49 people were killed by a gunman in two mosques in Christchurch. The suspect live-streamed the massacre on social media after releasing a **white supremacist manifesto** that called for **removing the “invaders” and “retaking” Europe**. The terrorist attack was condemned by people across the world.

**Body:**

**Global scope of white supremacist rhetoric and violence:**

- Right-wing racist terror, which has largely been on the fringes in the post-War world, is emerging as a major political and security threat, especially in white-majority societies.
- In recent years, mosques in Germany and France have been targeted; in Britain an MP was stabbed to death; and in the U.S. a synagogue was attacked, leaving 11 people dead.
- In most cases, the attackers were **obsessed with immigration and the far-right ideas** of Euro-Christian white racial purity, which is fundamentally not different from the ideology of the Nazis.





- The language these attackers use resembles that of mainstream anti-immigrant politicians in Western countries, such as Mr. Trump, who wanted to ban Muslims from entering the U.S.; Viktor Orbán, the Prime Minister of Hungary, who wants to defend “Christian Europe”; or Italian Interior Minister Matteo Salvini, known for his hardline views on migrants.
- Besides, a number of far-right parties known for their **Islamophobic**, white nationalist views are either in power in Europe or are on the rise, be it the Freedom Party of Austria, the AfD of Germany or the National Front of France.
- While they and their leaders set the **broad contours of anti-immigrant, anti-Muslim and anti-Semitic politics as part of their nationalist narrative**, neo-Nazis such as Breivik and the Christchurch shooter are killing common people.

#### Long history of white supremacist policy in New Zealand and Australia:

- The alleged attacker who carried out recent massacre in Christchurch, New Zealand, was acting on a **toxic belief system** — one that has been **long nurtured by opportunists in politics and the media, in Australia and elsewhere**.
- The long period of economic development enjoyed by Australia and New Zealand since the late Nineteenth century virtually hid the widespread massacres and human rights violations committed by the British settlers and the subsequent local governments against the native peoples.
- During the twentieth century, a Maori protest movement developed, criticizing Eurocentrism and working for greater recognition of Maori culture and of the Treaty of Waitangi, first signed in 1840
- In 1975, a Waitangi Tribunal was set up to investigate alleged breaches of the Treaty, and it was enabled to investigate historic grievances in 1985.
- The country’s Human Rights Commission have asserted that there is strong evidence that structural discrimination of Maori, Pasika and other minorities is a real and ongoing issue.
- In this context, Christchurch—the largest city in the South Island, with nearly 400,000 inhabitants—gained prominence in the last 40 years as a hotbed of Pacific,” according to local sociologists.
- The 2011 earthquake that killed 185 people from 20 countries in Christchurch was the backdrop of the largest “white nationalist march” in New Zealand’s history one year later, and of the appearance of a more overt militant movement exploiting the globalization of the so-called “alt-right,” and neo-nazi groups such as the Atomwaffen Division.

#### Way forward:

- Societies worldwide should wake up to the growing danger right-wing racist terrorism poses, and not view it as mere isolated, irrational responses to Islamist terror.
- It has to be **fought politically**, by **driving a counter-narrative to white supremacy, and by using the security apparatus**, through **allocation of enough resources to tackle all threats of violence**.
- There is a need to **control the social media** from spreading such content of terror and violence. This is possible with the **confluence of all stake holders involved**.
- **Gun control laws** should be put in and **better law and order system** to protect the people needs to be taken up.
- **Refugee and migrant laws** should be framed in accordance to the Global Conventions. Increased people-to-people contact can help reduce the differences between people.

#### Conclusion:

- ❖ The rising hatred and intolerance among people egged by radicalism has led to many such lone-wolf terror attacks.
- ❖ India is also vulnerable to such ghastly attacks as seen in the recent Pulwama terror attacks. A global effort with all the nations needs to work towards eradicating the menace of terrorism.

*Topic : Role of media and social networking sites in internal security challenges, basics of cyber security.*

**Q) Discuss Fake news problem in India. Is it a policy issue or is it due to the lackadaisical approach by the social media companies or is it a combination of both? (250 words)**

The hindu



### **Why this question:**

*The article captures in detail how fake news has pervaded all spheres of life, political, economic and social – with negative implications. What measures need to be taken by various stakeholders to combat fake news menace. Thus it is important topic from the point of view of paper III and IV.*

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

*Discuss the causes and spread of fake news, Why is the spread of fake news on rise these days – causes and consequences. Most importantly discuss role of social media in it.*

### **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:**

*Introduce by stating the current conditions of the high prevalence of fake news in India.*

#### **Body:**

*In brief discuss – What do you understand by fake news – a type of yellow journalism that consists of deliberate misinformation or hoaxes spread via the traditional print, broadcasting news media, or via Internet-based social media., Why is the spread of fake news on rise these days – role of social media, main driving force behind fake news, how to contain it, legislative measures necessary, challenges and need for multi-stakeholder approach, how it affects society in general.*

#### **Conclusion:**

*Conclude with way forward – suggest steps to overcome.*

#### **Introduction:**

- Fake news is a deliberate lie or a half-truth circulated with the intention to mislead or cause harm to a section of people. It is a type of yellow journalism that consists of deliberate misinformation or hoaxes spread via the traditional print, broadcasting news media, or via Internet-based social media.
- Fake news is written and published with the intent to mislead in order to gain financially or politically, often with sensationalist, exaggerated, or patently false headlines that grab attention.

#### **Body:**

#### **Fake news problem in India:**

- **Social media in campaign:**
  - used to promote electoral programme and encourage anti-liberal sentiments as seen in Trump campaign. They offer a quick way to convey one-sided information or opinion, without the option or capability to verify the authenticity of this information or to present the opposite opinion for the sake of balance.
- **Fake news creating Bubble phenomenon**
  - Users with matching political views exchange one-sided information and opinions that suit their own convictions, reinforcing them even further, even if those were based on false information.
- **Social media distancing people**
  - It deprives people of human contact and the accompanying intimacy and exchange of opinions, which could lead to changing a wrong impression or correcting an inaccurate belief.
- **Evergreening of fake news websites**
  - Tens of thousands of “fake news” websites have emerged, offering false information to an audience that is used to traditional media doing the fact-checking for it and that believes anything that appears on a presentable webpage.
- **Igniting extremist sentiments**
  - ‘Fake news’ perpetuates, previously locally found, extremist ideas and groups together dangerously minded people e.g. – Neo-Nazis in Germany, Separatists in Kashmir.

**Reasons for rise of fake news:****It is an amalgamation of policy issue as well as lackadaisical approach of social media companies:**

- The Centre has adopted a flawed approach in resolving the ongoing security crisis due to fake news being circulated on WhatsApp.
- It is unfair to put the onus on the social media platforms alone for providing a solution to the menace of fake news.
- Security requirements must also take into account the privacy rights of millions of genuine users.
- Data leaks at Facebook and Uber in the recent past have proven that the encryption has to be so high.
- Blocking mobile applications such as WhatsApp, Facebook, Instagram and Telegram on security grounds would be even more dangerous.
- Rather than to force a solution on technology providers alone, the Centre needs to address the consumer end as well and adopt a collaborative way to tackle the menace of fake news.

**Challenges in curbing fake news:**

- Messaging platforms act as mere conduits for encrypted information.
- They deny decrypting or intercepting messages sent through their platforms.
- Traceability would undermine end-to-end encryption, weaken consumer privacy and cybersecurity.
- Since WhatsApp users converse outside Indian boundaries, the storage of a foreign user's data could come with its own jurisdiction issues.
- Asking a foreign company to establish an entity in India is only asking for greater control without clearly identifying the potential harm.
- WhatsApp's recent decision to restrict forwarding of messages to five users may only have limited impact in curtailing rumours

**Way forward:**

- Platform companies have much to do to improve their content moderation and contain disinformation.
- Facebook has announced that it currently has over 500 full-time employees and at least 3,500 external contractors who focus on election work, on top of the 30,000 people across the company focused on safety and security issues.
- Coordinated attempts to amplify and spread misleading and false information sometimes seem to emanate from major political parties and activists who support them. This ought to stop, and if it does not, has to be continuously and critically covered by independent journalists to ensure that people are aware of what is going on.
- Indian news media has a lot of work to do if it wants to gain the trust of the Indian public. Many express high levels of trust in some individual brands, most notably major newspapers and some broadcasters. But many news media are not trusted.
- A better and more effective approach to limit the influence of hoaxes on WhatsApp and other platforms is to increase media literacy.
- The government should bring out a policy framework on the possible harm due to the internet messaging platforms to engage at a deeper level.
- Government of India could partner with local news groups to further educate citizens on how to identify real news from fake news.
- Imposing hefty fines, like in Germany the Social media companies face fines of up to €50m if they persistently fail to remove illegal content from their sites.