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



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General Studies Paper - III

Topic: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment. Inclusive growth and issues arising from it.

Q) What do you understand by GAFA tax ? Explain the rationale behind devising a separate framework to tax online service providers ? Explain how such services are taxed in India and issues arising out of it ? (250 words)

Livemint

Why this question

The article discusses a novel issue regarding taxation provisions for online service providers and the challenges involved therein. With online companies like Google, Facebook etc repeatedly coming under the scanner of regulatory authorities, this issue becomes important and needs to be prepared.

Key demand of the question

The question expects us to first explain what GAFA tax is. Next, we need to discuss the reasons why special tax provisions are required for such online service providers. Thereafter, we need to discuss how such services are taxed in India, the issues involved therein and finally give suggestions as to what needs to be done.

Structure of the answer

Introduction – Explain that France recently announced introduction of GAFA tax and explain what it is.

Body

Discuss the rationale for having separate taxation provisions for such services – digital economy is characterized by a unique system of value creation resulting from a combination of factors such as sales functions, algorithms and personal information of users. What distinguishes technology companies from traditional businesses is user participation in creating value, which, in turn, translates into revenue.

Explain about similar taxation provisions in India. Finance Act, 2016, accommodated a 6% equalisation levy (EL) in lieu of specified digital services provided to residents in India. However, EL can only be imposed on advertising services. Thereafter, through the Finance Act, 2018, the Income Tax Act was amended to expand the meaning of business connection to “significant economic presence”, which includes digital services

Discuss about the issues involved therein such as assessing the value created, difference of opinion between source countries and others etc and how such issues can be resolved.

Conclusion – Explain that this is an important tax revenue for government and discuss the way forward.

Introduction:

- GAFA tax—named after Google, Apple, Facebook, Amazon—is a proposed digital tax to be levied on large technology and internet companies.
- France has decided to introduce the tax (3% tax on revenues from digital activities) which will take effect from 1 January, and is estimated to raise about ₹500m (€450m) in its first year.

Body:

The rationale for having separate taxation provisions in France:

- Existing tax norms that are framed envisaging brick and mortar business models are not suitable to regulate online services.
- Digital economy is characterized by a unique system of value creation resulting from a combination of factors such as sales functions, algorithms and personal information of users.
- The technology companies differ from traditional businesses as a result of user participation in creating value, which, in turn, translates into revenue.



- The often complex corporate structures set up by several companies that derive huge revenues from major European economies but allow them slash their tax bills by shifting profits to low-tax jurisdictions. (Base Erosion and Profit Sharing issue)
- To combat attempts by the firms to avoid paying what is considered a “fair share” of taxes in the country, by taking advantage of European tax laws.
- Reports suggest that digital businesses pay an effective average tax rate of only 9.5% , compared with 23.2% for bricks-and-mortar firms.

Taxation initiatives of such services in India:

With growing Internet and mobile penetration in India, there is a need to consider the adoption of an accurate methodology to assess value created through user contributions. This will help in taxing more effectively the digital service providers in India.

- The Finance Act, 2016, accommodated a 6% equalisation levy (EL) in lieu of specified digital services provided to residents in India.
- However, EL can only be imposed on advertising services.
- Through the Finance Act, 2018, the Income Tax Act was amended to expand the meaning of business connection to “significant economic presence”, which includes digital services.
- While this comes close to taxing value created by Indian users of foreign digital service providers, it is not clear whether the assessment of attributability is based on value creation per se.

Issues involved in such taxation:

- Lack of Objectivity: Inability to devise a definite method of assessing the value that users generate in a source country.
- Assessment of value of user contribution in the source country could be subjective. This can create greater friction and undermine the **efficacy of double taxation agreements**.
- The lack of consensus due to a difference in the interests of developed (residence) countries and developing (source) countries.
- Smaller countries, such as Ireland, Luxembourg and Estonia, fear such taxation could hand an advantage to the US, Japan, or even Brexited Britain.

Way Forward:

- The Organisation for Economic Co-operation and Development (OECD), a group of major world economies, has been working on proposals for an international scheme that would regulate taxation on technology companies.
- Deliberations in multi-lateral for a like G-20 to build a consensus oriented approach across countries.

Conclusion:

It is imperative that policymakers deliberate upon the possibility and feasibility of adopting a methodology to assess value creation objectively to tax digital players more effectively in the source country.

Q) Stress on economic indicators like GDP is catering to people’s’ needs as consumers but is not fulfilling their aspirations as citizens of good societies. Analyze. (250 words)

[Livemint](#)

Why this question

The article written by an ex-member of erstwhile planning commission briefly discusses the perils of economic progress unmatched by an equal measure of social and political progress and why there is a need to shift human endeavours towards a holistic, sustainable and democratic setup which caters to all the human needs and not just their economic hunger.

Directive word

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



Key demand of the question.

The question wants us to dig deep into the central role played by GDP figures in modern economies and why such a myopic approach is not good for a healthy democracy and environmentally sustainable society.

Structure of the answer

Introduction– write a few introductory lines about the economic indicators like GDP being in use to compare nations and states and quantifying their progress etc.

Body–

Discuss the benefits of measuring growth in terms of GDP figures. E.g

- *Growth can be easily measured and quantified.*
- *It indicates increase in overall purchasing and investment capacity of a society.*
- *GDP is also used as an indicator of a nation's overall standard of living because, generally, a nation's standard of living increases as GDP increases etc.*

Discuss the perils of measure human progress in strictly economic terms. E.g

- *many complex forces—ecological, social, political and economic—interact to shape the future. No expert in any one discipline can comprehend the interactions among all these forces.*
- *progress is too unequal.*
- *Economists have focused too narrowly on the economic side of human aspirations, setting aside human yearnings for belonging to social collectives and nations.*
- *Capitalist systems founded on a religion of property rights have treated nature that nurtures as an “externality” to be exploited etc.*

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue. E.g to make the world better for everyone, consumers must learn to be better citizens and to democratically govern the local systems within which they live.

Introduction:

- Gross Domestic Product (GDP) is one of the most widely used measures of an economy's output or production. **Samuelson and Nordhaus** liken the ability of GDP to give an overall picture of the state of the economy to that of a satellite in space that can survey the weather across an entire continent.

Body:

Benefits of GDP as a tool to measure the growth of a nation:

- GDP consists of consumer spending, Investment expenditure, government spending and net exports.
- It provides an insight to investors which highlights the trend of the economy by comparing GDP levels as an index.
- GDP is used as an indicator for most **governments and economic decision-makers for planning and policy formulation.**
- GDP is not the perfect way to measure growth. But among the alternatives, it is the least “inaccurate” method to compute the growth rate of the country.
- GDP is also used as an indicator of a nation's overall standard of living because, generally, a nation's standard of living increases as GDP increases.
- If by growth one means the expansion of output of goods and services, then GDP or preferably real GDP which measures growth without the effects of inflation is perfectly satisfactory
- Calculation of GDP provides with the general health of the economy. A negative GDP growth portrays bad signals for the economy. Economists analyse GDP to find out whether the economy is in recession, depression or boom.
- GDP growth over time enables central banks and policymakers to evaluate whether the economy is in recession or inflation. In that sense it is still required.



- GDP has held significance as a universal metric over the years.
- It is inaccurate to say that GDP does not capture wellbeing. It captures at least the wellbeing that results from the production of goods and services. Indeed, when statisticians quantify the goods and services produced, they take into account their utility to the consumer.

Perils of measure human progress in strictly economic terms:

- Since the institution of GDP figures and country rankings, **other measures of the quality of life have appeared.** E.g., The Organization for Economic Cooperation and Development (OECD) annually issues a report based on a study of 140 countries, indicating the levels of happiness in those countries. For at least the last decade, European countries such as Denmark, Finland, have ranked at the top and India is nowhere to be seen.
- Economists have focused too narrowly on the economic side of human aspirations, setting aside human yearnings for belonging to **social collectives and nations.**
- The progress is too **unequal.** E.g.: The Oxfam report which shows that 1% of the people own about 60% of the wealth in India.
- GDP is **neither a measure of welfare nor an indicator of well-being.**
 1. That is because it is not set up to recognize important aspects of our lives that are not captured by the acts of spending and investing.
 2. There is no room in GDP for volunteering or housework, for example; nor does it recognize that there is value in community or in time spent with families.
 3. More measurable things such as damage to our environment are also left out, as is job satisfaction. GDP doesn't even measure the state of jobs.
- Capitalist systems founded on a religion of property rights have treated nature that nurtures as an "externality" to be exploited. Thus, it does not take into account the sustainability of future GDP.
- GDP also ignores important factors like environment, happiness, community, fairness and justice. But these are important aspects of development.
- It does not allow for the health of children, the quality of their education or the strength of marriages; neither wisdom nor learning; neither compassion nor devotion to country which makes life worthwhile.
- GDP also **assumes all growth is good growth.** g.: savings from energy-efficient devices counts as a negative for GDP growth, even though it is a positive for society.
- GDP does not take into account the **value of non-monetized activity.** g.: Care activity of women.
- GDP does not differentiate between more or less productive economic activity (i.e. implicitly assumes that economic activity is the desirable ends rather than a means to an end).
- All value additions for self-consumption, which are not put out in the market, are not accounted in the GDP.

Conclusion:

- Broader, non-monetary, measures are required to assess the well-being of citizens. To make the world better for everyone, consumers must learn to be better citizens and to democratically govern the local systems within which they live.

Q) GST 2.0 will arrive in incremental stages, not at one go. Do you agree. Comment. (250 words)

[Livemint](#)

Why this question

Many political parties and politicians have called for reforms in the GST structure and there have been calls to bring GST 2.0, a revised and more progressive GST regime. The article discusses the need for reform arising in the current regime and why one-time reforms in GST regime are not possible.

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.



Key demand of the question

The question wants us to write in detail about the current GST structure and its shortcomings which call for the arrival of GST 2.0. We have to express our opinion as to why/ why not GST 2.0 would be a progressive achievement rather than a wholesale reform.

Structure of the answer

Introduction:– write a few introductory lines about the GST 2.0 E. g GST 2.0 is a revised form of GST that aims to resolve the problems and deficiencies associated with the present GST regime. Among others it aspires to cover excluded item like electricity real estate and petroleum, and evolve a common composition scheme for goods and services etc.

Body

Discuss the shortcomings of current GST structure and thus discuss why there is a need of adopting a newer version of GST E.g

- Finding a revenue-neutral rate by adding up state and central value-added taxes on various products
- Need to keep inflation down in the initial phases of the exercise, which resulted in many items of common consumption being kept out of the GST;
- Need to compensate states for losses, which resulted in the imposition of a cess to create a separate revenue corpus from which losses would be compensated;
- Need to coax small businesses into the GST net, if needed by giving them an entirely different set of rules to live by (as in the composition scheme)
- Political compulsion to create a progressive rate structure

Discuss why only incremental rather than drastic reforms are possible under GST. e.g

- In the GST Council, a vote on any issue needs 75% backing, which means the centre can block any proposal with its 33% voting rights.
- A coalition of states with 25% backing can also block. When Mizoram's vote equals Uttar Pradesh's, a coalition of tiny states can block proposals that lack consensus. This is why the only way forward is to make one or two tweaks every few months etc.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

- GST 2.0 is a revised form of GST that aims to resolve the problems and deficiencies associated with the present GST regime. The changes could be in terms of tax rates, expansion of ambit, system of advance rulings, clarity on cess and procedural issues. Among others it aspires to cover excluded item like electricity real estate and petroleum, and evolve a common composition scheme for goods and services etc.

Body:

Benefits of Current GST system:

The current GST heralded a change in the indirect taxation system of India. However, there are shortcomings of current GST structure and thus, there is a need of adopting a newer version of GST.

Shortcomings of current GST structure:

- **Compliance has miles to go:** The information technology glitches took more than the anticipated time to be resolved. The filing system that was put in place in the beginning was quickly abandoned as businesses struggled with compliance.



- **Cumbersome registration system:** Multiple registration requirements have complicated things for industry, which was expecting simplicity. In many cases, registration is required in all states. Companies fear that multiple audits and assessments due to multiple registrations could make life more difficult for them going forward.
- **GST rate structure:** Political compulsion to create a progressive rate structure led a multi-tiered GST structure. While a single GST rate is the international norm, given India's diversity and the need to have a differential tax treatment for "must have" and "nice to have" goods and services, a two-rate GST structure should be adopted leaving no room for any incorrect or inadvertent interpretation for classification.
- **Alcohol, petroleum products outside purview of GST:** Petroleum Products such as petroleum crude, motor spirit (petrol), high-speed diesel, natural gas and aviation turbine fuel etc. are charged as per the previous tax structure. GST is also not applicable on electricity. No Constitutional Amendment is required for their inclusion in GST. Only a consensus in the GST Council is sufficient, should be taken up on priority.
- **One nation, one tax, with many acts and different tax processes:** The e-way bill provisions have been made mandatory across the country with effect from April 1, 2018. While the requirements of e-way bill concerning the interstate movement of goods is uniform across the country, **the requirements for intrastate (within the state) movement of goods differ from state to state.** Gujarat has made the generation of e-way bill mandatory only for a select few products, while Maharashtra insists an e-way bill for intrastate movement of all products above the prescribed threshold of ₹50,000 per consignment.
- **New cesses crop up:** While GST scrapped a multiplicity of taxes and cesses, a new levy in the form of compensation cess was introduced for luxury and sin goods. **The need to compensate states for losses resulted in the imposition of a cess.** A separate revenue corpus would ensure states are compensated. This was later expanded to include automobiles. A new cess on sugar is also being examined.
- **Refunds problem for exports:** The refund mechanism for exporters, including data matching law, besides procedures governing them, have irked the sector, particularly smaller entities that saw their working capital requirements rise. Though several efforts have been made to address the issue, it may require more intervention.
- **Revenue-neutral rate:** Finding a revenue-neutral rate by adding up state and central value-added taxes on various products. Arvind Subramanian had headed a committee and submitted the report on the "Revenue Neutral Rate and Structure of Rates for the GST". In his report, he had suggested a preferred revenue neutral rate of 15 per cent, with two, four, and six per cent rate for precious metals, a low rate of 12 per cent for goods along with a standard rate of 16.9, 17.3 and 17.7 per cent and one 40 per cent rate for demerit goods.
- **Small Businesses under GST ambit:** Need to coax small businesses into the GST net, if needed by giving them an entirely different set of rules to live by. GST Composition Scheme, under which small traders and businesses pay a 1% tax based on turnover (Rs. 1.5 Crore) and exemption from paying GST upto Rs. 40 lakh. Small taxpayers can get rid of tedious GST formalities and pay GST at a fixed rate of turnover.

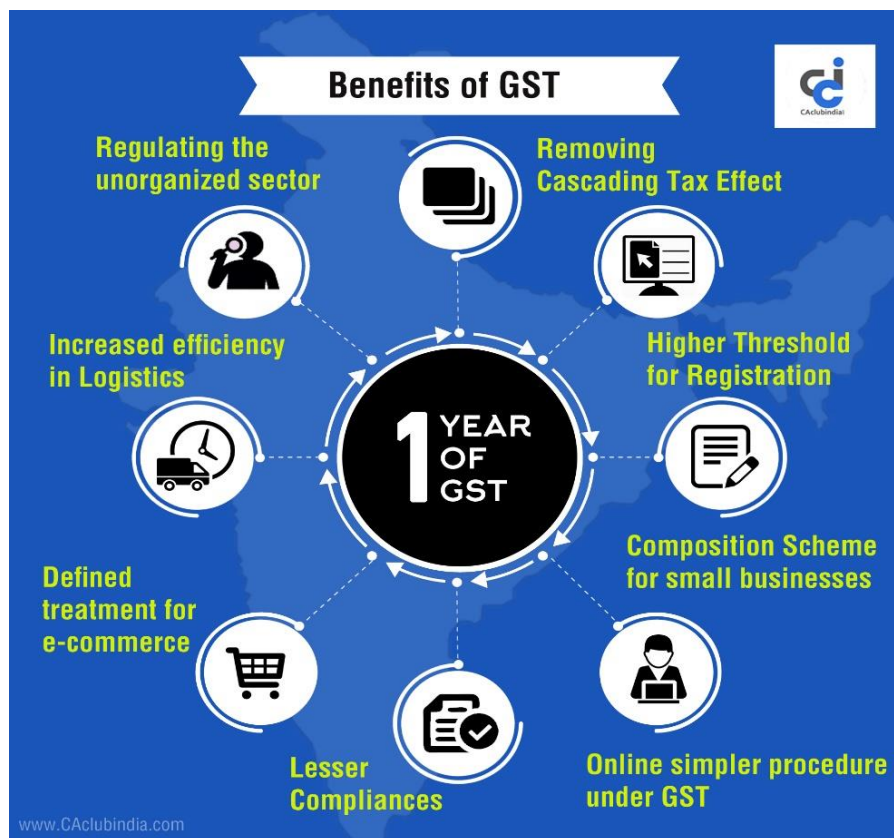
Drastic overhaul of GST is not possible:

- The GST Council set up has certain procedures. A vote on any issue needs 75% backing, which means the centre can block any proposal with its 33% voting rights.
- A coalition of states with 25% backing can also block.g.: When Mizoram's vote equals Uttar Pradesh's, a coalition of tiny states can block proposals that lack consensus.
- This is why the only way forward is to make one or two tweaks every few months in consensus-oriented way.



Conclusion:

Undoubtedly, GST has received positive as well as negative responses as befits its characterisation as a toddler. Problems of transition to a major tax reform are unavoidable and most countries go through this. However, further steps will bring out the true sense of 'One Nation One Tax'.



Q) As India transitions to renewable energy, it needs to articulate a credible economic future for the coal belt. Critically analyze. (250 words)

Indianexpress

Why this question

India is one of the largest CO₂ emitting nations in the world and this trend is going to increase for a certain period of time. Coal is a cheap and fairly abundant source of energy but it has its own problems which call for phasing out its production and use. However, the coal belt of India is highly dependent on coal and there is a need to chalk out a strategy for this coal belt in anticipation of phasing out coal in India.

Directive Word

Critically analyze- here we have to examine methodically the structure or nature of the topic by separating it into component parts, and present them as a whole in a summary. based on our discussion we have to form a concluding opinion on the issue.

Key demand of the question

The question wants us to dig deep into the issue and bring out the reasons as to why there is a need to enhance the coal quality & economic future of the country. Based on our discussion we have to form a personal opinion on the issue.

Structure of the answer

Introduction- write a few introductory lines about the growth of renewable energy in India. E.g mention a few key statistics presenting India's current energy mix and renewable energy installed capacity etc.



Body-

Discuss the problems associated with coal and the need to phase it out of the energy mix. E.g Pollution; costly imports of higher grade coal; pressure from international and domestic environmental organizations to phase out coal etc.

Discuss the need to bring out a credible economic future of the coal belt of India. E.g

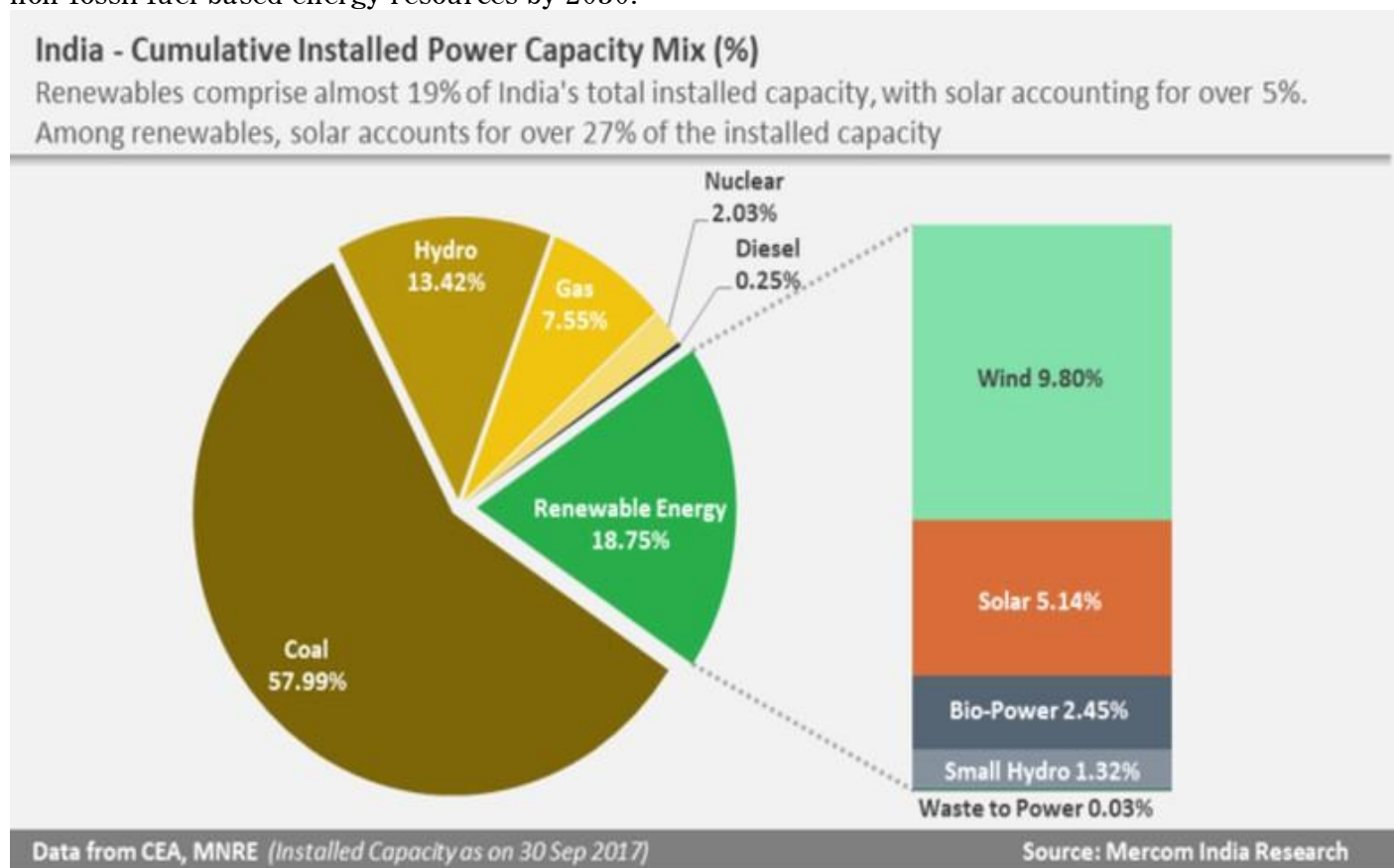
- Roughly 15-20 million people in the coal belt are dependent on the coal industry, either directly or indirectly, for their livelihood.
- While companies like Coal India face no immediate threat to either coal demand or their market power, in a multi-decadal time-frame both these concerns will become real.
- Not surprisingly, many coal-bearing states are also in the bottom third by income per capita (Jharkhand, MP, Odisha, Chhattisgarh and West Bengal in ascending order). But one of the big benefits of public investments is that they can be guided.
- PSUs like Coal India have built up considerable social and political capital in these regions and this social and political capital be used to pivot towards other activities etc.

Discuss the strategy envisaged by you. E.g Ultimately, an Indian “coal commission” needs to be formed which should articulate a credible economic future for the coal belt and the companies that exist there.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

India has its goal of achieving 175GW from renewable energy sources. In the INDC goals submitted under Paris Deal, it aims to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030.



Body:

India's thermal coal base, which still provides over 60 per cent of the country's overall electricity generation, is still growing. However, extraction and usage of coal leads to severe environmental problems within India and also contributes to climate change inducing green-house gas emissions. Indian coal is mostly bituminous and we import higher grade coal which is expensive. India is the third



largest emitter of green house gases – around 2.3 Giga tons annually. This has lead to pressure from international (UNFCCC) and domestic environmental organizations to phase out coal.

Need to bring out a credible economic future of the coal belt of Central India:

Huge Dependency:

Individual level:

- Roughly 15-20 million people in the coal belt are dependent on the coal industry, either directly or indirectly, for their livelihood.
- Jobs in the renewable energy sector will not be coming to the coal belt in large numbers.

Industry level:

- Over 50 power plants in the country are dependent on the coal from Central India belt.
- According to the Integrated Energy Policy prepared by the Planning Commission of India, even under a least coal usage scenario, coal will supply more than 40% of the primary commercial energy even in 2031-32.

Industries under threat:

- While companies like Coal India face no immediate threat to either coal demand or their market power, in a multi-decadal time-frame both these concerns will become real.
- The government has now allowed private companies to mine the fossil fuel for commercial use. This indirectly puts in a lot of investment at stake and could lead to continuation of '**TWIN BALANCESHEET PROBLEM**'.
- **Developing Regions:**
 - Not surprisingly, many coal-bearing states are also in the bottom third by income per capita (Jharkhand, MP, Odisha, Chhattisgarh and West Bengal in ascending order).
 - High incidences of poverty, starvation deaths, presence of large number of Scheduled Areas and Scheduled Tribes are seen in the Central India. With unemployment and lack of alternative livelihoods, there can be severe repercussion on human development, if no proper planning is done.
- **Other determinants at play:** A Study commissioned by Coal India gave the report "**Coal Vision 2030**", to assess the future demand scenario for the coal sector in India up to 2030. The other determinants at play are
 - COP21 (Paris agreement) commitments by India.
 - Apparent shrinkage in global coal consumption.
 - Apparent downward revision of the economic growth projections of India.
 - Tepid response to recent tranches of coal block auctions.
 - NPA (non-performing asset) crisis, especially in the steel and power sector that are two major consumers of coal and important sectors linked to economic growth.

Way Forward:

- An Indian **coal commission based on the model of Germany** can be devised to chalk out a plan for credible future of Central India coal belt region.
- As the previous Economic Survey has shown, the **divergence in economic performance and incomes** between India's states has intensified over the last decade, and **public spending and investment** have become increasingly necessary in poorer states to keep them afloat.
- **Alternative jobs** can be created by taking financial surpluses from both the NTPC and Coal India to invest in solar power, fertiliser plants, and other areas far from the core business areas of these companies.
- PSUs like Coal India have built up considerable social and political capital in these regions and this social and political capital be used to pivot towards other activities.
- The **North-Eastern region** also huge reserves of coal, diversion of people for time-being can solve their unemployment problem. This can also solve the problem of illegal rat-hole mining by legitimising and finding newer technologies to mine coal in NE India.

Conclusion:

The latest COP in Katowice (Poland's coal capital) delivers another disappointing outcome; it is clear that international financing for such projects is an unrealistic expectation. Instead, if the Indian



state can engage in some good old long-term planning it can anticipate and prevent the large-scale economic distress which will be experienced in eastern India with the decline of the coal industry.

Q) Analyze whether the slew of measures meant to aid the MSME sector to address their woes have come too little too late ? (250 words)

[Livemint](#)

Why this question

The article first gives a nice summary of the series of steps taken by the government to address the woes faced by MSME sector due to demonetization and GST introduction. Thereafter it also analyzes whether these steps will actually prove beneficial for msme sector. MSME sector is a critical part of our economy and hence this question.

Key demand of the question

The question expects us to first explain the woes faced by MSME sector. Next, we need to explain the series of steps taken by the government. Finally we need to analyze whether these steps would end up alleviating the issues faced by MSME sector. Finally we need to discuss the way forward.

Directive word

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.

Structure of the answer

Introduction – Highlight that a slew of relief measures for msme sector has been announced off late.

Body

Discuss about the problems caused to msme sector as a result of demonetization and GST.

Highlight the steps taken by the government to address their woes such as

- setting up of an export promotion cell within the MSME
- Restructuring of MSME loans announced by RBI
- Clarification on eCommerce regulations etc

Analyze how these steps would benefit the MSME sector, if at all

Conclusion – emphasize on the importance of MSME sector for the economy and the way forward.

Introduction:

Micro, Small & Medium enterprises termed as “**engine of growth** “ for India, has played a prominent role in the development of the country in terms of creating employment opportunities. The share of MSMEs in the **country’s gross value added is estimated to be about 32%**. It also contributes about **40% to total exports and 45% to manufacturing output**.

The government, in conjunction with the Reserve Bank of India (RBI), has now launched a series of measures to alleviate their distress.

Body:

Many MSMEs suffered severe hardships due to the twin impact of demonetisation and introduction of a flawed goods and services tax (GST) regime. This double whammy led to distress and defaults on bank loans. As a corollary, many of these units shut down and numerous others were forced to lay off employees.

The Recent Steps taken to alleviate the impacts due to above sufferings are

- **eCommerce Norms tightened:**
 1. The rules in the FDI limits were changed for the eCommerce giants to tackle “anti-competitive” behaviour.



2. Firstly, barring e-commerce marketplaces from selling products of firms in which they own stakes.
 3. Second, the move to ban deep discounts for selective products which earlier disturbed the level playing field.
 4. These will ensure that MSMEs are safeguarded from the competitive threat from e-commerce growth.
- **Export promotion cell:**
 1. The plans to set up an export promotion cell within the MSME.
 2. EPC will help formulate strategies to promote the MSME products, maintain export quality standards.
 - **Restructuring of Loans:**
 1. The RBI announced a one-time restructuring for existing stressed MSME loans below ₹ 25 crore.
 2. Concurrently, the RBI also set up a panel under former Securities and Exchange Board of India (SEBI) chairman **K. Sinha** to **suggest long-term structural and institutional changes to catalyse MSME growth**.
 3. Finally, RBI governor Shaktikanta Das has also promised to meet with MSME sector representatives to get a clearer idea of their problems.
 - **Mudra scheme:**
 1. Loans offered to small businesses in the unorganized sector are now covered by a credit guarantee scheme.
 2. It also helps bridge the shortfall in loans for these businesses.
 3. This helps small entrepreneurs save on the interests that they need to pay.
 - **Other Reforms:**
 1. GST system has been simplified with most of the items below the 28% bracket.
 2. **GeM:** Government e-Marketplace Portal to enable procurement of MSME goods by the government departments.
 3. **TreDs platform** to facilitate finance of trade receivables.
 4. Schemes like **SFURTI, ASPIRE** have been introduced to strengthen the Khadi and Agro MSMEs.

The steps taken by the Government are definitely beneficial to the MSMEs in the long run. However there have been damages done and the measures seem a little too late.

- These measures are being announced after many units have shut down or are beyond repair. The remedial measures should have been executed right after demonetisation, instead of living in denial.
- After farm loan waivers and MSME loan restructuring, ignoring demands for similar regulatory forbearance from other politically influential groups will be difficult and can be disastrous for the economy.
- There is no initiative to reform or provide more moxie to the **trade receivables discounting system, or TReDS platform**, which has financed MSME receivables of only ₹ 2,400 crore till October 2018.
- Most MSME units are umbilically attached to the supply chain of large corporations and are subject to their capricious payments records, leading to lengthening working capital cycles and an uncertain bank-loan repayment record. Government has opted to sidestep this problem, which alone would have helped in restructuring a large chunk of MSME loans.
- The view that there are impending Lok Sabha elections in 2019, ergo the reforms have generated scepticism.

Conclusion:

MSMEs being the growth engine of economy, there is a need to prepare a roadmap for sector in addition to the adhoc initiatives undertaken. Delineation of the objectives, vision, and mission is necessary to give clarity on the path to be treaded. An inclusive, sustainable vision to compete with the global MSMEs, by collaborating the industry groups, researchers, government and other stakeholders is the need of the hour.



Q) The Gujarat model which focuses on megaprojects at the expense of SMEs is not the solution for India. Critically analyze. (250 words)

Livemint

Why this question

The plan to introduce reservation in jobs for economically weaker sections of the upper castes in India points out the growing concerns about employment growth in India. In this context it is important to analyze the Gujarat model of development and see whether it offers the required solutions.

Directive word

Critically analyze- here we have to examine methodically the structure or nature of the topic by separating it into component parts, and present them as a whole in a summary. based on our discussion we have to form a concluding opinion on the issue.

Key demand of the question.

The question wants us to dig deep into the Gujarat model of development and bring forth its positive as well as negative points. Based on our discussion we have to form an opinion on whether this model should be emulated across India, given the present pressing concerns of the economy.

Structure of the answer

Introduction– write a few introductory lines about the Gujarat model of development. E.g mention what exactly it refers to- which period of Gujarat story it relates to and mention that it is being hailed as role model for other states to emulate.

Body-

Discuss the positive points of Gujarat model. E.g It ensured a high growth rate and attracted foreign investment; It led to substantial economic growth of the state and created a positive business friendly image among the investors; It made governance simpler and business easy to be done; A large number of industries were exempted from obtaining No-Objection Certificate (NOC) from the Pollution Control Board. They were allowed relatively easy and quick possession of land through the 'urgency' clause, as well as a simplification of the administrative processes to release agricultural land for industrial use etc.

Discuss the flaws in such model. E.g it was more about business-friendliness than market-friendliness, as evident from the non-market prices some companies paid for their land. While market-friendly economies minimize interventions by the state, in business-friendly economies, politicians (and "their" bureaucracies) intervene in favour of the companies they seek to favour; by focusing on "mega-projects", the "Gujarat model" has relied on big companies that have boosted the growth rate but have not created many good jobs, not only because the rules pertaining to job creation have been relaxed, as mentioned above, but also because big companies are very capital intensive etc.

Discuss the importance of job creation for India and link it with people's agitations, recent reservation plans for economically weaker higher castes etc.

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Gujarat model refers to a period from 2002-03 to 20011-12 during which **Gujarat experienced a quantum jump in its growth rate**. The driving force was the neoliberal policies.

The growth strategy had **three major components**:

- quantum jump in infrastructure to facilitate inflow of corporate investment.
- quantum jump in governance to address the requirements of corporate units.
- unprecedented rise in incentives and subsidies on investments to the corporate sector to attract investments.



Infrastructure development focused on roads, airports and power – and through reforms, 24-hour availability of power. The Gujarat model is hailed as role model for other states to emulate.

Body:

Bibek Debroy summarized the state's economic policy as follows: "What is the Gujarat model then? It is one of freeing up space for private initiative and enterprise and the creation of an enabling environment by the state".

The Gujarat model of Growth has positives like

- **Ease of FDI flow:**
 - It ensured a high growth rate and attracted foreign investment. The concerned departments were aggressive in expediting the procedures to facilitate investment flows.
- **Quick Environmental Clearances:**
 - A large number of industries were exempted from obtaining No-Objection Certificate (NOC) from the Pollution Control Board.
- **Swift Land Acquisition:**
 - They were allowed relatively easy and quick possession of land through the 'urgency' clause, as well as a simplification of the administrative processes to release agricultural land for industrial use.
- **Ease of Doing Business:**
 - Governance focused on **quick disposal of investment proposals with a single window**, easy access to bank credit and if required, other escort services to corporate units and their core staff.
 - It led to substantial economic growth of the state and created a positive business friendly image among the investors.
- **Tax Incentives:**
 - The incentives to corporate investment included mainly sales tax subsidies till 2006-07 (till the Centre banned it).
 - **Forty percent of the revenue from sales tax** – the main source of revenue for state governments – **was forgone**.
- **Subsidies:**
 - The government introduced subsidies on capital, interest, and infrastructure as well as heavy subsidies on land, water supply and natural resources.
 - The rates of subsidies were larger for larger investments.
 - For mega industries, there was no fixed rate and each case was assessed separately.

Case Study: Tata-Nano got totally Rs 30,000 crores subsidies (like Suzuki, Hyundai etc). Land was acquired from common grazing land, denotified protected areas, national parks and from irrigated fertile lands. The price started from Re 1 per acre, and increased during the last years of the model but still was less than the market price.

The negatives of Gujarat model were

- **Capital intensive:**
 - The growth has been **highly capital intensive MEGA Projects** due to the chase for the "state-of-the-art" technology.
 - **Example:** The petrochemical industry and the chemical industry are cases in point. They have been so dynamic that they represent, respectively, 34% and 15% of the industrial output, but they are not labour intensive at all.
 - Automation is also gaining momentum in large factories.
 - The employment elasticity of growth has nose-dived for productive sectors.
 - One of the greatest challenges for the state is creating massive productive jobs with decent incomes for the youth.
- **Sidelining of MSME sector:**
 - The engines of growth- MSMEs are sidelined. Their **credit lending is poor**, labour laws are pro-industry leading to death knell for MSMEs.



- According to the Union ministry of MSMEs, the number of sick units jumped from 4,321 in 2010-11 to 20,615 in 2012-13 and 49,382 in 2014-15—a figure second only to Uttar Pradesh. Between 2004 and 2014, 60,000 MSMEs shut down in Gujarat.
- The cooperatives and SMEs have not continued to benefit from the traditional attention of the state, and this evolution has affected the labour market—where jobs have been few and where wages have not increased.
- **Poor social infrastructure:**
 - After the huge incentives to corporate units, the government is left with limited funds for education, health, environment and employment for the masses.
 - Gujarat spends less than 2% of its income on education (the norm is 5-6%) with the result that 45% workers in Gujarat are illiterate or studied up to the fifth standard with the quality of education very poor.
- **Environmental Externalities:**
 - Though 40-45% households in Gujarat depend on natural resources for their livelihoods (farming, animal husbandry, dairy, forestry, fishery etc), the depleted and degraded resources, along with heavy pollution, have reduced their productivity and incomes in these sectors and raised their vulnerability.

Many economists have opined that India is known to be undergoing a “jobless growth”. In 2015, youth of a particular upper caste demonstrated in order to have access to government jobs quotas. This massive protest showed that good jobs had become an acute need. The strikes and agitations have shown clear indication of the crisis the peasants, the artisans, and the cottage industry are facing. The plan to introduce reservation in jobs for economically weaker sections of the upper castes in India points out the growing concerns about employment growth in India.

Conclusion:

The focus should be on development rather than growth. MSMEs have proved over time how they are labour intensive and generate the much needed jobs. The neoliberal, business friendly policy of Gujarat should include and focus on the MSMEs too. The problem of jobless growth must be tackled with development in the social infrastructure, promotion of MSMEs. “Kerala Model” of development can be seen as an alternative.

Q) Evaluate whether having multiple GST rates make the GST structure cumbersome and discuss how can we make GST more simple ? (250 words)

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

Why this question

Off late, GST and the issues faced in its implementation along with the idea of simplification of GST has been in the news. The article critically analyzes the issue and hence needs to be prepared.

Key demand of the question

The question expects us to explain the rate structure in GST and thereafter analyze the pros and cons of having multiple rates in light of revenue protection, federal structure etc and gives a fair and balanced opinion on whether the multiple rate structure in GST makes the tax regime quite cumbersome. Thereafter, we need to give suggestions for making the tax regime simpler.

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 about the recent statements given by the FM that we are eventually planning to move towards a single rate structure under GST.



Body

Explain the current rate structure under GST

Evaluate its pros and cons

- *The complicated GST structure we began with can partly be explained by the messy federal bargaining in the GST Council and partly by a flawed incentive structure.*
- *Centre guaranteed the states that their revenues from GST would grow at 14% a year. Any shortfall would be compensated.*
- *GST collections have not met with the monthly revenue and growth targets which validates the need for keeping certain goods in higher tax bracket*
- *World Bank study published in May 2018 said that the Indian GST rate was the second highest among the 115 countries with a national value-added tax. It was also the most complicated, with five main tax rates, several exemptions, a cess and a special rate for gold. The multilateral lender said that only five countries had four or more non-zero tax rates—India, Italy, Pakistan, Luxembourg and Ghana.*
- *Highlight that committees formed for this purpose such as the Modi committee had recommended a 12% GST rate, of which 5% would go to the Union government, 5% to the state governments and the other 2% to the third tier of government.*

Suggest measures which would make the GST regime simpler such as single rate , simplification of returns process etc

Conclusion – *Give your view whether the multiple rate structure under GST makes the tax regime cumbersome.*

Introduction:

The Goods and Services Tax (GST) Council recently reduced tax rates on 22 items, of which seven were from the highest slab of 28%. GST was initially promoted as **one nation, one tax, and one market**. The multiple tax slabs had deferred this objective. However, the Finance Minister has reiterated that there is an eventual plan to move towards a single rate structure under GST.

Body:

Present GST rate Structure:

- The GST regime has multiple tax slabs with five broad categories of zero, 5 per cent, 12 per cent, 18 per cent and 28 per cent. There are two more GST rates of 0.25 per cent for rough diamonds, precious stones and 3 per cent for gold, silver.
- A Cess, ranging from 1 to 15 per cent, is levied on demerit and luxury goods over and above the highest rate of 28 per cent.
- The complicated GST structure we began with can partly be explained by the messy federal bargaining in the GST Council and partly by a flawed incentive structure.

Cons of multiple rate structure of GST:

- **Difficulty in tax administration:** Goes against the canons of taxation. A modern tax system should be **fair, uncomplicated, transparent and easy to administer**. It must yield revenues sufficient to cover the cost of government services and public goods.
- **Complicated taxation structure:** A World Bank study published in May 2018 said that the Indian GST rate was the second highest among the 115 countries with a national value-added tax. It was also the most complicated, with five main tax rates, several exemptions, a cess and a special rate for gold. The multilateral lender said that only five countries had four or more non-zero tax rates—India, Italy, Pakistan, Luxembourg and Ghana.
 - ✚ Ghana introduced GST in 1995 with three different rates but soon abandoned it since it became too complicated to implement. China had a similar experience, and it too eventually rejected multiple rates in favour of a simple policy with one single rate across all industries.
 - ✚ This skew violates the basic principle of revenue collection: **the lower the taxation rate, the higher the compliance.**



- **High compliance costs:** are also arising because the prevalence of multiple tax rates implies a need to classify inputs and outputs based on the applicable tax rate. Along with the need to apply the correct rate, firms are required to match invoices between their outputs and inputs to be eligible for full input tax credit, which increases compliance costs further.
- **Instability in tax regime:** The GST rates for various goods and services have been shifted from one slab rate to another over the past 1.5 years. The federal demands from states during GST Council Meetings to assuage their fears are the main cause. Multiple rates create problems of classification, inverted duty structure and large-scale lobbying.
- **Estimation overshoot:** GST collections have not met with the monthly revenue and growth targets which validates the need for keeping certain goods in higher tax bracket

Pros of multiple rate structure of GST:

- **Alleviates Revenue loss to states:** Standard rate might lead to concerns related to revenue losses of the state. The revenues loss prospects under multiple slabs will be much less as opposed to the single rate.
- **Progressive nature:** Makes the tax less regressive as it treats rich and poor in different way. A single GST rate structure in India would have made an apt case for 'equality' in taxes, but would have failed on the grounds of 'equity'.
- While a single-rate structure might have made the tax system simpler, it would neither have been equitable and revenue-neutral nor would it have been acceptable to all states.
- **Higher Revenues:** GST collections are expected to increase further in the coming months due to an expanding tax base and better compliance, with more states using the e-way bill system.

Even NITI Aayog member Bibek Debroy had opined that Multiple rates a key problem with present GST. Various Committees were formed for simplifying GST Rate structure. **Example: Arbind Modi** committee had recommended a 12% GST rate, of which 5% would go to the Union government, 5% to the state governments and the other 2% to the third tier of government.

Way Forward:

- It is important for India to simplify the tax structure.
- The first target should be to move to at least a three-rate structure, a lower rate for essential goods, a relatively high rate for luxury goods, and a standard rate for the majority of goods and services.
- The next step would be simplify the tax returns process.
- The scope for lowering the GST rate is umbilically linked to **direct tax reform**.
- A better way to make a tax system more just is by **lowering regressive indirect tax rates while widening the base for progressive direct taxes** on income and corporate profits.
- Many goods are still outside the GST net, which comes in the way of seamless flow of input tax credit. Key items outside its ambit are electricity, alcohol, petroleum goods and real estate. This aspect need to be looked into.
- Emulating the best practices. The GST in New Zealand, widely regarded as the most efficient in the world, has a single standard rate of 12.5 percent across all industry groups.

Conclusion:

The problems of the complicated GST with multiple rate structure and high compliance costs are now evident. The next government —of whatever political persuasion—will have the onerous task of untangling the mess.

Q) A 10% quota for the upper-caste poor will not necessarily translate into employment opportunities. Comment. (250 words)

epw

Why this question

Recently the central government has passed a bill which provides 10% reservation to economically poor but socially higher castes in India. The article explores the potential of such a measure over employability of the targeted group.



Directive word

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

Key demand of the question.

The question wants us to express our knowledge and understanding of the recent measure of the central government to provide reservations to economically weaker upper caste people in India and express our opinion as to why/ why not this measure will translate into employability for them.

Structure of the answer

Introduction– write a few introductory lines about the recent move of the central government to provide reservations to economically weaker upper caste persons in India.

Body-

Discuss the implications of such measure on employment in India. E.g

- A recent report by the Centre for Monitoring Indian Economy (CMIE) reveals that-
- the situation in the Indian job market is bleak: first, unemployment is on the rise with the rate shooting up to 7.4% in December 2018, the highest ever seen in the past 15 months;
- the incidence of joblessness is the highest among the (economically) vulnerable sectors and sections (for example, around 82% of the jobs lost are in the rural sector, already facing the agrarian crisis,
- and almost 80% of the joblessness is borne by women.
- Recruitment in the government sector is tardy, wherein a third of the backlog vacancies is already of the “reserved” category.
- Simultaneously, the unorganised and informal sector that had been a source of employment, historically, is evidently reeling.
- The International Labour Organization’s (ILO) World Employment and Social Outlook: Trends 2018 has classified almost four-fifths of the employment in India as “vulnerable,” with less than a fifth of the workers being regular salaried employees and another two-fifths perceiving themselves to be underpaid.
- Bring out whether the 10% reservations will help Indian youth gain employment, based on your discussion.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

The President of India has given his assent to the bill providing **10% reservation in jobs and educational institutions to the economically weaker sections in the general category**. The legislation will be known as the **Constitution (103 Amendment) Act, 2019** and it shall come into force on such date as the Centre notifies.

Body:

The implications of such measure on employment in India are:

- **Increased pressure for job creation:** A recent report by the Centre for Monitoring Indian Economy (CMIE) reveals that the situation in the Indian job market is bleak: unemployment is on the rise with the rate shooting up to 7.4% in December 2018, the highest ever seen in the past 15 months. This shows that there will be an increased pressure to create more jobs to accommodate the increasing number of job aspirants.
- **Weaker sections made more vulnerable:** The incidence of joblessness is the highest among the (economically) vulnerable sectors and sections (for example, around 82% of the jobs lost are in the rural sector, already facing the agrarian crisis, and almost 80% of the joblessness is borne by women.



- **Unfilled backlogs:** Recruitment in the government sector is tardy, wherein a third of the backlog vacancies is already of the “reserved” category.
- **Job generators crippled:** The unorganised and informal sector that had been a source of employment, historically, is evidently reeling from the “surgical strikes” of demonetisation and the goods and services tax. Further with the global economy in doldrums, the private spending has also reduced.
- **Underprivileged Job condition:** The International Labour Organization’s (ILO) World Employment and Social Outlook: Trends 2018 has classified almost four-fifths of the employment in India as “vulnerable,” with less than a fifth of the workers being regular salaried employees and another two-fifths perceiving themselves to be underpaid.
- **Non-commensurate rise between labour-productivity and wages:** there is an ever-widening divergence between labour productivity and wages. For instance, labour productivity in organised manufacturing is estimated to have increased by six times over the past three decades, whereas wages increased by only 1.5 times.
- **Reduced Entrepreneurial Spirit:** Fresh Graduates are added up every year. Slowly but steadily, the number of persons with higher education entering India’s job market has been increasing. Reservation will only encourage them to be job seekers rather than job givers.

A disproportionately higher share of jobseekers are competing for less than half of the jobs left unreserved, and the beneficiaries of reservation can hardly gain from it.

Conclusion:

Reservation to the weaker sections is an positive affirmative action needed for their welfare. The 103rd Constitutional Amendment Act though is a beneficial move for the “**forward poor**”. Similar moves by previous governments have been judicially reviewed and struck down. It is prudent to look at other alternatives to alleviate the conditions of EWS.

Q) India needs to raise and sustain its growth rate at 8%. Discuss what measures need to be taken in this regard. (250 words)

[Economictimes](http://economictimes)

Why this question

India’s growth is poised to increase this year but has not been at the desired level for quite some time. In order for India to achieve most of its socio economic goals. The article discusses some of the essential steps that need to be taken in order to achieve a sustained growth rate of 8%.

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.

Key demand of the question.

The question wants us to bring out in detail about the measures that you think need to be taken in order to achieve and sustain a growth rate of 8%.

Structure of the answer

Introduction– write a few introductory lines about the recent growth rate figures for India- past few years and anticipated growth rate. E.g growth rate projected by IMF etc.

Body-

Write in points as to what should be done to enhance India’s growth rate to 8% and sustain it for the medium future. E.g

- *a shift in agriculture to convert farmers into ‘agripreneurs’ by expanding e-National Agriculture Markets and replacing the Agricultural Produce Marketing Committee Act with Agricultural Produce & Livestock Marketing Act.*



- *A unified national market, a freer export regime and abolition of the Essential Commodities Act are essential to boost agricultural growth,*
- *further improve the policy environment in which private investors and other stakeholders can contribute their fullest*
- *bring innovation, technology, enterprise and efficient management together at the core of policy formulation and implementation etc.*

Conclusion- *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

International Monetary Fund (IMF) in its update of flagship **World Economic Outlook** was released in Davos. It said that India's GDP is forecast to expand **7.5% in FY20** and **7.7% in FY21**. However, Niti Aayog, the government's think tank, has pitched for an **average 8% growth** over the **next five years to lift India to a \$4-trillion economy** in its 75th year of independence, proposing a strategy for a New India by 2022.

Body:

The need for consistent 8% growth rate is needed for

- **To alleviate poverty:** India's 21.9% of citizens live below poverty line despite 70 years of Independence.
- **Doubling the farmer's income by 2022:** A goal set for warding off the agrarian distress and ensure remunerative incomes to farmers.
- **Increase the employment generation:** This will help leverage the demographic potential and reap demographic dividend.
- **To empower the weaker sections of society:** The SC's, ST's, women who still remain backward due to poor empowerment.
- **To invest in social and economic infrastructure:** Education, health, infrastructure & logistics still need a lot of improvement.

India needs to undertake more substantive economic reforms if it wants to push its economic growth rate to its long-held target range of 8 to 10 percent a year.

Agriculture Sector:

- Implementing **Ashok Dalwai committee** recommendations
- Focus on policy to create favourable investment climate in agriculture.
- Placing **agricultural marketing** in the Concurrent list.
- Greater private sector participation in agri-marketing and logistics.
- **Market reforms** and investment in **infrastructure for cold-chain integration** to reduce wastages.
- Forming **FPOs/VPOs** as collectives to give **unified voice to small and marginal farmers**.
- The committee strongly recommends **stepping up of institutional credit on a large scale**.
- Increase focus on **export** to raise agricultural export by a **minimum of three times by 2022-2**
- Implementing the **Model Land Leasing Act** and encouraging **Contract Farming** to make the most out of available lands.
- A strong push would be given to '**Zero Budget Natural Farming**' techniques that reduce costs, improve land quality and increase farmers' incomes.
- A shift in agriculture to convert farmers into '**agripreneurs**' by expanding e-National Agriculture Markets.
- Replacing the Agricultural Produce Marketing Committee Act with **Agricultural Produce & Livestock Marketing Act**.

Manufacturing Sector:

- The Indian MSME sector provides **maximum opportunities** for both self-employment and wage employment outside the agricultural sector.



- Five key aspects of facilitating the MSME sector: **Access to credit; Access to market; Technology upgradation; Ease of doing business; social security for employees.**
- Loans offered to small businesses in the unorganized sector are now covered by a **credit guarantee scheme**. Ease of credit availability within 59 minutes
- eCommerce platform reforms like **Barring e-commerce marketplaces** from selling products of firms in which they own stakes. **ban deep discounts for selective products** which earlier disturbed the level playing field.
- Setting up an **export promotion cell** within the MSME.
- **TreDs platform** to facilitate finance of trade receivables.
- Schemes like **SFURTI, ASPIRE** have been introduced to strengthen the Khadi and Agro MSMEs.
- **'Make in India'** scheme: **improve competitiveness, increase investments and increasing skills of workers** in accordance to changing needs of market.
- Adopting **global quality standards** to products to enter markets of developed economies.
- **Better labour codes** to ensure **ease of hiring and firing of employees.**
- Development of **SEZ's , NIMZ** to boost manufacturing sector.

Services Sector:

- The Indian service sector is the fastest growing service sector in the world. It contributes more than 60% to India's economy and accounts for 28% of employment.
- The opportunities in this fast-growing, employment-oriented, FDI attracting sector, with vast export-potential are striking.
- There is an urgent need to **increase access to higher education and vocational training** at affordable prices. Implementation of **Sharda Prasad committee**
- Focus on other **sub-sectors like education, health** than financial and business services which have grown at a faster rate than the services sector overall.
- **Increasing Labour productivity** by skill training and continuous upgradation.
- The large working age population of India should focus on developing as a **knowledge-based economy**.
- Focusing on other aspects of **Ease of Doing business** like **reducing the litigation time**, ease of setting up industries.
- **Increasing the PPP ventures** in Infrastructure projects by Government being responsible for land acquisition while private players are taking care of rest.
- **Easing the FDI norms** in sectors like Accounting, Retail, legal services etc. which have huge potential of investments and job generation.
- Focusing on R&D in the latest technologies like **BigData, AI, Machine Learning** and training people for the impending **Industrial Revolution 4.0**.

Conclusion:

Thus, an overall growth in all the three sectors with collaboration from the governments, private players and citizens can help India achieve the 8% growth target in a sustained manner.

Q) Explain the structure of equity holding of RBI and analyze issues related to equity holding of RBI ? (250 words)

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

Why this question

The article discusses the structure of RBI's equity holding and examines whether the equity holding of RBI needs to be reduced. The issue has been in news recently and a committee has been formed to examine this issue.

Key demand of the question

The question first expects us to explain the structure of equity holding of RBI and thereafter analyze whether it's too high and should be reduced. Finally, we need to give a fair and balanced opinion and discuss way forward.

Directive word



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.

Structure of the answer

Introduction – Explain why this issue has been in news.

Body

Explain that the RBI's current equity holding is around 27 per cent of its total assets. This overall equity level can be divided into four categories: Paid-up capital, contingency capital, revaluation capital and asset development fund. The two largest components of these are contingency capital (6.6 per cent) and revaluation capital (around 20 per cent). The revaluation capital is an accounting entry that offsets changes in the rupee value of the foreign assets and gold holdings of the RBI due to changes in the exchange rate of the rupee and changes in the dollar price of gold, respectively.

Explain what the issue is – total equity of 27 per cent has attracted a lot of attention lately. Arguments have been made that this is too high, especially when compared with other countries and that the RBI should transfer a part of this “excess” capital to the government as a one-time payment.

Give rationale for why this equity is needed and whether it needs to be reduced.

Conclusion – Give your view and discuss way forward.

Introduction:

The government has been insisting that the **central bank hand over its surplus reserves** amid a **shortfall in revenue collections**. Access to the funds will allow the government to **meet deficit targets**, **infuse capital into weak banks to boost lending and fund welfare programmes**.

RBI has constituted a **panel on economic capital framework**. It will be headed by **Ex-RBI governor Bimal Jalan**. The expert panel on RBI's economic capital framework has been formed to **address the issue of RBI reserves**—one of the sticking points between the central bank and the government.

Body:

Economic capital framework refers to the **risk capital required by the central bank while taking into account different risks**. The economic capital framework reflects the **capital that an institution requires or needs to hold as a counter against unforeseen risks or events or losses in the future**.

1) THE RBI'S RESERVES			2) HOW DOES RBI BUILD ITS RESERVES?	
Various Funds (₹ lakh crore)			1	RBI earns income from:
	FY17	FY18	1	Interest on government bonds held for conducting open market operations
Contingency fund	2.28	2.32	2	Earnings retained after giving dividends to govt are parked in reserves
Currency and gold revaluation account	5.3	6.92	3	Revaluation of foreign assets and gold goes to revaluation reserves
Asset development fund	0.23	0.23		
Investment revaluation account-rupee	0.57	0.13		
TOTAL	8.38	9.6		

The structure of equity holding of RBI is as follows

The RBI's current equity holding is **around 27% of its total assets**. This overall equity level can be divided into four categories:

1. **Paid-up capital**
2. **Contingency capital – about 6.6%**
3. **Revaluation capital – around 20%**
4. **Asset development fund.**



The **revaluation capital** is an accounting entry that offsets changes in the rupee value of the foreign assets and gold holdings of the RBI due to changes in the exchange rate of the rupee and changes in the dollar price of gold, respectively.

The issues of equity holding

- The **total equity of 27 per cent** has attracted a lot of attention lately. Arguments have been made that this is too high, especially when compared with other countries and that the RBI should **transfer a part of this “excess” capital to the government** as a one-time payment.
- The government believes that RBI is sitting on much higher reserves than it actually needs to tide over financial emergencies that India may face. Some central banks around the world (**like US and UK**) keep **13% to 14% of their assets** as a reserve compared to RBI's 27% and **some (like Russia) more than that**.
- Economists in the past have argued for RBI releasing ‘extra’ capital that can be put to productive use by the government. The **Malegam Committee** estimated the excess (in 2013) at Rs 1.49 lakh crore.

The central bank needs to hold equity rather than paying it out to the government. The important reasons are.

- Putting a part of the country's assets in a protected entity like the central bank builds **fiscal credibility of the country** as long as the central bank is viewed by markets as being independent of the government.
- This can **improve the country's international credit rating**.
- It also gives the central bank **greater credibility** in committing to **perform its emergency functions** without worrying about the fiscal contingencies of the government.
- **Mandating payments from the capital of the central bank creates a policy moral hazard**.
- For example, a cut in the policy rate raises the value of government securities that the central bank holds. If the resultant rise in the central bank's equity sparks a payment to the government then there would be greater spending and inflationary pressure in the economy. Anticipating this, the central bank would be tempted to not lower rates as much.
- A similar argument operates with **exchange rate depreciations**.
- Legislating payments out of the central bank's excess capital will tend to compromise its operational independence in achieving its policy mandate.

TERMS OF REFERENCE

- To propose a suitable profits distribution policy after looking at all likely scenarios of the RBI
- To determine whether the RBI is holding

enough provisions, reserves and buffers

- Review global best practices for central banks in making assessment and provisions for risks

MEMBERS

Bimal Jalan
Rakesh Mohan
Bharat Doshi
Sudhir Mankad
S C Garg
N S Vishwanathan

“We must continue to ensure that the quantum of reserves in the long-run is in line with the growth of the economy, the size of risk-adjusted capital flows and national security requirements

—BIMAL JALAN IN APRIL 2002 MONETARY POLICY



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Way forward:

A formal agreement between the government and the RBI with the agreement stipulating:

- A target band for the equity level of the RBI based Value of assets at Risk computations.
- The time frame within which the RBI needs to bring its capital level back within the band every time the bounds of the band are breached.
- Explicitly prohibit any payments to the government that is based on the equity level of the RBI.

Conclusion:

The committee needs to look into the **larger macro-economic stability of the Indian economy than just budging to the Government's pressure**.



Q) Tax litigation takes a heavy toll on the economy and should be reduced. Discuss. (250 words)

The hindu

Why this question

The economic survey has highlighted the issue of high tax litigation in India and it is important to discuss the issue in detail.

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.

Key demand of the question.

The question wants us to write in detail about the burden of tax litigation in the country, and describe the effects of this burden on the overall economy.

Structure of the answer

Introduction– write a few introductory lines about the tax-litigation in India. E.g In March, 2017, there were approximately 1.37 lakh direct tax cases and 1.45 lakh indirect tax cases under consideration by the Income Tax Appellate Tribunal, high courts and Supreme Court.

Body-

Discuss in points as to how unnecessary and huge tax-litigation takes a toll on the economy. E.g

- The tax department is the largest litigant with almost 85% of direct tax cases arising out of its appeals.
- The Department unambiguously loses 65% of its cases.
- The government's persistence with litigation despite high rates of failure was increasing the workload of the judiciary and adding to delays and pendency of cases.
- This, takes a severe toll on the economy in terms of stalled projects, mounting legal costs, contested tax revenues, and reduced investment".
- The project costs are significantly increased.

Discuss briefly how tax-litigation can be reduced. E.g

- Dedicated subject-matter courts could have "profound benefits" as seen in the apex court's recent experiment with constituting an exclusive bench for taxation produced impressive results.
- This may be replicated for other subject matters, and emulated by other high courts

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Income Tax Department is the biggest litigant but loses 85% of cases, according to the Economic Survey 2018. In March, 2017, there were approximately 1.37 lakh direct tax cases and 1.45 lakh indirect tax cases under consideration by the Income Tax Appellate Tribunal, high courts and Supreme Court.

Body:

The increased litigation takes a huge toll on the economy by:

- **Unusable money:** The indirect and direct tax stuck in litigation by the quarter ending March, 2017, amounted to nearly ₹58 lakh crore, over 4.7% of GDP.
- **Over-burdened judiciary:** The government's persistence with litigation despite high rates of failure was **increasing the workload of the judiciary and adding to delays and pendency of cases.** The tendency of the Supreme Court to eagerly entertain appeals directly from any court or



tribunal in the form of Special Leave Petitions (SLPs) has increased frivolous appeals eating into the **precious judicial time and effort**. The rate at which the Supreme Court admits SLPs increased from about **25% in 2008 to almost 40% in 2016**.

- **Loopholes in the law:** Indian taxation policy has large numbers of loop holes which has created number of impediments to economic growth of the nation.
- **Poor success rates:** Success rate of the litigations was **only about 35% leading** to huge financial overhead to government. As per a **2016 World Bank estimate, judicial delays cost India around 1.5 per cent of its GDP annually**.
- **Mounting NPAs:** It leads to severe toll on the economy in terms of stalled projects, mounting legal costs, contested tax revenues, and reduced investment. The Survey found that **more than ₹52,000 crore worth of government infrastructure projects have been stalled by various orders of the courts**.
- **Twin-balance sheet syndrome:** Money locked up in NPAs is affecting the investment cycles leading to reduced economic activities. It is thus affecting the banks as well as the industries perpetuating the Twin-balance sheet syndrome.
- **Difficulty of doing Business:** Due to mismatch between the government's intent and the verbal interpretation of the law, India still lacks transparency and administrative capability that is hampering the growth of industries.
- **Infrastructural deficit:** Litigations affect the infrastructure projects leading to poor connectivity, skewed concentration in few cities increasing the cost to infra projects drastically. The Survey said as project costs have risen by close to 60% during the stalled period. The Ministries of Power, Roads and Railways were hit hardest.
- **Tax- terrorism:** Unpredictable taxation policy especially retrospective taxes.
- **Affects Smooth functioning of Industrial sector:** Lack of administrative support, efficiency and proactive approach as well as no proper grievance redressal mechanism. Slow process of dispute resolution.
- **Affects socio-economic justice:** Delay in collection of potential tax revenue to the government, which ultimately impact investment in different sectors of the economy.

Way forward:

- **Dedicated subject-matter courts** could have “profound benefits” as seen in the apex court's recent experiment with constituting an exclusive bench for taxation produced impressive results.
- This may be replicated for other subject matters, and emulated by other high courts.
- Economic Survey 2017-18 pitched for **separate ITAT benches at various high courts to reduce pendency**.
- **Frivolous litigations should be fined**, which acts as a deterrent.
- The **Canons of taxation** should be followed in the tax system. This helps in easing the taxation system, increases compliance and smoothenes the process.
- Schemes like **Direct Tax Dispute Resolution Scheme** which seeks to address the issue of pending litigation before the first appellate mechanism in the Income Tax department — the Commissioner should be brought in.
- **Strengthening Alternative Dispute Resolution Mechanisms** like the settlement can be taken up voluntarily by negotiation between the parties within fixed time.
- A **3-tier GST mechanism** as proposed by many expert committees and practiced across many countries will further help in reducing the tax litigations.
- Calling for **coordinated action between government and judiciary** to reduce pendency of commercial litigation.
- The tax department could exercise greater self-restraint by limiting appeals, given its low success rate.
- A **pre-dispute consultation mechanism** can be introduced, especially for high value disputes, which could help in settlement of various issues. Assessment orders should be rolled out only for those disputed issues on which no agreement was reached.
- India could introduce a **mechanism of a private letter ruling**, which exists in the USA. It is a written response by the tax administration, which is issued to a taxpayer on his or her request, that interprets and applies tax laws to the taxpayer's represented set of facts



Conclusion:

The government's attempt towards **tax simplification** and **improving the tax litigation framework in India** are noteworthy but still it needs more clarity and improvement. The government should work to devise an **effective tax policy** that raises revenue by minimising collection costs, compliance costs and the cost to the economy on account of the distortions created.

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

Q) The recent updates to the regulations governing FDI in e-commerce does well to close out the transgressions and violations in the existing policy wrt FDI in e-commerce. Critically Analyze. (250 words)

Livemint

Why this question

Online shopping has witnessed a very high growth rate in India and is bound to further increase in future. Indian government has recently issued some new rules for e-commerce and it is important to discuss those rules and their possible impact in detail

Key demand of the question

The question expects us to explain the recent regulations brought in by the government regarding FDI in e-commerce. Thereafter, we need to explain the pros and cons of the decision including the impact on such online marketplace. Finally we need to provide a fair and balanced view and discuss way forward.

Directive word

Critically analyze –

Structure of the answer

Introduction – Write a few introductory lines about the recently released e-commerce rules. E.g the new rules stipulate that e-commerce entities will have to maintain a level playing field, and ensure that they do not directly or indirectly influence the sale price of goods and services etc.

Body

Discuss the provisions of the rules in detail.

- *From February 1, 2019, e-commerce companies running marketplace platforms cannot sell products through companies, and of companies, in which they hold equity stake;*
- *Inventory of a vendor will be deemed to be controlled by e-commerce marketplace entity if more than 25% of purchases of such vendor are from the marketplace entity or its group companies etc.*

Analyze whether these rules amount to micromanagement on the part of government which would adversely impact such investments into e-commerce sector which is a high growth sector in Indian economy. On the other hand, also explain that these explanation to the rules are a clarification of existing regulations governing FDI in e-commerce and will positively impact the domestic players.

Conclusion – Give a fair and balanced conclusion after analysing all aspects and discuss way forward.

Introduction:

- In the last couple of years, e-commerce transactions have risen substantially in India and abroad. The size of the digital economy in India will be \$1 trillion by 2022 and it will account for close to 50% of the entire economy by 2030.
- This necessitates better policy response and coordination among various wings of the government. Ministry of Commerce & Industry recently reviewed the policy on Foreign Direct Investment (FDI) in e-commerce. The new rules stipulate that e-commerce entities will have to



maintain a level playing field, and ensure that they do not directly or indirectly influence the sale price of goods and services.

Body:

The provisions of the rules in detail along with the new changes proposed.

Scope:

- E-Commerce entities would engage only in Business to Business (B2B) e-commerce and not in Business to Consumer (B2C) e-commerce.
- Models in e-Commerce:
 - **Marketplace based model** provides an IT platform by an e-commerce entity on a digital & electronic network to act as a facilitator between buyer and seller. E.g.: Amazon, Flipkart.
 - **Inventory based model** means an e-commerce activity where inventory of goods and services is owned by e-commerce entity and is sold to the consumers directly.

FDI:

- 100% FDI under automatic route is permitted in marketplace model of e-commerce.
- FDI is not permitted in inventory based model of e-commerce.

Equity ownership:

- **RECENT ADDITION:** The sellers that have equity ownership by the marketplace or its group companies will no longer be able to sell on the marketplace.
- g.: a product in which Amazon or Flipkart have a stake cannot be sold on their respective platforms.

Inventory ownership:

- E-commerce entity providing a marketplace should not exercise ownership or control over the inventory.
- **RECENT ADDITION:** Sellers will no longer be able to source more than 25% of their purchase from the marketplace or its group companies.
- Such entities will be classified as inventory-based model.

Responsibility and Accountability:

- **RECENT ADDITION:** The marketplaces are required to submit to the Reserve Bank of India (RBI) an annual compliance certificate from their statutory auditors is important for ensuring implementation.
- Consumer protection for the goods and services sold on website will be applicable to E-Commerce entities as brick and mortar entities.
- This is in tune with the provisions of Consumer Protection Bill 2018.

Pricing:

- **RECENT ADDITION:** E-commerce entities providing marketplace will not directly or indirectly influence the sale price of goods or services and should maintain a level playing field.
- Deep discounts and offers like cashbacks provided by marketplace entity to buyers should be fair and non-discriminatory.

Data Localisation measure:

- Companies such as Amazon, Facebook and Google that generate user data through ecommerce platforms, social media and search engines have to store data exclusively in India.

Redressal:

- A separate wing to be set up in the Enforcement Directorate. This will handle grievances related to guidelines for foreign investment in ecommerce.

Draft Ecommerce Policy Proposals

Proposal Group companies of online marketplaces barred from influencing prices
Impact Check cartelisation

Proposal Ban bulk buys by related party sellers
Impact Check misuse of discounts/offers

Proposal Sunset clause defining maximum duration of deep discounts
Impact Create a level playing field for local cos

Proposal Restricted inventory based model for FDI funded/foreign cos
Impact Encourage local sourcing/Make in India

Proposal ED to look into alleged violations
Impact Tighter control on ecomm companies

Proposal CCI to examine competition distorting M&As
Impact Check creation of monopolies

Proposal Data to be hosted in India
Impact Help local software firms; ensure user details not misused by foreign entities

**Payment:**

- Currently, a large number of payments for online purchases is made through the cash-on-delivery option.
- To make online payments safer, the task force has suggested creating a fraud intelligence mechanism. This would use artificial intelligence-based authentication systems, for early detection of frauds.

Negatives of such regulations:

- These rules amount to micromanagement on the part of government which would adversely impact such investments into e-commerce sector which is a high growth sector in Indian economy.
- The rules can have significant impact on the business model of e-commerce majors, as most of them source goods from sellers who are related.
- Equity restrictions can affect sales of products in which the e-Commerce entities have a stake in manufacturing companies of products. E.g.: WS Retail cannot sell their products on Flipkart as the latter has a stake more than 25%.
- Consumers may no longer enjoy the deep discounts offered by retailers that have a close association with marketplace entities.

Positives of the regulations:

- The rules are a clarification of existing regulations governing FDI in e-commerce and will positively impact the domestic players.
- The absence of large retailers will, however, bring relief to small retailers selling on these platforms.
- Traders running traditional brick-and-mortar stores, who now find it difficult to compete with the large e-commerce retailers with deep pockets, could gain.
- Checks Cartelization: The e-commerce players cannot directly or indirectly influence the price of goods and services.
- Sellers will get autonomy as the e-commerce marketplace entity will not mandate any seller to sell any product exclusively on its platform only.
- Other Positives:

Conclusion:

- The proposed rules are a step in the right direction to bring about equity in the e-Commerce sector which has hitherto been controlled by big conglomerates.
- However, Self-regulation regarding operating guidelines, based on the government's stated policies, is the ideal way forward for India's digital commerce sector.

Topic– Inclusive growth and issues arising from it.

Q) Repeated loan waivers may be in the interest of political parties but are not in the interest of farmers. Critically examine. (250 words)

The hindu

Why this question

Farm loan waivers introduced recently by several state governments have been criticized time and again on many accounts. It is therefore necessary to analyze the perils of such schemes and what could be the best strategy to address the issue holistically.

Directive word

Critically examine- here we have to probe deeper into the topic, get into details, and find out the causes or implications if any. based on our discussion we have to form a concluding opinion on the issue.

Key demand of the question.

The question wants us to dig deeper into the issue, bring out the pitfalls and deficiencies of farm loan waiver schemes and express our opinion on the issue as to what should be done in this regard.



Structure of the answer

Introduction– write a few introductory lines about the farm loan waivers introduced recently as well as in the recent past in many states of India. Mention that 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.

Body-

Discuss how farm subsidies are not enough to address the farmers' woes. E.g

- A loan waiver is only an element of immediate relief. It is an acknowledgment that farmers have been pushed into debt due to the systemic failures of the government.
- The burden on farmers on account of just three items (lack of compensation during drought and disasters, the failures of the crop insurance scheme, and the deficit due to prices falling below the announced Minimum Support Prices) runs to tens of thousands of crores every season.
- 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 etc.

Discuss what should be the line of action to address the agriculture distress in a sincere and holistic manner. E.g

- Guarantee access to institutional credit to not only big farmers but also small and marginal farmers, sharecroppers, tenants, adivasi and women farmers, and animal-rearers;
- Registration of all cultivators and providing them Kisan credit cards
- establish farmers' distress and disaster relief commissions at the national and State levels, based on the model of Kerala Farmers' Debt Relief Commission.
- In addition to reforming the credit system, agriculture should be made profitable by ensuring fair remunerative prices, lowering the cost of cultivation, and promoting viable farmer collectives and sustainable models of agriculture.

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

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. 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.

Body:

Farm loan waiver are necessary for farmers' welfare:

- Agriculture in India has been facing many issues — fragmented land holding, depleting water table levels, deteriorating soil quality, rising input costs, low productivity. Add to this vagaries of the monsoon.
- Output prices may not be remunerative. Farmers are often forced to borrow to manage expenses. Also, many small farmers not eligible for bank credit borrow at exorbitant interest rates from private sources.
- When nature rides roughshod over debt-ridden farmers in the form of erratic monsoon and crop failures, they face grim options. Indebtedness is a key reason for the many farmer suicides in the country.



Loan waivers are not sufficient for farmers' welfare rather it's in interest of Political Parties:

- Loan waiver is generally declared by **political parties for electoral gains**. The very purpose of waiving is unjustified and the needs a review of overall waiving process.
- Farm loan waivers have become electoral weapons for parties, but it's the small businesspersons and traders who are bearing the burden of loans that banks give them at high-interest rates.
- 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 **Rythu Swarajya Vedika** in June 2018 showed that 75% of farmer suicides in Telangana are by tenant farmers, who have no or least access to formal credit.
- 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.
- 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 source. Among the borrowing households, 36% take credit from informal sources.
- A negative relationship between the size of farm and per capita consumption expenditure (a proxy for income) further underscores the importance of formal credit in assisting marginal and poor farm households in reducing poverty hence farm loan waivers fail to result into farmers welfare.

What needs to be done?

- **Credit, finance and Insurance:**
 - A functional institutional credit system which is accessible and accountable to all cultivators.
 - This covers not only land-owning farmers but also sharecroppers, tenants, adivasi and women farmers, and animal-rearers.
 - Credit products for agriculture need to be tailor-made based on cropping and rain cycle, specific to a particular region. The regional offices of commercial banks should contribute in this exercise. Registration of all cultivators and providing Kisan credit cards.
 - The period of crop loan should be extendable to four years, given that, on average, every second or third year the spatial distribution of rain pattern is erratic in India.
- **Input Costs:**
 - It is more important to make agriculture sustainable by reducing input costs of seeds, fertilizers and other inputs.
- **Remunerative Prices:**
 - Extending reach of minimum support price which has been dedicated to few crops and in a narrow geographical area is important.
 - Set up of Futures and Trade markets, tie up of farmer and private companies for procurement should be looked into as alternative methods against distress sale.
- **Agro- Produce Marketing and Processing:**
 - The agro-processing industry and warehousing needs to expand so that agricultural produce can be stored when prices plunge.
 - Promoting viable farmer collectives to act as a "collective voice of marginal and small farmers".
 - Legislations on the basis of NITI Aayog's new model law — Agricultural Produce and Livestock Marketing (Promotion and Facilitating) Act (APLM) should be enacted in all states.
- **Technology:**
 - Use of technology to aid farmers like drip and sprinkler irrigation.
 - Precision agriculture, GM Crops should be encouraged drought prone areas.
 - Space technology and Mobiles should act as "Eyes and Ears" of the farmers to assist in farming.



- **Distress Management:**

- Establish farmers' distress and disaster relief commissions at the national and State levels, based on the model of Kerala Farmers' Debt Relief Commission.

Conclusion:

- Waiving of loans should be done only in the most exceptional circumstances.
- The challenge before political parties and governments is to deliver on the institutional solutions demanded by farmers as against temporary solutions of loan waivers.

Q) The aspirational districts programme will play a key role in bridging the development gap is vital to social and political stability. Examine. (250 words)

Livemint

Why this question

The progress shown by some of the districts under the aspirational districts programme leads us to harbour belief that sustained focus on the progress of these districts would enable us to bridge the developmental gap. It is important to know about this programme and the impact that it creates.

Key demand of the question

The question expects us to first explain about the aspirational districts programme. Next, we need to explain about the impact that this programme is having in the social indicators of these backward districts and bring out how it can help us achieve SDG etc.

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** – Highlight that unevenness of development has been flagged as a major issue by economic survey.*

Body

- *Explain what aspirational districts programme is and how it plans to take India on to the path of inclusive growth. Under the “aspirational districts” programme, central and state officials are working closely to identify the strength of each district and use it to catalyse growth. NITI Aayog, which anchors the programme, has ranked these districts on their performance in key development areas of health and nutrition, education, farming, water resources, financial inclusion, skill development and access to basic infrastructure such as road, potable water and power.*
- *Discuss about the progress shown by some of the districts in achieving their targets and what it means for achieving SDG and bringing the inequality across regions.*
- *Explain why bridging this inequality vital to ensure political and social stability.*

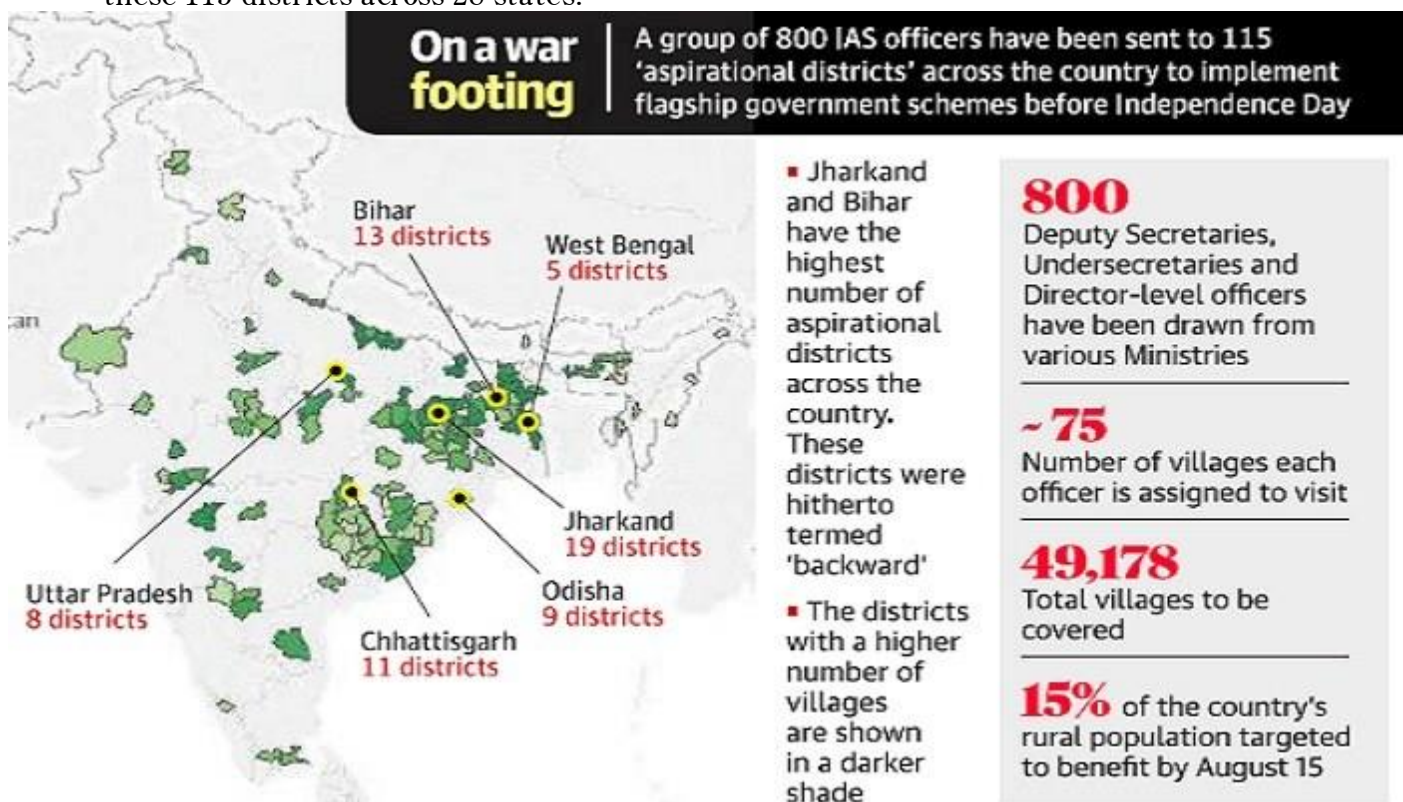
***Conclusion** – Give your view and discuss way forward.*

Introduction:

- India is on a high growth trajectory that is expected to lift millions out of poverty. However, presently the quality of life of many of its citizens is not consistent with this growth story, a fact reflected in UNDP's 2016 Human Development Index wherein we are ranked 131 out of 188 countries. A closer look at the data reveals high heterogeneity in the living standards in India. There are significant inter-state and inter-district variations. By uplifting the districts which have shown relatively lesser progress in achieving key social outcome, India can move ahead in the human development index.



- Launched in January 2018, NITI Aayog's 'Transformation of Aspirational Districts' initiative aims to remove this heterogeneity through a mass movement to quickly and effectively transform these 115 districts across 28 states.



Body:

Extra information on Aspirational Districts Program:

Core Strategy: The broad contours of the programme are **Convergence** (of Central & State Schemes), **Collaboration** (of Central, State level 'Prabhari' Officers & District Collectors), and **Competition** among districts driven by a spirit of mass Movement. With States as the main drivers, this program will focus on the strength of each district, identify low-hanging fruits for immediate improvement, measure progress, and rank districts.

NITI Aayog which has been driving the program has introduced a system of ranking to inculcate a spirit of competitiveness among the chosen districts. The present ranking is based on 49 indicators across 5 sectors. These sectors are areas that have been targeted for transformation –

1. Health and Nutrition (30%)
2. Education (30%)
3. Agriculture and water resources (20%)
4. Financial inclusion and skill development (10%)
5. Basic infrastructure (10%)

Selection: The 115 districts were identified from 28 states, at least one from each state, in a transparent manner by a committee of Senior Officers to the Government of India, in consultation with State Officials using a composite index of key data sets based on above indicators.

The second set of rankings in December 2018, showed that five districts have particularly made rapid progress—

- Kupwara in Jammu and Kashmir
- Ranchi in Jharkhand
- Siddharthnagar in Uttar Pradesh
- Fatehpur in Uttar Pradesh
- Jamui in Bihar



While districts such as Siddharthnagar made progress on several fronts, including education and basic infrastructure, Pakur in Jharkhand remain backward in education, health, nutrition and basic infrastructure. Pakur, which ranks at the bottom of the list, at 111, has plenty of room for improvement. Bridging this inequality is vital to ensure political and social stability.

Political Stability

- 1) Fillip to democracy: Due to the collaboration at all the three levels of Governance.
- 2) Co-operative and competitive federalism: The index-based ranking system helps in achieving a competitive spirit which will further encourage states to perform better.
- 3) Helps in SDG goals achievement. Currently India is only half-way in SDG goals.
- 4) Secessional demands, regional demands based on polarization will be reduced
- 5) Naxalism, Radicalisation, mob lynching, crime rates and social unrest will be reduced as the developmental factors increase

Social stability

- 1) Inequality reduction, in turn poverty reduction by equitable distribution of income and tackling discrimination.
- 2) Food Security ensuring availability, accessibility and affordability to all. This will lead to focus on other developmental aspects of Education and skilling.
- 3) Education acts as a stepping stone to success by giving the opportunity to grow.
- 4) Health: With programs like Ayushman Bharat offering health cover to 100 million vulnerable families, reduces the Out of Pocket Expenditure saving many families from falling BPL.
- 5) Tackling Unemployment by creating opportunities of employment and skill development
- 6) Reduced stress migration by developing the rural areas with modern urban facilities and seamless connectivity.

Challenges:-

- Local government is in a unique position to understand the complexities of the districts. They can experiment with different measures to enhance socio-economic development on the ground. **Panchayats are neglected.**
- State government in its conditions has also demanded allocation of more funds for the most backward districts.
- Data collection and analysis on monthly basis is a very hectic process which needs resources and efficient workforce.
- The districts which are backward need to compete with the best performing so quick transformation might be difficult and be flawed as well.
- Also there might be conflicts between centre and states. Work might be affected during elections etc.

Way forward:-

- For the programme to succeed there is a need for effective monitoring which can be done by **social auditing**.
- Increase the awareness amongst the people and even some of them can be given work as volunteers.
- With **lack of digital literacy and infrastructure at local level** compiling the enormous data and updating it is a humongous task.
- Seeking rapid transformation of these districts on specific parameters such as health, education and nutrition need to happen alongside unlocking of their development potential.
- In this context, recognising development trajectory of each district, relentlessly tracking district's progress on its chosen interventions and indicators is probably a better approach.

Conclusion:

- Plugging the development gaps and improving the quality of life of people in these backward areas is important. India, set to be the fifth largest economy in the world, bridging the development gap is vital to social and political stability. Thus, Aspirational District Programme will go a long way to achieve regionally balanced, inclusive and sustainable growth.



Q) Universal Basic Income has its own pros and cons. Discuss in the context of Indian economy. (250 words)

[Indianexpress](#)
[Indianexpress](#)

Why this question

The Union government has recently mooted the idea of UBI 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.

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.

Key demand of the question.

The question wants us to write in detail about the UBI and bring out its positive points as well as cons/ limitations.

Structure of the answer

Introduction– write a few introductory lines about the central government’s idea to introduce UBI and also mention about the state of Sikkim.

Body-

Discuss about UBI. E.g 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).

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- based on your discussion, form a fair and a balanced conclusion on the given issue.

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.

The state of Sikkim recently announced that UBI will be implemented in state by 2022.

Body:

Basic income schemes have also been promoted within the context of capitalist systems, where they would be financed through various forms of taxation. Prominent advocates of the concept include **Philippe Van Parijs, Ailsa McKay, Andr  Gorz, Hillel Steiner, Peter Vallentyne, and Guy Standing**.

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).

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.
- **Fighting technological unemployment:** With IR4.0 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. The research of economists Emmanuel Saez and Thomas Piketty showed that “the bottom half of earners went from making 20 percent of overall income in 1979 to just 13 percent in 2014. The top 1 percent, on the other hand, have gone from making 11 percent to 20 percent. The pie has gotten vastly bigger, and the richest families have reaped bigger and bigger pieces from it.” UBI would help balance this 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 an **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, PMJ SY etc
- Economic Survey has suggested to replace 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.

Conclusion:

UBI holds a lot of potential as a welfare scheme, however in its present form needs to be re-evaluated. There is a need for a 10-fold increase in resource mobilisation combined with increasing the tax base for funding. Also, UBI should not be aimed at replacing the existing welfare schemes but stick to its core ideas of providing basic income to citizens without a means test and work requirement.

Case Studies

India: A pilot project by the Self Employed Women's Association (SEWA) and the United Nation's Children's Fund (UNICEF) was implemented in Madhya Pradesh from June 2011 to November 2012, where unconditional cash transfers (UCT) were provided to the people. Citing the study, the Economic Survey 2016-17 claimed that "people become more productive when they get a basic income".

Iran : In 2010, the government of Iran ran a UBI trial, giving citizens transfers of 29 percent of the median income each month. Poverty and inequality were reduced, and there was no sign of large amounts of people leaving the labour market. In fact, people used it to invest in their businesses, encouraging the growth of small enterprises.

Canada : A UBI trial in Manitoba, Canada, showed a modest reduction in workers, along with fewer hospitalisations and mental health diagnoses.

Q) NITI Aayog's strategy for 2022 is replete with environmental and livelihood related contradictions. Critically analyze. (250 words)

The hindu

Why this question

The NITI Aayog which replaced the erstwhile planning commission has recently (last year) released a strategy for 2022. It is important to discuss the strategy in detail and bring out its positive as well as negative points.

Directive word

Critically analyze- here we have to examine methodically the structure or nature of the topic by separating it into component parts, and present them as a whole in a summary. based on our discussion we have to form a concluding opinion on the issue.

Key demand of the question

The question wants us to look deep into the strategy-2022 envisaged by the NITI Aayog and bring out how it will impact Indian economy and its environmental and livelihood aspects.



Structure of the answer

Introduction– write a few introductory lines about the recently released NITI Aayog's strategy for 2022. E.g it is an aspirational strategy which aims to achieve a 'New India' by 2022, when the country celebrates its 75th year of Independence.

Body-

Discuss the positive points of the strategy. E.g

- It follows the UN Sustainable Development Goals, Inclusion, sustainability, participation, gender equality etc.
- major focus on renewable energy, organic farming (with the zero budget natural farming, increasing forest cover, and reducing pollution and waste.

Discuss the negative points and its anticipated effects on livelihood and environment. E.g

- the urgent need to conserve a range of non-forest ecosystems is missing
- The increasing presence of toxic chemicals around us finds no mention.
- Most importantly, the absence of an integrated, comprehensive view on how ecological issues can be integrated into all sectors indicates that this is still not core to the mindset of our planners.
- It proposes a doubling of the extent of mining.
- stress on rapid, single-window clearance of infrastructure and other projects etc.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

NITI Aayog's **Strategy for New India @ 75** is a comprehensive national Strategy for New India, which defines clear objectives for 2022-23. It seeks to make development a **Jan Andolan**, details key **recommendations across growth drivers, infrastructure, inclusion and governance**. It is a detailed exposition across forty-one crucial areas, that recognizes the progress already made, identifies binding constraints, and suggests the way forward for achieving the clearly stated objectives.

Body:

The document details out the overarching focus of the Strategy document.

The progressive objectives of the strategy document are:

- It focuses to further improve the policy environment in which private investors and other stakeholders can contribute their fullest towards achieving the goals set out for New India 2022.
- It gives the way to propel India towards a USD 5 trillion economy by 2030.
- It follows the UN Sustainable Development Goals, Inclusion, sustainability, participation, and gender equality.
- Major focus on renewable energy, organic farming (with the zero budget natural farming), increasing forest cover, and reducing pollution and waste.
- An entire chapter titled '**Sustainable environment**' focuses on air pollution, solid waste management, water pollution, and forestry.

However, the document misses out on many issues

- The document focuses on air pollution, solid waste management, water pollution, and forestry where as there are much larger number of environmental issue India faces. **Example:** deforestation, global warming, land degradation, wiping out of bio-diversity, plastic pollution etc.
- The urgent need to conserve a range of **non-forest ecosystems** is missing. **Example:** grassland, marine and coastal, wetland, mountain, and desert conservation.
- The increasing presence of toxic chemicals around us finds no mention. Excessive use of fertilizers, herbicides, industrialization has lead to **intoxication of soil, water sources and even biomagnification**.



New India @75

Niti Aayog sets goals for 2022, the platinum jubilee of India's independence

BIG TARGET

- ▶ Average GDP growth of **8%** between 2018-23
- ▶ Economy grows to **\$4 trillion**



HOW TO BE ACHIEVED

- ▶ Raise investments rate to **36%** by 2022-23 from 29% now
- ▶ Increase tax-GDP ratio to at least **22%** by 2022-23



DETAILED STRATEGY

41 sectors identified for action

Industry and infrastructure

- ▶ Enhance skills and apprenticeships
- ▶ Complete codification of central labour laws into four codes by 2019
- ▶ Enhance female labour force participation



To address rural/farm stress

- ▶ Better ecosystem for innovation
- ▶ Augmentation of industrial infrastructure
- ▶ Promote MSMEs, improve ease of doing business
- ▶ Double the mining area explored from 10% to 20%

- ▶ Modernise agricultural technology, increase productivity
- ▶ Crop diversification & reorientation of fertiliser subsidy
- ▶ Adopting the Model Agricultural Produce and Livestock Marketing Act
- ▶ Amend the Essential Commodities Act, stable export policy
- ▶ Infrastructure status for agriculture value chains
- ▶ Link production to processing, village level procurement centres

Financial Inclusion

- ▶ New scheme for comprehensive financial literacy
- ▶ Review banking correspondents and give better incentives
- ▶ Tech use assessment of credit-worthiness for households

Better living

- ▶ Provide every family with a pucca house
- ▶ Water connection, toilet facilities
- ▶ Make 24x7 power available to all by '19

- The absence of an integrated, comprehensive view on how ecological issues can be integrated into all sectors indicates that this is still not core to the mindset of our planners. A case in support of the statement is study of 2008, the **Confederation of Indian Industry** indicated that India was **already using twice of what its natural resources could sustain**, and that **more than half its biocapacity had already been eroded**.
- c There is positive mention of organic farming models for replication, but nothing on the amazing work of **dryland farmers** (such as the Dalit women of the Deccan Development Society in Telangana) showing productive, sustainable, bio-diverse agriculture with millets and women as the fulcrum.



- NITI Aayog proposes a **doubling of the extent of mining**. The large-scale open-cast type mining is one of the biggest ecological and social disasters in India.
- NITI Aayog recommends **doubling the number of domestic tourist** visits to over 3,200 million from 1,614 million in 2016. Exceeding the carrying capacity has led to degradation of many ecosystems.
- It proposes a host of **mega river valley projects** that have proved to be ecological nightmares, including **Pancheshwar** in the fragile Himalaya, the Ken-Betwa link in Madhya Pradesh, and dozens in the Northeast that are going to choke up rivers and are being pushed ahead despite strong local opposition.
- There is an emphasis on **rapid, single-window clearance of infrastructure and other projects**. Any decent ecological assessment of a project needs a year of study (over all seasons), so the 180 days limit it suggests will mean short-cuts. This rush also means compromising on crucial processes of social assessment, public hearings, and participatory decision-making, as already seen in the last few years.

Way Forward:

- Planning will have to become more **decentralised**, but within a stipulated time framework.
- Bureaucracy will need to change from **generalist to specialist**, and its accountability will have to be based on outcomes achieved, not inputs or funds spent.
- By **collecting fresh ideas and sharing them with the Central and State governments**, it pushes frontiers and ensures that there is no inertia, which is quite natural in any organisation or institution.
- Making Environmental Impact Assessment more stringent.

Conclusion:

The debate of Environment and development is a tricky one. There is a need to balance both without compromising on either. **Deliberations** and **discussions** in public forum can bring out the shortcomings in the strategy. This can be restructured in tune with our efforts towards the Sustainable Development goals.

Q) Discuss the factors responsible for economic disparities between various regions of India. (250 words)

[The hindu](#)
[Reference](#)

Why this question

Regional inequality has been an important issue for independent India and it is still relevant given that progress on this front has not been at the desired level. In this context it is essential to discuss the factors responsible for creating and sustaining regional disparities in India.

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.

Key demand of the question.

The question wants us to write in detail about the factors- historical, social, geographical, political- responsible for the economic disparities between various parts/ regions of India.

Structure of the answer

Introduction– write a few introductory lines about the economic disparity between various regions of India. E.g inter-State disparities have widened in recent years even as the larger economy grows in size. Many low-income States have experienced isolated years of strong economic growth above the national average. But they have still failed to bridge their widening gap with the richer States since they have simply not been able to maintain a healthy growth rate over a sustained period of time.



Body-

Discuss in points as to what factors are responsible for this disparity. E.g

1. *Historically, regional imbalances in India started from its British regime. The British rulers as well as industrialists started to develop only those earmarked regions of the country which as per their own interests.*
2. *Geographical factors play an important role in the developmental activities of a developing economy. The difficult terrain surrounded by hills, rivers and dense forests leads to increase in the cost of administration, cost of developmental projects, besides making mobilisation of resources particularly difficult.*
3. *Locational advantages are playing an important role in determining the development strategy of a region. Due to some locational advantages, some regions are getting special favour in respect of site selections of various developmental projects.*
4. *Economic overheads like transport and communication facilities, power, technology, banking and insurance etc. are considered very important for the development of a particular region.*
5. *Failure of Planning etc.*

Conclusion- *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

India, as the world's fastest-growing major economy, may well be catching up with the richer economies in terms of absolute size. But economic convergence within the country remains a distant dream as poorer States continue to lag behind the richer ones in economic growth.

A report from the rating agency **Crisil** found that the inter-State disparities have widened in recent years even as the larger economy grows in size and influence on the global stage.

Body:

Many low-income States have experienced isolated years of strong economic growth above the national average. But they have still failed to bridge their widening gap with the richer States since they have simply not been able to maintain a healthy growth rate over a sustained period of time. The various factors are responsible for these disparities are:

- **Historical Factors:**
 - Historically, regional imbalances in India started from its British regime.
 - The British rulers as well as industrialists started to develop only those regions of the country which as per their own interest were possessing rich potential for prosperous manufacturing and trading activities. **Example:** Bombay, Calcutta and Madras.
 - The absence of proper land reform measures and proper industrial policy, the country could not attain economic growth to a satisfactory level.
- **Geographical Factors:**
 - River plains, fertile areas, cool climate, arable lands, mines etc. are economically beneficial areas and are developed quickly. **Example:** Northern plains,
 - The difficult terrain surrounded by hills, rivers and dense forests leads to increase in the cost of administration, cost of developmental projects, besides making mobilisation of resources particularly difficult. **Example:** Himachal Pradesh, Northern Kashmir.
 - Adverse climatic conditions like regions prone to flood, drought are also responsible factors for poor rate of economic development of different regions of the country as reflected by low agricultural productivity and lack of industrialisation.
- **Location Advantages:**
 - While determining the location of iron and steel projects or refineries or any heavy industrial project, some technical factors included in the location advantage are getting special considerations.
 - Due to some location advantages, some regions are getting special favour in respect of site selections of various developmental projects. **Example:** Ports in the coastal areas.



- **Economic Overheads:**
 - Economic overheads like **transport and communication facilities, power, technology, banking and insurance** are considered very important for the development of a particular region. **Example:** Gujarat, Maharashtra
 - New investment in the private sector has a general tendency to concentrate much on those regions having basic infrastructural facilities.
- **Policy & Governance Issues:**
 - The poor policies also lead to imbalanced growth in regions.
 - The benefit of **green revolution** was very much restricted to the states like Punjab, Haryana and plain districts of Uttar Pradesh leaving the other states totally in the dark about the adoption of new agricultural strategy.
 - States like Maharashtra, Gujarat, Tamil Nadu have excelled due to industrial development policies, attraction of FDI from foreign investors, tax holidays, tax sops to industries attract them.
- **Political Instability:**
 - **Unstable government, extremist violence, law and order problem** have been obstructing the flow of investments into these backward regions besides making flight of capital from these backward states.

Way Forward:

- **Goods and Service Tax** is a game changer and provides a level-playing field for all states. This makes all states equally attractive to set up industries.
- Flagship projects like **Bharatmala, Sagarmala** concentrate on the hinterland development too thereby providing infrastructure to underdeveloped areas.
- Schemes like **Aspirational Districts Program** are curated to target the under-developed areas and bring on par with good socio-economic development.
- Bolstering the **State-level institutions, as gauged by their ability to uphold the rule of law and create a free, competitive marketplace for businesses to thrive, and the quality of public spending** could be crucial determinants of the long-run growth prospects of States.
- **Bottom-up development, competitive and co-operative federalism** should be implemented in true letter and spirit to reduce the regional disparities.

Conclusion:

Reducing the regional disparity is imperative as the demographic potential of states are different. The states with poor developmental indices are the youngest ones and must be developed to reap the demographic dividend and a sustained development of India.

Q) The Supreme Court's decision in Surendra Mohan v. Union of India, has severely undermined India's disability rights movement. Analyze. (250 words)

The hindu

Directive word

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

Key demand of the question.

The question wants us to dig deep into the given case and bring out the details of the judgement and how it is against the disability rights in India.

Structure of the answer

Introduction— write a few introductory lines about the *Surendra Mohan v. Union of India* case. E.g In this case the Court had to rule on the legality of the Tamil Nadu government's policy of reserving the post of civil judge only for people whose percentage of blindness does not exceed 40-50%.



Body-

Discuss about the judgement. E.g

- *The SC held that the government's decision was rational and reasonable. It ruled that a judicial officer has to possess a reasonable amount of sight and hearing to discharge her functions.*
- *It accepted the claim that impaired vision makes it impossible to perform the functions required of judicial officers, such as assessing the demeanour of witnesses and reading and analysing evidence.*
- *It also accepted that asking a blind judicial officer to perform such administrative functions as recording dying declarations and conducting inquiries can result in avoidable complications.*

Discuss the implications and shortcomings of the judgement. E.g

- *First, the view that a totally blind person cannot thrive as a judge is belied by several examples of successful judges who are blind.*
- *A blind person be reasonably expected to thrive as a judge without being excessively dependent and inefficient*
- *The Court's unreasoned assertion is an outcome of their ignorance about the capabilities of the disabled.*
- *The declaration cuts to the core of the confidence of the visually impaired about the fairness and robustness of our judicial system etc.*

Conclusion- *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

In *Surendra Mohan v. Union of India*, Supreme Court upheld **the legality of the Tamil Nadu government's policy of reserving the post of civil judge** only for people whose percentage of blindness does not exceed 40-50%, resulting in the **exclusion of the applicant who are blind more than 50%**. The court's verdict is regarded as one of the darkest in India's disability rights movement.

Body:

Supreme Court's ruling:

- SC held that the government's decision was rational and reasonable and ruled that **a judicial officer has to possess a reasonable amount of sight and hearing to discharge her functions.**
- SC accepted the claim that impaired vision makes it impossible to perform the functions required of judicial officers, such as assessing the demeanour of witnesses and reading and analysing evidence.
- SC also accepted that asking a blind judicial officer to perform such administrative functions as recording dying declarations and conducting inquiries can result in avoidable complications.

The implications and shortcomings of the judgement are:

- The view that a totally blind person cannot thrive as a judge is belied by several examples of successful judges who are blind.
- **Example:** former South African Constitutional Court judge Zak Yacoob, who has repudiated the notion that one needs to be sighted to assess a witness's demeanour as being nonsensical.
- S. Court of Appeals DC Circuit judge David S. Tatel, who thinks that it is neither fair nor accurate to impose low expectations on what blind lawyers can do.
- **Yousaf Saleem** became Pakistan's first blind civil judge last year.
- The court is of the opinion that a blind person cannot thrive as a judge without being excessively dependent and inefficient.



- This contradicts Supreme court's own note in 2017 that, "A lawyer can be just as effective in a wheelchair, as long as she has access to the courtroom and the legal library, as well as to whatever other places and material or equipment that are necessary for her to do her job well."
- The Court's unreasoned assertion is an **outcome of their ignorance about the capabilities of the disabled**.
- Many disabled people have excelled in many walks of life. **Example:** Beno Zephine is the first 100% visually challenged Indian Foreign Service Officer. Yousaf Saleem is a Blind civil Judge of Pakistan etc.
- As to obviating avoidable complications, the reasonable accommodations required by a blind judge may be considered irksome.
- However, there is a distinct exhortatory dimension to be recognised in deciding whether an adjustment to assist a disabled person to overcome the disadvantage that she or he has in comparison to an able-bodied person is reasonable.
- The constitutional promise of equality cannot be fully realised, if we lack the ability to even pay the price of making reasonable accommodations.
- The judgement **cuts to the core of confidence of citizens about the fairness and robustness of our judicial system**.

Conclusion:

- India is a signatory to the UNCRPD and ratified it in 2007. Supreme Court Judgment in this case appears simply not to have bothered to notice the competence of the millions of disabled people who inhabit this world.
- An institutional display of pure and simple discrimination dressed up as legal reasoning will be reflective of what kind of a society we hope to be. Verdict does not bode well with our 2030 SDG which provides that persons with disabilities must be both "beneficiaries and agents of change".

Q) A simple UBI will not solve the fundamental problems of the economy. analyze. (250 words)

The hindu

Why this question

The article discusses the other side of UBI as a tool of the capitalists in the wake of growing inequality. It is important to analyze the UBI for its cons and limitations.

Directive word

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

Key demand of the question.

The question wants us to dig deep into the UBI as a simplified version and bring out why it will not help in solving the fundamental problems afflicting Indian state.

Structure of the answer

***Introduction**– write a few introductory lines about the UBI. E.g mention the growing popularity and support for the scheme among academic and political circles and also mention about the Sikkim.*

Body-

Discuss in points, the cons of UBI and also why it would not help in solving the fundamental problems afflicting India.

- *It side-steps the challenge of actually providing the services required: education, health, food, etc. Just give the people cash: let them buy what they need.*



- *However, if the cash will not provide citizens with good quality and affordable education and health, because neither the government nor the private sector is able or willing to, this will not solve the basic human development problems that must be solved.*
- *UBI fails to strengthen 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.*
- *Fails to strengthen institutions of the state also to regulate delivery of services by the private sector and ensure fair competition in the market.*

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

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.

The state of Sikkim recently announced that UBI will be implemented in state by 2022.

Body:

The **cons** of UBI:

- **Quality of Services:** However, if the cash will not provide citizens with good quality and affordable education and health, because neither the government nor the private sector is able or willing to, this will not solve the basic human development problems that must be solved.
- **Status Quo of public institutions:** UBI fails to strengthen 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.
- **Extreme privatization:** Fails to strengthen institutions of the state also to regulate delivery of services by the private sector and ensure fair competition in the market.
- **Rising Economy of India:** The growing support for a basic income in developed countries comes against the backdrop of stagnant median incomes over several decades. The current Indian context is quite different. Incomes have been rising across the spectrum even after taking into account higher levels of inequality.
- **Definition of Poor:** The last official data comes from the NSSO Consumer Expenditure Survey for 2011-12. The latest survey for 2017-18 is done, but it will take some time for the numbers to be made public. There may thus be a need to reassess what constitutes the minimum consumption basket used to define poverty in India. Much of the subsequent basic income calculations will have to be re-jigged.
- **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 an **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.

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.
- The terms of trade remain unfair for small enterprises, and terms of employment unfair for unorganised workers. The solution is aggregation of the small into larger associations, cooperatives, and unions. Aggregations of small producers, and unions of workers, can negotiate for more fair terms.
- 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.

To create more equitable growth than the ones on offer are:

- One, focus on building state capacity beginning with implementation of the recommendations of the Second Administrative Reforms Commission.
- Two, strengthen the missing middle-level institutions for aggregation of tiny enterprises and representation of workers.
- Three, the creativity of economists could be better applied to developing ideas for UBC than UBI.

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

Q) Reducing farmer's vulnerability to negative shocks through focussed financial help is more critical than unconditional loan waivers scheme. Critically analyze. (250 words)

[Livemint](#)

[Livemint](#)

Why this question

Farm loan waivers is the news of the season with multiple editorials having been written around the issue. These articles in particular dissect the issue very well even explaining the scenarios where farm loan waivers might actually work. Hence it provides very good fodder points for a question on farm loan waiver.



Key demand of the question

The question expects us to explain about the recent phenomenon of announcing farm loan waivers and thereafter discuss the pros and cons of it. We need to highlight whether if loan waivers can work in certain situations rather than unconditional loan waivers. Finally we need to provide a fair and balanced view and discuss the way forward.

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, all you need to do is look at the good and bad of something and give a fair judgement.

Structure of the answer

Introduction – Highlight the slew of loan waivers resorted to by political class as a quick win for farmers.

Body

Highlight why such unconditional loan waivers are problematic

- They cause a moral hazard
- Lead to lead to debt overhang (essentially stagnated investments due to any new income being used largely for paying back old debts)
- Lead to vicious cycle of debt that sometimes characterizes farm households in India. Etc

Analyze what are the situations where a loan waiver might prove beneficial

- monitoring of debt and ensuring appropriate governance mechanisms for new loans or targeted benefits. Although this may involve additional enforcement costs for the government, it will likely be far lower than the huge fiscal burden associated with debt relief schemes.

Discuss the contour of such a scheme

Conclusion – give your view on unconditional loan waivers and whether directed financial help that reduce farmers vulnerability might help.

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. The loan waivers have 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.

Body:

Loan waivers are not sufficient for farmers' vulnerability to negative shocks:

- 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'.
- 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.
- **World Bank economist Martin Kanz** finds in a recent paper that the loan waiver scheme did not have any positive impact on household savings, credit uptake from banks, or investments.



- Economic theory suggests that waiving debts via such a scheme will lead to **debt overhang** (essentially stagnated investments due to any new income being used largely for paying back old debts).
- 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**.
- 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 source. Among the borrowing households, 36% take credit from informal sources**.

Focussed financial help is more critical than unconditional loan waivers scheme. However, **Farm loan waiver could be beneficial if:**

- Monitoring of debt and ensuring appropriate governance mechanisms for new loans or targeted benefits. Although this may involve additional enforcement costs for the government, it will likely be far lower than the huge fiscal burden associated with debt relief schemes.
- **A broader agricultural policy:** Such policy must consist of multiple avenues to ensure a farmer's ability to deal with negative shocks to her income. This could include encouraging adoption of appropriate crop insurance products that operate along pay-on-harvest lines, as found to be effective in reducing farmer vulnerability in Kenya.
- **Better financial training and control over finances** will deter households from going back to informal credit markets after having farm loans written off.

What needs to be done?

- **Credit, finance and Insurance:**
 - A functional institutional credit system which is accessible and accountable to all cultivators.
 - This covers not only land-owning farmers but also sharecroppers, tenants, adivasi and women farmers, and animal-rearers.
 - Credit products for agriculture need to be tailor-made based on cropping and rain cycle, specific to a particular region. The regional offices of commercial banks should contribute in this exercise. Registration of all cultivators and providing Kisan credit cards.
 - The period of crop loan should be extendable to four years, given that, on average, every second or third year the spatial distribution of rain pattern is erratic in India.
- **Input Costs:**
 - It is more important to make agriculture sustainable by reducing input costs of seeds, fertilizers and other inputs.
- **Remunerative Prices:**
 - Extending reach of minimum support price which has been dedicated to few crops and in a narrow geographical area is important.
 - Set up of Futures and Trade markets, tie up of farmer and private companies for procurement should be looked into as alternative methods against distress sale.
- **Agro- Produce Marketing and Processing:**
 - The agro-processing industry and warehousing needs to expand so that agricultural produce can be stored when prices plunge.
 - Promoting viable **farmer collectives** to act as a **"collective voice of marginal and small farmers"**.
 - Legislations on the basis of NITI Aayog's new model law — **Agricultural Produce and Livestock Marketing (Promotion and Facilitating) Act (APLM)** should be enacted in all states.
- **Technology:**
 - Use of technology to aid farmers like drip and sprinkler irrigation.
 - Precision agriculture, GM Crops should be encouraged drought prone areas.
 - Space technology and Mobiles should act as **"Eyes and Ears"** of the farmers to assist in farming.



- **Distress Management:**

- Establish farmers' distress and disaster relief commissions at the national and State levels, based on the model of **Kerala Farmers' Debt Relief Commission**.

Conclusion:

Waiving of loans should be done only in the most exceptional circumstances. The challenge before political parties and governments is to deliver on the institutional solutions demanded by farmers as against temporary solutions of loan waivers.

Q) Among several options being contemplated to address agricultural distress in the country, direct income/ investment support is the most prudent option. Critically analyze. (250 words)

Indianexpress

Structure of the answer

Introduction- write a few introductory lines about the various options being discussed in political and media circles about addressing farmers' distress. E.g Loan waiver schemes, Increased MSPs and Direct Cash/ Investment support.

Body-

Discuss the cons of first two options briefly-

- *Loan waiver schemes- Only helps large farmers who are able to take institutional credit; it is a band aid solution not a comprehensive one; It enforces and strengthens uneconomical populism and abjures the government from its responsibilities etc.*
- *Increased MSPs – Only helps a fraction of farmers especially those growing Wheat< Rice and Sugarcane; Higher Chances of corruption in this model; Also it helps mainly large farmers who are able to have sufficient surplus etc.*

Discuss the pros of the direct income/ investment support. E.g

- *It can be enforced to include almost all the farmers who have access to formal banking channels (Jan-Dhan Accounts)*
- *Provides financial help at proper time/ season.*
- *Helps large as well as small farmers and can even be capped to limit unwarrantedly huge transfers to rich farmers.*
- *No corruption issue.*

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

The **lack of remunerative prices** for the crops is one of the main reasons for Agrarian distress in India today. The various options like **Minimum Support Price** for about 25 crops, **Farm Loan Waiver** schemes undertaken by various state governments have failed to alleviate the problem. The **Direct Cash/Investment scheme** has however fared better and is a prudent scheme.

Body:

Farm Loan- waiver schemes are a **band-aid solution** as Agriculture in India has been facing many issues over a period of time. Many small farmers aren't eligible for bank credit, making them borrow at exorbitant interest rates from private sources.

However, Loan-Waivers is **not a comprehensive solution** because

- It entails a moral hazard even those who can afford to pay may not, in the expectation of a waiver.
- According to NABARD's Financial Inclusion Survey (NAFIS), only about 30.3 % of Indian agri-households took loans from institutions.



- It enforces and strengthens uneconomical populism and abjures the government from its responsibilities.
- Further, studies have revealed that the small and marginal farmers constituting about 85% of all farmers are mostly not benefitting from waivers.
- A study by **Rythu Swarajya Vedika** in June 2018 showed that 75% of farmer suicides in Telangana are by **tenant farmers, who have no or least access to formal credit**.

Minimum Support Prices: Price volatility makes life difficult for farmers. MSPs ensure that farmers get a minimum price for their produce in adverse markets.

However, MSPs also have many cons

- Most of the small farmers have failed to get MSP as they don't produce marketable surplus.
- As per NSSO 2012-13, less than 10 per cent of the country's farmers sold their produce at MSPs — the percentage though is a little higher for sugarcane, wheat and rice farmers.
- MSP has failed to keep pace with the input costs (as per CACP Data).
- Only about 6% of the farmers were aware of MSP.
- High leakages and wastage in procurement have failed MSP.
- Large-scale corruption also left farmers high and dry.
- MSPs have led to promotion of cultivation of water intensive crops like Paddy and Sugarcane.
- The criticism of Economists, MSPs leading to Inflation, market distortion and mono-crop culture is also a grave matter of concern.

Direct Cash/Intervention Scheme: This involves the **Direct Benefit Transfer (DBT) of the cash to the farmers**.

- It can be enforced to include almost all the farmers who have access to formal banking channels (Jan-Dhan Accounts).
- Provides financial help at proper time/season and would also **spur the investment cycle in the farm economy**.
- Helps large as well as small farmers and can even be capped to limit unwarrantedly huge transfers to rich farmers.
- The corruption issue can be eliminated as farmers directly get the cash in their accounts.

Case Study: The Telangana government's income/investment support through the Rythu Bandhu Scheme (RBS). Telangana started RBS in May 2018, whereby it gave Rs 4,000 per acre to every farmer. This transfer is made twice a year, coinciding with the two cropping seasons. By directly giving cash, the government aims to support the input purchases of farmers. The scheme is said to have reached almost 93 per cent of landowners.

In terms of costs, estimates show that a national farm-loan waiver is likely to cost about Rs 4 to 5 trillion. An RBS-style income transfer is likely to cost about Rs 2 trillion.

- **Odisha** has launched the **KALIA scheme** that will provide Rs. 10,000 to about 3 million small and marginal farmers for the Rabi and kharif crops.
- Jharkhand has announced a Rs. 5,000-per-acre payment to 2.3 m medium and marginal farmers from the next financial year.
- West Bengal has announced two new schemes for farmers and farm labourers in the state that entail a payment of Rs.5,000 per acre every year in two instalments besides Rs.2 lakh to the kin of farmers who die due to any reason, including suicide.

Other reforms along with the direct intervention scheme include

- Breaking the stranglehold of the Agricultural Produce Marketing Committees (APMC).
- The Essential Commodities Act (ECA of 1955) requires reforms.
- The negotiable warehouse receipt (NWR) system has to be scaled up.
- Value-chains — based on the **Amul model** — are needed for most crops.
- Land laws need to be less restrictive.
- Contract farming should be promoted
- Agro-exports are in need of a conducive environment to grow.

**Conclusion:**

Through higher MSPs or through loan-waivers, one **cannot reach more than 20 to 30 % of Indian farmers**. This limited reach, therefore, cannot redress the widespread grievances of Indian farmers. An income transfer scheme for poor farmers based on the Socio Economic and Caste Census (SECC) that has already mapped household deprivation may be the best answer.

Q) Indian agriculture has entered the era of permanent surpluses, which is further worsening the condition of the farmers. Discuss. Also examine how can agricultural marketing improve the situation ? (250 words)

[Financialexpress](http://www.financialexpress.com)

Why this question

Although Indian agriculture suffers from several perennial problems, permanent surpluses have only been a recent phenomena. Instead of ameliorating the condition of the farmers, the phenomena has further hurt the farmers. The key to resolving this lies in improved agricultural marketing and needs to be discussed.

Key demand of the question

The question wants us to express our knowledge/ understanding of the issue and present our opinion. We have to explain how Indian agriculture has entered the permanent surplus era, what impact it has on farmers and what should be done in this regard. In the next part, we have give our opinion on whether the solution lies in improved agricultural marketing.

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.

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 the meaning of the term permanent surplus in agriculture.
Body-

- Discuss some statistics related to agricultural production and mention examples of places where farmers faced the problems of surplus production coupled with lower prices.
- Discuss how India has reached trade surplus- technology, infrastructure, diffusion and adoption rate of technology/ innovation etc.
- Discuss the good and bad of permanent/ near-permanent surplus in agricultural production.
- Examine how far agricultural marketing is a solution to the problems discussed above

Conclusion – Give your view and discuss the way forward.

Introduction:

Traditionally, the supply in most crops was like not linked to the price, the quantity harvested and sold remained virtually the same. However, in the recent times, it has a supply response linked to the price, the ability of farmers to increase production when prices go up is happening. As a result, there are permanent surpluses.

Body:

The country's food production has increased tremendously from just 51 million tonnes in 1950-51 to about 252 million tonnes in 2014-15. The permanent surpluses are due to the following reasons:

- **Technology:**
 - Hybrid quality seeds and faster diffusion of technology have made a difference. **HD-2967** wheat variety released in 2011, could cover 10 million hectares area in a single season within five years.



- Similarly impactful has been **Co-0238**, a cane variety that not only yields more crop per hectare, but also more sugar from every tonne crushed. First planted in 2013-14, it now accounts for well over half of the cane area in North India.
- With planting of hybrids paddy yields have gone up from 15 quintals to 25 quintals per acre even in the Adivasi areas of Jharkhand, Chhattisgarh and Odisha.
- The technologies be it hybrid seeds, high-density cultivation using tissue-cultured plants, or drip irrigation have been implemented.
- **Infrastructure:**
 - Development of Roads under PM Gram Sadak Yojana to reach the Mandis quicker.
 - Establishment of Mega Food Parks having storage infrastructure, food processing industries which can directly procure from the farmer.
- **Government's support:**
 - The **Operation Flood programme** helped boost India's milk production from 22 mt in 1970-71 to 66.2 mt in 1995-96.
 - More scientific dairying husbandry practices as investments in infrastructure of especially rural roads and electricity which have enabled milk to be procured from the interiors and chilled at village collection centres.

Due to surplus production, India has **food security and increased exports** leading to revenue generation ultimately benefitting the whole economy.

However, this has turned out to be anti-climax for the farmers due to the following reasons.

- **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.
- **High Input costs:**
 - Land degradation has become a major challenge and cost of farming is constantly rising with usage of fertilizer, pesticides, expensive seed varieties, machinery, labour cost, rise in fuel prices, vagaries of monsoon. This further complicates the livelihood of farmers
 - In India, farmers are poor due to low productivity (yield per hectare) of all major crops.
- **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.
- **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.
- **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.
- **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.

Agriculture Marketing can be the solution for the permanent surpluses. It is clear that about 30 -40% of our food crops get wasted due to spoilage and poor storage conditions. The seasonal spike in prices of perishable commodities that pushes up the food inflation cannot be addressed without market reforms.

The measures needed in the Agricultural Marketing in India are

- It is imperative to bring agriculture marketing into the Concurrent or Union list to benefit farmers. This will guarantee remunerative prices to farmers.
- The Committee on Doubling Farmers' Income under the chairmanship of Ashok Dalwai justifies the recommendation saying marketing has no boundaries; this **necessitates a pan-India operation** to meet the demand across the country.
- NITI Aayog's **model Agricultural Produce and Livestock Marketing Act** should be implemented by the states. Further the provisions like facilitating single-point levy of taxes, promoting direct interface between farmers and end-users, and give freedom to farmers to sell their produce to whomsoever and wherever they get better prices.
- e-NAM is a good step in this way. Budget 2018 announced developed **GRAMS** which would be integrated to the e-NAM Structure.
- Promoting warehouse receipts, agro-processing and exports. Warehouse receipts will help farmers defer their sale immediately post harvest, when prices are at their lowest level.
- This will require 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.



Q) Schemes such KALIA and Rythu Bhandhu indicate that there is a shift in policy from promising higher MSPs or loan waivers to direct income/investment support to farmers. Discuss. (250 words)

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

Why this question

The article discusses the silent shift that is taking place in welfare schemes for farmers. The farmers of India have largely been the neglected chapter in India's growth story and the plight of the farmer is now taking centrestage. As a result, government is modifying the way it supports its farmers and the article provides very important insight in this regard.

Key demand of the question

The question expects us to explain what KALIA and Rythu Bhandhu schemes are and thereafter explain how this marks a transformation in farmers welfare scheme from higher MSPs or loan waivers to direct income/investment support to farmers. Discuss the pros and cons of this and provide 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 – Highlight the growing discontent among the farmers.

Body

Explain about KALIA and Rythu Bandhu scheme

- Telangana's Rythu Bandhu scheme, which gives Rs 4,000/acre to land-owning farmers for two seasons in a year, is costing the state exchequer roughly Rs 12,000 crore per annum. It appears to have reached more than 90 per cent farmers, and yielded political dividends.
- KALIA (Krushak Assistance for Livelihood and Income Augmentation) scheme of Odisha attempts to respond to this criticism and accordingly promises to include not only land-owning farmers (up to 5 acres) but also tenants and agri-labourers. While land-owning small and marginal farmers, 30.17 lakh in number, accounting for 92 per cent of farming households in Odisha, will get Rs 5,000/family for five seasons, the tenants and agri-labourers (estimated to be 10 lakh in number) who have no land records will get one-time payment of Rs 12,500/family, and vulnerable families (another 10 lakh) will get one-time payment of Rs 10,000/family. With some support for life insurance and interest-free loans up to Rs 50,000, the scheme is likely to cost about Rs 10,180 crore over three years.

Explain how this marks a transformation in the approach of government with respect to farmers welfare scheme

Discuss the pros and cons of such a transformation – impact on government finances, its reach, its impact on market forces etc. Discuss how it negates the ill

effect of announcing high MSPs and unconditional loan waivers

Conclusion – give a fair and balanced view and discuss way forward.

Introduction:

Farm incomes have been squeezed by slower output growth, higher costs and increased vulnerability to a changing climate. Economists said that the GDP deflator for agriculture is negative for the first time in many years.

And there are a slew of new problems resulting directly from government policies. The recent marches to New Delhi, Mumbai by thousands of farmers are any indication, the farm sector has already sent up emergency flares.

**Body:**

The country's agricultural output, measured as gross value added, grew at a **sedate pace of 2.8% in Dec 2018 quarter**, far slower than the 5.3% in the June 2018 quarter. The governments at states have come up with schemes of Direct Income Support

Rythu Bandhu scheme:

- The **Telangana government** has implemented this scheme to **support farmers' investment for two crops a year**.
- The government is providing **83 million farmers Rs4,000 per acre per season** to support farm investment twice a year, for the rabi and kharif seasons.
- The scheme is costing the **state exchequer roughly Rs 12,000 crore per annum**.
- It appears to have reached more than 90 per cent farmers, and yielded political dividends.
- **Gulati et al** have estimated that the **cost** of this scheme would be **97 trillion** if the government implemented it at an **all-India level**, assuming a **payout of Rs10,000 per hectare per year**.

Krushak Assistance for Livelihood and Income Augmentation or KALIA Scheme:

- The **Odisha government** has implemented this and involves payments to encourage cultivation and associated activities.
- Primary targets are **small farmers, cultivators and landless agricultural labourers**.
- All farmers will be provided **Rs 10,000 per family** as assistance for cultivation.
- Each family will get **Rs 5,000 separately in the kharif and rabi seasons, for five cropping seasons between 2018-19 and 2021-22**.
- Targets **10 lakh landless households**, and specifically SC and ST families. They will be supported with a **unit cost of Rs 12,500 for activities like goat rearing, mushroom cultivation, beekeeping, poultry farming and fishery**.
- It will assist the **elderly, sick and differently-abled population** who are unable to take up cultivation, by providing **Rs 10,000 per household per year**.
- The scheme includes a **life insurance cover of Rs 2 lakh** and additional personal accident coverage of the same amount for 57 lakh households. Crop loans up to Rs 50,000 are interest-free.
- This is also going to be an area-specific scheme in the sense that an input support for a particular trade, say mushroom cultivation, will be provided if it is prevalent throughout that locality so that there is **aggregation of produce**.
- the scheme is likely to cost about **Rs 10,180 crore over three years**.

Shift in the policy is due to:

- The various options like **Minimum Support Price** for about 25 crops, **Farm Loan Waiver** schemes undertaken by various state governments have failed to alleviate the problem.
- As per NSSO 2012-13, less than 10 per cent of the country's farmers sold their produce at MSPs. Only about 6% of the farmers were aware of MSP.
- **Farm Loan- waiver schemes** doesn't cover many small farmers **aren't eligible for bank credit**.
- According to RBI, loan waivers scheme is responsible for credit indiscipline, increased fiscal deficit of states, crowding out effect and loss in interest payments
- crowding out effect and loss in interest payments.
- It makes them ineligible for farm loan waiver as well as borrow at exorbitant interest rates from private sources.
- 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**.
- The **Direct Cash/Investment scheme** has however **fared better and is a prudent scheme**.
- This shift will be better for the country as it **is more predictable and less market distorting**.

Pros of Direct Income schemes:

- Unlike a loan waiver, in which banks appease a few farmers, KALIA's main targets are **rural activities as a whole**.
- It will support farming on a small scale, sharecropping, fishing, animal herding, which are not covered under bank loans, but are caught in debt traps set up by local moneylenders.
- A farm loan waiver will reduce credit available to farmers in the long term, while income support can be used to make a repayment or at least activate a bank account which can then receive a loan.



- It can be enforced to include almost all the farmers who have access to formal banking channels (Jan-Dhan Accounts).
- Provides financial help at proper time/season and would also spur the investment cycle in the farm economy.
- Helps large as well as small farmers and can even be capped to limit unwarrantedly huge transfers to rich farmers.
- The corruption issue can be eliminated as farmers directly get the cash in their accounts.

Cons of the Direct Income schemes:

- **Fiscal Sustainability and Prudence:** The huge costs involved may have an impact on Public investments in other infrastructure spending. The lack of clear revenue sources to fund such schemes is another limitation.
- **State's fiscal deficits:** States like WB, Jharkhand and even Central Government has started the implementation of direct income scheme. This can lead to increased burden on states which are already deviating from FRBM targets.
- **Targeting Issues:** Poor land record maintenance, exclusion of tenant farmers in some states, no women-farmer friendly provisions can lead to targeting issues. This can lead to status quo despite huge spending.
- **Not a panacea:** Until India reforms its agri-marketing laws and frees agri-markets, it is time to atone through a structured and stable income policy for farmers for at least the next five years.

Way Forward and Conclusion:

Policy focus should be rather on investment — in **efficient water management and irrigation, plant breeding and genetics, crop husbandry, market linkages and in breaking the middleman's hold over the farm-to-consumer value chain, replacing it with farmer-led enterprises, whether cooperatives or producer companies, that allow farmers to capture a share of the value added to their produce along its journey to the factory or home.**

Long-term solution to farmer distress would be improving the supply chain, establishing agro-processing zones and creating a better agri-logistic platform.

An income transfer scheme for poor farmers based on the Socio Economic and Caste Census (SECC) that has already mapped household deprivation may be a complementary and alternative scheme to MSP and Loan waiver.

Q) What are the measures which can help reduce agrarian distress in the country. Discuss. (250 words)

[The hindu](#)

Why this question

India is reeling under a protracted agrarian distress and the importance of agriculture in India's society, economy and polity cannot be overstated. In this context it is important to discuss what measures should be taken to rescue India's agriculture from the distressing situation it is in today.

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.

Key demand of the question.

The question wants us to write in detail about the measures required to alleviate agricultural distress in India. In our approach we should be as pragmatic and practical as possible.

Structure of the answer

***Introduction**— write a few introductory lines about the agriculture and its importance in India. E.g mention the share of agriculture in total GDP and employment. Also mention that Agrarian distress, in the present context, is mainly in terms of low agricultural prices and, consequently, poor farm incomes.*



Body-

Discuss in points as to what measures should be taken to help alleviate the agricultural distress in India. E.g

- *Raising the MSP, price deficiency payments or income support schemes can only be a partial solution to the problem of providing remunerative returns to farmers.*
- *A sustainable solution is market reforms to enable better price discovery combined with long-term trade policies favourable to exports.*
- *The creation of a competitive, stable and unified national market is needed for farmers to get better prices.*
- *The next issue is the low productivity of Indian agriculture. Basics such as seeds, fertilizers, credit, land and water management and technology are important and should not be forgotten. Similarly, investment in infrastructure and research and development are needed.*
- *water-use efficiency can be improved significantly with better use of technologies that include drip irrigation.*
- *We need to have policies for land consolidation along with land development activities in order to tackle the challenge of the low average size of holdings etc.*

Conclusion– *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

Agrarian distress, in the present context, is mainly in terms of low agricultural prices and, consequently, poor farm incomes. Low productivity in agriculture and related supply side factors are equally important. An issue that is connected is the declining average size of farm holdings and the viability of this size for raising farm incomes.

Body:

Government has set up many committees like **Swaminathan committee** and the recent **Ashok Dalwai committee** to give solutions to agrarian distress in India. The measures that can help agrarian distress in the country are as follows:

- **Credit, finance and Insurance:**
 - Raising the MSP, price deficiency payments or income support schemes can only be a partial solution to the problem of providing remunerative returns to farmers.
 - A **functional institutional credit system** which is accessible and accountable to all cultivators.
 - This covers not only land-owning farmers but also sharecroppers, tenants, adivasi and women farmers, and animal-rearers.
 - Credit products for agriculture need to be tailor-made based on cropping and rain cycle, specific to a particular region. The regional offices of commercial banks should contribute in this exercise. Registration of all cultivators and providing Kisan credit cards.
 - The period of crop loan should be extendable to four years, given that, on average, every second or third year the spatial distribution of rain pattern is erratic in India.

Land holdings:

- The average size of farm holdings **declined from 2.3 hectares in 1970-71 to 1.08 hectares in 2015-16.**
- Policies for land consolidation along with land development activities in order to tackle the challenge of the low average size of holdings.
- Farmers can **voluntarily come together** and pool land to gain the benefits of size. Through consolidation, farmers can reap the economies of scale both in input procurement and output marketing.
- **Input Costs:**
 - It is more important to make agriculture sustainable by reducing input costs of seeds, fertilizers and other inputs.
 - Investment in infrastructure and research and development are needed.



- There is a need for collaboration of **industry-academia** for coming out with cost-effective solutions to agrarian distress.
- There is a need to make a shift from rice and wheat-centric policies to millets, pulses, fruits, vegetables, livestock and fish.
- **Remunerative Prices:**
 - Extending reach of minimum support price which has been dedicated to few crops and in a narrow geographical area is important.
 - Set up of Futures and Trade markets, tie up of farmer and private companies for procurement should be looked into as alternative methods against distress sale.
- **Agro- Produce Marketing and Processing:**
 - The creation of a **competitive, stable and unified national market** is needed for farmers to get better prices.
 - For better price for farmers, agriculture has to go beyond farming and **develop a value chain comprising farming, wholesaling, warehousing, logistics, processing and retailing.**
 - The agro-processing industry and warehousing needs to expand so that agricultural produce can be stored when prices plunge.
 - Promoting viable farmer collectives to act as a “collective voice of marginal and small farmers”.
 - Legislations on the basis of NITI Aayog’s new model law — **Agricultural Produce and Livestock Marketing (Promotion and Facilitating) Act (APLM)** should be enacted in all states.
 - A sustainable solution is market reforms to enable better price discovery combined with long-term trade policies favourable to exports.
- **Technology:**
 - Use water-use efficient technologies that can improve significantly the produce like drip irrigation and sprinkler irrigation.
 - Precision agriculture, GM Crops should be encouraged drought prone areas.
 - Space technology and Mobiles should act as “Eyes and Ears” of the farmers to assist in farming.
- **Distress Management:**
 - Establish farmers’ distress and disaster relief commissions at the national and State levels, based on the model of **Kerala Farmers’ Debt Relief Commission.**

Conclusion:

Farmers’ distress is due to low prices and low productivity. **Limited procurement, measures to improve low productivity, and consolidation of land holdings to gain the benefits of size, can help in reducing agrarian distress.** The challenge before government is to deliver on the institutional solutions backed by a long term policy demanded by farmers as against temporary solutions of loan waivers.

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

Q) Upscaling solar power in India requires tighter land regulations. Examine. (250 words)

Reference

Why this question

India has placed huge stress on the solar power and has also made significant strides in capacity addition in this regard. However further upscaling has been difficult on account of land acquisition problems. Therefore it is necessary to discuss the need for tighter land regulations in this regard.

Directive word

Examine- here we have to probe deeper into the topic, get into details, and find out the causes or implications if any.

Key demand of the question.

The question wants us to bring out the reasons as to why upscaling solar power in India requires tighter land regulations.



Structure of the answer

Introduction– write a few introductory lines about India's stress on solar power. E.g present a few statistics related to addition of installed capacity of solar power under National Solar Mission.

Body-

Discuss why there is a need for tighter land regulations in order to further upscale solar energy in India. E.g

- solar developers still reportedly face hurdles in converting agricultural land to industrial.
- It has become problematic even in the fringes of the Thar Desert.
- Most parks, developed by nodal government agencies, identify low-yield land and lease it from the farmers on 25-to 28-year-agreements, a win-win situation for everyone involved as the farmer has a steady flow of income.
- But in practice, the land acquired by developers isn't always "barren".
- With no clear penalties and regulations that draw the line on land quality, fertile cultivable land is often procured to build solar power plants.
- "While ideally there is the desire to use barren land, factors such as availability, distance from the substation and other acquisition challenges come into play.
- "To develop decentralised and rooftop solar, and more solar pump capacity, a much more concerted, deep, invasive policy effort is needed to provide the right information to the consumers and enable the right kind of business model etc.

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

National Solar Mission envisages establishing India as a global leader in solar energy. The Mission has set the ambitious target of **deploying 100GW of grid connected solar power by 2022**. (40 GW Rooftop and 60 GW through Large and Medium Scale Grid Connected Solar Power Projects). The country's solar installed capacity reached **25.21 GW as of 31 December 2018**.

Body:

The availability of land is a big impediment for this sector. In India generally land is segmented and records might not be available. This has led to **irregularities in land acquisition** for Solar farms.

There is a **need for tighter land regulations** in order to further upscale solar energy in India.

- Solar developers still face hurdles in converting agricultural land to industrial land. It has become problematic even in the fringes of the Thar Desert.
- Solar farms are usually developed on **lands that are barren and uncultivable terrain**.
- But in practice, the land acquired by developers isn't always "barren". With no clear penalties and regulations that draw the line on land **quality, fertile cultivable land** is often procured to build solar power plants.
- While ideally there is the desire to use barren land, **factors such as availability, distance from the substation and other acquisition challenges** come into play.
- Developers pay extra money for the lands if the location factors are feasible for the project. This can lead to **real-estate bubble** and can **affect food security**.
- The lack of proper regulations on land leasing **leaves farmers with uncertainty** regarding the future of their land, even as the lease expires.
- Land-grabbers and real- estate mafia is on the rise to grab arable lands from farmer, leave it fallow and then sell it to solar projects.

Way Forward:

- The government should **impose penalties or other enforcement regulations** to limit solar panels to the **truly barren, uncultivable terrain**.
- Strengthen the land-records by digitizing and constant updation.



- Solar projects should identify lands that are low-yielding and lease it from the farmers on 25-to 28-year-agreements, a win-win situation for everyone involved as the farmer has a steady flow of income. **Example:** Karnataka's Pavagada solar plant – **Shakti Sthala**.
- There is a need to develop **decentralised and rooftop solar and more solar pump capacity** rather than just large-scale solar farms.
- A much more concerted, deep, invasive policy effort is needed to provide the right information to the consumers and enable the right kind of business model.
- Tighter land regulations would also enable faster dispute resolutions in case of any disputes.
- Alternative spaces like **floating solar plants** (example: Kerala's Banasura Sagar Dam), **solar roads** (France and China), **solar trees** (developed by CSIR-CMERI), **coverings on canals** should be looked into.
- Increasing the height of solar panels so that cultivation could be done in tandem as done in Wind Farms.

Conclusion:

The need of the hour is to make use of the renewable solar energy to satiate the power hunger and developmental needs of India. But the process of solar farm set up should take into consideration the other impacts like food-security, bio-diversity damage, farmers' livelihoods before acquisition or leasing of lands.

Q) Despite its many challenges, wind energy in India has a lot to gain from its experience and its large manufacturing base. Analyze. (250 words)

Reference

Why this question

India has been placing huge importance to renewable energy and has launched various missions in this regard. Wind Energy Mission however has been recently witnessing a downfall. In this context it is important to discuss the challenges faced by the sector.

Directive word

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

Key demand of the question.

The question wants us to dig deep into the wind energy sector in India and bring out the challenges involved in the sector and what we can learn from our experience.

Structure of the answer

Introduction- Write a few introductory lines about the wind energy generation in India. E.g mention the capacity added in recent years and also mention the decrease in capacity addition witnessed recently.

Body-

Discuss the challenges faced by the sector. E.g

- *In 2016 the government shifted to the auctioning regime for tariff determination. This was a worthy effort to bring competition into a cost-complacent market, especially in light of the success solar energy had achieved.*
- *Due to failure to adapt to this measure, Installations stalled, falling from 5.4 GW in 2017 to 1.7GW in 2018, and less than 1 GW is expected in 2019.*
- *The financial issues faced by distribution companies (DISCOMs) pose a significant threat to wind energy and so do payment delays, curtailment and PPA defaults.*
- *The failure of the UDAY scheme, introduced to ease the financial stress on the DISCOMs, has further added to the concerns. With increasing concentration of wind installations in just a few states, these DISCOM issues are bound to intensify.*



Discuss the lessons learnt so far and what needs to be done. E.g

- *Repowering old wind projects — replacing them with newer, efficient technology — could optimise utilisation of high wind potential sites.*
- *There is need to reform and reduce fragmented ownership and captive consumers.*
- *There is the need for a third-party player who acts as intermediary — someone who consolidates the old project owners (probably 70-80%) — and then facilitates repowering*
- *in addition to consolidating, there was a need to compensate the old project owner for the remaining life of their assets.*

Conclusion— based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Wind power generation capacity in India has significantly increased in recent years. As of June 2018 the total installed wind power capacity was **34.293 GW**, the **fourth largest installed wind power capacity** in the world. Wind power capacity is mainly spread across the **South, West and North regions**. According to **National Institute of Wind Energy's 'Wind Atlas'**, the wind energy potential in the country at 100 m AGL is **over 302 GW**.

Body:

Success of the wind energy sector in the past:

- India's wind energy industry has had a lustrous past.
- It developed on the back of incentives (accelerated depreciation and generation based incentives).
- It was bolstered by very comfortable **feed in tariffs (FiT)** to increase competition and reduce the prices of wind energy.

Wind energy sector despite its success is **facing challenges**. The diminishing role of wind energy in India's power mix is due to

- The lack of auctioning regime before 2016 for tariff determination led to a **cost-complacent market**, especially in light of the success solar energy had achieved. Installations stalled, falling from 5.4 GW in 2017 to 1.7GW in 2018, and less than 1 GW is expected in 2019.
- The **State of Renewable Energy in India** report pre-empts that the financial issues faced by distribution companies (DISCOMs) will pose a significant threat too. Widely prevalent in the wind-rich state of Tamil Nadu, these issues include payment delays, curtailment and PPA defaults.
- The **failure of the UDAY scheme**, introduced to ease the financial stress on the DISCOMs, has further added to the concerns. With increasing concentration of wind installations in just a few states, these DISCOM issues are bound to intensify.
- **Solar Energy Corporation of India (SECI)**, too, is stuck in a Catch22 situation where it is pressured into releasing large tenders for wind energy, with no clarity on what DISCOMs will buy.
- MNRE's **offshore wind policy, solar PV-wind hybrid policy and the wind repowering policy** — have not seen any activity under the ministry's aegis.
- Indian DISCOMs do not have the stomach for the double digit tariffs that offshore auctions would inevitably yield, especially in light of the current cost sensitivity driving the electricity markets.
- There are major deterrents posed by fragmented ownership and captive consumers.

The government did make some amends recently to spur the wind energy sector in India.

- In 2016, however, the government shifted to the auctioning regime for tariff determination. This was a worthy effort to bring competition into a cost-complacent market, especially in light of the success solar energy had achieved.

Way Forward:

- The Solar PV and wind hybrid projects require some nuance in designing and planning.
- Repowering old wind projects by replacing them with newer, efficient technology could optimise utilisation of high wind potential sites.
- There is the need for a third-party player who acts as intermediary — someone who consolidates the old project owners (probably 70-80%) — and then facilitates repowering.
- There is a need to compensate the old project owner for the remaining life of their assets.
- Increase the public – private partnership projects.



- Actively pursuing the **offshore wind policy, solar PV-wind hybrid policy and the wind repowering policy.**

Conclusion:

Despite its many challenges, wind energy in India has a lot to gain from its experience and its large manufacturing base. It is vital in our goals of achieving INDC's of Paris agreement. Key government and private stakeholders can maximise on the existing policies and ensure a competitive, cost-conscious growth.

Q) “The Future of Rail Opportunities for energy” report, released by the International Energy Agency, has painted a bright future for Indian railways. Discuss the report and the efforts made by the government in recent years to modernize Indian railways. (250 words)

[Pib](#)
[Timesofindia](#)

Why this question

The report highlights the future of Indian railways and its potential in terms of its size, scope and economy. It is therefore important to discuss the excerpts from the report related to India's lifeline and largest employer.

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.

Key demand of the question.

The question wants us to write in detail about the achievements of Indian railways in recent years and also write in detail about the key findings/ predictions of the report titled, The Future of Rail Opportunities for energy.

Structure of the answer

Introduction– write a few introductory lines about the Indian railways. E.g mention the size, no of passengers catered to, no of persons employed etc.

Body-

Discuss about the reforms and achievements of Indian railways in recent years and the future plans. E.g

- *The investment Railways has achieved in the last 5 years has helped country improve safety, complete long-delayed projects and introduce modern & unprecedented technology in services.*
- *the indigenously produced Vande Bharat Express is an engineering marvel that will change approach to train manufacturing as well as revolutionise train travel in India.*
- *Indian Railways' successful effort to convert diesel locomotives to electric locomotives as truly innovative and added that it will be a game-changer in the way forward as we move towards 100% electrification for the Indian Railways.*
- *5 years ago, Railways had electrified about 600 km of tracks across the country. Last year alone, 4,000 km was electrified, and in the coming year over 6,000 Km are planned to be electrified.*

Discuss about the key findings/ predictions of the report. E.g

- *“The Future of Rail” analyses the current and future importance of rail around the world through the perspective of its energy and environmental implications.*



- *The report reviews the impact of existing plans and regulations on the future of rail, and explores the key policies that could help to realise an enhanced future rail.*
- *This first ever global report has a focus on India, elaborating on the unique social and economic role of rail in India, together with its great enduring potential, to show how India can extend and update its networks to harness rail at a scope and scale that is unparalleled.*

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Indian Railways (IR) has been the **prime movers of the nation**. IR is the **second largest railway system in the world** under single management. IR has historically played an important integrating role in the socio-economic development of the country.

It manages the **fourth-largest railway network** in the world by size, with 121,407 kilometres of total track over a 67,368-kilometre route. IR runs more than 20,000 passenger trains daily, on both long-distance and suburban routes, from 7,349 stations across India. In the freight segment, IR runs more than 9,200 trains daily. It employs about **1.31million people**.

Body:

The reforms and achievements of Indian railways in recent years are:

- The **indigenously produced Vande Bharat Express (Train 18)** is an engineering marvel that will change our approach to train manufacturing as well as revolutionise train travel in India. It is currently India's fastest train, which breached the speed limit of 180 kmph during trials.
- It also managed to bring down accidents across its network of 60,000 kms in 2018.
- **Setubharatam**: elimination of unmanned railway crossings.
- **Rashtriya Rail Sanraksha Kosh (RRSK)** fund of Rs. 1 Lakh Cr to be spent on safety over five years created with focus on asset renewal and elimination of Unmanned Level Crossings to improve safety on Indian Railways
- commissioning of dedicated freight corridors (DFCs)
- **Striving towards a 'Zero Accident' railway system**: 63% reduction in fatalities from 152 in 2013-14 to 57 in 2017-18
- Speedy execution of track renewals to prevent accidents: 50% increase in track renewal from 2,926 kms in 2013-14 to 4,405 kms in 2017-18online monitoring of rolling stock.
- Connectivity to the north east states, rapid installation of bio toilets, Improvement in coaches and trains.
- **Mission Raftaar**.
- Commencement of first session of **India's first Rail and Transportation University**.
- CCTV/Video Surveillance systems being installed at all trains and stations.
- As a result of these investments, in 2050 fuel expenditures are reduced by around USD 450 billion, relative to the base scenario. India could save as much as USD 64 billion on fuel expenditures by mid-century.
- The pace of infrastructure build is fastest in urban rail. The length of metro lines under construction or slated for construction over the coming five years is twice the length of those built over any five-year period between 1970 and 2015.

"The Future of Rail" the first-of-a-kind report analyses the **current and future importance of rail around the world** through the perspective of its **energy and environmental implications**. The report reviews the **impact of existing plans and regulations on the future of rail**, and **explores the key policies** that could help to realise an **enhanced future rail**. The key findings/predictions of the report:

- India to account for 40 per cent of global rail travel by 2050.
- Rail is among the **most energy efficient modes of transport** for freight and passengers – while the rail sector carries 8% of the world's passengers and 7% of global freight transport, it represents only 2% of total transport energy demand.
- Today, **three-quarters of passenger rail transport activity takes place on electric trains**, which is an increase from 60% in 2000 – the rail sector is the only mode of transport that is widely electrified today. This **reliance on electricity** means that the rail sector is the most energy diverse mode of transport.



- The regions with the highest share of electric train activity are Europe, Japan and Russia, while North and South America still rely heavily on diesel.
- **Passenger rail is significantly more electrified than freight in almost all regions** and regions with higher reliance on urban rail and high-speed rail are those with the largest share of passenger-kilometres served by electricity.
- **Most conventional rail networks** today are located in **North America, Europe, China, Russia, India, and Japan**. These regions make up about 90% of global passenger movements on conventional rail with India leading at 39%, followed by China at 27%.
- In contrast, **significant investments have been made in high-speed rail and metros**. High-speed rail provides an important alternative to aviation while urban rail provides a solution to cities impacted by congestion and air pollution. Growth has been most notable in China, which has overtaken all other countries in terms of network length of both types within a single decade.

Conclusion:

This first ever global report has a focus on India, elaborating on the **unique social and economic role of rail in India**, together with its great enduring potential, to show how India can extend and update its networks to harness rail at a scope and scale that is unparalleled.

Topic: Science and Technology- developments and their applications and effects in everyday life

Q) A small cohort of technology firms now guards the door to the modern economy. Discuss why information technology markets of today are highly concentrated. Also discuss the need to adapt our regulatory policies to new business models. (250 words)

Livemint

Why this question

MNCs, especially those based on IT platforms have grown at a tremendous rate owing to their inherent strengths. However as can be easily observed their growth has been highly concentrated and at the same time the regulatory environment has not adapted itself to the rapidly evolving business models. The article looks into those issues in detail.

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.

Key demand of the question.

The question wants us to write in detail about the reasons as to why the information technology markets of today are highly concentrated and also discuss at length the need to adapt our regulatory policy in line with the newly emerging business models.

Structure of the answer

Introduction– write a few lines about the multi-national, multi-billion IT companies representing the modern economy- Google, Facebook, Amazon, Uber etc.

Body-

Discuss why information technology markets of today are highly concentrated. E.g

- *network externality: We need to be on the same network as the person with whom we want to interact.*
- *The dominant firms benefit from economies of scale*
- *There are exceptions, of course. Economies of scale and network externalities have not played a paramount role in the markets for digital music and movies, where there are a number of platforms but these services are differentiated by their degree of interaction with the user etc.*

Discuss why there is a need to adapt our regulatory policy in line with the newly emerging business models. E.g

- *the reasoning behind traditional competition measures is no longer valid. It is now common for a platform like Google or Facebook to set very low prices—or*



provide a service for free—on one side of the market and very high prices on the other side.

- *And yet, even small digital firms and startups now practice this kind of asymmetric pricing: consider, for example, free online newspapers that are funded wholly by advertising.*
- *Two-sided markets are prevalent in the digital economy, and a regulator who does not adequately account for this unusual business model could incorrectly declare low pricing to be predatory, or high pricing to be excessive, even though such price structures have also been adopted by the smallest platforms entering the market.*
- *Regulators, then, will need to refrain from mechanically applying traditional principles of competition policy. When it comes to multi-sided platforms, these principles simply are not applicable in many cases.*

Conclusion— *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

- Large corporations are an economic, political, environmental, and cultural force that is unavoidable in today's globalized world.
- The world's largest corporations like Google, Facebook, Amazon, Apple etc. are clearly huge organizations which has a major effect on Modern Economy.
- Around 1/4th of the world economy is controlled by big MNCs and their sales are estimated to be higher than combined worth of economies around 182 countries.

Body:

Information technology markets of today are highly concentrated:

- **Network Externality:** The business models are so created that a person need to be on the same network as the person with whom he wants to interact. E.g: Facebook, Twitter etc. This increases the platform dependency and concentration of people in single entity.
- **Economies of Scale:** Some services require large technological investments which the dominant firms can afford to spend due to their brand value, user reach and confidence of the user in the firm. E.g.: Search engine designing will cost roughly the same regardless of whether it attracts two thousand or two trillion search requests per year. What will not be the same is the value of the user data that is generated. The search engine that receives two trillion requests can charge advertisers far more, and scale up far more quickly.
- **Market Domination:** a single company dominates a given market leaving very little or no space to local enterprises or companies. This leads to a lopsided market. E.g: Flipkart's struggle against global eCommerce giant Amazon in Indian market.

However, there are exceptions too. Economies of scale and network externalities have not played a paramount role in the markets for digital music and movies, where there are a number of platforms, including Amazon Prime, Apple's iTunes, Deezer, Spotify, Pandora, and Netflix. But these services are differentiated by their degree of interaction with the user.

Need to adapt our regulatory policy in line with the newly emerging business models:

There is clearly a need to adapt the regulatory policy as the digital economy is highly dynamic and can affect the entire economy.

Asymmetric pricing: The reasoning behind traditional competition measures is no longer valid. The form of market predation that is meant to weaken or kill off a smaller competitor is on a high. **E.g:** platform like Google or Facebook to set very low prices—or provide a service for free—on one side of the market and very high prices on the other side.



- Even small digital firms and startups now practice this kind of asymmetric pricing. **E.g.:** free online newspapers that are funded wholly by advertising.

Competition:

- The cases of buyout of smaller, new entrants by larger firms has to be watched. If a newcomer has a single original product that is better than what the incumbent offers, the incumbent might want to block it from gaining even a partial foothold in the market.
- To ensure productive competition in the digital sector is to approach these questions on a case-by-case basis. Regulators must deploy rigorous analysis, and they must do so with alacrity to keep up with the pace of change.

Labour Law:

- Gig- Economies started by the tech giants are a challenge to the existing labour laws. Classification as employee or not, Hiring and Firing,
- Temporary employment etc. cannot be moulded into the existing labour laws of countries. The priority should be to ensure competitive neutrality.
- The state must promote the health-care and social-security rights of gig workers like, say, Uber drivers. At the same time, it should avoid policies that would make the digital platforms unviable, even if they are unfamiliar and disruptive.

Privacy:

- With internet acting as backbone of majority of these tech giants, User's data is at the mercy of private players and State. The recent incidents of Facebook Analytica and multiple data leaks shows the issue of Data Privacy.
- State Surveillance is another possibility thereby risking individual's privacy. Global Data protection laws like The European Union's General Data Protection Regulation amounts to only a small first step toward protecting us from such threats.

Taxation:

- The internet has no borders; countries will increasingly need to cooperate on taxation, both to prevent tax competition and simply to derive some revenues from a huge swath of the economy. **E.g.:** the 2015 agreement within the European Union to end tax competition on online purchases offers a promising model.

Conclusion:

- To achieve an economics for the common good in this new world, we will have to address a wide range of challenges, from public trust and social solidarity to the ownership of data and the effects of technological diffusion.
- Success will depend, in particular, on whether we can develop viable new approaches to antitrust, labour law, privacy, and taxation.

Q) Even though India is a lucrative destination for technology companies, its uniqueness offers several challenges to them. Comment. (250 words)

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

Why this question

As India becomes increasingly digital and its population grows gradually, it is poised to become the top destination/ focus of intention of technology companies. However, India also poses several unique challenges to such companies. It is therefore essential to discuss these opportunities and challenges.

Directive word

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

Key demand of the question.



The question wants us to express our knowledge and understanding of the Indian society and economy in general and express our opinion as to how although it is a lucrative destination for technology companies, it poses several unique challenges to them.

Structure of the answer

Introduction– Write a few introductory lines about India. E.g mention the population size, growth predictions and also the size of the economy and its growth predictions.

Body-

Discuss how India is an important and lucrative destination for tech companies. E.g

- *Burgeoning population.*
- *Growing online presence of the population.*
- *Governments stress on adoption of technology- Digital India.*
- *Skilled workforce.*
- *A huge and growing digital market etc.*
- *Discuss the challenges posed by it. E.g*
- *Rural India- which demands applications and technologies to be compatible with local languages, low economic status of the people and low costs.*
- *Urban India- which demands adherence to privacy concerns, protection of the content and platforms from nefarious groups/ persons etc.*
- *Populism- which can lead to sudden and unexpected policy decisions.*
- *Protectionism- in various forms like the one provided to domestic industry etc.*

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

A World Bank report 2017 revealed that India emerged as the world's sixth largest economy surpassing France. It is soon expected to overtake England as fifth largest. India improved 65 notches to 77th position in World Bank's Ease of Doing business report. Favourable demographics such as a high population and a catching up on per capita GDP will benefit the country.

Body:

India is an important and lucrative destination for technological companies due to the following reasons:

- **Burgeoning population**
 - Rising affluence will make India the third-largest consumer market by 2025, making it imperative for companies to adapt their business models for meeting the changing customer needs. Consumption expenditure will increase three times to hit \$ 4 trillion by 2025, according to a report by the Boston Consulting Group.
- **Growing online presence of the population**
 - IAMAI report, 2018 data says that Urban India with an estimated population of 455 million already has 295 million using the internet. Rural India has only 186 million internet users. The numbers are expected to reach 500 million soon.
- **Governments stress on adoption of technology- Digital India**
 - Indian government's initiative of Digital India to revolutionize the ICT is a welcome step. The programs of connecting every Gram panchayat with internet under BharatNet and mobile connection will strengthen the competition for tech industries.
- **Skilled workforce**
 - With young workforce and continuing policy reform, India has not only emerged as the fastest-growing economy, but its stars also shine bright amid the current global gloom.
 - About 400 million strong workforce between the age group of 21-40 is ready to make India the labour capital of world.



- **A huge and growing digital market**
 - The digital marketing industry is seeing an exponential rise in India. It is evident both from statistical figures and otherwise. With e-commerce businesses expanding, it is but natural that the digital marketing industry is also growing. Global players like Walmart, Amazon and indigenous players like Flipkart are setting the platform for digital market.

On the flipside, there are many challenges too which the companies face

- **Rural India:** There are language barriers which demands applications and technologies to be **compatible with local languages**, poor socio- economic conditions leading to **unaffordability, inaccessibility of technology**. As a result, the companies are forced to **recover low costs**.
- **Urban India:** The rising demands of adherence to privacy concerns especially after the **Facebook data breach episode**. The **Right to privacy**, now a fundamental right, is also bolstering the privacy concerns. The poor data protection standards leading to illegal sale of personal data are few of the problems. Security breaches as seen during the **Wannacry ransomware where more than 1.5 lakh computers** were affected in India. **Hacking of about 32 lakh credit and debit cards** of major banks of India are rising concerns.
- **Populism:** The Government of the day which formulates policies are always in favour of voters. This is a rising concern as it leads to unpredictable and unfavourable policies to companies. **Example:** the **recent changes to e-Commerce rules** where companies were set limits on their warehouse capacity, thereby affecting their business models.
- **Protectionism:** In the current global scenario of protectionism and deglobalization, there is a rising demand for supporting the domestic industry. This has increased the fears of the global players. **Example:** IPR rights issue due to evergreening and compulsory licensing. WTO dispute between India and USA over the solar panels procurement.

Way forward:

- There is a need to improve the employability of Indian youth by better skill training and knowledge in latest technologies.
- Clear policies to improve the ease of doing business and reduced litigations.
- Government should come up with a strong and effective data protection law to safeguard the people's rights.
- Efforts to reduce the digital divide should be accelerated. Digital Education initiative like **Digital Saksharatha Abhiyan** must be promoted to nook and corner of India to digitally empower the citizens.

Conclusion:

India is a lucrative market for the technical companies. There is a need to overcome the above challenges to reap the benefits. Policies to strengthen and give equal space and developmental opportunities for Indian firms should also be looked at.

Q) Analyze the debate between lithium-ion batteries and hydrogen fuel cells ? (250 words)

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

Why this question

The article provides deep insight into battery technology used in electric vehicles which are going to become the preferred mode of transportation in the days and years to come. Hence this question

Key demand of the question

The question expects us to explain how Li Ion battery and hydrogen fuel cells battery work. Thereafter, we need to highlight the pros and cons of each technology and give a fair and balanced view regarding the future of these technologies.

Directive word

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.



Structure of the answer

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

Body

Explain how Li Ion and fuel cell batteries work

- **Li ion** – All lithium-ion batteries work in broadly the same way. When the battery is charging up, the lithium-cobalt oxide, positive electrode gives up some of its lithium ions, which move through the electrolyte to the negative, graphite electrode and remain there. The battery takes in and stores energy during this process. When the battery is discharging, the lithium ions move back across the electrolyte to the positive electrode, producing the energy that powers the battery. In both cases, electrons flow in the opposite direction to the ions around the outer circuit. Electrons do not flow through the electrolyte: it's effectively an insulating barrier, so far as electrons are concerned.
- **Fuel cell** – Fuel cells use an electrochemical reaction between hydrogen and oxygen, catalysed by platinum, to produce energy. The only exhaust is the combination product—water. The challenge is to produce hydrogen in an energy-efficient manner, transport it to distribution points and store it in gaseous or liquid form in a car.

Discuss the pros and cons of both technology for the purpose of usage in electric vehicles

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

Introduction:

The recent report by the **Intergovernmental Panel on Climate Change (IPCC)** that predicted serious consequences if temperatures were allowed to rise just 1.5 degrees Celsius above pre-industrial levels. **Transport emission** accounts for a **quarter** of greenhouse gas (GHG) emissions. Ending the hegemony of **the internal combustion (IC) engine** and replacing it with **electric Vehicles** is thus gaining importance. Lithium Ion batteries and Hydrogen fuels are the two options to power the e-Vehicles.

Body:

Lithium Ion Battery:

- It is type of **rechargeable battery** that contains several cells.
- Each cell consists of cathode, anode and electrolyte, separator between electrodes and current collectors. Li-ion battery use **intercalated lithium compound** as one electrode material.
- When the battery is **charging up**, the **lithium-cobalt oxide**, positive electrode gives up some of its lithium ions, which move through the electrolyte to the negative, graphite electrode and remain there.
- When the battery is **discharging**, the lithium ions move back across the electrolyte to the positive electrode, producing the energy that powers the battery.

Advantages:

- Li-ion batteries are rechargeable (lifecycle of 5000 recharges), highly space efficient, light-weight and low-maintenance vis-a-vis lead acid batteries.
- **High energy density:** The much higher power density offered by lithium ion batteries is a distinct advantage.
- Rate of self-discharge is much lower than that of other rechargeable cells such as Ni-Cad and NiMH forms.
- It can provide instant torque to the electric motor and maintain constant voltage throughout entire discharge cycle.
- Clean and safe technology vis-a-vis fossil fuels.

Challenges:

- Raw materials are concentrated only in few places on earth. **Example:** Afghanistan, China etc.
- They are not as robust as some other rechargeable technologies and requires long durations for charging.



- They require **protection circuitry** incorporated to ensure they are kept within their safe operating limits.
- Typically they are around 40% more costly to manufacture than Nickel cadmium cells.

Hydrogen-Fuel Cells:

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

Advantages:

- A fuel cell operating on pure hydrogen emits zero emissions at the source.
- Fuel cells provide a much longer operating life than a battery, and since fuel cells have a higher energy density, they are lighter than an equivalent battery system.
- Fuel cells create energy electrochemically, and do not burn fuel, they are fundamentally more efficient than combustion systems.
- They do not require recharging and is a renewable source of energy.
- Hydrogen can be produced from domestic resources, eliminating the need to import foreign oil. It gives energy security.
- Fuel cells are modular, and can be scaled up depending on the power needs of a facility. Larger fuel cells can be linked together to achieve multi-megawatt outputs

Challenges:

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

Conclusion:

India is **one of the largest importers** and in 2017, it imported nearly 150 Million US Dollar worth Li-Ion batteries. Indian manufacturers source Lithium Ion Battery from China, Japan and South Korea among some other countries. Hydrogen fuel cell technology is expensive and commercial usage is still very minimal.

The Lithium Ion batteries currently score over the Hydrogen Fuel cells due the former's wide applications from mobile phones to wearable devices to e-Vehicles. The **FAME India** is a part of the **National Electric Mobility Mission Plan** whose main thrust is to **encourage electric vehicles by providing subsidies**. India must however make a concerted attempt to incentivize both EVs and FCEVs.

Q) Editing the 'human germline' is an exercise fraught with unknown risks. Discuss. (250 words)

[The hindu](#)

[Reference](#)

Why this question

In the wake of the world's first human germline editing exercise, it is pertinent to discuss about the risks associated with the technology, apart from the ethical issues involved therein.

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.

Key demand of the question.



The question wants us to write in detail about the risks associated with human germline editing technology, as of today.

Structure of the answer

Introduction- *write a few introductory lines about the recent incident of a Chinese scientist exercising gene-edition in human embryo.*

Body-

Discuss the potential benefits of human-germline editing. E.g

- *Editing DNA to correct disease mutations has been possible for a while now.*
- *The promises of such gene-editing are boundless- to treat diseases like HIV, multiple myeloma and other forms of cancer, using the Crispr-Cas9 editing system etc.*

Discuss as to why human germline editing is fraught with unknown risks. E.g

- *Editing human embryos to repair disease-causing genes is far more controversial.*
- *One pitfall of embryo gene-editing is that it is not as precise as we need it to be today.*
- *Studies have shown that the technology can result in unintended mutations, which in turn can cause cancers.*
- *Then there is the danger of mosaicism, in which some cells inherit the target mutation, while others don't.*
- *Every gene likely influences multiple traits, depending on the environment it interacts with. This makes it hard to predict the ultimate outcome of an embryo-editing exercise without decades of follow-up.*
- *Issue of Designer babies*
- *Issue of Social and political inequality etc.*

Conclusion- *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

A scientist in China created the world's first genetically edited babies, in a potentially groundbreaking and controversial medical first. **He Jiankui** created the **world's first gene-edited babies last November** using the genetic technique **CRISPR (or CRISPR-Cas9)**.

Body:

"Human germline modification" means deliberately changing the genes passed on to children and future generations – in other words, **creating genetically modified people**.

The potential benefits of human germline editing include

- **Inherited diseases** which pass on from parental genes to their offspring **can be stopped**.
- Lives will be healthier and longer too since there would be lesser unfortunate deaths due to diseases like coronary heart diseases that run in the family will be gone.
- Editing DNA to **fix genetic flaws in sick adults** with diseases like **Sickle Cell Anaemia; Hypertrophic cardiomyopathy (HCM)** is a heart condition that affects roughly 1 in every 500 people worldwide.
- The promises of such gene-editing are boundless- to treat diseases like HIV, multiple myeloma and other forms of cancer, using the Crispr-Cas9 editing system.
- With genetic screening prior to birth, many children could be saved from the harsh realities of inborn diseases that continue to affect their life after birth.
- The CRISPR can eliminate the microbes that cause diseases.

But editing the genes of human embryos in order to create genetically modified people is very different, and raises grave safety, social, and ethical concerns.

- Editing human embryos to repair disease-causing genes is **far more controversial**.



- Gene editing itself is **experimental** and **imprecise**. It is still associated with off-target mutations, capable of causing genetic problems early and later in life, including the development of cancer.
- The impending danger of **mosaicism**, in which some cells inherit the target mutation, while others don't.
- Scientists are far from understanding **how exactly individual genes influence phenotypes**, or the visible traits of people.
- **Every gene likely influences multiple traits**, depending on the **environment it interacts**. This makes it hard to predict the ultimate outcome of an embryo-editing exercise without decades of follow-up.
- Every gene **influences trade-offs**, which scientists barely understand today. **Example:** while protecting against HIV, a deactivated CCR5 gene can also make people more susceptible to West-Nile Fever.
- **Issue of Designer babies:** The eyes of the mother, the hair of the father, the complexion from the maternal side and a cute little dimple from the paternal is what makes the kid loved by one and all. Designing the babies to look like celebrities might get the kids to thank you later in life but might **loosen the bond** that is supposed to be the significant part of the relationship.
- There are prospects of irreversible harms to the health of future children and generations, to concerns about opening the door to **new forms of social inequality, discrimination, and conflict**.
- Such living experiments are **done in secret**, outside of any formal institution, and apparently without any independent scrutiny or review by the scientific fraternity.

In a 2017 report, the U.S.'s **National Academies of Sciences, Engineering, and Medicine** said such an intervention would be defensible **only in very rare situations, where no alternative exists**. For treating classic genetic diseases like sickle cell, I think CRISPR will be transformative. With newer gene editing techniques coming into market, there is an urgent need to **translate such advisories into regulations**.

Conclusion:

Human germline modification has for many years been widely considered off-limits, for both safety and social reasons. It is formally prohibited in more than 40 countries. It would be wise to wait for few years to determine the surety of the process and to keep of side effects if any.

Q) Integrating various social media platforms raises several serious concerns.

Comment. (250 words)

Economic times

Why this question

Facebook has recently mulled the idea of integrating three of its social network's messaging services — WhatsApp, Instagram and Facebook Messenger. In this context it is essential to discuss the concerns raised by such an act.

Directive word

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

Key demand of the question.

The question wants us to express our knowledge and understanding of the issue of integrating various social media platforms and express our opinion about the issues and concerns raised by such initiative.

Structure of the answer

***Introduction-** write a few introductory lines about the recent idea of Facebook to integrate Facebook, Whatsapp and Instagram.*

Body-

Discuss the benefits to the business and the people/ consumers with such a step. E.g



- *One business opportunity involves behavior around Facebook Marketplace, a free Craigslist-like product where people can buy and sell goods on the social network;*
- *Facebook Marketplace buyers and sellers in Southeast Asia would be able to reach out and communicate with each other using WhatsApp — rather than using Facebook Messenger or another, non-Facebook text messaging service.*
- *Eventually, that could lead to new ad opportunities or services for profit etc*

Discuss the issues and concerns raised by this step. E.g

- *The changes raise questions of data privacy because of how user information may be shared between the services.*
- *Today, WhatsApp requires people to register only a phone number to sign up for the service. By contrast, Facebook and Facebook Messenger ask users to provide their real identities.*

Conclusion— based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Social media is computer-based technology which facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities.

Facebook's CEO recently unveiled his plans to integrate the social network's messaging services — WhatsApp, Instagram and Facebook Messenger — asserting his control over the company's sprawling divisions.

Body:

Globally, there are roughly 1.96 billion social media users will, most likely, rise to 2.5 billion by the end of 2018. Facebook has about 2.3 billion users worldwide.

The benefits to the business and the people/consumers with merging the various social media platforms are:

- **Privacy and Security:** all of the apps to **incorporate end-to-end encryption**, a significant step that protects messages from being viewed by anyone except the participants in the conversation.
- **Interoperability:** a Facebook user could send an encrypted message to someone who has only a WhatsApp account, for example. Currently, that isn't possible because the apps are separate.
- **Utility:** By stitching the apps' infrastructure together, Facebook wants to increase the utility of the social network, keeping its billions of users highly engaged inside its ecosystem.
- **Marketplace:** Buyers and sellers in Southeast Asia would be able to reach out and communicate with each other using WhatsApp — rather than using Facebook Messenger or another, non-Facebook text messaging service. Eventually, that could lead to new ad opportunities or services for profit.

There are concerns flagged with the integration of platforms.

Data privacy:

- the fact that the applications are standalone, the question of how user information may be shared between the services is still a point of contention.
- WhatsApp requires people to register only a phone number to sign up for the service. By contrast, Facebook and Facebook Messenger ask users to provide their real identities. Matching Facebook and Instagram users to their WhatsApp handles could give pause to those who prefer keeping their use of each app compartmentalized

Security Breach:

- Data security breach as seen in the Cambridge analytica has raised many eyebrows over Facebook's data security architecture.
- The integration will lead to congregation of more information in the hands of private conglomerates which can be used a potential tool.

Against Right of Choice:

- The integration can lead to loss of right to choose a particular app which the user wants.
- With this, he must download the entire application which can be memory and space heavy.



Monopolization:

- The mergers and acquisitions among the bigger conglomerates reduces the opportunities to many small start-ups and tech companies.
- On the other hand, this can also lead to accumulation of all funds at one place which can pose risk in case of market failures.

Impacts:

- India **lacks a data protection law**, making the privacy of people highly vulnerable. Right to privacy is a fundamental right and its violation is against the dignity of humans.
- The **lack of data localization** and **private ownership of data** is very risky especially when there are many security related events across India.
- The **lack of right to be forgotten** can lead to a online presence of an individual despite his choice of not staying on it.
- India has **one of the highest number of Facebook, whatsapp and Instagram users**.
- The lack of data protection can lead to **illegal monetization of personal data of the users, data snooping and altering the views of electorate**.

Conclusion:

The need of the hour is for the government to provide a strong data protection law based on the recommendations of Justice BN Srikrishna committee. The users rights should be protected against such market interruptions of the social media platforms. Education of people goes a long way in beneficial use of social media platforms.

Q) What do you understand by 5g technology ? Discuss the advantages it offers ? (250 words)

Key demand of the question

The question is quite straightforward in its demand. Explain what the technology, the characteristics which set it apart and the advantages of this technology.

Structure of the answer

Introduction – Explain that 5G is a wireless communication technology. It is the next generation mobile networks technology after 4G LTE networks. The final standard for 5G will be set up by the International Telecommunications Union (ITU).

Body

- *Explain about 5g technology. The 5G Connectivity is name given to latest Technology in Internet technology that would ensure Fast Broadband Speeds along with capacity to perform well without regionalisation barriers. Characteristics Of 5G – Fast Speeds, Reliable, Higher Bandwidth, Low Latency Rate, Mobile Connectivity with many interconnected devices*

Discuss its advantages such as

- *As per the OECD (Organization for Economic Cooperation and Development) Committee on Digital Economic Policy, 5G technologies rollout will help in increasing GDP, creating employment and digitizing the economy.*
- *The 5G technology will offer far greater upload and download speed available today.*
- *This will help cloud systems to stream software updates, music, and navigation data to driverless cars. In other words, it will help aid incorporate Artificial Intelligence in our lives.*
- *It will enable Smart devices to exchange data seamlessly providing the ecosystem for Internet of Things (IoT)*

Conclusion – *Discuss the immense application of 5g technology and how India should move ahead with respect to 5g.*

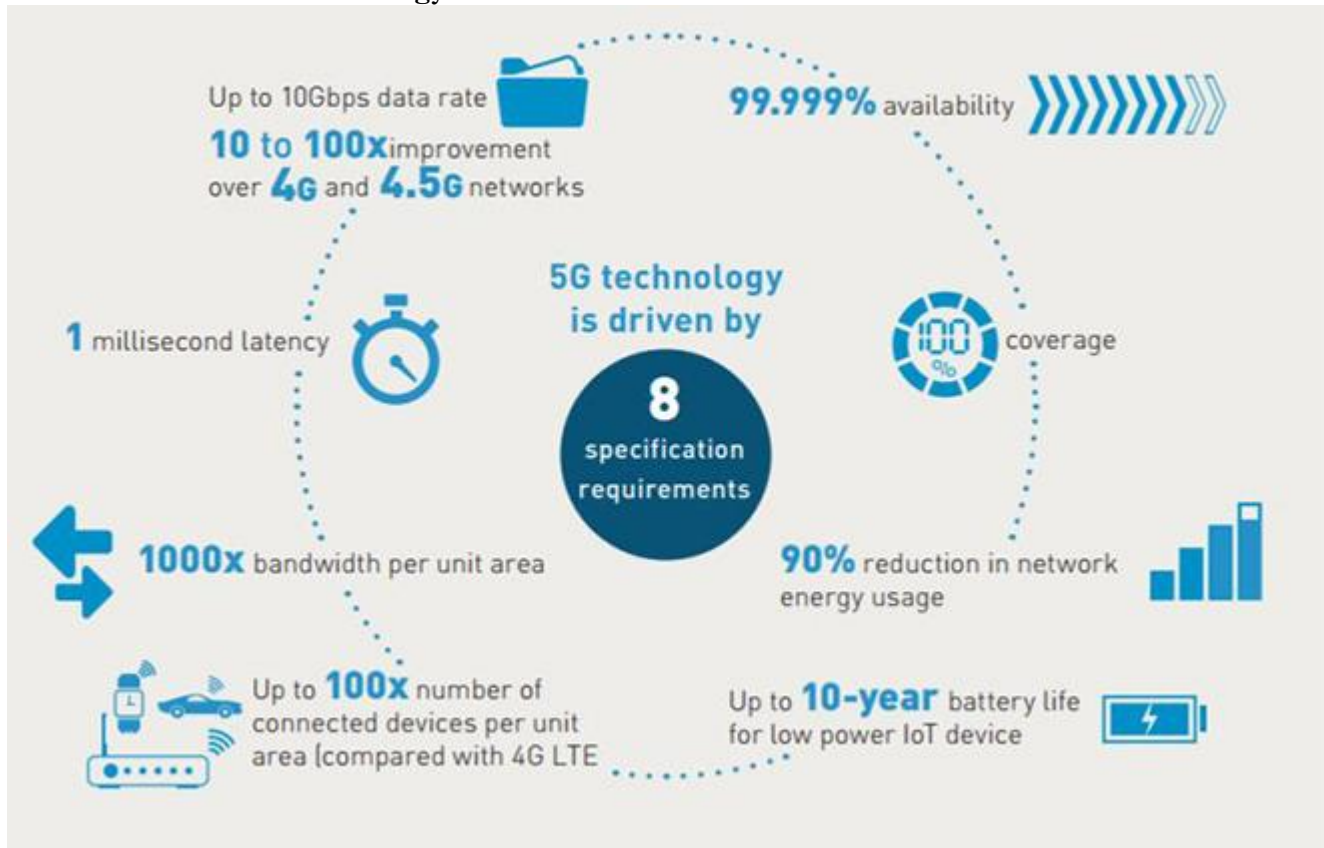


Introduction:

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 potential advantages it offers:





Challenges present to adapt to 5G are:

- Indian operators have far less spectrum in comparison to international operators. This increases their cost of operations.
- Many of the Indian operators are also weighed down by debt.
- Faster rounds of new technology introduction when prior technology investments have not been recouped add further complexity.

Way forward:

- 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.

Conclusion:

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.

Extra Information:

- The **Steering Committee** constituted for identifying the 5G deployment roadmap for India has submitted its 5G high level forum report titled '**Making India 5G Ready**' to Telecom Secretary.
- The key recommendations and action plan for the report include spectrum policy; regulatory policy; education and awareness promotion; application and use case labs; participation in international standards; development of application layer standards; and major 5G trials.
- It has also asked for setting up a Standing Committee with five-year term to advice on building Spectrum Technology Infrastructure.

Q) India has huge opportunity to become an AI specialist but there are several challenges involved therein . Critically analyze. (250 words)

Reference

Timesofindia

Why this question

India has been touted as one of the leading AI ready nations in the world. However the progress has not been upto the mark especially in comparison to countries like China. In this context it is important to analyze the extent to which India is an AI specialist.

Directive word

Critically analyze- here we have to examine methodically the structure or nature of the topic by separating it into component parts, and present them as a whole in a summary. based on our discussion we have to form a concluding opinion on the issue.

Structure of the answer

Introduction— mention a recent international survey which highlights India's performance vis a vis AI technology. E.g In a recent survey announced that India is the 13th most advanced country the world in terms of the development of artificial intelligence technologies.



Body-

Discuss the progress and achievements of India in this regard. E.g

- *In the last few years, numerous entrepreneurs have come up with AI-based services in applications ranging from farming to healthcare and education.*
- *We have also seen the government undertaking initiatives to adapt AI in its policies as well. It has partnered with several AI institutes to implement AI projects.*
- *It is these AI projects that have helped the country do so well in the field. Also, partnering with various reputed international AI institutes has helped the country develop an effective AI strategy.*
- *NITI Aayog's unique brand called #AIforAll is an approach that focuses on how India can leverage the transformative technologies to ensure social and inclusive growth in line with the development philosophy of the government.*
- *With this initiative, it has extended its support in the areas of healthcare, agriculture, education, smart cities and infrastructure and smart mobility and transportation sectors.*
- *Andhra Pradesh government has been using cloud management and data storage in governance to resolve issues of the people in the state.*
- *Big Indian companies such as Bharti Airtel and Reliance Jio are setting up AI labs. Indian IT services giants such as Infosys and Wipro are making huge investments in AI etc.*

Discuss the limitations and challenges lying ahead. E.g

- a) *Lack of enabling data ecosystems*
- b) *Low intensity of AI research*
- c) *Core research in fundamental technologies*
- d) *Transforming core research into market applications*
- e) *Inadequate availability of AI expertise, manpower and skilling opportunities*
- f) *High resource cost and low awareness for adopting AI in business processes*
- g) *Unclear privacy, security and ethical regulations*
- h) *Unattractive Intellectual Property regime to incentivise research and adoption of AI*

Conclusion- *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

A recent survey announced that India is the **13th most advanced country** in the world in terms of the development of artificial intelligence technologies. Over the past decade, India has flourished greatly in AI.

Body:

Over the last few years, tech services industry in India has had a significant impact on its economy and accounted for **7.7% of India's GDP in 2016**.

India's progress and achievements in AI is due to the huge opportunities available to it:

- **Government Policies:**
 - The Indian Government's push to catapult the services into 4th IR by supporting policies in leveraging AI.
 - In 2018, the Policy Commission of India, that is the National Institution for Transforming India (NITI Aayog), launched an **AI-focused research programme**. It came up with a **National Strategy for Artificial Intelligence**.



- NITI Aayog's unique brand called **#AIforAll** is an approach that focuses on how India can **leverage the transformative technologies to ensure social and inclusive growth** in line with the development philosophy of the government.
- **Example:** NITI Aayog using AI is its development of an **AI-based crop yield prediction model** for a real-time advisory to farmers on crop yield and pest outbreak.
- The state governments are putting their best foot forward in making use of AI.
- **Example:** the Andhra Pradesh government has been using cloud management and data storage in governance to resolve issues of the people in the state.
- **Talent Pool:**
 - A copious pool of STEM talent and with growing population of youngsters, India will be banking on AI for its economic growth and improvement in quality of life of its citizens.
 - There are more than 200 AI-based startups in India that are helping different sectors.
 - IT industry body Nasscom is setting up Centre of Excellence (COE) in AI in Karnataka and Telangana with companies like IBM, Microsoft, NVIDIA, Intel and AWS, on the lines of its successful 10,000 Startups program.
- **Collaborations & Partnerships:**
 - There are many collaborations and partnerships that the country involves itself in when dealing with the advancement of AI.
 - These partnerships are not just within the country but also across the globe.
 - **Example:** Tech giant Microsoft is working with the state government to predict dropout rates in government schools in the state of Andhra Pradesh. It makes use of AI to predict with some margin of error, who among the current cohort are likely to drop out.
- **Market:**
 - India has burgeoning market with about 750 million potential users with diverse choices and needs.

However, there are limitations and challenges to this booming sector:

- **Connectivity**
 - A fundamental challenge with regards to the development of AI in India is the quality of connectivity in the country.
 - India has taken great strides in improving access to the internet over the last decade; the internet penetration rate reached 30 percent in 2016—a huge jump from less than 4 percent in 2006.
 - The development of future AI technologies is closely linked to 5G networks.
 - India is not expected to begin rolling out 5G networks until 2020, and it may take up to five years to fully deploy.
 - **Example:** for complicated uses of AI, such as self-driving cars, decision-making must happen at near zero latency.
- **AI 'black box':**
 - India's AI strategy stands out for its overt focus on the social sector—but the implications of such use in the social sector are not fully clear.
 - Given a data set, AI is trained to perform a particular task. This can lead to many negative real-world implications, as AIs can be biased by the data set they are exposed to.
- **AI Ecosystem:**
 - Lack of enabling data ecosystems and very low intensity of AI research.
 - High resource cost and low awareness for adopting AI in business processes.
 - Transforming core research into market applications is a challenge.
 - High Global competition from big players like USA (Amazon, Walmart); China (Tiktok, Helo).
- **Quality of STEM talent:**
 - The low-quality of higher education in India and the significant brain drain from the best institutions over the last several decades.
 - **The 2018 India Skills Report found that only 45 percent of graduates are employable.**
 - India also has a shortage of qualified faculty to teach AI courses.
 - The 'brain drain' that happens from the best technical institutions across India to developed markets globally.



- **Security issues:**

- Unclear privacy, security and ethical regulations are hindering the AI start-ups.
- Data-thefts, cyber attacks of big data, AI devices can leave many vulnerable as many AI apps are in the social sector.
- The huge battery of data on which AI works is a potential target of anti-social elements like terrorists, child-pornography etc.
- Users fear to try out the new products due to safety and security issues.
- Unattractive Intellectual Property regime to incentivise research and adoption of AI for the companies.

The 2018 India Skills Report found that only 45 percent of graduates are employable

Way Forward:

- A strong policy-framework defining our path.
- Improve connectivity through BharatNet.
- Create incentives to reverse the 'brain drain'.
- Training programs for AI.
- Industry- Academia collaboration should be pushed.
- Strengthen the data security and regulation for AI products.

Conclusion:

With a rich spread of talent in the sector of computer science and data science and the related fields, the country is making its mark in the AI world market. India must make the most out of the 4th IR to benefit the socio-economic problems of herself and similar countries across the world.

Q) CMB- Bharat is an ambitious mission, which will increase our understanding of the universe. Discuss about the CMB and the significance of the CMB- Bharat mission. (250 words)

[Reference](#)

[The hindu](#)

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.

Key demand of the question.

The question wants us to write in detail about the CMB, its meaning, relevance and also discuss about the CMB- Bharat mission being mooted recently.

Structure of the answer

Introduction– write a few introductory lines about the CMB- Bharat. E.g A consortium of Indian scientists has submitted a proposal to the ISRO for a new space science mission called CMB Bharat.

Body-

Discuss about the CMB. E.g

- *The cosmic microwave background (CMB) is radiation leftover from the time the first atoms formed in the universe, about 378,000 years after the Big Bang. In other words, it's been around since when the universe was only 0.0027% as old as it is today.*
- *It manifests as a temperature of 2.7 K in the emptiest regions of space. Without the CMB, these regions should have exhibited a temperature of 0 K. However, as the universe continues to expand, this temperature will keep dropping.*
- *The 'microwave' in its name alludes to the radiation frequency: 160.23 GHz, which falls in the microwave range.*



- *As radiation that has been around (almost) since the dawn of space and time, it carries the signatures of various cosmic events that shaped the universe over the last ~13.7 billion years.*

Discuss the scope and uses of CMB- Bharat in further detail. E.g

- *The CMB Bharat proposal envisages an instrument that will study CMB polarisation to a greater extent than the Planck or NASA WMAP probes did*
- *CMB Bharat's high-energy regime refers to constituents of the particulate realm. The mission will explore problems in neutrino physics, including help determine how many kinds of neutrinos there actually are and the order of their masses.*
- *It will also be able to map the distribution of dark matter; and track baryons (composite particles like protons and neutrons) in the observable universe.*
- *Additionally, the instrument will also be able to study the Milky Way galaxy's astrophysical properties in greater detail.*

Conclusion– *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

Project CMB-Bharat is a proposal for **comprehensive next generation Cosmic Microwave Background (CMB) mission** in international collaboration with major Indian contribution. CMB-Bharat could help us listen to the faintest murmurs of the early universe.

Body:

The scope and uses of CMB Mission:

- **The “ultrahigh goal”:**
 - The project would reveal the first clear signature of quantum gravity and ultrahigh energy physics in the very early universe. This refers to quantum gravitational waves, which are different from what LIGO detectors had observed those were classical in nature.
 - The cosmic microwave background (CMB) is **radiation leftover from the time the first atoms formed in the universe, about 378,000 years after the Big Bang**. In other words, it's been around since when the universe was only 0.0027% as old as it is today.
 - It manifests as a temperature of 2.7 K in the emptiest regions of space. Without the CMB, these regions should have exhibited a temperature of 0 K. However, as the universe continues to expand, this temperature will keep dropping.
- **The “high” goals:**
 - These lay in neutrino physics where we could discover more about the neutrino species, their total mass and mass hierarchy.
 - **Map all dark matter and most baryons in the observable universe.** The problem of knowing the hierarchy of masses of the different species of neutrino is a very deep one and being hotly pursued by many countries.
 - As radiation that has been around (almost) since the dawn of space and time, it carries the signatures of various cosmic events that shaped the universe over the last 13.7 billion years.
- **The “legacy” goals:**
 - This is to improve probe of the cosmological model by a factor of over 10 million, and to generate rich galactic and extragalactic astrophysics datasets.
- The ‘microwave’ in its name alludes to the radiation frequency: 160.23 GHz, which falls in the microwave range.
- The instrument will also be able to study the Milky Way galaxy's astrophysical properties in greater detail.

Conclusion:

The CMB-BHARAT mission presents an unique opportunity for India to take the lead on prized quests in fundamental science in a field that has proved to be a spectacular success. It simultaneously helps in **gaining valuable expertise in cutting-edge technology for space capability through global cooperation.**



Q) What do you understand by a chemputer and how the system may revolutionize drug production ? (250 words)

Reference

Key demand of the question

The question expects us to explain what chemputer is and the advantages it would offer for drug production.

Structure of the answer

Introduction – Explain that recently scientists have developed a new method to produce drug molecules which use downloadable blueprints to easily and reliably synthesize organic chemicals via a programmable ‘chemputer’.

Body

Explain why this is significant –

- *first time scientists are able to a synthesis of important drug molecules which can be achieved in an affordable and modular chemical-robot system called chemputer.*
- *The objective of this program is to develop a general abstraction for chemistry that can be made universal, practical, and driven by a computer programme.*

Discuss how it may revolutionize drug production

- *Chempiler is the chemical recipes, run on a computer programme which instructs the computer how to produce molecules on-demand, more affordable and safely than ever possible before.*
- *The researchers claim the ability to use a universal code will allow chemists all around the world to convert their recipe into a digital code.*
- *This approach is a key step in the digitization of chemistry and will allow the universal assembly of complex molecules on demand, democratizing the ability to discover and make new molecules using a simple software app and a modular chemputer.*

Conclusion – Explain about the scope of this technology.

Introduction:

A programmable computer which synthesises important drug molecules in an affordable and modular chemical-robot system is called a ‘chemputer’. It uses downloadable blueprints to easily and reliably synthesize organic chemicals.

It will allow the real time searching of chemical space leading to new discoveries of drugs, interesting molecules with valuable applications, and cutting cost, time, and crucially improving safety, reducing waste, and helping chemistry enter a new digital era.

Body:

Significance of this technique:

- The chemputer is underpinned by a **new universal and interoperable standard** for writing and sharing chemical recipes which will help the automated systems to produce at large scale.
- A **general abstraction was developed for chemistry that can be made universal, practical, and driven by a computer program.**
- Chemputers have the ability to **democratise the pharmaceutical industry** as they can help in **universalising the technique and standards** across industries.
- It is seen as a **revolutionary new approach to organic chemistry.**

Chemputers have the **potential to revolutionize drug production:**

- **Cost-Reduction:** Chempilers instruct the chemputer how to produce molecules on-demand, more affordably and safely than ever possible before.



- **Universalisation of drug-recipes:** The researchers claim the ability to use a universal code will allow chemists all round the world to convert their recipe into digital code, allowing others to share and download recipes similar in a similar way to music is today on iTunes or Spotify.
- **Digitization of chemistry:** This approach is a key step in the digitisation of chemistry, and will allow the universal assembly of complex molecules on demand, democratising the ability to discover and make new molecules using a simple software app and a modular chemputer.
- **Utilitarian:** Making recipes for drugs available online, and synthesisable via a compact chemputer system, could allow medical professionals in remote parts of the world to create life-saving drugs as and when they are required, for example, or researchers to easily share newly-developed drug molecules for innovative treatments.
- **Push to Generic Drug Industry:** The technique will further emphasize the Generic drug industry and help in creation of cost-effective medicines. It can break the nexus between doctors and pharma industries.
- **Chemical robot system:** The desktop-sized chemputer itself draws raw chemical materials in liquid form into and out of a series of modules capable of performing the operations necessary to complete a synthetic sequence. They created the sleeping drug Nytol, seizure medication Rufinamide, and erectile dysfunction treatment Viagra in yields comparable to those achieved in traditional human-controlled synthesis.

Conclusion:

The scope of chemputer is wide and can be used in **third world countries where disease instances are very high, distant areas, war zones and pandemic zones** where there is a huge need for medicines. It will be a step forward in achieving the SDG-3.

Q) If ‘Make in India’ is to succeed, it needs to encompass ‘Make it the Indian Way’. Examine in context of popularity of additive manufacturing technology. (250 words)

Key demand of the question

The question expects us to explain what additive manufacturing is and the opportunities that it presents for India. We need to highlight why India needs to adapt to this paradigm shift in manufacturing to ensure that make in India is a success.

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 – Highlight the emphasis of make in India on transforming domestic manufacturing.

Body

Explain the focus of make in India scheme – to boost domestic manufacturing in India.

Explain what do you understand my additive manufacturing and how is it disrupting the traditional manufacturing models.

Highlight the opportunities and challenges for India and what exactly is meant by make it the indian way

Conclusion – discuss the importance of adapting to the changed needs while highlighting the early movers advantage that India might enjoy.

Introduction:

Under the Make in India initiative, the Government of India aims to increase the share of the manufacturing sector to the gross domestic product (GDP) to 25 per cent by 2022, from 16 per cent, and to create 100 million new jobs by 2022.

**Body:**

Additive manufacturing which was defined by the industry as **“making objects from 3D data, usually layer upon layer”**.

- In additive manufacturing, the physical object to be built is first designed in software. This design is fed to computerised machines, which build that object layer by layer.
- In practice the phrases 3D printing and additive manufacturing may be used interchangeably by some sources so it's important to understand the process which is actually being discussed.
- Additive manufacturing is the industrial version of 3-D printing that is already used to make some niche items, such as medical implants, and to produce plastic prototypes for engineers and designers.
- And while 3-D printing for consumers and small entrepreneurs has received a great deal of publicity, it is in manufacturing where the technology could have its most significant commercial impact.
- There are in fact a number of different subtypes of additive manufacturing including 3D printing, but also rapid prototyping and direct digital manufacturing (DDM). Recent advances in this technology have seen its use become far more widespread and it offers exciting possibilities for future development.
- Additive manufacturing machines work directly from a computer model, so people can devise completely new shapes without regard for existing manufacturing limitations.
- Breaking with traditional manufacturing techniques, such as casting and machining material, Additive Manufacturing product gives designers far greater flexibility.

Fortunately, this manufacturing paradigm has several features that play to the strengths of the Indian ecosystem. It will help India's manufacturing sector:-

- It eliminates large capital outlays:
 - Machines are cheaper, inventories can be small and space requirements are not large. Thus, India will not face the massive hurdle of large capital requirement
 - Even the traditional small and medium enterprises can easily be adapted and retooled towards high technology manufacturing.
- The Indian software industry is well-established, and plans to increase connectivity are well under way as part of 'Digital India'.
 - This would allow for the creation of manufacturing facilities in small towns and foster industrial development outside of major cities.
- It is possible to build products that are better suited for use in harsh environmental conditions.
 - Products that required assembly of fewer parts also implies that they may be better able to withstand dust and moisture prevalent in our tropical environment and be more durable.
- Maintaining old products is far easier because parts can be manufactured as needed and product life-cycles can be expanded.
- Maintaining uniform product quality is far easier because the entire system is built at the same time and assembly is not required.

Challenges posed by Additive manufacturing:

- **Affects labour:**
 - It decreases reliance on assembly workers and bypasses the global supply chain that has allowed countries like China to become prosperous through export of mass-produced items.
 - It will transfer value creation towards software and design and away from physical manufacturing. This would imply that labour intensive manufacturing exports may be less profitable.
 - For countries that have already invested in heavy manufacturing, this shift to adaptive manufacturing will be difficult and expensive.
- **Discontinuous production process :**
 - To prevent economies of scale, parts can only be printed one at a time.
- Requires post-processing:
 - The surface finish and dimensional accuracy are of low quality than other manufacturing methods.

**Way forward:**

- India needs to accelerate research at its premier engineering schools on manufacturing machines and methods and encourage formation of product design centres so that the products built suit the Indian environment and consumers.
- India also would need government support to provide incentives for distributed manufacturing in smaller towns, and for the IT industry to work on creating platforms and marketplaces that connect consumer demands, product designers and manufacturers in a seamless way.

Conclusion:

Therefore a pinch of Indian entrepreneurship thrown in, will allow India to develop a manufacturing ecosystem that will not only allow India to compete with global manufacturing, it will also create products that are uniquely suited to Indian conditions.

Q) India is uniquely positioned to create a vibrant defence manufacturing ecosystem that can help us achieve self-reliance. Discuss. (250 words)

Reference***Why this question***

India is the world's largest arms importer and given our economic size and talent pool, this is a matter of grave concern for us. In this context it is important to discuss how India can achieve indigenisation of defence technology.

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.

Key demand of the question.

The question wants us to write in detail as to how India can achieve indigenisation of defence technology- what are its strengths and potential vis a vis this aim.

Structure of the answer

Introduction– write a few introductory lines about the Indian defence imports. E.g mention that India is the world's largest defence importer etc.

Body-

Discuss in points as to how India could achieve indigenisation of defence technology vis a vis its potential and strengths. E.g

a) India harbours an immense amount of potential that can be tapped into by way of key strategic partnerships that add value across the entire length and breadth of R&D, manufacturing and supply chain.

b) As per government estimates, a reduction in 20-25 percent in defence related imports could directly create an additional 100,000 to 120,000 highly skilled jobs in India.

c) Government's offset policies, procurement policies and regulatory incentives spurring the growth of a domestic defence industry, the SMEs need to play a more active role in developing a robust supply chain.

d) Lack of adequate infrastructure drives India's logistics costs upwards thus reducing the country's cost competitiveness and efficiency. While the government is investing in this area the pace of development needs to pick up considerably and public-private participation can go a long way in hastening this process.

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.



Introduction:

India remains the world's largest importer of major arms, accounting for 13 per cent of the global total sales, according to a new data released by Stockholm International Peace Research Institute (SIPRI), an independent institute that tracks arms proliferation among other issues in conflict studies. Currently, India allocates about 1.8 per cent of its GDP to defence spending and imports about 70 per cent of defence equipment.

Body:



India could achieve indigenisation of defence technology vis-a-vis its potential and strengths.

• Policy Initiatives:

- The government's agenda to **reduce import dependence in defence by 35-40 percent** it is actively promoting indigenous defence manufacturing with initiatives like **Make in India** and policy reforms including allowing 100 percent Foreign Direct Investment (FDI).
- **Defence Procurement Policy (DPP)** is seen as a game changer to ensure faster pace in procurement, especially through newly introduced categories under **indigenously designed, developed and manufactured (IDDM)** provisions.
- Several states are also offering incentives and concessions in the form of **aerospace clusters** or **Special Economic Zones (SEZs)** for developing an ecosystem where all core and ancillary activities related to defence manufacturing can co-exist.

• Redefined Roles:

- **Original Equipment Manufacturers (OEM)** as well as **Small & Medium Enterprises (SME)** in the defence manufacturing sector are focussing on moving from a buyer-seller to a co-developer and co-manufacturer relationship.
- They have come together and formed strategic partnerships to support the development of a sustainable supplier base for the defence sector. Also, moulded themselves quickly to foster a **culture of innovation and R&D**.



- **Partnering for success:**
 - India harbours an immense amount of potential that can be tapped into by way of key strategic partnerships that add value across the entire length and breadth of R&D, manufacturing and supply chain.
 - Foreign OEM's are encouraging Indian industry to adopt best practices for global quality standards in their manufacturing processes to lead to the creation of a **gold standard supply chain and defence manufacturing ecosystem in India**.
- **Skilled talent pool:**
 - As per government estimates, a **reduction in 20-25 percent in defence related imports** could **directly create an additional 100,000 to 120,000 highly skilled jobs** in India.
 - The academia and industry needs to forge partnerships to encourage research and technological advancements and create a talent pool that is industry ready.
 - **Innovation for Defence Excellence:** The scheme envisions setting up innovation hubs particularly for the defence sector across the country.
- **Robust supply chain:**
 - A strong supply chain is critical for a defence manufacturer looking to optimize costs. Gradually, a handful of Indian SMEs are playing a key role in the global supply chain of OEMs.
 - With the **government's offset policies**, procurement policies and regulatory incentives spurring the growth of a domestic defence industry, the SMEs need to play a more active role in developing a robust supply chain.
- **Infrastructure development:**
 - Lack of adequate infrastructure drives India's logistics costs upwards thus reducing the country's cost competitiveness and efficiency.
 - While the government is investing in this area the pace of development needs to pick up considerably and public-private participation can go a long way in hastening this process.
 - Establishment of **two defence industrial corridors** in the country. **Tamil Nadu and Uttar Pradesh** to develop defence manufacturing ecosystems in the region.

Way Forward:

- **Defence offset policies** need better monitoring, removing unnecessary restrictions and linking defence offsets with offset in civil sector. That should be encouraged.
- To boost indigenization, the **Defence Research & Development Organisation (DRDO)** needs to be given more autonomy like space and atomic energy departments.
- Even playing field should be created between the Defence Public Sector Undertakings (DPSUs) and the private sector companies.
- Indian defence PSUs and ordnance factories have a lot of potential, they need to be **“revived, revitalised and made a lot more dynamic”**.
- Establishing courses on defence production across universities and creating job opportunities for the graduates.
- The government needs to expedite the setting up a **professional defence procurement agency**.
- Meeting the objectives of defence exports, encouraging innovation, streamlining procurements will require robust defence diplomacy. A **cadre of defence diplomats** should be created to address these issues.
- The country needs an elaborate ecosystem of innovation of which defence innovation can be a part.

Conclusion:

Self-reliance is a major corner-stone on which the military capability of any nation rests. Indigenous defence production is an essential capability to provide strategic independence to a nation, thus making exponential additions to national security through round-the-clock defence preparedness.



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

Q) The soft landing on the dark side of the moon by China will greatly expand our knowledge. Examine. (250 words)

The hindu

Why this question

Chinese spacecraft Chang'e-4, successfully made a landing on the dark side of the moon and we need to be aware why this landing is important.

Key demand of the question

The question expects us to explain why the landing of Chang's e-4 on the dark side of the moon is important and how it will expand our knowledge.

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 – Highlight that Chinese spacecraft recently landed on the dark side of the moon

Body

Explain about the dark side of the moon

Explain why this mission is important

- *Considering that earth is right next door to the moon, we know precious little about it. The mission will help us in planetary studies, and help in understanding exoplanets.*
- *the far side is a quiet place and a haven for earthly aspirations to set up a radio telescope that could reveal astronomical mysteries, such as the structure of the universe shortly after the Big Bang.*

Conclusion – Emphasize on the importance of such missions in expanding our knowledge about the solar system and beyond.

Introduction:

China joined a select group of countries with successful missions to the moon, when its spacecraft, Chang'e-4, successfully made a landing, according to the China National Space Administration. It landed at a spot on the moon's far side, the **Von K rm n crater** (which sits within the great Aitken basin), which is untouched by earlier missions from earth.

Body:

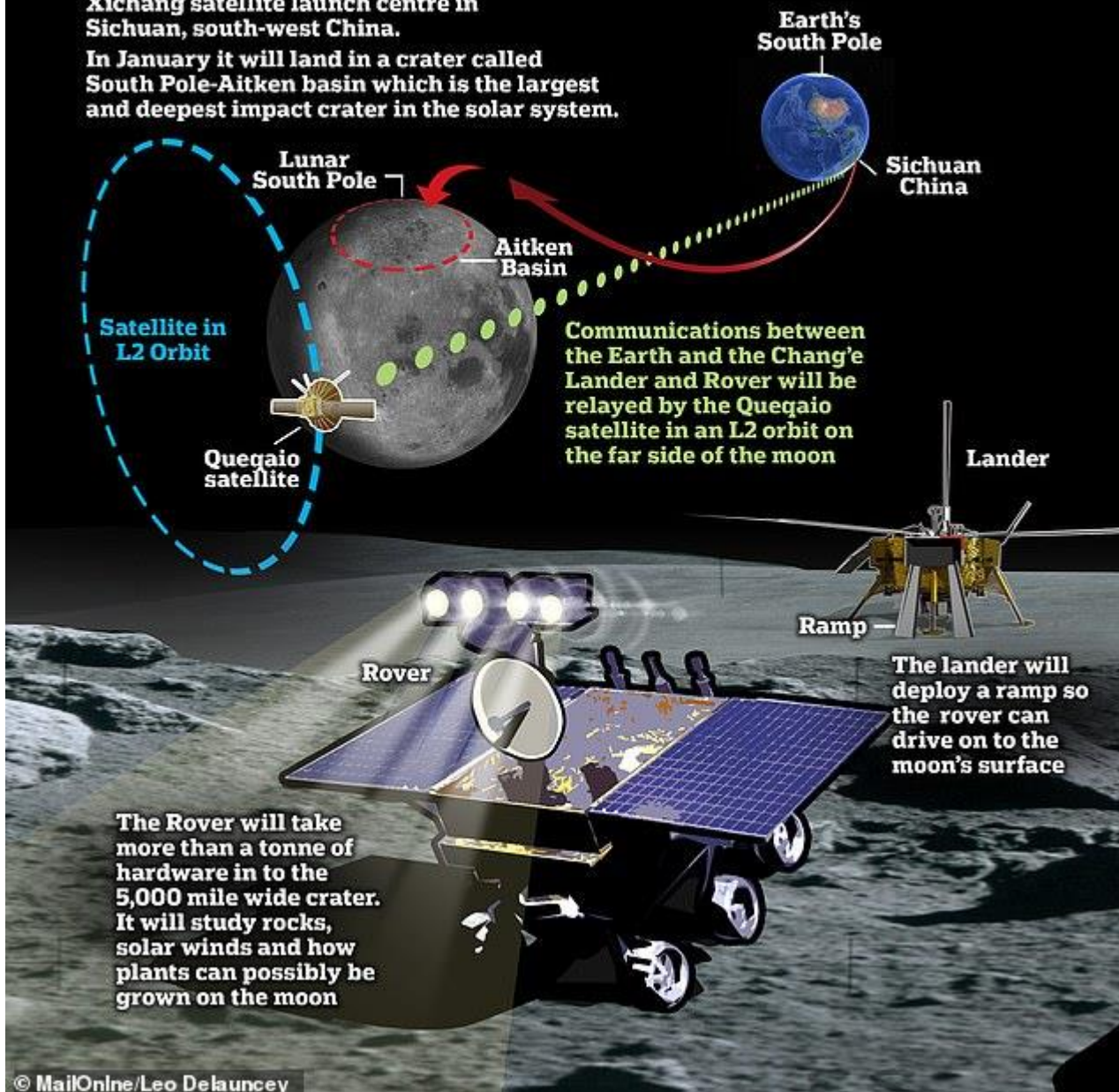
Dark Side of the moon:

- The dark or far side of the moon is of particular scientific interest as it is heavily pockmarked by deep craters formed by meteorite collisions.
- More so than the nearside, where a succession of lava flows have obscured many of the earliest impacts.
- Being thicker, the far side has not faced such an erasure and bears the marks of the crater impacts. This helps in study of its geology.
- The moon's far side also differs from the near side in that it is shielded from all the radio waves emanating from earth.
- The far side of the moon can never be in direct line-of-sight with Earth, proving direct radio communication impossible, which is why the orbiter is needed.



CHINA'S MISSION TO THE MOON

Chang'e 4 Spacecraft will take off from Xichang satellite launch centre in Sichuan, south-west China. In January it will land in a crater called South Pole-Aitken basin which is the largest and deepest impact crater in the solar system.



Importance of the Mission:

- The mission helps us to analyze whether the bombardment by asteroids, left over from the formation of the solar system, **might have created the conditions for life**.
- The mission intends to **study the local lunar geology, probe the moon's interior, and analyse the solar wind** – a stream of high-energy particles that flow from the sun.
- Arabidopsis seeds and silkworm eggs sent to the Moon in a 'mini biosphere' to test **photosynthesis and respiration in the low-gravity lunar environment**.
- The far side is a quiet place and a haven for earthly aspirations to **set up a radio telescope that could reveal astronomical mysteries**, such as the structure of the universe shortly after the Big Bang.
- The mission will help us **study the moon's formation and early evolution mysteries** could guide us in **planetary studies**, and help in **understanding exoplanets**.

Importance for India:

- **Chang'e-4 and Chandrayaan-2** — China & India missions have similar objectives, landing site near the moon's South Pole.



- Chandrayaan-2, India's second mission to the moon, will comprise an orbiter, a lander named **Vikram** and a rover.
- India can learn from the challenges faced by the Chang'e 4 and overcome the same in Chandrayaan 2.

Conclusion:

Chang'e-4 could herald a new chapter in lunar exploration. The mission's outcome will open new avenues in the field of space exploration.

Q) The onset of digital age requires careful considerations in policy making to balance the interests of state and citizen, capital and consumer, public good and private gain. Discuss in context of the recent developments in how to govern data ? (250 words)

Indianexpress

Why this question

This article establishes the need for a global policy regulating data, highlights the various strains of thoughts regarding this and the global developments as well. The article provides relevant and contemporary issue which will become very significant in the days to come.

Key demand of the question

The question expects us to bring out the various strains of thoughts regarding how data should be governed and bring out the interests of the various stakeholders as mentioned in the question. Thereafter, we need to give a fair and balanced view on what the way forward needs to be.

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 about the growing importance of data in the digital age.

Body

Explain what the issue is – the fact that data generated by the people's digital footprint is being monetized without the approval or knowledge of people whose data it is

Give the various strains of thoughts regarding how this must be protected

Nationalization of data as suggested by Ambani

Jack Ma's suggestion of greater liberalisation to make it easier for small producers in one country to sell to consumers across the world.

Gathering data and monetising is what Google and Facebook do.

Cook is mobilising support for a comprehensive privacy law in the US that will protect the consumer from the companies that collect personal data. One of Cook's key proposals is the establishment of a "data-broker clearinghouse" that will register all data brokers, enable consumers to track the transactions that have bundled and sold their data from place to place, and give users the power to delete their data if they chose.

Discuss why this is important and interests of the various stakeholders like government, corporates, public etc

Give your view on what the way forward should be

Conclusion – Highlight that in the days and years to come, this is doing to be a major issue and discuss the way forward.



Introduction:

The digital economy spurred a move from a **system of records** to a **system of intelligence**. Every interaction that a human or machine has with the digital world **leaves behind a trace**. This **digital footprint** carries significant information embedded in the data that provides a **fertile ground to build systems of intelligence**.

Body:

With the **IR4.0** in progress, data is today so precious that it is metaphorised as “**New Oil**”. The **misuse of data** has increased for **political gains as seen in Facebook Analytica episode**, **economic gains like theft of data of credit cards, bank details** and for **societal gains like polarizing the vote base, radicalising people, spreading fake news etc.**

With such huge impacts, the **data governance** is imperative. The data generated by the people’s **digital footprint** is being monetized without the approval or knowledge of people whose data it is. This has led to a debate on how data governance should be done. The various strains of thoughts regarding how this must be protected are

- **Nationalization of data:** The idea of nationalization of data is proposed by Indian corporate heads and in particular Mukesh Ambani. The core idea here is **India’s data must be controlled and owned by Indian people — and not by corporates, especially global corporations**. This essentially is against **Data colonization by foreign entities**.
 - However, the idea of **data nationalism** might be criticised for **erecting barriers against cross-border data flows**.
- **Greater liberalisation of Data:** Jack Ma’s suggestion is to make it easier for small producers in one country to sell to consumers across the world. Ma’s **Electronic World Platform (eWTP)** hopes the government and businesses could work together to **remove multiple obstacles to the flow of e-commerce across national borders**. As a logical complement to the eWTP, Ma has plans to disrupt the international logistics market and shorten the global supply chains.
 - But, Sceptics might say the **eWTP** might actually **consolidate Beijing’s dominance of the global trading system**, founded as it is on a tight domestic nexus between capital and the Chinese Communist Party.
- **Comprehensive privacy law:** Tim Cook’s idea is to **protect the consumer from the companies that collect personal data**. One of Cook’s key proposals is the establishment of a “**data-broker clearinghouse**” that will register all data brokers, enable consumers to track the transactions that have bundled and sold their data from place to place, and give users the power to delete their data if they chose.
- **Cyber Technology Accord:** The accord’s objective is to **empower individuals online and promote stability, security and resilience of the cyberspace**. It is modelled after the **Geneva Conventions** — negotiated at the turn of the 20th century — that sought to protect civilians during armed conflict. The initiative has had some impact, for example on the Paris Call for Trust and Security in Cyberspace that was unveiled by the French President Emmanuel Macron last November. The call has already been endorsed by a **large number of governments and corporations**.

Way forward

- In the future, the data governance and privacy issues are going to increase with huge increase in the data churned out every minute.
- Governments should frame a strong data policy which can utilise economic benefits and which can uphold its citizens rights and national security interests.
- Inclusive law which encompasses all the stake holders from state and the citizen, capital and the consumer, public good and private gain and between competing interests within capital — both domestic and foreign is needed.

Q) Discuss about the CRISPR gene editing technology and the concerns raised by it. (250 words)

Reference



Why this question

The CRISPR technology is a revolutionary technology which has enhanced our capabilities to edit genetic information. It finds use in many cutting edge research and clinical programmes. It is therefore important to discuss in detail about the technology as well as issues raised by it.

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.

Key demand of the question.

The question wants us to write in detail about the CRISPR gene editing technology- a brief description, scope and its use. It also wants us to write in detail about the concerns raised by the technology.

Structure of the answer

Introduction– write a few introductory lines about the CRISPR technology. E.g Often described as “a pair of molecular scissors,” CRISPR is widely considered the most precise, most cost-effective and quickest way to edit genes.

Body-

Discuss further about the technology in detail. E.g

- CRISPR forms an integral part of the “immune system” in bacteria, allowing them to fight off invading viruses. When a virus enters the bacteria, it fights back by cutting up the virus’ DNA. This kills the virus and the bacteria stores some of the leftover DNA.
- The leftover DNA is like a fingerprint, stored in the CRISPR database. If invaded again, the bacteria produce an enzyme called Cas9 that acts like a fingerprint scanner. Cas9 uses the CRISPR database to match the stored fingerprints with those of the new invader. If it can find a match, Cas9 is able to chop up the invading DNA.
- Its potential applications are far-reaching, affecting conservation, agriculture, drug development and how we might fight genetic diseases. It could even alter the entire gene pool of a species.
- It might be used to fight HIV infection, combat invasive species and destroy antibiotic-resistant bacteria.
- One particular leap in cancer therapy options is the genetic modification of T cells, a type of white blood cell that’s critical for the human immune system etc.

Discuss the concerns raised by the technology. E.g

- One of the chief barriers to getting CRISPR effectively working in humans is the risk of “off-target effects.” When CRISPR is tasked with hunting down a gene, it sometimes finds genes that look very similar to its target and cuts them, too.
- An unintended cut may cause mutations in other genes, leading to pathologies such as cancer, or it may have no effect at all
- Gene editing can also be used to edit embryos and thus, change the human gene pool.

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

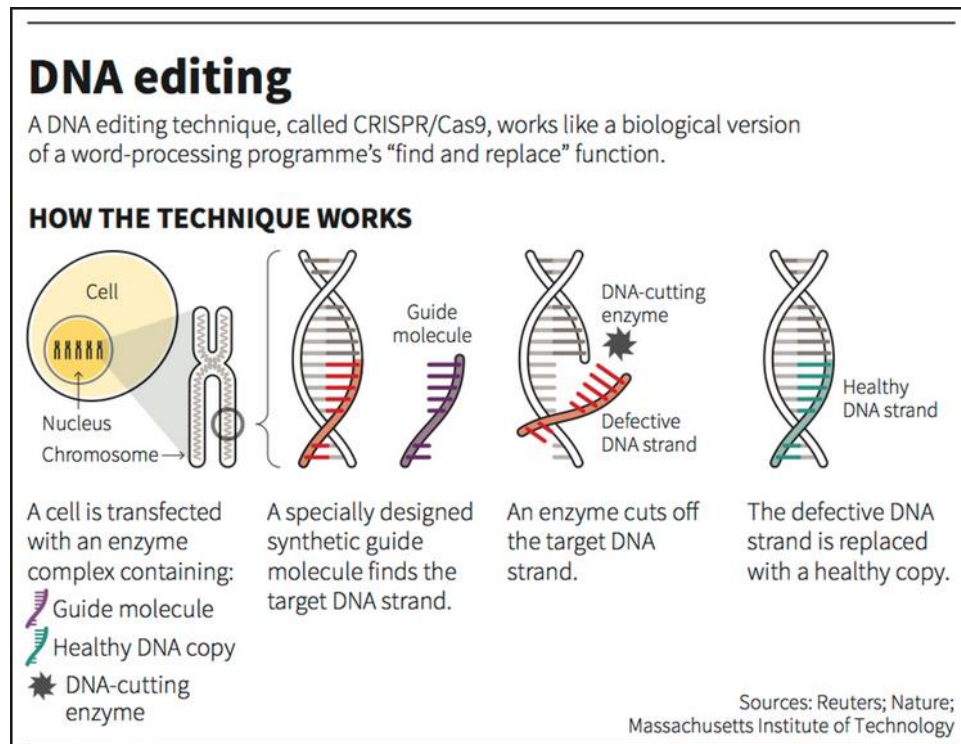
Introduction:

CRISPRs (clustered regularly interspaced short palindromic repeats) are sections of DNA, while CAS-9 (CRISPR-associated protein 9) is an enzyme. Often described as “a pair of molecular scissors,” CRISPR is widely considered the most precise, most cost-effective and quickest way to edit genes.



A scientist in China created the world's first genetically edited babies, in a potentially ground-breaking and controversial medical first. **He Jiankui** created the **world's first gene-edited babies last November** using the genetic technique **CRISPR (or CRISPR-Cas9)**.

Body:



CRISPR technology is basically a **gene-editing technology** that can be used for the purpose of altering genetic expression or changing the genome of an organism. The technology can be used for targeting specific stretches of an entire genetic code or editing the DNA at particular locations. CRISPR technology is a simple yet powerful tool for editing genomes. It allows researchers to easily alter DNA sequences and modify gene function. Its many potential applications include correcting genetic defects, treating and preventing the spread of diseases and improving crops.

Working of CRISPR-CAS9 Technology:

- CRISPR-Cas9 technology behaves like a cut-and-paste mechanism on DNA strands that contain genetic information.
- The specific location of the genetic codes that need to be changed, or "edited", is identified on the DNA strand, and then, using the Cas9 protein, which acts like a pair of scissors, that location is cut off from the strand.
- A DNA strand, when broken, has a natural tendency to repair itself.
- Scientists intervene during this auto-repair process, supplying the desired sequence of genetic codes that binds itself with the broken DNA strand.

But editing the genes using CRISPR-CAS9 raises grave **safety, social, and ethical concerns**.

- Study by Stanford University, U.S., found that the CRISPR-Cas9 system introduces unexpected off-target (outside of the intended editing sites) effects in mice. The fear that the CRISPR system is being prematurely rushed for clinical use lingers. Three recent reports have exacerbated this fear even further.
- Studies highlighted that CRISPR-Cas9-edited cells might trigger cancer.
- **P53 protein:**
 - CRISPR-Cas9 system induced activation of a protein called P53. This P53 protein acts like a gatekeeper or guardian in the cells to keep them healthy and prevents them (the cells) from turning cancerous. In many cancers, cells lose their ability to repair deleterious genetic changes due to an impaired P53 function.
 - In cells where editing is adequate, the cell's P53 protein may be dysfunctional. Therefore, a functional pP53 protein is good for the cells to be healthy but makes the Cas9-mediated editing process less effective.



- The impending danger of **mosaicism**, in which some cells inherit the target mutation, while others don't.
- Scientists are far from understanding **how exactly individual genes influence phenotypes**, or the visible traits of people.
- **Every gene likely influences multiple traits**, depending on the **environment it interacts**. This makes it hard to predict the ultimate outcome of an embryo-editing exercise without decades of follow-up.
- Every gene **influences trade-offs**, which scientists barely understand today. **Example:** while protecting against HIV, a deactivated CCR5 gene can also make people more susceptible to West-Nile Fever.
- Editing human embryos to repair disease-causing genes is **far more controversial**.
- **Issue of Designer babies:** The eyes of the mother, the hair of the father, the complexion from the maternal side and a cute little dimple from the paternal is what makes the kid loved by one and all. Designing the babies to look like celebrities might get the kids to thank you later in life but might **loosen the bond** that is supposed to be the significant part of the relationship.
- There are prospects of irreversible harms to the health of future children and generations, to concerns about opening the door to **new forms of social inequality, discrimination, and conflict**.
- Such living experiments are **done in secret**, outside of any formal institution, and apparently without any independent scrutiny or review by the scientific fraternity.
- Bioethicists fear abuse of gene editing, not just by misguided governments hoping to create a **'superior' race**.

Way Forward:

- India's current regulatory architecture for approving novel treatments is ambiguous and assigns overlapping functions to different governmental bodies. This framework needs to be **restructured to optimize trial approval time while addressing safety requirements**.
- A **two-step model** wherein the **government works with industry and research groups to accelerate clinical research is recommended**. This model consists of a national apex committee working in collaboration with existing institutional ethics committees and independent accreditation agencies.
- It is envisaged that, India will emerge as a significant contributor to the world bioinformatics market and position itself as a global hub for bioinformatics.
- Indian bioinformatics sector has numerous strengths and competitive advantages to make bioinformatics sector a sunrise industry of India.
- With the improvements in the IPR regime, increasing support from the government and continuing efforts of the private sector companies, it is very much likely that India could repeat its IT success story in bioinformatics too.
- Much research on animal models and isolated human cells should be conducted before any full-scale routine application in humans.

Conclusion:

CRISPR technology is indeed a path-breaking technology, to alter genes in order to tackle a number of conventional and unconventional problems, especially in the health sector. However, experiments and tests to validate its use must be subjected to appropriate scrutiny by the regulators, and their use must be controlled to prevent commercial misuse.

Q) India's superbug issue is a global public health problem. Discuss the factors responsible for the problem. (250 words)

[The hindu](#)
[Reference](#)

Why this question

Recently superbugs have been detected in the Arctic and this points towards the alarming situation the world is in today. In this context it is important to discuss the issue vis a vis India.

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.

Key demand of the question.

The question wants us to describe the superbugs, their importance and why India is a hotbed for superbugs.

Structure of the answer

Introduction– write a few introductory lines about the superbugs. E.g Superbugs — the term unofficially refers to bacterial and fungal infections resistant to various antibiotics.

Body-

Discuss the factors responsible for India being a hotbed of superbugs. E.g

- *Superbugs exist across the globe; it's a problem rearing its ugly head in China, South Africa, Australia and even in U.S.*
- *What makes India's situation unlike other developing nations, is the "extent and degree" of the factors that fuel superbugs.*
- *antibiotic use is a major driver" of the development of diseases that become resistant to the drugs. Indeed, in 2010 India consumed more antibiotics for human health per person than any other country. What's more, the nation's intake spiked by 62 percent from 2001 to 2010.*
- *Such consumption is spurred by overprescription and overuse.*
- *In 2014, the government re-categorized many antibiotics, to make them prescription-only. But implementation of the regulation remains murky.*
- *Wastewater treatment plants serving antibiotic manufacturing facilities are responsible for transferring resistance genes.*
- *There is also a "huge amount" of antibiotic use in animals in India.*

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

- Superbugs refers to bacterial and fungal infections resistant to various antibiotics. They are a growing health problem worldwide. The **World Health Organization** warned in 2015 of an approaching "**post-antibiotic**" era. Current estimates are that drug-resistant infections annually **kill about 700,000 people** around the world — a figure that could reach **10 million by 2050**.

Body:

Spread of the superbug gene:

- Scientists have found a "**superbug**" gene — first detected in New Delhi over a decade back — in one of the **last "pristine" places** on Earth that is some 12,870 km away. This is a cause of concern as there is a global spread of multi-drug resistant (MDR) bacteria.
- Soil samples taken in Svalbard, Norway have now confirmed the spread of **blaNDM-1** (called New Delhi Metallo-beta-lactamase-1) into the **High Arctic**.
- The resistant gene has been found in over 100 countries, including new variants.
- Superbugs exist across the globe; it's a problem rearing its ugly head in China, South Africa, Australia and even in U.S. hospitals.
- According to a study in 2018 on antimicrobial resistance, **60,000 newborn lives are claimed each year** in India by antibiotic-resistant infections.

India is a **notorious hotbed** for antibiotic resistance. The factors responsible for the problem are:

- **Variety of Carriers:**
 - Carried in the gut of animals and people the antibiotic resistant genes are likely spread through the faecal matter of birds, other wildlife and human visitors to the area.



- **Over-prescription and overuse of antibiotics:**
 - In 2010 India consumed more antibiotics for human health per person than any other country.
 - The nation's intake **spiked by 62 percent from 2001 to 2010.**
- **Rampant use in livestock, poultry and aquaculture:**
 - Antibiotic use in agriculture and for livestock to keep them away from diseases during their growth period for commercial usage.
 - For instance, antibiotics are routinely given as growth promoters to chicken to fatten them.
- **Slack regulations:**
 - A lack of regulation of the discharge of antimicrobial waste into the environment all contribute to the superbug problem.
- **Nexus between Doctors and Pharmaceutical companies:**
 - This has lead to unnecessary prescriptions of antibiotics by doctors leading to microbial resistance.
 - A study in 2016, found doctors are compensated by pharmaceutical companies and pharmacists for prescribing antibiotics.
- **Other factors:**
 - Waste water treatment plants serving antibiotic manufacturing facilities. They are also responsible for transferring resistance genes.
 - Poor sanitation is another cause leading to spread of AMR.

India's effort towards AMR:

- In 2012, India's medical societies adopted the **Chennai Declaration**, a set of national recommendations to promote antibiotic stewardship.
- National Programme on Containment of Antimicrobial Resistance was launched during the 12th five year plan (2012-2017).
- The Food Safety Standards Authority of India (FSSAI) has recently notified the much-awaited tolerance limits for antibiotic residues in meat, milk, egg and fish.
- The Central Pollution Control Board (CPCB) has also developed draft standards for antibiotic residues in pharmaceutical industrial effluent and common effluent treatment plants.

Way forward:

- Informing the public is important.
- Reduce the over-the-counter availability of many antibiotics.
- Re-categorization of antibiotics to make them prescription-only.
- Strict implementation of above should be achieved. Licensing of pharmashops and drugstores can be based on the **sale history and stock database.**
- Recently, the Indian Council of Medical Research (ICMR) issued guidelines for antibiotic stewardship, which include advising hospitals on how to administer treatment that best suits the patient's needs.
- Mixing antibiotics with animal feed is a practice that should be stopped immediately.

Conclusion:

- Antibiotics are different from almost every other class of drug in one important and dangerous respect: **the more they are used, the less effective they become.** When microbes are repeatedly exposed to antibiotics, the bacteria eventually win.
- AMR is a global health emergency that no nation can afford to ignore. It is a cross-sectoral issue that affects developed and developing countries/societies alike and has potential to derail all developmental activities and achievements. Addressing this challenge requires a proactive and aggressive approach.

Topic: Conservation, environmental pollution and degradation, environmental impact assessment, Disaster and disaster management.

Q) India has made a lot of progress in reducing plastic waste but a lot more still needs to be done. Comment. (250 words)

The hindu

Why this question



India has resolved to end single-use plastics by 2022 and in this connection it has also released the Plastic Waste Management Rules, 2016. In this context it is important to discuss what has been achieved and what more needs to be done.

Directive word

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

Key demand of the question.

The question wants us to express our knowledge and understanding of India's fight against plastic use and express our opinion as to why still more needs to be done in this regard.

Structure of the answer

Introduction– write a few introductory lines highlighting India's efforts to reduce plastic waste. E.g India has resolved to beat plastic pollution by eliminating single-use plastics by 2022.

Body-

Discuss what India has achieved in this direction. E.g

- 22 States and Union Territories have announced a ban on single-use plastics such as carry bags, cups, plates, cutlery, straws and thermocol products. Puducherry will implement a ban from March 1.
- Voluntary initiatives are having an impact in many States, as citizens reduce, reuse and sort their waste.
- The Plastic Waste Management Rules, 2016 are clear that producers, importers and brand owners must adopt a collect-back system for the plastic they introduce into the environment etc.

Discuss what more needs to be done. E.g

- Waste plastic from packaging of everything from food, cosmetics and groceries to goods delivered by online platforms remains unaddressed.
- Local bodies should consult manufacturers or importers to assess the problem. Delaying such a measure has created the anomalous situation of small producers of plastics facing the ban, while more organised entities covered by the Extended Producer Responsibility clause continue with business as usual.
- Cities and towns need competent municipal systems to achieve this.
- The fast moving consumer goods sector that uses large volumes of packaging, posing a higher order challenge.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

India has won global acclaim for its “**Beat Plastic Pollution**” resolve declared on **World Environment Day last year**, under which it pledged to **eliminate single-use plastic by 2022**. So far, 22 States and Union Territories have joined the fight to beat the plastic pollution, announcing a ban on single-use plastics such as carry bags, cups, plates, cutlery, straws and thermocol products. Puducherry will implement a ban from March 1.

Body:

It is estimated that with the growing population and rising consumerism, the world's plastic bottle consumption will increase to half a trillion annually by 2021. According to **Plastic Infrastructure Report, 2017**, India consumes close to 12.8 million tonnes of plastic per annum, of which, close to 5 million tonnes is rendered as waste every year. It is about 25,000 tonnes of plastic waste generated every day. The



residues can stain the environment and natural resources for hundreds of years. Plastic toxicity is known for its enduring adverse effects on territorial and aquatic life.

India has made progress in its efforts to reduce plastic waste:

- The **Plastic Waste Management Rules, 2016** are clear that producers, importers and brand owners must adopt a collect-back system for the plastic they introduce into the environment.
- Voluntary initiatives are having an impact in many States, as citizens reduce, reuse and sort their waste.
- In 2016, Sikkim banned usage of packaged drinking water in government offices and government events. Second, it banned the use of Styrofoam and thermocol disposable plates and cutlery in the entire state.
- A Bengaluru waste collective estimates that the volume of plastic waste that they collect **dropped from about two tonnes a day to less than 100 kg**.

The ubiquitous plastic has made humans so dependent that it is virtually impossible to live without it. As a result, a lot needs to be done in this direction to completely eliminate single-use plastics.

- **Amendment issues:**
 - The PWM Rules Amendment, 2018, omitted explicit pricing of plastic bags that had been a feature of the 2016 Rules. This comes as a surprise as the pricing of the bags was beginning to bring about a change, albeit gradually.
- **Packaging material:**
 - Waste plastic from packaging of everything from food, cosmetics and groceries to goods delivered by online platforms remains unaddressed.
 - The fast moving consumer goods sector that uses large volumes of packaging, posing a higher order challenge.
- **Implementation issues:**
 - Lack of adequate infrastructure for segregation and collection is the key reason for inefficient plastic waste disposal.
 - The Solid Waste Management Rules, 2016, mandate ULBs to set up facilities for processing sorted dry waste. However, the implementation has been rather bleak, owing to available land/space concerns.
- **Collect-back system:**
 - The Plastic Waste Management Rules, 2016 are clear that producers, importers and brand owners must adopt a collect-back system for the plastic they introduce into the environment. However, not much has been done to take the process forward.
- **Extended Producer Responsibility clause:**
 - Small producers of plastics are facing the ban, while more organised entities covered by the **Extended Producer Responsibility** clause continue with business as usual.

Way Forward:

- The success of imposing a plastic bag fee has also been established in cities like Chicago and Washington, showing that such interventions could be effective in **shaping behaviour change**.
- Promoting the **use of biodegradable plastics, khadi bags, cotton bags** would also go a long way in managing plastic waste in India.
- **Monetise the waste:** Incentivising collection is the key to Plastic Waste Management. **Example:** In supermarkets of **Germany (pfand system)**, consumer pays extra for the plastic bottle and gets back the money when he returns bottle to recycling centre in supermarket.
- **"Polluter pays":** Governments must start charging the producers for their waste, which will lead to recovery and recycling.
- Local bodies should consult manufacturers or importers to assess the problem. Cities and towns need competent municipal systems to achieve this.
- **Developing a circular economy of plastics** requires the participation of everyone across the entire value chain and the long term commitment of businesses, governments, and communities. **Example:** The Alliance to End Plastic Waste (AEPW), comprising about 30 companies, pledged over \$1 billion to eliminate plastic waste across the world. They aim to invest \$1.5 billion over the next five years for the same.

**Conclusion:**

The indiscriminate disposal of plastic has become a major threat to the environment. In the absence of a suitable alternative, it is impractical and undesirable to impose a blanket ban on the use of plastic all over the country. The real challenge is to improve plastic waste management systems. **Our policies must promote collection, recycling and monetising of waste.**

Q) COP-24 held at Katowice in Poland, brings little cheer on the climate front for developing countries. Discuss. (250 words)

The hindu

Why this question

Our future is in a precarious situation. Globally the effects of climate change are being felt with more intensity and severity with each passing year. COP-24, the latest of the climate change negotiations under the Paris Pact framework have been widely criticised for being inadequate in addressing the issue. In this context it is important to discuss the outcomes of the conference, particularly for the developing countries.

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.

Key demand of the question.

The question wants us to write in detail as to why the COP- 24 brings little cheers for the developing countries. We have to discuss the outcomes of the conference in terms of it's underachievements and limitations.

Structure of the answer

Introduction– write a few introductory lines about the COP-24. E.g mention its relation with the Paris agreement and mention its key outcome- the rulebook for Paris agreement.

Body-

Discuss in points as to how/ why COP-24 brings little cheer on the climate front for developing countries. E.g

- *substantial rollback of differentiation between the global North and South in climate action, with uniform standards of reporting, monitoring and evaluation for all countries.*
- *While all developing nations are ostensibly allowed flexibility in these reporting requirements, the concession has been hedged in with a number of conditions, with the intention of forcing them to full compliance in short order.*
- *the requirement of reporting as little as 500 kilo tonnes or 0.05% of national emissions per country has little scientific significance.*
- *a smaller percentage of the emissions of a large emitter will be a larger quantity in absolute terms compared to the larger percentage of emissions of a small emitter.*
- *As the “rulebook” stands today, private sector flows or loans, which will increase the indebtedness of developing countries, are to be considered adequate fulfilment of developed country obligations under the UNFCCC etc.*

Conclusion- *based on your discussion, form a fair and a balanced conclusion on the given issue.*

Introduction:

The **24th Conference of the Parties (COP-24)** of the UN Framework Convention on Climate Change (UNFCCC), held at Katowice in Poland. Negotiators from 196 countries finalised a **rulebook for the 2015 Paris Agreement**. The finalisation paves the **way for implementation of the Paris Agreement**, which is



supposed to replace the existing Kyoto Protocol in 2020. Several countries and NGOs feel that the deal reached in Katowice, though welcome, was not enough.

Body:

The **highlights** of the Katowice Rulebook are:

- **Mechanism:** The Paris Agreement requires every country to have a climate action plan. This must be periodically updated and submitted to the UNFCCC. The rulebook now specifies what actions can be included in the action plan, how and when to submit them.
- **Stocktaking:** The Paris Agreement requires every member nation to submit information about their greenhouse gas emissions every two years. The rulebook now specifies which gases to measure, what methodologies and standards to apply while measuring them and the kinds of information to be included in their submissions.
- **INDC implementation:** Article 4 of Paris Agreement mandates nationally determined contributions (NDCs) by countries. The rulebook specifies that support shall be provided to developing countries for the implementation of INDCs. Parties shall provide the information necessary for clarity, transparency and understanding as applicable to their NDCs.
- **Finance:** The Paris Agreement demands developed countries to provide “climate finance” to developing countries and submit an account of this. The rulebook specifies the kinds of financial instruments (loans, concessions, and grants) which can be classified as **climate finance**. It specifies how they should be accounted for and the kind of information about them needed to be submitted.

However, COP-24 brings little cheer on the climate front for developing countries.

- **Against the Common but Differentiated Responsibilities principle:**
 - The Katowice COP it was agreed that all countries (developed, developing) have uniform standards of reporting, monitoring and evaluation for all countries.
 - The real targets of this uniformity are not the poorest nations, who have been provided exemptions, but the larger developing nations.
 - Example: Both USA and Tuvalu islands have the uniformity in reporting requirements.
 - Although the developing nations are apparently allowed flexibility in these reporting requirements, there are a number of conditions, with the intention of forcing them to full compliance in short order.
- **Finance:**
 - Developing countries have for long demanded that the bulk of climate finance must be from public sources.
 - In contrast, the developed countries have succeeded in putting other sources of finance, including FDI and equity flows.
 - The private sector flows or loans will increase the indebtedness of developing countries.
 - Much of the pressure exerted by developed countries at Katowice had the active backing and instigation of the U.S.
- **Mitigation:**
 - There is lack of initiative by the developed countries in taking the lead in climate mitigation.
 - All developed countries continue to invest in fossil fuels either through direct production or imports.
 - Some countries are downgrading their nuclear energy (**Example:** Germany) due to domestic political pressures, while others are weaning themselves off coal by shifting to gas (**Example:** USA).
 - Overall, the use of fossil fuel-based electricity generation continues to rise for OECD countries.

India, despite its articulation of the need for equity in climate action and climate justice, failed to obtain the operationalization of these notions in several aspects of the “rulebook”. Even though it pushed for equity, particularly in the benchmarks for the periodic review of the Paris Agreement, it failed to press home its point. Successive dispensations in New Delhi have fallen short of doing the needful in this regard.



Conclusion:

Katowice Rule book was a success in its roll out of a rule-book. However, the climate equity and climate-justice is still at bay for the developing and island countries.

Q) Some of the possible solutions to climate change and environmental degradation themselves pose challenges to the environment. Analyze. (250 words)

Reference

Why this question

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

Directive word

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

Key demand of the question.

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

Structure of the answer

Introduction- write a few introductory lines highlighting environmental degradation, biodiversity loss and climate change. E.g present some related statistics and mention that a number of solutions have been currently in vogue to address those issues.

Body-

Discuss the solutions to climate change that are currently in vogue and bring out how they themselves pose challenges to the environment. E.g

Discuss Desalination technology and challenges posed by it.

Discuss HFCs and replacement of HCFCs to protect ozone depletion and challenges posed by it.

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

- *Wind farms vs biodiversity loss.*
- *Solar energy vs Ground pollution.*

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

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

Body:

A number of technological solutions are at place to mitigate the effects of climate change. These technologies have helped humankind to find solutions to the problems posed by the climate change. However, in a world where climate change, air and water pollution, biodiversity loss, water scarcity, ozone depletion, and other environmental problems overlap, a fix in one arena can cause trouble or pose challenges in another.



- **Desalination technology:** Desalination has become a solution for many cities located in coastal areas. The saline water from the sea is treated and the water is made potable. More than 16,000 desalination plants are scattered across the globe producing fresh water, according to a **first global assessment of the sector's industrial waste**.
- **Challenges posed:** The plants produce more briny toxic sludge than fresh water. For every litre of fresh water extracted, a litre-and-a-half of salty, chemical-laden sludge called brine is dumped—in most cases—into the ocean. That's enough to cover the state of Florida in a 30-centimetre (one-foot) layer of slime.
- **Hydro Fluoro Carbons to protect ozone depletion:** The 1987 Montreal Protocol banned industrial chemicals (CFCs) dissolving stratospheric ozone, which protects us from the Sun's dangerous ultraviolet rays. To replace the forbidden molecules, used in aerosols and refrigerants, scientists invented a new category known as HFCs.
- **Challenges posed:** But there was a small problem that didn't emerge until much later: the substitutes—while harmless to the ozone layer—were **dangerous greenhouse gases**, thousands of times more potent than carbon dioxide or methane. That meant a new, protracted round of negotiations over an amendment calling for the phase of HFCs, which was finally adopted in 2016.
- **Bio-fuels:** The rise in oil prices in the 1970s, and later the looming threat of climate change, boosted the production of bio-fuels made from corn, sugarcane and palm oil. It seemed like a great idea: planet-warming CO₂ released into the atmosphere when the bio-fuels were burned would be partially offset by the CO₂ absorbed while the plants were growing.
- **Challenges posed:** The energy needed to transform and transport plant-based fuels undercuts their original purpose. To make matters worse, the newly emerging market created a perverse incentive to cut down tropical forests—far more efficient at soaking up CO₂—to make way for sugarcane and palm oil trees. When it comes to climate change, projections for how humanity can cap global warming under two degrees Celsius (3.6 degrees Fahrenheit) assume a major role for bio-fuels. But recently scientists have calculated that an area up to twice the size of India would be needed to cultivate them, which may not leave enough land to grow food.
- **Wind farms:** There are some 350,000 wind turbines scattered across the globe producing more than 500 gigawatts of clean, green energy and supplying four percent of global electricity demand.
- **Challenges posed:** But wind farms are also bird killers: up to 328,000 birds—especially those that fly at night—are felled every year by fast-spinning blades in the United States alone, where there are some 50,000 turbines. They also **disrupt ecosystems**.
- **Case Study:** A scientific study of **wind farms in the Western Ghats**, a UNESCO-listed range of mountains and forest spanning India's west coast, found that predatory raptor birds were four times rarer than in adjacent areas. Their absence cascaded down the food chain and radically altered the density and behaviour of the birds' prey. There was, in particular, an explosion in the raptors' favourite meal: fan-throated lizards.
- **Solar energy:** Photovoltaic solar panels absorb sunlight to generate electricity. This has powered many homes in developing and under-developed countries. It has shown the potential to reduce the consumption of coal for electricity generation.
- **Challenges posed:** However, the solar panels pose a challenge. A study by French investigative journalist Guillaume Pitron reveals this. The fastest growing renewable energy source includes critical metals and minerals that require a lot of energy to extract and often leave a trail of environmental devastation in their wake. Wandering the world to research his book "The Rare Metals War", Pitron said he saw mountains in southern China "cut in half vertically," and "toxic lakes" in Inner Mongolia.



Conclusion:

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

Q) What do you understand by Globalization 4.0. Discuss in the context of earlier phases of globalization. Also discuss how it can be leveraged to fight climate change. (250 words)

[Reference](#)

[Reference](#)

Why this question

Globalisation 4.0 has arrived and it also presents some possible solutions to climate change. In this context it is important to discuss the meaning and scope of the concept and how it will help in fighting climate change.

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.

Key demand of the question.

The question wants us to write in detail about the meaning and scope of Globalisation 4.0 and also bring out in detail as to how it can help us in fighting climate change across the world.

Structure of the answer

Introduction- write a few introductory lines about globalization. E.g mention what was the first globalization- Globalization 1.0 was pre-World War 1 globalization, which was launched by a historic drop in trade costs when steam and other forms of mechanical power made it economical to consume goods made faraway.

Body-

Briefly discuss the globalization 2.0 and 3.0. E.g Globalization 2.0 is the post-World War II phase where trade in goods was combined with complimentary domestic policies that helped share the pains and gains of globalization (and automation). The market was in charge of efficiency; the government was in charge of justice; globalization 3.0 ushered into an era when factories crossed borders, and – critically – the know-how of G7 firms along with them. This created a new world of manufacturing in which high-tech was combined with low wages.

Discuss what is globalization 4.0. E.g it is the current phase of globalization which has just started in the wake of industry 4.0; driven by big data, AI etc.

Discuss how globalization 4.0 can be leveraged to fight climate change. E.g building new forms of alliances within and between the private and public sectors; forging new clubs of like-minded governments, cities, states and provinces; and building new leadership platforms for policy experimentation and public-private action, each targeted to suit different industrial, national and regional agendas etc.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Globalization refers to the integration of economies through the exchange of goods, people and ideas. It views the whole world as a 'Global village' or 'World without trade borders'.

Globalization 4.0 is the third unbundling, which would happen when **digi-tech allows arbitrage of international wage differences without the physical movement of workers**. Globalization 4.0 is going to hit the service sector. Hundreds of millions of service-sector and professional workers in advanced economies will, for the first time ever, be exposed to the challenges and opportunities of globalization 4.0.



Body:

Trends of Globalization:

- **Globalization 1.0** was **pre-World War 1 globalization**, which was launched by a historic drop in trade costs when steam and other forms of mechanical power made it economical to consume goods made faraway. This globalization came with almost no government support. There was no global governance and there was little domestic policy to help share the gains and pains of more intense international arbitrage in goods. **Laissez-faire capitalism, imperialism and various forms of autocracy** ruled this era mostly.
 - However, the two world wars, the Great Depression, and the rise of communism and fascism resulted in hundreds of millions of humans being killed by other humans. This led to the end of G-1.0.
- **Globalization 2.0** is the post-World War II phase where trade in goods was combined with complementary domestic policies that helped share the pains and gains of globalization (and automation). The **market** was in charge of **efficiency**; the **government** was in charge of **justice**. Internationally, Globalization 2.0 saw the **establishment of institute-based, rule-based international governance**, specifically the UN, IMF, World Bank, GATT/WTO and many **specialized agencies like the FAO and ILO**.
- **Globalization 3.0** is the **second unbundling**, or the New Globalization. *Arvind Subramanian called it hyper-globalization, Gary Gereffi called it the global value chain revolution, and Alan Blinder called it offshoring.* The key is that globalization now meant factories **crossing borders, and – critically – the know-how of G7 firms along with them**. This created a new world of manufacturing in which **high-tech was combined with low wages**.
 - This new combination disrupted the lives and communities of workers struggling to compete with high wages and high tech as well as those struggling to compete with low wages and low tech.
 - Workers employed in goods-producing sectors were the most affected, since this unbundling **mostly affected goods-producing sectors**. In particular, **the monopoly that G7 factory workers had on G7 manufacturing technology was broken when their employers moved jobs and know-how abroad**.

Globalization 4.0: As explained above, the G-4.0 will impact the service sector mostly. It is in parallel with the IR 4.0. The various disruptive technologies like Artificial Intelligence, Big Data, Internet of Things, Block-chain etc. will play key roles in this. Rather than shaping a parallel hegemonic structure, globalisation 4.0 intends to correct the flaws inherent in globalisation 3.0 that allowed the dominance and wealth superiority of the great economic powers to hinder the optimisation and evolution of the global governance structure.

Globalization 4.0 and fighting climate change:

Climate change, arguably humanity's most existential challenge, requires urgent global action. IPCC's **Special Report on the Impacts of Global warming at 1.5°C**, published in October 2018, says we have just 12 years to act if dangerous climate change is to be avoided. With the rise in protectionism, rising national interest, G-4.0 is imperative to tackle the climate change with global efforts.

- By building new forms of alliances within and between the private and public sectors. **Example:** The **Alliance of CEO Climate Leaders**: This group of CEOs, with collective company revenues of more than \$1.5 trillion, have already reduced their collective emissions by 9% since 2015 and are committed to do more
- By forging new clubs of like-minded governments, cities, states and provinces. **Example: International Solar Alliance initiative** which has about 120 countries
- By building new leadership platforms for policy experimentation and public-private action, each targeted to suit different industrial, national and regional agendas.
- With the **rapid technological advances of the IR 4.0**, we will also be able to harness **new means of monitoring, verifying and reporting the progress (or lack thereof) of global, regional and industry actions on climate**.
- This will also lead to radical new forms of **distributed information transparency and real-time disclosures**. **Example:** Internet of Things to capture and transmit data at real-time in highly polluted areas in cities.
- Increased transparency will boost awareness and simply heighten the pressure to act.



Conclusion:

Globalisation 4.0 should be more sustainable, reasonable and balanced version, led by innovation, inclusiveness, shared benefits and tolerance. Globalization 4.0 seeks to promote: **practical, public-private arrangements to help governments find agile, collaborative solutions to pressing global problems in our more complex world**, which is being rapidly transformed by the IR 4.0.

Q) 2018 was the sixth warmest year on record, a result of the global warming trend. Discuss in the context of India. (250 words)

Indianexpress

Why this question

India with its huge population and imperative development needs is placed in a precarious situation. In this context it is important to discuss the intensity and severity of climate change being witnessed in the country.

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.

Key demand of the question.

The question wants us to write in detail about the global warming and associated effects being witnessed in India. We have to present some statistics related to the previous year in order to present an overall picture.

Structure of the answer

Introduction– write a few introductory lines about the global warming being witnessed these years. E.g According to the IMD, 11 of the 15 warmest years were during the recent past fifteen years (2004-18).

Body-

Discuss further about the global warming being witnessed in India. E.g

- *The rate of increase of temperatures over India is almost similar to the global average.*
- *With the increase in temperatures, more and more extreme weather events are expected to be experienced.*
- *During 2018, the IMD said the annual mean surface air temperature averaged over the country was +0.410°C above the 1981-2010 average.*
- *However, this was “substantially lower” than the highest warming observed over India in 2016, which was +0.720°C.*
- *The winter and pre-monsoon seasons, with an anomaly of +0.590°C and +0.550°C respectively, “mainly contributed to this warming” seen in 2018.*
- *“Mean temperature during the monsoon and post-monsoon seasons (with anomaly of +0.260°C, and +0.310°C respectively) were also above normal.*
- *Temperatures are increasing during both day and night time. Heat waves are increasing in frequency as well as magnitude.”*
- *As a consequence, “extreme rainfall and rainstorms which can cause floods are increasing. Dry spell duration is also increasing”.*
- *Apart from the six cyclonic storms that formed over the northern Indian Ocean, India experienced several “high impact weather” events.*
- *These were extremely heavy rainfall, heat and cold waves, snowfall, thunderstorms, dust storms, lightning and floods.*



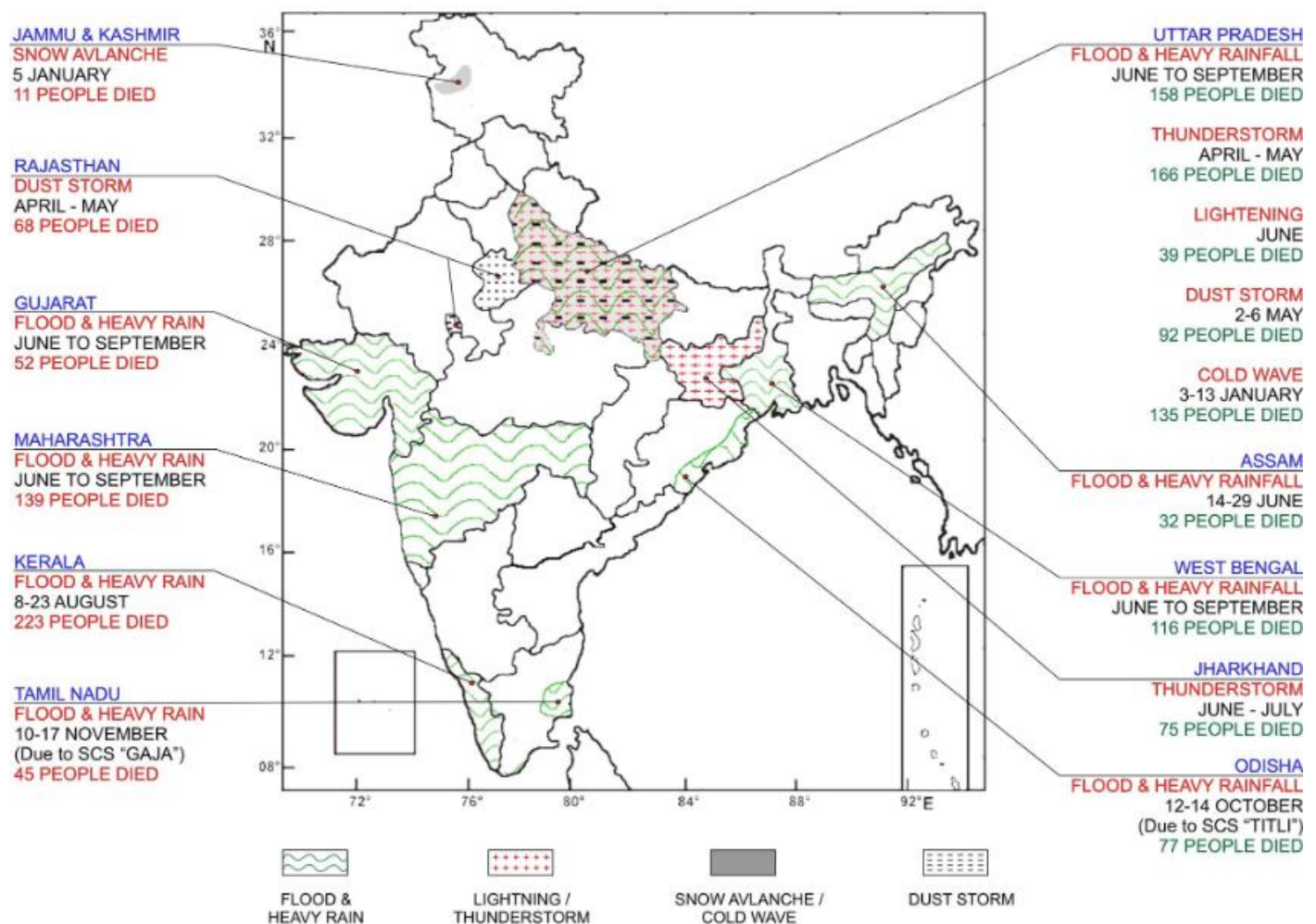
- "Uttar Pradesh was the most adversely affected state during the year which reported near 600 deaths due to cold waves, thunderstorm, dust storm, lightning and floods.
- Flood and heavy rain related incidents reportedly claimed over 800 lives from different parts of the country etc.

Conclusion- based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

In its latest report, on 'Climate of India', India Meteorological Department (IMD), stated that while 2016 was the warmest, 11 out of the 15 warmest years have so far all been within the last 15 years (2004-18). Floods triggered by heavy rains took **more than 800 lives across states in 2018**, which was the sixth warmest year on record, raising concerns over the **increasing human cost of climate change**.

Body:



The increase in temperatures (Global warming) is likely to lead to more extreme weather events across India. The trends of global warming being witnessed in India are:

- IMD also noted that the rate of increase of temperatures over India is almost similar to the global average.
- The annual mean land-surface air temperature for the country was $+0.41^{\circ}\text{C}$ above the 1981-2010 average, showing an increasing warming trend.
- The global warming has in turn triggered many weather events like **floods and heavy rain** (seen in Kerala, Tamil Nadu, Odisha), **Lightning and Thunderstorms** (Uttar Pradesh), **Heat Waves** (Central India and Telangana), **Dust Storms** (Rajasthan) and **Snow Avalanche and Cold waves** (J&K, UP, Delhi, Punjab, Haryana).
- The five warmest years on record in order are 2016 ($+0.7^{\circ}\text{C}$), 2009 ($+0.56^{\circ}\text{C}$), 2017 ($+0.5^{\circ}\text{C}$), 2010 ($+0.54^{\circ}\text{C}$) and 2015 ($+0.42^{\circ}\text{C}$) ever since the nation-wide records commenced in 1901.



- **Uttar Pradesh** was the most affected by extreme-weather events, reporting 600 deaths due to cold waves, thunderstorms, dust storms, lightning and floods.
- The coastal regions bore the brunt of as many as seven cyclonic storms that formed over the north Indian Ocean last year. This was attributed to increased Sea Surface Temperature.
- The anomaly in **winter temperatures** (+0.59°C) and **those of the pre-monsoon** (+0.55°C) season contributed to this warming.
- Kerala floods were due to unusually heavy rains and are very rare over Kerala, which is not conventionally flood prone. The thunderstorm activity also was unique due to prolonged days of activity and severity.
- Temperatures are increasing during both day and night time.
- According to a Quartz report, **heat-waves** have increased in duration. Global warming could further increase **both their frequency as well as intensity**. This would, in turn, pose a threat to public health.
- High-velocity dust storms and thunderstorms seen in North India in April and May last year and then, later in June-July.
- The effects of climate change are also harming the **health of agricultural crops**. The agriculture ministry recently said that the **wheat production in India will decrease by 6-23% by 2050**. The production of maize, paddy, sorghum, mustard, potato, cotton and coconut are also likely to be affected.
- Two Thirds of Glaciers in the Hindu Kush Himalaya Could Melt by 2100. About 15% has already melted due to Global Warming. This was further aggravate weather events in the Northern Indian region.

Conclusion:

Global Warming has the capability of triggering many other weather events. IMD predicts that the impact is getting more and more severe. India has been witnessing increased instances of such events causing great harm to people and resources. There is a need to mitigate the global warming as it impacts the developing nations more strongly.

Q) E-waste is a looming crisis for humanity and calls for immediate action. Discuss. (250 words)

Reference

Why this question

The UN has recently released a report highlighting the huge problem of e-waste across the world. In this context it is important to discuss the problem in detail.

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.

Key demand of the question.

The question wants us to write in detail about the problem of e-waste generation and disposal across the world. We have to highlight the magnitude and extent of the problem as well as highlight the deficiencies in the present management and regulation.

Structure of the answer

Introduction– write a few introductory lines about the recent UN report on e-waste. E.g It notes that the waste stream has already reached 48.5 million tonnes (MT) in 2018 and the figure is expected to double if nothing changes. Moreover, only 20 percent of global e-waste is recycled.

Body-

Discuss in detail about the problem of e-waste. E.g

- *E-waste comprises not just electronic items, but also all electrical equipment that involves anything with a plug, electric cord or battery.*



- It may represent only 2 percent of the solid waste stream, yet it can represent 70 per cent of the hazardous waste that ends up in landfills.
- One-half of all e-waste is personal devices such as computers, screens, smart phones, tablets and TVs, and the rest is larger household appliances, as well as heating and cooling equipment.
- by 2021, the annual total volume is expected to surpass 52 MT, considering the fact that the number of devices connected to the internet is going to be between 25-50 billion by 2020, which is nearly triple the number of people on the planet today.
- By 2050, the volume of e-waste in the worst-case scenario, could top 120 MT annually etc.

Discuss what has been/ should be done to handle the problem. E.g

- E-waste export, though, is regulated under the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal, the regulatory environment is complex and fragmented.
- As many as 67 countries have legislation in place, including India, to deal with the e-waste they generate which involves the 'extended producer responsibility' (EPR) aspect.
- India notified the E-waste (Management) Rules, 2016, on October 1, 2016, which made EPR mandatory.
- Also, there is an acute lack of awareness among people as they simply don't know that there exist collection centres that collect items for recycling. The law will fail to serve the purpose unless these changes are made on the ground etc.

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

A recent UN report titled 'A new circular vision for electronics' warned that 'Tsunami of e-waste' was to hit the world soon. The report notes that the waste stream has already reached **48.5 million tonnes (MT) in 2018** and the figure is expected to double if nothing changes. In India, e-Waste accounts for **70% of the landfills**. (2011 Rajya Sabha Secretariat Study).

Body:

e-Waste is a **behemoth-sized problem that is making the world sicker and adding to environmental degradation**. It lies in the fact that globally, **only up to 20% of e-waste is recycled**. The rest is undocumented and experts predict that it gets buried under the ground in landfills for centuries as it is not biodegradable.

- e- Waste is technically all waste electrical and electronic equipment (WEEE) discarded without the intent of use.
- It comprises not just electronic items, but also all electrical equipment that involves anything with a plug, electric cord or battery.
- In recent years, e-waste has grown faster than earlier anticipated. By 2021, the annual total volume is expected **to surpass 52 MT**, considering the fact that the number of devices connected to the internet is going to be between **25-50 billion by 2020**. **By 2050, the volume of e-waste in the worst-case scenario, could top 120 MT annually**.
- In India, e waste accounts for **4% of global e-waste and 2.5% of global GDP** (2014 figures) – so it has a higher share of e-waste than its share of gross domestic product (GDP).
- The **informal sector** manages about **95% of the e-Waste in India**. Due to the informal and crude processing techniques, the soil, water and air are polluted to a beyond-repairable level. **Example:** Moradabad and Seelampur.
- The **hard-to-recover substances from e-waste like mercury, arsenic** make their home in landfills and keep leaching into ground water.
- **Incineration** is one of the most practiced method of recycling leading to high carbon emissions and poisoning of air with toxic gases.



- The poor implementation of Extended Producer Responsibility as mandated under e-Waste Management Rules, 2016 is another challenge.
- The export of e-Waste from developed countries is another growing problem despite regulations under Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal.

Measures to control the e-Waste growth:

- **Unified effort:** The report calls for systematic collaboration with major brands, small and medium-sized enterprises, academia, trade unions, civil society and associations in a deliberative process to reorient the system and reduce the waste of resources each year with a value greater than the GDP of most countries.
- **Holistic management:** To capture the global value of materials in e-waste and create global circular value chains, use new technology to create service business models, better product tracking and manufacturer or retailer take-back programmes.
- **Scaling up recycling:** The report notes that material efficiency, recycling infrastructure and scaling up the volume and quality of recycled materials to meet the needs of electronics supply chains will all be essential for future production.
- **Incentivization:** The producers should also have buy-back or return offers for old equipment, and plans to incentivise the consumer financially. The report also advocates a system of 'urban mining' by strengthening the extended producer responsibility provision.
- **Job potential:** If the electronics sector is supported with the right policy mix and managed in the right way, it could lead to the creation of millions of decent jobs worldwide.
- **Awareness & Education:** there is an acute lack of awareness among people as they simply don't know that there exist collection centres that collect items for recycling. The law will fail to serve the purpose unless these changes are made on the ground.

Q) Declaring Climate Change as an international security issue is the best approach to handle the issue. Comment. (250 words)

The hindu

Why this question

India has questioned the rush at the UN to declare climate change an international security issue. It is therefore important to analyze and discuss upon the issue in detail.

Directive word

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

Key demand of the question.

The question wants us to express our opinion as to whether there is a need to declare climate change as an international security issue, what repercussions it will have and whether it will be the best way to solve the issue of climate change. We can form our opinion in favour of or against the statement but we have to substantiate our opinion with proper arguments and facts.

Structure of the answer

Introduction– Write a few introductory lines about the issue. E.g mention the UN idea being recently mulled about designating climate change as an international security issue.

Body-

Discuss the pitfalls of such decision being implemented, and why climate change can't be handled by such an approach. E.g

- *the trends of heat waves, heavier rains, higher sea levels and severe damage to agriculture "represent a security risk for the entire world."*
- *But a "mere decision of the Council" to take over enforcement of climate change action will disrupt the Paris Agreement and multilateral efforts to find solutions*



- *“The relationship between climate-related risks and conflict is complex and often intersects with political, social, economic and demographic factors,”*
- *The decision would extend UN’s reach beyond what is allocated in the UN Charter by redefining other issues, even as it struggles to fulfil its primary functions.*
- *It would lead to shifting climate law-making from the inclusive UN Framework Convention of Climate Change (UNFCCC) to decision-making by a structurally unrepresentative institution with an exclusionary approach decided in secretive deliberations.*

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

Introduction:

Climate change will be the defining test of global civilization in the twenty-first century. While climate scientists have been aware of the effect of carbon emissions on average worldwide temperatures for several decades, the trends of heat waves, heavier rain events, higher sea levels and severe damage to agriculture “represent a security risk for the entire world”.

The UN has been mulling to designate climate change as an international security issue.

Body:

The idea of declaring Climate change as International security issue is based on the **rationale that the effects of climate change will lead to violence in near future**. The conflicts over water, food or energy will become more common and many people will be forced from their homes. The UNSC believes that **the move will help heighten public awareness and even help in surmounting opposition**. However, India has questioned the rush at the UN to declare climate change an international security issue, potentially giving the Security Council the right to take action on it.

The pitfalls of such a decision include

- **Overreach:** India has been wary of the Council’s mission creep as it tries to extend its reach beyond what is allocated in the UN Charter by redefining other issues, even as it struggles to fulfil its primary functions. The decisions taken **may affect sovereignty of nations**.
- **Disruption of Global agreements:** A “mere decision of the Council” to takeover enforcement of climate change action would disrupt the Paris Agreement and multilateral efforts to find solutions.
- **Unitary decision-making:** The composition of the UN Security Council does not reflect the contemporary world due to only 5 permanent members with veto power and 10 non-permanent members who get elected to represent their region.
- **Opaque decisions:** climate justice cannot be served by shifting climate law-making from the **inclusive UN Framework Convention for Climate Change (UNFCCC)** to decision-making by a structurally unrepresentative institution with an exclusionary approach decided in secretive deliberations.
- **Needs Holistic View:** The relationship between climate-related risks and conflict is complex and often intersects with political, social, economic and demographic factors.
- **Needs humanitarian solutions:** The problem of climate change inherently require non-military responses rather than overly militarised or nationalistic solutions to problems.
- **Increased unaccountability:** Countries which fail to their obligations under the Paris Agreement to cut their emissions or fail to provide obligatory financing for climate change programmes cannot be held accountable for climate change.
- **Rights of Refugees:** Such a move can dehumanize refugee victims, portraying them as the true threat to the powerful countries to which they are trying to migrate.

Conclusion:

India supports cooperation and action that are consistent with the principle of common but differentiated responsibilities to prevent and address serious disasters linked to climate. The idea of designating climate change effects as security issue needs to **deliberated and well-thought out to ensure climate equity and climate justice to all**.



Topic – Disaster and disaster management

Q) The disaster in Meghalaya shows that lives of people matter little in India. Examine. (250 words)

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

Why this question

The article highlights the apathy shown by policymakers towards the weaker sections of the society who keep on dying in accidents or tragedies one after the other. These instances remain in public memory for some time and thereafter, it ceases to bother one. The recent Meghalaya tragedy was one such incident which could have been averted but wasn't because no one was paying attention. Hence this question

Key demand of the question

The question expects us to first discuss the reasons behind the tragedy in Meghalaya, and underline the causes why the disaster happened. Thereafter, we have to bring out that such disasters are a lack of proactive steps taken by the government and in certain cases, downright negligence. We have to give our opinion and discuss way forward.

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 – Highlight about the recent incident in Meghalaya and other such incidents where a number of people have died in totally avoidable circumstances.

Body

Explain the causes behind the disaster in Meghalaya

- Highlight the tardy response response of the Centre and the State which has exposed the extraordinary indifference in government to labour welfare and the law.
- Highlight that such mines were being operated despite ban by NGT which again highlights the apathy of the state.
- Explain that Justice B.P. Katoki committee appointed by the NGT had warned about the continued operation of the illegal mines. However, Meghalaya government failed to act and take appropriate actions.

Discuss about the other such incidents such as death caused during demonetization, death due to hunger in Jharkhand etc which necessitated to enquiries and no corrective measures highlighting that lives of common people matter little and shows governmental apathy

Explain how the situation can be improved

Conclusion – Highlight that such incidents reflect utter neglect on the part of the state and discuss the way forward.

Introduction:

The collapse of a coal mine in Meghalaya's East Jaintia Hills, trapping at least 15 workers who are still missing and are feared dead, has thrown the spotlight on a procedure known as "rat-hole mining". Although banned by the National Green Tribunal in 2014 and upheld by the Supreme Court, it remains the prevalent procedure for coal mining in Meghalaya. The **poor implementation of the orders, state's inefficiency for quick disaster management** lead to many such avoidable tragedies.

**Body:**

The **causes** behind the disaster in Meghalaya are

Loopholes in the law:

- The ban has been rendered meaningless by the Supreme court-sanctioned permission to transport “already-mined” coal till January 2019. Mine owners have used this loophole to continue mining operations illegally.
- The State of Meghalaya has promulgated a mining policy of 2012, which does not deal with rat-hole mining, but on the contrary, deprecates it.
- Meghalaya comes under the **6th Schedule of Constitution**. The provisions allow for community ownership of land and autonomy over its use. However they are taken over by private players and tribals are left helpless.

Lack of Political and Executive will:

- The unholy nexus of Politicians and Contractors: About 33% of political candidates have stakes in coal mining and transport companies, thus lobbying against the ban order.
- A committee (headed by Retired Justice **P. Katoki**) appointed by the National Green Tribunal (NGT) has blamed poor implementation of NGT order by executive.

Lack of Alternate Sources of Livelihood:

- The tardy response of the Centre and the State which has exposed the extraordinary indifference in government to labour welfare and the law.
- It is a cheap method for the mine owners to extract coal and presence of abundance of Migrant labour.

Much like the Meghalaya tragedy, **other disasters**—some driven by policy and others where policymakers look away—show how little the lives of the poor matter in India.

- Over the past year, at least 17 people are likely to have succumbed to hunger in Jharkhand. The inability to link Aadhar card with the ration cards of PDS is the reason.
- The botched demonetization exercise in 2016: More than a 100 people are estimated to have died either while standing in queues for long hours or for failing to provide new banknotes while getting treated in hospitals.
- An uncounted number of labourers who are paid a pittance continue to die because of silicosis after inhaling stone dust while working in quarries in states such as Rajasthan and Gujarat.
- In NCR region, more than 20 labourers have died in the past year alone from inhaling poisonous gases while cleaning sewers and sewage treatment tanks,

The above incidents reflect utter neglect on the part of the state. Ceremonial enquiries and lack of corrective measures highlights that lives of common people matter little and shows governmental apathy.

Way Forward:

- Co-ordinated working of Centre, State and Local Governments to achieve the true objective of citizen welfare.
- Holistic policymaking which involves the gauging of possible after-effects, Effective Disaster Management goals as a part of the policies.
- Effective implementation of the policies at the grass-roots level following the rule of law. **Example:** Prevention of Manual Scavenging act.
- **Sensitivity training to public servants** so that the policies are more citizen-centric and empathetic.
- Safety trainings to employees and localized Disaster Response teams should be present to reduce the wastage of precious time post disasters.
- Occupational disasters can be avoided by effective regulations and intermittent renewal of licences of firms based on safety regulations. **Example:** Compulsory face masks and goggles and by using wet drilling in stone quarries.
- Alternative employment or economic engagement for the coal mine owners and labourers must be provided. **Example:** MGNREGA
- **Innovative use of technology** to reduce harm to human lives. **Example:** Pit cleaning robots as seen in Thiruvananthapuram; Drones and Cameras for monitoring work conditions.



- Involvement of Social Activists, NGO's and Local community and education of the people about perils of occupation.

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

Q) Without being sincere about enlarging the democratic space in Kashmir, every call for de-escalation will be seen by people as an invitation to surrender and will be vehemently resisted. Comment. (250 words)

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

Why this question

Situation in Kashmir has worsened with time as can be gauged from the number of civilian and security personnel killings in 2018, one of the highest in this decade. The article provides an insider view of the present distress in the valley and calls for deepening and strengthening of democracy.

Directive word

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

Key demand of the question.

The question wants us to express our knowledge and understanding about the present situation in Kashmir and express our opinion as to why/ why not, without being sincere about enlarging the democratic space in Kashmir, every call for de-escalation will be seen by people as an invitation to surrender and will be vehemently resisted.

Structure of the answer

Introduction– write a few introductory lines about the present situation in Kashmir. E.g mention about the fall of BJP-PDP coalition and governor's rule and also mention that 2018 saw the highest number of casualties since 2008 etc.

Body-

Discuss the relationship between shrinking democratic space and rise of violent forms of protest against the government. E.g

- *Discuss the erosion of democracy and democratic institutions in the valley- interference by the central govt. In the functioning of state govt; no respect for rule of law and accountability on part of the government; rise in corruption in the state etc.*
- *Voter-turnout has been time again misused to negate the legitimacy of the political aspirations of the people and governance issues are used to confuse their narrative.*
- *If the people's call for the restoration of their political agency is responded to only by deploying stronger and more lethal weapons, then this asymmetric war is not ending anytime soon.*
- *The way out of the deadlock in Kashmir is to strengthen democracy. The Indian state must be extra accommodating of dissent, when dealing with Kashmir. Those who win elections must have the freedom to truthfully represent their electorate. The existing "mainstream" political parties must not feel threatened by intrigues originating in Delhi etc.*

Conclusion– based on your discussion, form a fair and a balanced conclusion on the given issue.

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:**

Outrage over the Shopian rape incident, invocation of collective conscience during Afzal Guru's execution, the capture of the newsrooms in Delhi, the sanctimonious politics of rescue during the September 2014 floods, coalition government in 2015, pellet-gun-related mass blinding during the Burhan Wani agitation were some of the major provocations in last decade that pushed Kashmiris towards a suicidal upsurge against the Indian state.

Shrinking democratic space and increasing violence can be studied under the following heads**1. Political reasons:**

- **Reducing Political Participation:** The state saw the lowest voter turnout of 7.1% in bypoll election at Srinagar in 2017, when the 2014 state assembly elections saw 65% and 2008 saw 60%.
- Incidents like rigging of the 1987 elections has reduced faith of the people in democratic processes.
- The lack of faith in the electoral process also stems from the fear that voter-turnout is misused to negate the legitimacy of the political aspirations of the people and governance issues are used to confuse their narrative
- No respect for rule of law and accountability on part of the government; rise in corruption in the state.
- The paradox that those who represent the sentiment do not participate in the electoral process and those who participate in the electoral process do not represent the sentiment.
- Elections have been held regularly since 1996, but there is a feeling that the elected representatives are either a disempowered lot.
- The upper-hand of the Central Government vis-a-vis the state government.
- The elected representatives are misrepresenting their electorate by not speaking out about the basic Kashmir issue, for their personal gains.
- The central government sent a special representative to listen to people's "grievances" but no one seemed interested in bartering "aspirations" for "grievances" and the dialogue couldn't take off.

1. Security reasons:

- Continued application of Armed Forces Special Protection Act (AFSPA), curfews, presence of armed forces has increased the anger of people. E.g.: the human shield incident goes against human dignity.
- The right to protest, dissent (Article 19) has been curbed leading to snatching away of the political freedom of the people.
- The Supreme Court in **Anita Thakur v Government of J&K** has reaffirmed that in the name of maintaining law and order, State has not received a license to trample upon the sacrosanct Fundamental Rights of ordinary citizen.
- People's call for the restoration of their political agency is responded to by deploying stronger and more lethal weapons.

• Non-State Actors:

- Communalisation of political issue has flared up the situation by hindering the functions of democratic institutions.
- The non-state actors like Separatists in both regions are active and present ideas to youth which distracts them from focusing on their careers in different fields.
- The terrorist organisations have been successful in radicalising many youths through use of Internet and spreading disbelief in democracy.

1. Socio-Economic reasons:

- Despite framing of developmental policies, actual implementation is lacking at ground level. RTE although a fundamental right, many areas do not have necessary infrastructure to support education leading to poor knowledge of their rights.
- Women empowerment is at its lowest level and high rates of unemployment add to the frustration of the people.
- Lack of socio-economic development leads to unrest and violence.

IMPACTS:

- Increasing extremism and a fertile breeding ground for non-state actors like terrorists, extremists.



- Loss of faith and credibility in the Democracy and growing demand of secession from India.
- Alienation of the Kashmiri youth and higher vulnerability to radicalisation.
- Increased casualties of security forces. When bread-winners of family is killed, it pushes the family into poverty.
- Failure of Government Schemes.

Way Forward:

- Kashmir needs non-violent and democratic methods to achieve political aspirations.
- The way out of the deadlock in Kashmir is to strengthen democracy.
- The Indian state must be **extra accommodating of dissent**, when dealing with Kashmir.
- Those who win elections must have the freedom to truthfully represent their electorate.
- The existing “mainstream” political parties must not feel threatened by intrigues originating in Delhi.
- The perception that it is not the ballot but the deep-state that changes regimes in Kashmir must end.
- Involvement of all genuine stakeholders in dialogue to get the representation of all voices of Kashmir.
- In the true spirit of free speech, public debate must be allowed to include the whole range of issues, from governance to regional aspirations to issues of minority communities like the Kashmiri Pandits and, most importantly, the right to self-determination.
- **Strengthening of Local Governments** which involves people at the grassroots level.

Conclusion:

- There is a need to devolve true autonomy to the democratic institutions of J&K in letter and spirit. The spirit of accommodation and tolerance should be inculcated and must be practiced from lowest to top echelons of State to alleviate the mistrust of people in latter.