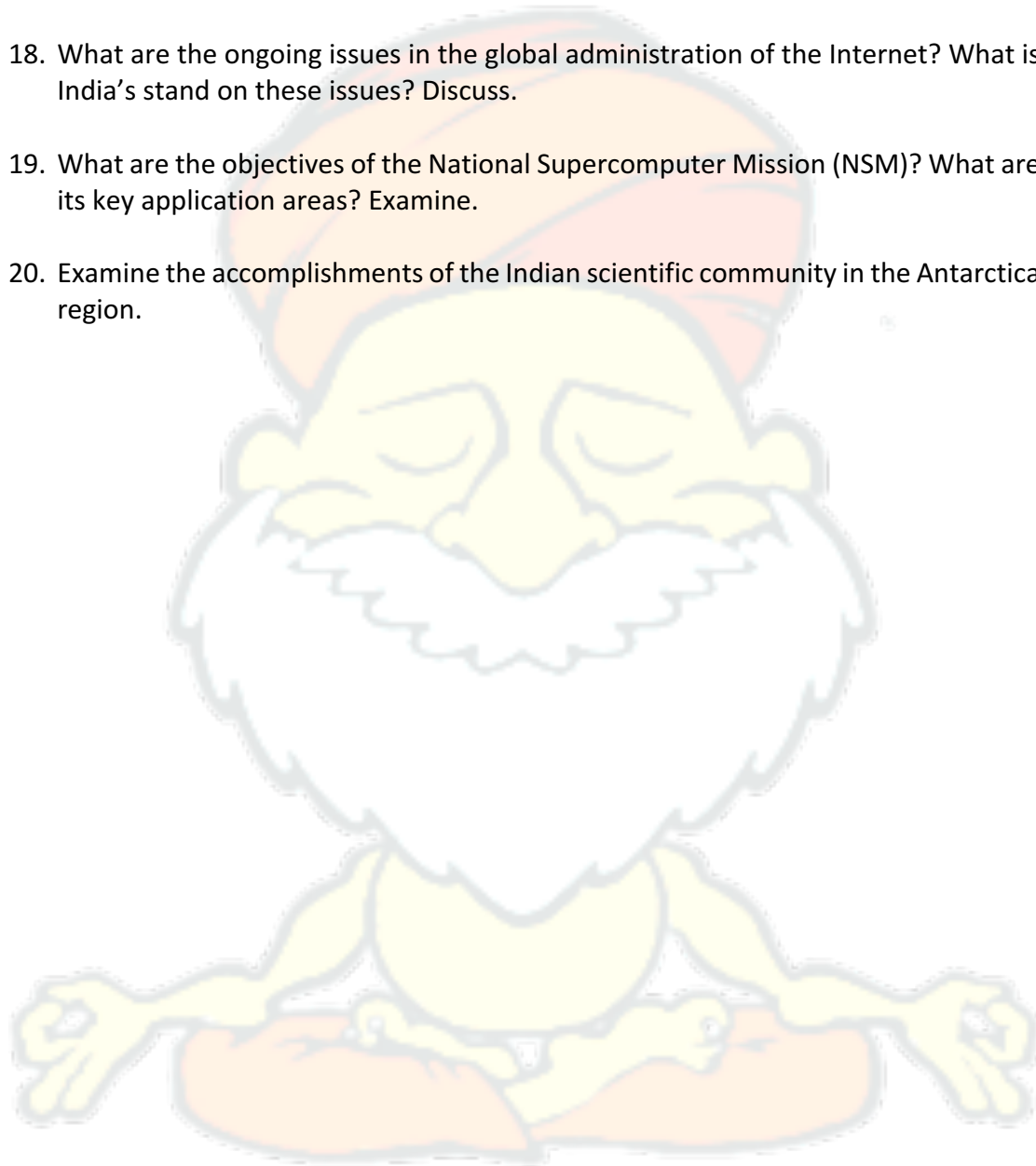


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**IMPORTANT NOTE: This is a Synopsis, not a Model Answer.** This synopsis intends to add more content and dimensions to your preparation. In any case, do not jump into conclusion considering this to be a model answer.

1. What have been the shortcomings of planning in India? What are the recent changes in India's planning discourse? Examine.

**Approach** – A straightforward question where in you need address the question in two parts, the first part throwing light on the shortcomings of planning in India and the second part examining the recent changes in India's planning discourse.

|  |  |
|--|--|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Capitalist planning and centralized planning</li><li>• Five year plans</li><li>• Plan and Non-plan expenditure</li><li>• Social Justice</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Allocation of resources</li><li>• National Planning Commission</li><li>• NITI Aayog</li><li>• Advisory Body &amp; Various action plans</li></ul> |
|--|--|

### Introduction

Planning is a continuous process that involves choices and decision making about allocation of available resources with the objective of achieving effective and efficient utilisation and growth of these resources. In India, planning is done both at the centre as well as the state level. Economic planning is done by the central authority after an economic survey where policy objectives are designed based on the future development goals of the country.

### Body

- In India, until 2014, planning was the responsibility of the National Planning Commission that was established on March 15, 1950. The first five-year plan was prepared by the Planning Commission for the period 1951-56.
- The objectives of economic planning in India were Economic Growth and Development, Increase in Employment, Increase in Investment, Social Justice and Equity, Balanced Regional Development and Modernisation.
- In this light, the shortcomings of planning in India can be seen from the following points:
  1. **Slow Growth** - The rate of increase of national income and per capita income has been slow in India as compared to developing countries like China, which have been able to achieve more than 10 percent growth rate consistently. India was able to achieve a growth rate of only about 4 to 5 percent during the pre-reform period.
  2. **Lack of Pragmatic Approach** - Another shortcoming is that planning lacks the practical outlook. This has been formulated on the basis certain ideologies rather than keeping in view the actual problems facing the country.
  3. **Neglect of Agriculture** - The five year plans failed to pay attention to the agricultural sector except for the first five-year plan. As a result, the agricultural growth rate declined from 3.62 percent in 1991-92 to 2.81 percent during 2019-20. And the share of agriculture in GDP declined from about 50 percent during 1950-51 to about 16 percent of the GDP in 2020.

4. **Faulty Implementation** - Faulty implementation of various plans is one of the major obstruction in the path of its success. To Sixth Five Year Plan, the deficiencies in implementation are largely due to inadequate planning of projects at the initial stages. It causes slippages in schedule and poor performance. There are other factors which have been identified for the faulty implementation of plans.
5. **Unemployment** - The plans have failed to address the problem of unemployment which is a cause of many social evils. The unemployment rate has marginally reduced from 8.35 percent during 1972-73 to about 7.8 percent in 2019-20.
6. **Over-Ambitious Plans** - One of the reasons of failure of Five Year Plans is of unduly over ambition. The planners never bothered about the fact that we neither have the adequate financial resources nor the requisite administrative capacity to implement such huge plans. The gap between the targets and achievements underlines the failures of the plans.
7. **Widespread Poverty** - Failure to address the problem of unemployment has resulted in widespread poverty in the country. It was only during the fifth five-year plan that measures were taken to tackle poverty directly by introducing various poverty alleviation programmes. The poverty rate in India declined from about 26.1 percent in 2000 to 21.9 percent in 2011.
8. **Rising Inequality** - With rapid economic growth, the country has been witnessing a rise in the level of inequality. It has been estimated that the richest 1 percent own about 73 percent of the country's wealth (Oxfam Report 2017). Poor performance of the agricultural sector and lack of investments in rural infrastructure are cited as the primary reason for such rising inequalities.

In India the role of planning activities was played by the Planning Commission (until 2014), afterwards NITI Aayog, a policy Think Tank replaced Planning Commission with an aim to make planning approach more inclusive and bottom-up.

- Most important difference is that Niti Aayog has no power to grant funds or make decisions on behalf of states. It is only an advisory body.
- The charter of NITI Aayog describes it as a body that should act as a catalyst of change in India's federal and complex socio-economic system. The Niti Aayog launched a three-year action plan from April 1, 2017, replacing the decades-old Five-Year Plans where the 12<sup>th</sup> Plan was the last one.
- The three-year action plan, which will be part of a seven-year strategy paper and a 15-year vision document is the new discourse in planning of India which follows a short-term, medium term and long term approach and thus a coherent policy framework.
- Further, the 3 year action document only provides a broad roadmap to the government. The document does not detail any schemes or allocations as it has no financial powers.
- Since it need not be approved by the Union Cabinet, its recommendations are not binding on the government. With the government having done away with the categorisation of expenditure into plan and non-plan heads, the

documents of the Niti Aayog have no financial role. They are only policy guide maps for the government.

**Conclusion**

The achievements and failures of the economic planning in India, thus, reveal the underlying gaps in the process of planning. It is an undeniable fact that the current level of growth and development that the country has achieved could not have been possible without planning where Planning Commission played a crucial role but the Indian Planning scheme requires a transformational approach to deal with 21st century challenges.



2. Comment upon the sectoral distribution of employment in India. What are the challenges posed by the prevalent distribution? Analyze.

**Approach** – Again a straightforward question divided into two parts where the first parts demands comment upon the sectoral distribution of employment in India whereas the second part demands analysis of the challenges posed by the prevalent distribution of the above.

|   |   |
|---|---|
| <p><b>Related concepts:</b></p> <ul style="list-style-type: none"> <li>• LPG reforms</li> <li>• Service sector boom</li> <li>• Make in India &amp; Stand up India</li> <li>• Labor intensive sectors</li> </ul> | <p><b>Keyword in the answer:</b></p> <ul style="list-style-type: none"> <li>• Liberalization reforms</li> <li>• Agricultural dependence</li> <li>• Disguised unemployment</li> <li>• Self-employed &amp; Casualization</li> </ul> |
|---|---|

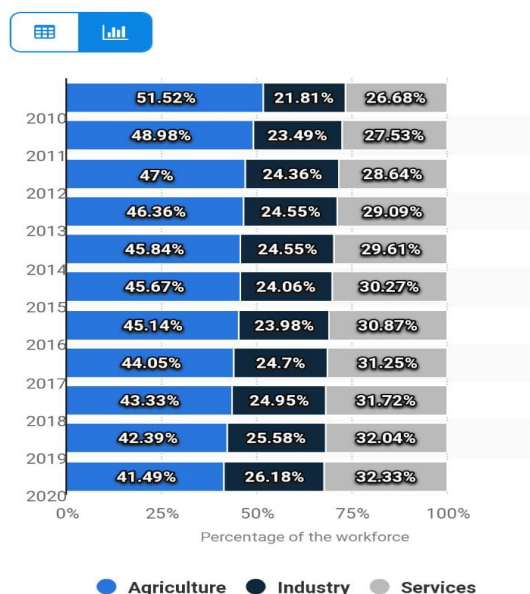
**Introduction**

Employment has featured as an important item in the development agenda in India. In the initial years of development planning, unemployment was not expected to emerge as a major problem; yet care was taken to see that employment of a reasonable magnitude is generated in the development process to productively employ the growing labour force. But over the years, sectoral distribution of employment in India has generated multiple issues.

**Body**

- With differential growth of employment among different sectors of the economy, there have obviously been changes in **the structure of employment.**
- Among the three major sectors by broad division of economic activity, namely, **agriculture, industry and services**, there has been a decline, as expected, in the share of agriculture. The structural changes have, however, been slow.
- The sectoral distribution of employment in India is as discussed in the diagram besides –

**India: Distribution of the workforce across economic sectors from 2010 to 2020**



The above given distribution of employment across multiple sectors presents with it multiple challenges, which are discussed in the points below:

1. **Dependence of workforce on Agriculture** – Agriculture contributes only 16% to the country's GDP but employs more than 40% of labour force which leads to problems like disguised unemployment and seasonal unemployment.
2. Further, excessive dependence on agriculture for employment in rural areas has led to issues like **stagnation of incomes and prevalence of poverty** among large sections of population as well as the outward migration towards urban areas in search of jobs.
3. Over the period of time, the farm sector has indeed shrunk but the transformation of the economy has been limited by **the paucity of productive jobs and the lack of skilled workers**.
4. The growth of jobs in the post-liberalization era has been very narrowly **concentrated in a few sectors** where nearly a third of new jobs added in the Indian economy in the post-liberalization era have been in the construction sector alone.
5. The employment in manufacturing sector has stagnated at around 25% where changes in manufacturing processes, especially the potential for **increased automation**, will limit the benefits of labour-intensive growth. This will hamper effective utilisation of demographic dividend in India.
6. Further, MSME's also face challenges like a **disproportionate share of microenterprises**, with 98% of companies employing fewer than 10 workers, high rate of informality, with 90% of employment generated in the informal sector.
7. Importantly, over 75% of the employed were engaged in **self-employment and casual wage employment**. The disproportionately high share of those who are self-employed or working as casual wage labour is worrying for multiple reasons as social security measures are hampered.
8. There has been a decline, albeit slow, in the share of self-employed, from 61 per cent in 1972-1973 to 53 per cent in 1999-2000. The share of regular wage-salaried workers has, however, stagnated at around 14 per cent, while that of casual workers has increased from 23 to 33 per cent.
9. The decline in **the LFPR - the Labour Force Participation Rate (LFPR)**, defined as the share of working age population (15+) which supplies or seeks to supply labour for production, stood at a mere 49.8% in 2017-18, a sharp decline of 6.1 percentage points from 2011-12. For females, this figure was a paltry 23.3%, down from 31.2% in 2011-12.
10. Structural shifts in the economy due to **digitalisation** are altering the kinds of jobs being created and the skills required for individuals to remain competitive. These structural shift relates to increasing trends of automation as well as use of artificial intelligence and machine learning processes in the production field.

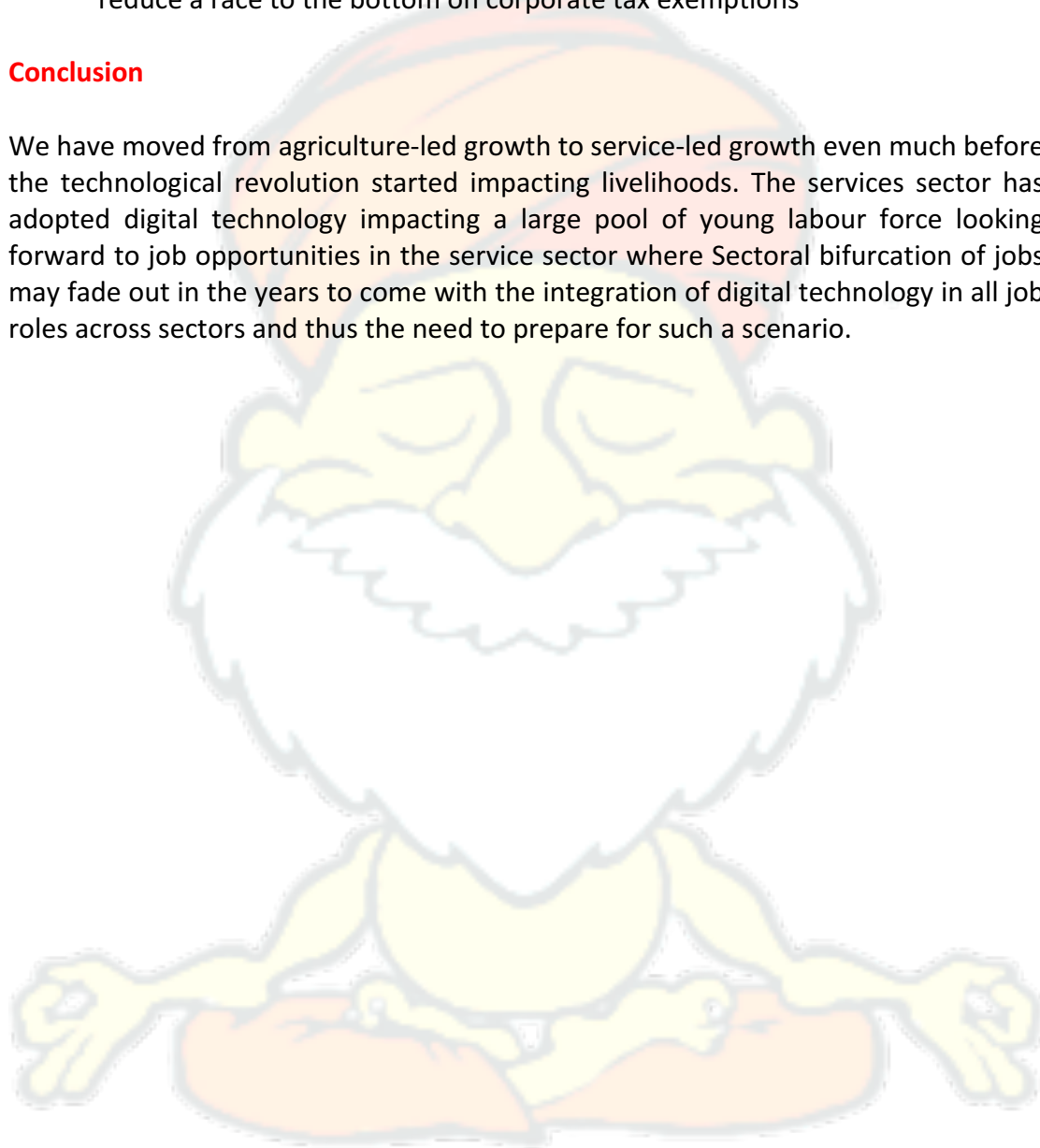
#### **Way Forward –**

- Shift towards labour-intensive sectors: Focus should towards labour-intensive sectors to create more jobs.

- Inclusive & decent jobs: Growth in jobs must be inclusive and new jobs need to be decent and secure with better work conditions including social security benefits and the right to organize.
- Investment to increase productivity: Substantially higher investments in health and education to improve productivity as these two sectors could be large employment generators in the future.
- Progressive taxation: There must be a greater focus on progressive taxation to reduce a race to the bottom on corporate tax exemptions

**Conclusion**

We have moved from agriculture-led growth to service-led growth even much before the technological revolution started impacting livelihoods. The services sector has adopted digital technology impacting a large pool of young labour force looking forward to job opportunities in the service sector where Sectoral bifurcation of jobs may fade out in the years to come with the integration of digital technology in all job roles across sectors and thus the need to prepare for such a scenario.





3. What are the main elements of inclusive growth? What are the most potent threats to the objective of achieving inclusive growth in India? Discuss.

**Approach** – It expects students to write about inclusive growth in the first part and in the second part, you need discuss the potent threats related achieving inclusive growth in India.

|   |   |
|---|---|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Social development</li><li>• Inclusive growth</li><li>• Equitable growth</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Regional disparities</li><li>• Agriculture backwardness</li><li>• Social exclusion</li><li>• Distribution of income</li></ul> |
|---|---|

### Introduction

The concept of inclusive growth focuses on equitable growth for all sections of society. This involves ensuring that fruits of growth and development reach the poor and marginalized sections as well. Inclusiveness is a multi-dimensional concept.

### Body

Elements of Inclusive Growth -

- Poverty Reduction.
- Employment generation and Increase in quantity & quality of employment.
- Agriculture Development.
- Industrial Development.
- Social Sector Development.
- Reduction in regional disparities.
- Protecting the environment.
- Equal distribution of income.

Threats to the objective of achieving inclusive growth:

1. **Unemployment** - As per the Periodic Labour Force Survey (PLFS) of NSSO, the unemployment rate among the urban workforce was 7.8%, while the unemployment rate for the rural workforce was 5.3% totalling the total unemployment rate at 6.1%. The quality and quantity of employment in India are low due to illiteracy and due to over-dependence on agriculture.
2. **Poverty** - 373 million Indians continue to experience acute deprivations of poverty. Additionally, 8.8% of the population lives in severe multidimensional poverty and 19.3% of the population are vulnerable to multidimensional poverty. India demonstrates the clearest pro-poor pattern at the sub-national level. As per the Multidimensional Poverty Index (MPI) 2018, India lifted 271 million people between 2005-06 and 2015-16.
3. **Agriculture Backwardness** - Around 44% of people in India have agriculture-related employment but its contribution to the Indian GDP is only 16.5% which lead to widespread poverty. Declining per capita land availability, decline in

agriculture yield due to climate change, land degradation and unavailability of water, disparities in growth across regions and crops are also main threats to inclusive growth.

4. **Issues with Social Development** - Significant regional, social and gender disparities, Low level and slow growth in public expenditure particularly in health and education, Social indicators are much lower for OBC, SC, ST, and Muslims and also Malnutrition among the children India ranks 102nd in Global Hunger Index.
5. **Social exclusion** - It is often solidified through discrimination, which can have physical and mental health costs. The economic cost of social exclusion can be captured by forgone gross domestic product (GDP) and human capital wealth. Exclusion or the perception of exclusion may cause certain groups to opt out of markets, services, and spaces, with costs to both individuals and the economy.
6. **Regional Disparities** - Regional disparities are a major concern for India. Factors like the caste system, gap between rich and poor etc. contribute to the regional disparities which create a system where some specific groups hold more privileges over others. For example, Kerala is the most literate state with 93.1% literacy, on the other hand, literacy rate of Bihar is only 63.82%. In terms of per capita income, Goa's per capita income is Rs 4,67,998 in 2018 while per capita income of Bihar is just one-tenth of that i.e. Rs 43,822.

NITI Aayog's Strategy for New India @75 has the following objectives for the inclusive growth -

- To have a rapid growth, which reaches 9-10% by 2022-23, which is inclusive, clean, sustained and formalized.
- To Leverage technology for inclusive, sustainable and participatory development by 2022-23.
- To have an inclusive development in the cities to ensure that urban poor and slum dwellers including recent migrants can avail city services.
- To make schools more inclusive by addressing the barriers related to the physical environment (e.g. accessible toilets), admission procedures as well as curriculum design.
- To make higher education more inclusive for the most vulnerable groups.
- To provide quality ambulatory services for an inclusive package of diagnostic, curative, rehabilitative and palliative care, close to the people.
- To prepare an inclusive policy framework with citizens at the centre.

### **Conclusion**

Inclusive growth is of vital importance to fight inequality in all aspects and promote holistic development of individuals in the country. Inclusive growth is necessary for the sustainable and holistic development of all sections of the society. For economic, social and political empowerment of its citizens, the core components of the Inclusive growth must be tackled.

**4. What has been India's fiscal framework during COVID-19? Has it been able to put the economy on track? Critically comment.**

**Approach** – It expects students to write about fiscal framework during COVID-19 in the first part of the answer while the second part necessitates critical comment on how it helped to put economy on track.

|  |  |
|--|--|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Reviving economy</li><li>• Fiscal framework</li><li>• Economic package</li><li>• Stimulus boost</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Corporate and business friendly</li><li>• National lockdown</li><li>• Fiscal cushion</li><li>• Tax relief</li><li>• Liquidity injections</li></ul> |
|--|--|

**Introduction**

A crisis of the scale of the COVID-19 pandemic presents infinite problems across geographies, communities, industries, administrative agencies, and support services in a country as vast, diverse and densely populated as India. Fiscal and monetary framework depends largely on the planning horizon to address relief measures to cushion the nationwide lockdown, and to deal with the socioeconomic aftereffects of the pandemic in terms of public healthcare, priorities for state expenditure, and regulations to operate businesses and establishments in the near future.

**Body**

Under the Special economic and comprehensive package of INR 20 trillion (~ 10% of India's GDP) and the call for building a self-reliant India, the Finance Minister announced various fiscal measures. Some of which include -

1. Government announces tax reliefs:
  - Immediate issuance of income-tax refunds
  - Reduction in rates for Tax Deduction at Source (TDS) / Tax Collection at Source (TCS)
  - Extension of due date for filing of income-tax return
  - Extension of due date for filing tax audit report
  - Extension of time period for payment under Vivad Se Vishwas Scheme
2. For Businesses and MSMEs:
  - Special Liquidity Scheme for Non-Banking Finance Companies (NBFCs), Housing Finance Companies (HFCs) and Micro Financial Institutions (MFIs)
  - Liquidity injection for Power Distribution Companies (DISCOMs)
  - Partial credit guarantee scheme 2.0 for liabilities of NBFCs/MFIs
  - Fund of funds for MSMEs INR 500 billion.
  - Subordinated debt for MSMEs INR 200 billion.
  - Automatic collateral free loans INR 3 trillion.

3. Fillip to employment including for returning migrant workers:
  - Additional allocation of funds for Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).
4. Corporate friendly laws:
  - Relaxation in IBC matters.
  - Ironing out certain procedural aspects of Indian corporate laws.
  - Decriminalisation of offences under the Companies Act, 2013 (2013 Act).
5. Health sector:
  - To increase investments in public health and to prepare India for any future pandemics.
6. Increasing Borrowing limit:
  - Proposal to link enhanced borrowing by states to specific reforms.
7. Fiscal framework enabling to put economy on track:
  - These measures assisted with the overall ease of doing business in India. The lowering of prescribed penalties will reduce financial burden on small companies, one person companies, producer companies and start-ups.
  - The special liquidity will protect those MSMEs that show signs of being able to revive despite being categorised as NPA. The measure will also protect jobs and prevent insolvencies in the near term.
  - This will give impetus to the public health infrastructure of the country, which has been under severe pressure in dealing with the pandemic.
  - Additional funds to MGNREGS expected to generate nearly 3 billion person days of work in aggregate.
  - Support increased by enhancing the Viability Gap Funding in social infrastructure sector, which should encourage faster development of such infrastructure.
  - The relief measures/steps taken by the government will help taxpayers in addressing liquidity issues.

Fiscal framework lacks measures to definitive and urgent steps to revive the economy back to good health as -

- The slowdown in economic activity is a function of both external factors such as the lockdown and behavioural changes of people and enterprises, driven by fear.
- India entered the COVID-19 crisis in a precarious position, with slowing growth, rising unemployment and a strained financial system. Need more effective fiscal policy to address crisis.
- The COVID-19 pandemic and the subsequent regulations have had adverse impacts on livelihoods and the larger economy. The economic impact of COVID-19 is expected to be bigger than the health impact itself.
- Economic contraction does not just imply a decrease in GDP numbers but marks a reversal of years of progress.

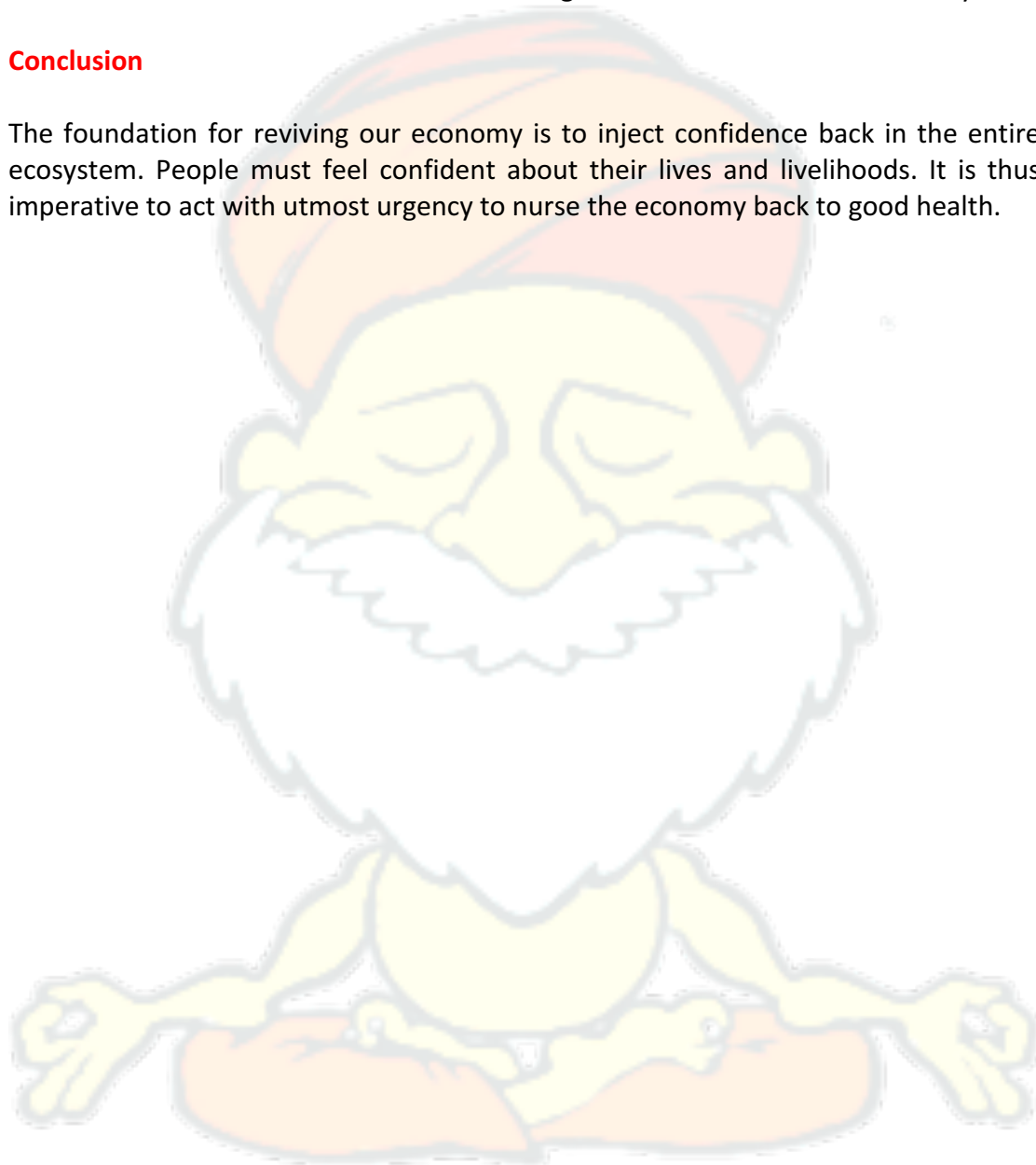
- The economic contraction and the subsequent shortage of financial resources will adversely impact the state's ability to feed and educate the children.

Policy measures to address this challenge:

- Direct cash assistance for the poor.
- Borrow from International Institutions or deficit monetisation by RBI
- Measures to restore confidence among investors and overall financial system

### **Conclusion**

The foundation for reviving our economy is to inject confidence back in the entire ecosystem. People must feel confident about their lives and livelihoods. It is thus imperative to act with utmost urgency to nurse the economy back to good health.



**5. What are the impediments of implementing land reforms in India's federal polity? Examine. What are the recent developments in the enactment of land legislations in India? Discuss**

**Approach** – It expects students to write about land reforms in India and its impediment in implementing also, highlight upon recent developments in enactment of land legislation in India.

|  |   |
|--|---|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Land reforms</li><li>• Land legislation</li><li>• 1<sup>st</sup> Constitutional Amendment</li><li>• Bhudan Movement</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Political will</li><li>• Bureaucratic obstacles</li><li>• Acquisition of land</li><li>• Social justice</li><li>• Redistribution of land</li></ul> |
|--|---|

### **Introduction**

Agricultural land is the most important productive resource for rural India. Land is also an important form of property. In post-independent India, equity in agriculture called for land reforms which primarily refer to change in the ownership of landholdings. Land reform refers to institutional measures directed towards altering the existing pattern of ownership, tenancy and management of land. It includes measures and policies relating to redistribution of land, regulation of rent, improving the conditions of tenancy, cooperative organisation, agricultural education, and so on.

### **Body**

Impediments of implementing land reforms in India's federal polity -

1. **Unclear Legislation:** The legislation enacted for land reforms in India is having certain built-in faults. These include unsatisfactory definition of personal cultivation, inadequate definition of etc.
2. **Lack of Political Will:** Strong political will determination and courage are very much important for the implementation of land reform measures. But unfortunately, this is very much absent in Indian context. The lack of political will is amply demonstrated by the large gaps between policy and legislation and between law and its implementation.
3. **Bureaucratic Obstacles:** Bureaucratic obstacles are also another impediment in the path of implementation of land reform measures in India. The bureaucracy always tried to play safe by following a lukewarm attitude. In some cases, even administrators have joined hands with the politician to grab the surplus land.
4. **Lack of coordination:** The land reform policy in India is being implemented at a slow pace and also in an uncoordinated manner leading to a total delay in implementing the reforms.
5. **Differences in the Laws related to Land Reforms:** The laws related to land reforms have differences in different states. This has resulted in a slow pace of

implementation in land reforms and also made it discriminatory. Moreover, these laws could not be implemented simultaneously at the national level in a smooth manner.

6. Litigation: The faults and defects in laws related to land reforms has resulted in growing number of litigations which has dampen the spirit of reforms and has also delayed its implementation.
7. Incomplete Land Records: Land records collected by the state Governments are incomplete. This has been creating difficulties in determining the ownership of land, leading to implementation of land reforms difficult.

Recent developments in land legislation in India -

- Though land is a state subject, "acquisition and requisitioning of property" is in the concurrent list.
- The 2013 Act replaced the Land Acquisition Act, 1894 (1894 Act) and provides for higher compensation to those deprived of land by the government for both public and private sector projects.
- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Bill, 2015 was introduced in the Lok Sabha February, 2015 amends LARR Act, 2013. It was passed only in Lok Sabha but not in Rajya Sabha.
- Recently centre encouraged States to draft and pass their own laws for land acquisition and get them approved.
- The Model Land Leasing Act, 2016 seeks to permit and facilitate leasing of agricultural land to improve access to land by the landless and marginal farmers. It also provides for recognition of farmers cultivating on leased land to enable them to access loans through institutional credit.
- The Real Estate (Regulation and Development) Act, 2016 is an Act which seeks to protect home-buyers as well as help boost investments in the real estate industry.

### **Conclusion**

The pace of implementation of land reform measures has been slow. The objective of social justice has, however, been achieved to a considerable degree. Land reform has a great role in the rural agrarian economy that is dominated by land and agriculture. New and innovative land reform measures should be adopted with new vigour to eradicate rural poverty. Modern land reforms measures such as land record digitisation must be accomplished at the earliest.

**6. Do you think export led growth can sustain India's growth engine? Comment in the light of rapidly changing global economy?**

**Approach** - Candidates will require explaining in brief about export led growth, while also focusing on the 'rapidly changing global economy'; hence candidates should comment the first part in that background. To conclude, candidates should end the answer with optimistic outlook and practical solutions in current times.

|   |  |
|---|--|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Export Preparedness Index</li><li>• Service sector</li><li>• Mercantilism</li><li>• Network Products</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Make In India</li><li>• Protectionism</li><li>• Trade Wars</li><li>• Geopolitics taking over geo-economics</li><li>• Assemble in India</li></ul> |
|---|--|

**Introduction**

The commerce and industry minister Mr. Piyush Goyal has set the target of \$1trillion exports a year in the next five years. The target seems to pretty ambitious given that India's export was \$537 billion for 2018-19, especially on the backdrop of changing global scenario where protectionism and inward looking policies have been adopted by countries to manage the economic crisis that has emerged out of global supply chain disruption because of COVID pandemic.

**Body**

- Exports are always considered to be the recipe for economic growth. Though trade economics tells us the benefits of trade in totality i.e. both exports and imports can be beneficial for the economy, individual nations prefer Mercantilism over Ricardian wisdom.
- Focus on the export especially merchandise export leads to the boom in manufacturing sector and massive economic development in a short period. Many countries adopted an export-led growth strategy successfully in the Postwar World. Japan was the first country that effectively followed this policy and became the first developed economy country in Asia.
- Similarly, in the 10 years between 1991 and 2001, China's export grew by an average rate of 14.6% per annum; between 2002 and 2008, the rate increased to 27.3%. Joining the WTO in 2001 has moved China into a completely new trade regime that helped to increase exports.
- For India though current scenario is not as favorable but today certainly world is more globalized than ever before and also interdependent. Also, consumption led growth has been a feature of Indian economy which clearly needs the boost of export led growth phenomenon.
- Here, it is pertinent to know that there has been no known model of domestic demand/consumption-led growth, anywhere that has delivered quick,



sustained, and high rates of economic growth for developing countries. Thus, the need for export led growth for India.

- Moreover, domestic-demand led growth requires more public spending, tax cuts, private investment, and/or financial sector reforms: which is not feasible in the present context due to pandemic.
- Consumption growth will be limited by the fact that household debt has grown rapidly in the last few years. Also, Consumption now can grow only if incomes grow where government spending could be a short run option, but COVID has limited that possibility.
- In context of global integrated economy and export led growth story, it is important to understand that foreign demand will always be bigger than domestic demand for any country and if domestic producers are competitive internationally, they will be competitive domestically and domestic consumers and firms will also benefit.
- Further, India's GDP growth of over 6 per cent after 1991 was associated with real export growth of about 11 per cent which clearly denotes the potential of this phenomenon of sustain and boost India's economic growth engine.
- COVID-19 pandemic has also highlighted the need to diversify the supply chain of industries around the world where dependence on a single sources is being seen as a problem in both economic and strategic terms. Here, India is being seen as favorable country where supply chains can be shifted due to its inherent advantages like demographic dividend, etc.

#### **Limitations of export-led strategy in current scenario-**

1. Protectionism and anti-globalization tendencies are creeping in where COVID-19 pandemic has speed up that process. Countries are now trying to seek more and more self-reliance, and import substitution industrialization.
2. Geopolitics is taking over geo-economics - According to a recent Mckinsey report, trade intensity (that is, the share of output that is traded) is declining within almost every goods-producing value chain although output and trade continue to increase in absolute terms.
3. It is also reported that all global value chains are becoming more knowledge-intensive and observed that low-skill labor is becoming less important as a factor of production because of the increased use of AI and automation. These are warning signs for a county like India because of its use of labor-intensive exports as a growth strategy.
4. High-Tech Production over Cheap Imports - The developed countries are increasingly turning to high tech to produce cheap consumer goods, which require fewer workers and are therefore cost-effective. Thus, manufactured goods in developed countries are slowly replacing the cheap imports from developing countries
5. It is very difficult for India to enter the global value chain, as smaller neighbor's like Thailand or Sri Lanka are already producing cheaper automotive parts and electronic components for multinational companies.
6. Many goods in India are produced in the medium and small enterprises and have poor quality. This is because the labor involved in the production is

lacking adequate training in skills, education, and is less disciplined than in India's competitor countries.

Though it will be very difficult for us to achieve our growth targets on the export-led growth strategy in this changing geopolitical environment, the silver lining for us could be the fact that the cross-border services are growing at more than 60 percent faster than the trade in goods and we enjoy a comparative advantage in this sector.

**Way ahead for India-**

- Put more focus on service sector export as the growth in service sector trade is very robust and we largely enjoy a comparative advantage in this sector.
- Take advantage of the space created by the US-China trade war. This is also a good opportunity for us to pitch in where a smaller economy like Vietnam have already taken advantage and started exporting more to the US market.
- To enhance India's export preparedness to meet the needs of the post-Covid global economy, the Export Preparedness Index (EPI) 2020 examines the export ecosystem of Indian states and union territories where regional inequities can be observed between various states.
- It is corroborated by the Economic Survey 2017-18, that shows that 70 per cent of India's export has been dominated by five states — Maharashtra, Gujarat, Karnataka, Tamil Nadu and Telangana.
- The Economic Survey established that states which engage with the world markets as well as with the other states within the country are richer. There is a need to recognize the unique strengths and competitive advantages of each state, and to mold policies and practices accordingly.
- The rise in the use of digital technologies and Artificial Intelligence (AI) in several industries, necessitated by the pandemic has come as a game-changer. Therefore, in the post-Covid world, India needs to create its own niche in the global market.
- There is a need to focus on R&D because R&D plays a significant role in improving the quality of products to match up to the international standards, and enables greater innovation.

**Conclusion**

Export success will require genuine easing of costs of trading and doing business in India. Resisting the misleading allure of the domestic market, India should zealously boost export performance and deploy all means to achieve that. Pursuing rapid export growth in manufacturing and services should be an obsession with self-evident justification.

**7. Infrastructure financing can have a positive impact on the local economy. Do you agree? Explain with the help of suitable examples.**

**Approach** - The question demands candidate's opinion on the subject matter. The directive here is to explain. Candidate should establish why and how infrastructure financing will have positive impact on local economies. Further, one can also refer to some of the limitations India is facing in the issue of infrastructure financing.

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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• NIP</li><li>• Vocal For Local</li><li>• Kelkar Committee on Revisiting and Revitalizing the PPP model of infrastructure development</li><li>• Multiplier effect of infrastructure</li><li>• Viability Gap Funding</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Local area entrepreneurial activity</li><li>• Access to markets</li><li>• Movement of resources from unproductive to productive sectors</li><li>• Utilizing the potential of the region</li><li>• Greater employment opportunities</li><li>• Changes in land use patterns</li></ul> |
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### **Introduction**

Infrastructure is a key driver of the overall development of Indian economy as investments in infrastructure equal to 1% of GDP result in GDP growth of at least 2% due to its “multiplier effect” on economic growth across sectors. An efficient infrastructure is the biggest enabler for growth and to ensure that fruits of this growth reach every corner of the country, infrastructure development should focus on immediate and also long-term regional, local requirements to tap the potential of local economies.

### **Body**

#### **Infrastructure and Local economies:**

1. Economic Survey 2019-2020 explores the district-wise analysis of Indian economy where Survey shows how infrastructure like all-weather tar roads, access to public goods like electricity, water, telecom services right from village level to block level are fundamental to business activity. Connectivity and access to large population centers (Markets) also determine the activity.
2. Movement of labor from unproductive sectors and subsistence entrepreneurship into entrepreneurship in formal manufacturing and services can help close India's productivity gaps. For example, development of port infrastructure leads to growth other industries in area in form of transport, shipping, industries & other services as was seen in areas around Vizag (AP).
3. Infrastructure frees up the resources to easily shift between sectors as newer possibilities of newer opportunities emerge. This transforms the stagnant sticky economies, and result in higher levels of output. For example, the building of expressway between Mumbai-Pune led to growth of IT industry and other industries in Pune due easy connectivity to Mumbai.

4. Local economic development is not just about development of basic needs of individuals but the creation of more employment at the grassroots level, promotion of entrepreneurship and addition of further opportunities for economic growth. Infrastructure provides those opportunities. For example, in primarily rural economy of east and north east India, infrastructure development is providing alternate employment in places like Prayagraj (UP) and Dhubri (Assam).
5. Infrastructure availability allows exploring potential of production and diversity from agricultural land, water bodies, forest, and animal husbandry, human resource of the particular region. These can result in enhanced income and employment levels.
6. Local consumption demands may be met through local enterprises and by leveraging local cooperative banks. Infrastructure projects enhance the capital flow in the region that enhances the credit access.

**Infrastructure Financing and its issues in India -**

- Infrastructure development typically involves high levels of upfront financial investment, given the heavy capital expenditure required during the construction stage. Infrastructure projects carry an array of risks which can lead to cost overruns and reduce financial returns.
- Roughly 27% of the nearly 1500 infrastructure projects being undertaken by the Central government are running behind schedule, while about 20% have overshot original cost estimates where according to Economic Survey of India 2017-18, India's infrastructure financing requirement is of 4.5 trillion US dollars for the period of 25 years from 2015 to 2040.
- These headline estimates mask considerable variations in requirements. States with high population densities, such as, Bihar, Uttar Pradesh, Jharkhand, and the North-Eastern region, which has lower population density and hilly terrain, are likely to have higher infrastructure needs.
- Fiscal Burden: Almost half of the total investment in the infrastructure sector is done by the Government through budget allocations. But Government funds have competing demands, such as, education, health, employment generation, among others.
- Better infrastructure financing models will help to tap the private sector investments into infrastructure. Infrastructure financing currently is driven by public sector. Recent Bank crisis of NPA, IL&FS crisis has further pushed private share downwards.
- Insufficiency of User Charges: A large part of the infrastructure sector in India especially irrigation, water supply, urban sanitation, and state road transport is not amenable to commercialisation for various political reasons. Due to this, the Government is not in a position to levy sufficient user charges on these services.

**Some recent trends & Way forward -**

- Government's efforts like UDAY scheme, National Infrastructure Investment Fund, Viability Gap Funding in the form of capital grant etc. have been a step in right direction to resolve the issues regarding infrastructure financing.

- **National Infrastructure Pipeline:** The National Infrastructure Pipeline is a group of social and economic infrastructure projects in India over a period of five years with a sanctioned amount of ₹102 lakh crore. The government is seeing this announcement as step towards making India a \$5 trillion economy by 2024-25.
- **Need for an Efficient and Vibrant Corporate Bond Market:** The corporate bond market is still a long way to go in providing adequate financing to the infrastructure sector in India.
- The logistics sector needs to be improved because of its impact on improving competitiveness in the economy. Improving logistics sector has huge implication on internal trade and also exports. It is estimated that a 10% decrease in indirect logistics cost can increase 5-8% of exports.

### **Conclusion**

For a massive country such as India, improvement in infrastructure and its financing is a necessity. Target of 5 trillion Economy depends on massive investment into infrastructure where infrastructure development will benefit Government's Ease of Doing Business. Infrastructure investments can also help improve peace and security by enabling, sustaining and enhancing societal living conditions. The Vocal for Local call will come into reality if infrastructure bottlenecks and other structural issues are ironed out. Equitable distribution to ensure that regional disparities are reduced can be achieved by building infrastructure according to the local needs.

8. What are cluster based investment models? Discuss. What potential do they hold for promoting economic growth? Examine.

**Approach** – The answer should be divided into two parts where in the first part, you discuss what are the cluster based investment models while in the second part, you examine their potential for promoting economic growth.

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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Investment Models</li><li>• Resource utilization</li><li>• Capital intensive and labor intensive growth models</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Economic output</li><li>• Financial necessities</li><li>• Geographic concentration</li><li>• Common requirements</li><li>• Interdependence</li><li>• Economies of scale</li></ul> |
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**Introduction**

Investment is defined as a process of putting money in assets for increasing production or financial gains. Investment is all about putting money in assets. And, the investment models speak about how to put the money into assets. Recently, Indian government has started focusing on cluster based investment models for greater economic output.

**Body**

- Clusters are the concentration of homogeneous enterprises producing similar products or providing identical services along with relevant backward and forward linkage enterprises in a particular geographic location sharing common opportunities and threats. Clusters are mainly two types based of their origin i.e. naturally grown and manmade clusters.
- Clusters are geographic concentrations of competing and collaborating firms that tend to produce innovation and higher than average wages. Cluster-based investment model strategies are interventions designed to improve a cluster’s performance by addressing the common needs of businesses within the cluster.
- Local government managers and other local officials can enhance the success of clusters through interventions that cut across a number of domains, including economic development, education and training, workforce development, and infrastructure provision.
- India has 388 documented industrial clusters, around 400 handloom clusters, about 3,000 handicraft clusters and 2,800 micro-enterprise clusters that contribute significantly to its economy, and provide employment to more than 20 million people where cluster based investment models can be helpful.
- India has drawn up a list of ten mega clusters across nine states as the most attractive destinations for companies to set shop based on sectoral requirements and tax incentives to promote the country as an alternative business continuity plan destination amid the ongoing Covid-19 pandemic.

- While the Noida-Greater Noida cluster is an electronics hub, Hyderabad is the largest export hub for pharma and vaccine and these “have the potential of developing into the most fertile grounds for manufacturing rapid economic activity in pandemic struck country.”

India requires investment worth Rs 50 trillion in infrastructure by 2022 to have sustainable development in the country. India is witnessing significant interest from international investors and in this regard, cluster based investment models have the following potential for promoting economic growth in India:

1. Regional economic activity located at clusters may attract investments by providing easy access to resources, technologies and markets where clusters and investments can be interdependent phenomena.
2. Clusters may also have an influence on the foreign companies that are doing the investing in the region due to the economies of scale aspect. For example, Ludhiana, a city that is well known as the Manchester of India, which alone contributes 95 per cent of the country’s woollen knitwear, 85 per cent of the country’s sewing machines and 60 per cent of the nation’s bicycle and bicycle parts.
3. The impact of cluster-based investment model on the wider economy also renders the relationship between clusters and investment particularly important. For example, Bangalore, which accounts for over 50 per cent of the output of machine tools in the country thus helping the manufacturing sector in the region.
4. Further, cluster based investment can help in providing competitive advantages to the industries located in the clusters through the availability of suitable business development services. For example, Surat, which cuts and polishes three-quarters of the world’s diamonds in several hundred “factories” employing over 300,000 cutters.
5. The abundance of customers/buyers attracted by the cluster investments in that industry where the presence of a skilled labour force helps in making about efficiency and productivity improvements.

### **Conclusion**

Cluster investment is a combination of multidimensional actions requiring active participation of different stakeholder’s. It is quite difficult to maintain the coordination and getting in time cooperation from all stakeholders. A concrete model could help the practitioners to make the system fruitful and functional and play a key role in economic growth as well as equitable development in India.

9. What are the issues related to sustainability of cropping pattern in different parts India? Critically analyze.

**Approach** – It expects students to write about issues related to sustainability of cropping pattern in different part of India and critically analyze the same.

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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Cropping mechanism</li><li>• Cropping system</li><li>• Cropping pattern</li><li>• Sustainable cropping pattern</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Crop intensification</li><li>• Nutrient imbalance</li><li>• Monoculture</li><li>• Water degradation</li><li>• Soil degradation</li></ul> |
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**Introduction**

Scientists have identified more than 250 cropping systems being followed throughout the country but it is estimated that only 30 major cropping systems are prevalent. Cropping Pattern refers to a yearly sequence and spatial arrangement of crops and fallow in a given area. Cropping pattern used on a farm and its interaction with farm resources, other farm enterprises and available technology that determines its make-up, is called a cropping system.

**Body**

Some of the most commonly followed crop patterns across India are -

- Rice-Wheat: UP, Punjab, Haryana, Bihar, West Bengal, Madhya Pradesh.
- Rice-Rice: Irrigated and Humid coastal system of Orissa, Tamil Nadu, Andhra Pradesh, Karnataka and Kerala.
- Rice- Groundnut: Tamil Nadu, Andhra Pradesh, Karnataka, Orissa and Maharashtra
- Rice-Pulses: Chhattisgarh, Orissa and Bihar.
- Maize-Wheat: UP, Rajasthan, MP and Bihar.
- Sugarcane-Wheat: UP, Punjab and Haryana accounts for 68% of the area under sugarcane. The other states which cover the crops are; Karnataka and MP.
- Cotton-Wheat: Punjab, Haryana, West UP, Andhra Pradesh, Karnataka, Tamil Nadu.
- Soya bean-Wheat: Maharashtra, MP and Rajasthan
- Legume Based Cropping Systems (Pulses-Oilseeds): MP, Gujarat, Maharashtra, Andhra Pradesh and Karnataka.

Factors affecting Cropping pattern -

- Physical and Technical Factors
- Farm Size
- Insurance against risk: minimise the risk of crop failures
- Availability of Inputs: Seeds, fertilizers, water storage,
- Food habits also play a role



- Infrastructure facilities: Irrigation, transport, storage, trade and marketing.
- Government Policies MSP, Green revolution, and other schemes.

Issues related to sustainability of cropping pattern -

1. **Water degradation:** Excessive use of water due to improper levelling of fields coupled with improper application methods, even in agriculturally advanced areas. Punjab, Haryana and Western Uttar Pradesh has caused lowering down of the ground water table. For example in Rice and sugar cultivation cropping pattern
2. **Monoculture:** Large scale mechanization lead to the spread of monoculture i.e. only one crop variety is sown in the entire area when only one cultivator is planted in a large area. This system (monoculture) uses lot of fertilizer, pesticide, water. This practice may be productive for some time but causes environmental and economic problems. For example in Paddy and wheat cropping pattern.
3. **Negative balance of nutrients in soil:** Due to imbalance in fertilizer use, widespread deficiencies of secondary and micro-nutrients and reduced organic matter contents of cultivated lands, a declining trend for responses to nutrients, specially to nitrogen, in major cropping systems is being observed on farmers' fields.
4. **Threat from crop intensification:** Crop intensification under high input use, serious threats of occurrence and build-up of some obnoxious pests and diseases have crept in. With a pressing need for producing more and more from less and less land resource, a serious threat is lurking upon the environmental quality.
5. **Climate Change Risks:** Adverse climate change could lead to drop in yield and lower quality produce. The agriculture will also be affected due to extreme weather events like drought, erratic rainfall, delayed onset of monsoon flood, cyclone, hail storm, heat wave etc.
6. **Land degradation:** According to ICAR's reports, 37% of India's total geographical area is affected with degradation.

Steps that can be taken for sustainable cropping pattern:

- **Resilient Intercropping System:** To deal with delayed monsoon alternate crops of short duration varieties like black gram, groundnut can be grown etc. That will help in maintaining a source of income if the monsoon is delayed.
- **Zero tillage Adoption of Zero Tillage** will reduce the loss and increase the production.
- **Efficient water use:** Efficient water and nutrient management should be done to enhance efficiency. Methods like drip-irrigation must be used in place of flood irrigation to save water.
- **Climate tolerant crops:** The government should incentivize farmers to use climate-tolerant crop varieties. It will help farmers to deal with crop failures due to climate change. E.g. Pokkali Rice in Kerala which is a saline tolerant rice variety.

- **Crop Diversification:** Crop diversification refers to the addition of new crops or cropping systems to agricultural production on a particular farm. Crop Diversification helps in agriculture sustainable and helps in maintaining ecological balance.
- **Soil and Nutrient Management:** A healthy soil is a key component of sustainable agriculture. That is healthy soil along with water and nutrients produces healthy crops that are less susceptible to pests and diseases.
- **Strip Farming:** This involves planting the main crops in widely spaced rows and filling in the spaces with another crop to ensure complete ground cover. It retards water flow which thus soaks down into the soil, consequently reducing erosion problems.

### **Conclusion**

Economic factors are playing a dominant role in determining the cropping pattern in India. Although Indian farmers are very much poverty stricken and conservative still their cropping pattern can be changed through appropriate changes in economic motive. There is a need to shift to sustainable agriculture. The policies should consider the environmental cost as well. The planning should be done with the fact that the next generation also need to have food security. Strong political will combined with mass farmer awareness can make the desired changes.

10. The government's focus on systemic irrigation reforms would go a long way in improving the productivity of agricultural sector. Elucidate.

**Approach** – It expects students to write about irrigation and how systemic irrigation reforms will help in improving the agriculture productivity.

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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Micro irrigation</li><li>• Irrigation</li><li>• Systemic irrigation</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Crop yield</li><li>• Water efficiency</li><li>• Energy efficiency</li><li>• Agriculture productivity</li></ul> |
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### Introduction

Irrigation is the artificial application of water to the soil or agricultural field. It is the replacement or supplementation of rainwater with another source of water. It is used in dry areas and during periods of inadequate rainfall. Agriculture productivity measures the quantity of output produced with a given quantity of inputs. Long term productivity growth reflects improvements in farmers' production efficiency and technological progress.

### Body

- The systemic irrigation system is judged by the level of water control it offers. Water control is defined as the capacity to apply the proper quantity and quality of water at the optimum time to the crops.
- Need for systemic irrigation reforms - The equitable and optimal use of water from canal irrigation has been a matter of continuing concern. It is estimated that the overuse of irrigation water in the country has resulted in a low irrigation efficiency of about 25-35 percent in most cases. The reasons that contribute to low irrigation efficiency are identified as:
  - Completion of dam work ahead of canals.
  - Dilapidated irrigation systems.
  - Unlined canal systems with excessive seepage.
  - Lack of field drainage.
  - Improper field levelling.
  - Absence of proper volumetric supply.
  - Inadequate extension services.
  - Low rate for water.
- Micro-irrigation is considered as a prudent Irrigation technology promoted nationally and internationally to achieve systemic irrigation system.
- Micro-irrigation has been given special importance in Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) with the aim of extending irrigation cover ('Har Khet Ko Pani') and improving water use efficiency ('Per Drop More Crop') to improve various water development and management activities.

Micro irrigation helps in improving productivity in agriculture sector in the following way -

1. **Increase in water use efficiency:** Micro irrigation helps in significant reduction of water conveyance losses, runoff, evaporation losses, and seepage & deep percolation losses. This ensures higher water use efficiency up to 50-90%. For example sprinkle and drip irrigation.
2. **Energy Efficiency:** Micro irrigation requires minimum pressure and low flow rate only. Hence, this ensures energy consumption saving up to 30.5%. Even small wells and tanks can also be used as a source of water. Since this system requires very low pressure, off-grid farmers can use solar pumps or diesel pumps.
3. **Productivity increase:** The crop yield (quantity and quality) is increased and the enhancement of productivity is estimated for fruits & crops up to 42.4 % and for vegetables up to 52.7%. This ensures good economic return for the better yields.
4. **Fertilizer Use Efficiency:** Proper mixing of fertilizers and water, control of optimum dosage and direct application of fertilizers to the root zone result in the saving in fertilizer consumption up to 28.5%.
5. **Irrigation cost saving:** This technology reduces the overall cost of irrigation due to decrease in labour requirement for irrigation, weeding and fertilizer application. Irrigation cost saving is up to 31.9%.

### **Conclusion**

It is thus observed that agricultural productivity largely influenced by irrigation. For achieving higher productivity in agriculture promotion of irrigation facilities is highly imperative. More dams, watersheds need constructed to preserve water for irrigation purposes. Rain water harvesting is an amicable way in drought prone and desert like areas. The farmers need to be trained in the technique of rain water harvesting and the methods of increasing water use efficiency.

11. What are your views on the ongoing protests by farmers on the issue of agri reforms? Critically comment.

**Approach** – The question demands critically comment on the ongoing protests by farmers on the issue of agri reforms by giving your own view as well as providing an all-round view of the issue.

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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• LPG reforms</li><li>• Union list and state list</li><li>• Contract farming</li><li>• Essential commodities act</li><li>• Agriculture Census</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• APMC acts</li><li>• Price realization and MSP</li><li>• Liberalizing farm sector</li><li>• Article 246 &amp; concurrent list</li><li>• Doubling farmer income</li></ul> |
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**Introduction**

Recently, the Government of India passed three farm reform bills- The Farmers’ Produce Trade and Commerce (Promotion And Facilitation) Bill, The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill, and The Essential Commodities (Amendment) Bill, in the Monsoon Session of the Parliament. The passage of these bills has led to widespread protests by farmers across the country. It has also raised critical concerns over the direction in which agricultural reforms should go, the nature of these three bills and the process through which they were passed in Parliament.

**Body**

Here, the bills can be understood from the following points -

1. The first one attempts to do is allow farmers to sell their produce at places other than the APMC-regulated mandis. It is crucial to note that the idea is not to shut down APMCs but to expand a farmer’s choices. Thus, if a farmer believes a better deal is possible with some other private buyer then he can take that option instead of selling in the APMC mandi.
2. The second Bill proposes to allow economic agents to stock food articles freely without the fear of being prosecuted for hoarding.
3. The third Bill provides a framework for farmers to enter into contract farming – that is signing a written contract with a company to produce what the company wants in return of a healthy remuneration.
4. The idea with all three Bills is to liberalise the farm markets in the hope that doing so will make the system more efficient and allow for better price realisations for all concerned, especially the farmers. The central concern is to make Indian farming a more remunerative enterprise than it is right now.

In this background, the farmers and their unions are having the following grievances with regards to the above bills/Acts –

- Farmers consider this move towards greater play of free markets as a ploy by the government to get away from its traditional role of being the guarantor of minimum support prices (MSPs) where MSPs work in the formally regulated APMC mandis, and not in private deals.
- Their main concern is that there was no assurance of minimum support price for farmers. The way the Bills were passed in the Upper House through a dubious voice vote also raised many doubts.
- At the core of the issue here is the very right of the Centre to enact legislation on agricultural marketing. Article 246 of the Constitution places “agriculture” in entry 14 and “markets and fairs” in entry 28 of the State List.
- Further, the main problem of farmers is essentially about the FPTC Act and its provisions that they see as weakening the APMC mandis. There are also issues regarding to the dispute resolution mechanism for transactions outside the mandis. The Act proposes these to be referred to offices of the sub-divisional magistrate and district collector which aren’t seen as independent courts.
- Also, the government prioritising the interests of the consumers over the interest of the farmers (the producers) is also an issue which was evident in the recent ban on onion exports by government.
- Moreover, the underlying structural problem is the lack of information with farmers, which inhibits their ability to make the best decision for themselves. This can be a handicap when the farmers wants to make an informed choice.
- Similarly, in the absence of adequate infrastructure to store their produce, farmers may not have the capacity to bargain effectively even if they knew the right price.

In the aftermath of 1991 LPG reforms, the then government was accused of selling the country to the IMF. Three decades later India has grown to become the fifth largest economy in the world and, in the process, many million citizens have escaped poverty. Similarly, the agri reforms, if implemented properly, has the potential to catapult Indian agriculture into a higher orbit and ensure farming becomes a profitable vocation. This can be seen from the following points:

1. The new laws correct many anomalies that weigh down the farming sector. The Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Act, 2020 allows farmers the freedom to sell their produce, if required, outside their mandis or even across the State. Earlier, a farmer was tied to a mandi under the Agriculture Produce Market Committee (APMC) Act.
2. Originally set up by States as a measure to protect farmers from exploitation by large buyers and intermediaries, these mandis have since become legal cartels hurting the very interest of those they sought to protect. Traders in the mandis ganged up and deprived farmers of the right price for their produce. The freedom to sell outside will check this practice as the farmer now has other options.
3. The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020 empowers and protects farmers who want to engage in contract farming. Apart from ensuring a better price, the law will

ensure that they are not exploited by large corporates who typically engage in contract farming.

4. The Essential Commodities Act belongs to an era when India perennially tackled shortages in farm produce. Stock-holding limits were imposed to prevent hoarding and those who violated it were severely penalised. Today, India is a surplus producer in most agri commodities and this outdated law only serves to prevent any significant investments in processing of farm produce. The Essential Commodities (Amendment Act), 2020 will correct this and enable large-scale investment in food processing which, in turn, should boost farmer income.
5. The new laws are not shutting down APMC mandis, nor are they implying that MSPs will not be functional. Moreover, across several sectors of the economy, liberalisation has expanded the size of the pie and improved wellbeing across the board.
6. Moreover, there is an unwarranted fascination with MSPs in India. The last Agriculture Census (2015-16) showed that 86% of all land holdings were small and marginal (less than 2 hectares). These are such small plots that most farmers dependent on them are net buyers of food. As such, when MSPs are raised they tend to hurt the farmers the most.
7. The new law is a next step towards agri-reforms. It seeks to promote barrier-free inter-State and intra-State trade in farm-products. Further, under the new legislation — farmers, women, workers and people from other marginalised sections — will benefit.
8. The entry 42 of the Union List empowers the Centre to regulate “inter-State trade and commerce”. While trade and commerce “within the State” is under entry 26 of the State List, it is subject to the provisions of entry 33 of the Concurrent List – under which the Centre can make laws that would prevail over those enacted by the states.

The reforms of 1991 came out of various committee reports through the 1980s – Abid Hussain committee, Narasimhan committee, Dagli committee and many others that recommended all those changes. Though it was done in a dramatic manner, the ideas were not last minute thinking. Similarly, here too a lot of work has been done and case for reform of the APMC was made by economists during the previous governments, especially the former Planning Commission member, the late Saumitra Choudhuri.

### **Conclusion**

There is no question that India’s agriculture markets are in urgent need of reform, but to assume this can be done without responding to the anxieties of those impacted (farmers) and without assurances of protection, is a recipe for failure. The government must work towards the welfare of farmers as they are our annadata and try to find a solution towards fulfilling the target to double the income of farmers by 2022.

**12. What are the most critical challenges pertaining to agricultural pricing policy in India? What are its current distorting effects? Analyze.**

**Approach** – In the first part of the answer, you need to enumerate the most critical challenges pertaining to agricultural pricing policy in India while in the second part, you need to analyze its current distorting effects.

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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Agriculture subsidies</li><li>• Market &amp; trade distortions</li><li>• Import substitution</li><li>• PM AASHA</li><li>• Post-harvest phases</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Share of Agriculture in Economy</li><li>• Minimum support price (MSP)</li><li>• ECA &amp; APMC Acts</li><li>• Food Corporation of India (FCI)</li><li>• Public Distribution System</li></ul> |
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**Introduction**

In India nearly half of the population is dependent on agriculture directly or indirectly for their livelihood. However, agriculture and allied activities like fishing and forestry account for less than 17 per cent of the national income. This partly explains, why the majority of Indian population is living in poverty and misery, thus a remunerative price for agricultural products plays an important role in inclusive growth.

**Body**

- In India, the pricing of agricultural products tries to strike a right balance between the producers (in terms of ensuring a minimum support price), and the consumers (in terms of ensuring that people in a poor country are able to meet their minimum food and other requirements).
- Within the marketing structure defined by the ECA and the APMC Acts, the central government's price policy for major agricultural crops seeks to ensure remunerative prices to producers with a view to encouraging higher investment and production and to safeguard the interest of consumers by making supplies available at affordable prices.
- The Food Corporation of India (FCI) is the main agency for executing the food grain policies of the central government. The FCI (a) procures food grains from farmers at remunerative prices, (b) distributes food grains to consumers through public distribution, and (c) maintains buffer stock of food grains for food security and price stability.
- The central government sets a Minimum Support Price (MSP) for 24 crops each year, as well as a bonus above the MSP for some crops. The FCI and state-level agencies operating on behalf of the FCI buy wheat, rice and coarse grains through open-ended procurement at MSP.
- In this regard, the most critical challenges pertaining to agricultural pricing policy in India and its distorting effects can be seen from the following points:
  1. Inadequate Coverage - Inadequate coverage of procurement facility has rendered the price ineffective. The facility of official procurement reaches only



a handful of farmers—of the total food grains production, procurement covers hardly 15 per cent.

2. **Remunerative Price** - The remunerative price and/or subsidized inputs have failed to keep pace with the rate of increase in costs. It has had two consequences. The farmer is discouraged from producing the maximum level of output; he tries to balance his output against the level of costs, and settles for a lower level of output.
3. **Ineffective Public Distribution System** - The public distribution has not been very effective. A large section of the poor people are outside the purview of the system. Even those who are covered under the system do not necessarily get the benefit of issue prices. Besides, the burden on the national exchequer is increasing enormously.
4. **Difference in Prices** - There is an important issue of wide difference between prices received by the producers and prices paid by the consumers. In this context, issues relating to the network of regulations and costs associated with it, incidence of octroi, increase in transportation costs, over fragmentation of the distribution network etc. require careful study.
5. **Unaccompanied by Effective Policy** - The efficacy of the price policy depends on a number of other factors inherent in the system of agricultural operations like land holding patterns, income distribution, general disparities and cropping pattern.
6. A continuous increase in procurement prices may have even an adverse impact on agricultural productivity. Price increases which over-compensate cost increases can discourage measures to raise agricultural productivity since such prices automatically lead to higher profits for the farmers.
7. To increase the income of the farmers, the poor of the country have to pay more. This practice will create the problem to allocate inefficiency in the country. Further, subsidizing farmers through higher product prices is an inefficient method because it penalizes the consumer with higher prices. Also it means large farmers will benefit the most. They have received more than they need but small farmers are still struggling.
8. However, price support procurement effectively operates mainly for wheat, rice and cotton and only in a few states. Most farmers sell to other buyers at prices other than the MSP, especially in eastern India, where procurement is not effective and no alternative buyers are present. This discriminatory policy hugely disincentivised crop diversification by the farmers and resulted in huge deficits as well as high import dependency in crops like oilseeds.
9. Producer prices have for many years and for many crops remained below comparable reference prices in international markets. This is explained partly by policy-induced (i.e. domestic market regulations and export restrictions) and other inefficiencies (i.e. roads, electricity, cold storage, transport) in the marketing chain and partly by MSP having been set below the international reference prices. This has resulted in significant negative price gaps.

**Measures -**

- To correct the policy bias in procurement operations, the Government of India introduced the PM AASHA (Pradhan Mantri Annadata Aay Sanrakshan

Abhiyan) in 2018, as an effort to ensure that farmers growing other crops also get MSP price at par with paddy and wheat farmers.

- The policy also took care of differences in crops and gave a lot of flexibility to state governments to choose from different operational modalities to ensure MSP for each crop. PM AASHA has three sub-schemes, that is, Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS) and pilot of Private Procurement & Stockist Scheme (PPSS).
- Recent changes in APMC Act and provisions for Contract farming through the farm bills are expected to attract much needed modern private sector investments into agricultural marketing as well as agricultural production. This will also reduce the need for government intervention and support for agriculture.

### **Conclusion**

Substantial increase in farmer's income and transformation of agriculture require a paradigm shift in entire approach towards agriculture sector. Advancement in science led technology, enhanced role of private sector in both pre and post-harvest phases, liberalized output market, active land lease market, and emphasis on efficiency will equip agriculture to address challenges of 21st Century and contribute towards goal of New India.

**13. What are the key elements of the Pradhan Mantri Kisan SAMPADA Yojana? What are its primary objectives? Discuss.**

**Approach** – A straightforward question where in you need to elaborate upon the key elements of Pradhan Mantri Kisan SAMPADA Yojana in the first part while discuss its primary objectives in the second part of the answer.

|   |  |
|---|--|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Agri economy components</li><li>• Backward &amp; Forward linkages</li><li>• Food Processing market</li><li>• Perishable products</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Agro-Processing</li><li>• Supply Chain Management</li><li>• Mega Food Parks</li><li>• Quality Assurance infrastructure</li></ul> |
|---|--|

**Introduction**

Recently, Government of India (GOI) approved a new Central Sector Scheme – Pradhan Mantri Kisan SAMPADA Yojana (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) with an allocation of Rs. 6,000 crore for the period 2016-20 coterminous with the 14th Finance Commission cycle. The scheme will be implemented by Ministry of Food Processing Industries (MoFPI).

**Body**

- PM Kisan SAMPADA Yojana is a comprehensive package which will result in creation of modern infrastructure with efficient supply chain management from farm gate to retail outlet.
- It will not only provide a big boost to the growth of food processing sector in the country but also help in providing better returns to farmers and is a big step towards doubling of farmer's income. The **Seven component** schemes under PMKSY are:
  1. Mega Food Parks - The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastage, increasing farmer's income and creating employment opportunities particularly in rural sector.
  2. Integrated Cold Chain and Value Addition Infrastructure – The objective of the Scheme of Cold Chain, Value Addition and Preservation Infrastructure is to provide integrated cold chain and preservation infrastructure facilities, without any break, from the farm gate to the consumer.
  3. Infrastructure for Agro-Processing Clusters – The scheme aims at development of modern infrastructure and common facilities to encourage group of entrepreneurs to set up food processing units based on cluster approach by linking groups of producers/ farmers to the processors and markets through well-equipped supply chain with modern infrastructure.
  4. Creation of Backward and Forward Linkages – The objective of the scheme is to provide effective and seamless backward and forward integration for

processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market.

5. Creation/Expansion of Food Processing & Preservation Capacities – The main objective of the Scheme is creation of processing and preservation capacities and modernisation/ expansion of existing food processing units with a view to increasing the level of processing, value addition leading to reduction of wastage.
6. Food Safety and Quality Assurance Infrastructure – Quality and Food Safety have become competitive edge in the global market for food products. For the all-round development of the food processing sector in the country, various aspect of Total Quality Management (TQM) such as quality control, quality system and quality assurance should operate in a horizontal fashion.
7. Human Resources and Institutions – For the purpose of Research & Development as well as Promotional Activities where Skill Development is focussed upon through the Strengthening of Institutions.

#### **OBJECTIVES OF PM KISAN SAMPADA YOJANA -**

- Under PMKSY, capital subsidy in the form of grants-in-aid ranging from 35% to 75% of the eligible project cost subject to a maximum specified limit is provided to investors under the various schemes for undertaking infrastructure, logistic projects and setting up of food processing units in the country.
- Creating huge employment opportunities especially in the rural areas, reducing wastage of agricultural produce, increasing the processing level and enhancing the export of the processed foods
- Creation of modern infrastructure for food processing mega food parks/ clusters and individual units which will ensure availability of world class facilities for post farming activities where most of the value addition is concentrated.
- To create effective backward and forward linkages - linking farmers, processors and markets ensuring streamlined movement of farm produce and thus reducing damage of perishable products as well as ensuring effective price realisation.
- To create robust supply chain infrastructure for perishables which can help in better price discovery for farmers as well as other players involved while also contributing to agriculture GDP.

#### **Conclusion**

The food processing market in India was valued at approximately Rs. 26 billion in FY 2018 and is expected to reach approximately Rs. 53 billion by FY 2024, expanding at a CAGR of 12.09% during the FY 2020-FY 2024 period rendering extensive gains for all the players involved including farmers as well as supply chain linkages and thus helping in the target of doubling farmers income by 2022.

**14. India's early fulfilment of its commitment to Paris climate agreement will go a long way in building future consensus for concerted global action. Do you agree? Substantiate your views.**

**Approach** – You need to provide details about the India's commitment and progress in the same with regards to Paris climate agreement commitments and comment whether you think that early fulfillment of these commitments will help in building consensus for concerted global action on climate change.

|   |  |
|---|--|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Copenhagen targets</li><li>• Champions of the Earth Award</li><li>• Mission Innovation</li><li>• NAPCC</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Intended Nationally Determined Contributions (INDC's)</li><li>• Emission intensity</li><li>• International Solar Alliance (ISA)</li><li>• UNFCCC</li></ul> |
|---|--|

### **Introduction**

Action towards climate change is a common concern for humanity, and it is our ethical and moral responsibility to address it by using all means and wherewithal at our disposal where the Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

### **Body**

Ratifying the Paris Agreement in 2016, India's pledge lays out a comprehensive approach to limit climate impacts while fostering economic growth. India's pledge includes -

- To reduce the emissions intensity of its GDP by 33 to 35% by 2030 from 2005 level.
- To achieve 40% cumulative electric installed power capacity from non-fossil-fuel energy sources by 2030 with the help of technology transfer and low-cost international finance including support from the Green Climate Fund.
- To create an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by 2030.

In this regard, India's early fulfilment of its commitment to Paris climate agreement can be said to help in building future consensus for concerted global action due to the following points:

1. India is an emerging economic powerhouse. It is also the world's third-largest energy consumer and greenhouse gas (GHG) emitter where Indian efforts to fast track Paris commitments will clearly help in speeding global efforts due its size.

2. India is taking several proactive actions at the national and international level to fulfil its obligations as per the principle of common but differentiated responsibilities and respective capabilities which will help in bringing many less developed and developing countries on board as it shows the principle of climate justice.
3. India has proactively pursued mitigation and adaptation activities and achieved a reduction in emission intensity of GDP by 21% over the period 2005-2014. By 2030, India's emission intensity is projected to be even lower—in the range of 35 to 50 percent. Thus, India is on track to not only achieve but likely exceed its non-fossil fuel electricity capacity, and its targeted reduction in emission intensity of its 2030.
4. India is on track to meet its Copenhagen commitments. Such an effort will help India take leadership role in tackling climate change across the globe and thus ensuring fast-tracking of global efforts.
5. The Climate Action Tracker website has rated India's climate efforts as "2-degree compatible" — that can contribute to limiting warming by the end of the century to 2° Celsius; making India the only major economy to be so highly rated. This showcases the global significance of Indian efforts.
6. In recognition of India's efforts towards climate change, Prime Minister Shri Narendra Modi received the Champions of the Earth award in 2018, a top United Nations honour that recognises contribution to the field of environment protection. This helps India in taking a proactive role in improving global efforts towards addressing climate change.
7. India along with France also initiated the International Solar Alliance (ISA) of 121 sunshine countries to work for efficient exploitation of solar energy to reduce dependence on fossil fuels. Such an effort of bringing in 121 countries along with others will help in speeding up transition towards clean energy and thus improving global effort to tackle climate change.
8. Further, India is partnering 22 member countries and the European Union in the 'Mission Innovation' on clean energy, and is co-lead in smart grid, off-grid and sustainable biofuels innovation challenges.
9. India's multiple policies and programmes aimed at synchronizing development and climate change mitigation at federal, state and local levels. The National Action Plan on Climate Change (NAPCC) which has eight National missions. On the lines of the NAPCC, each state has prepared its own State Action Plan on Climate Change (SAPCC) in the light of achieving the national goals. Such concrete action & implementing plans can be model for global efforts.

But at the same time, building future consensus for concerted global action can't be achieved from India's early fulfilment of its commitment to Paris climate agreement due –

1. The Earth's carbon system is one of the global commons, and any discussion on the use of the commons by a group or community is by definition a collective action problem. What one country does or has to do, depends not only on itself but also on the response of others.
2. It is often missed in energy considerations that the global warming constraint on a country's energy sector does not depend on the country alone. India's

policy has long emphasized that the problem of global warming requires collective action.

3. In terms of energy consumption, India uses only 6% of the world's primary energy. India's per capita energy consumption grew by 56.4% from 2005-06 to 2016-17 but still India's per capita energy consumption is nearly 30% of the world's average.
4. India's third NDC commitment is to create an additional carbon sink of 2.5 to 3 billion tons of carbon dioxide equivalent through additional forest and tree cover by 2030. However, the progress has been limited and the country has more work to do on this target.
5. As a developing nation, India has to multiple priorities including sustained economic growth for millions of its people and reducing air pollution and climate impacts to vulnerable communities.
6. Per capita, India's emission from fossil fuels (in 2017) is by far the lowest among major economies at 1.83 MT carbon dioxide (CO<sub>2</sub>). Despite its low per capita emissions, India has made significant commitments in its Intended Nationally Determined Contribution (NDC). However, to meet our Paris commitments and fully implement our NDCs in a timely manner, India requires enhanced new and additional financial, technological and capacity building support, which has been missing on the global front.
7. Further, in the Climate Change Performance Index (CCPI) 2020, released by non-profits Climate Action Network, German Watch and New Climate Institute, no country has done well enough to get into the very high rating in the index which is basically the top three ranks of the index.
8. Among the Group of 20 (G-20) countries, which are some of the biggest GHG emitters, only India and the UK rank among high performers. In fact, eight of the G-20 countries rank among low performers. This clearly shows that individual performance can't bring about much change in global discourse.

During the UN's Climate Week in New York this past September, India's Prime Minister committed to a target of 450 gigawatts (GW) of renewable energy installations, likely by 2030—equivalent to five times more than India's current installed renewable capacity (82.6 GW) and bigger than the size of India's electricity grid size in 2019 (362 GW). While technical, financial, regulatory challenges exist, India has made significant progress in fulfilling its climate pledges. It continues to show the world that combating climate change is compatible with economic growth and raising standards of living.

### **Conclusion**

Thus, the new and additional financial and technological support promised to the developing countries by the Paris Agreement needs to be operationalized where India's approach of tackling climate action in a manner that takes care of the vulnerabilities of its people while ensuring basic amenities and a life of dignity to all should be emulated throughout the world with support from the common people, academia, businesses and media, amongst others, thus making the entire process inclusive and participatory.

15. What are the issues related to India's environmental jurisprudence and regulatory framework? Analyze.

**Approach** – You need to show the issues related to India's environmental jurisprudence and regulatory framework while also analyzing the same.

| <b>Related concepts:</b>   | <b>Keyword in the answer:</b>   |
|--|---|
| <ul style="list-style-type: none"><li>• Stockholm Declaration</li><li>• Environmental sustainability</li><li>• Reward Mechanisms</li><li>• Economic angle to Environment</li></ul> | <ul style="list-style-type: none"><li>• Environmental consciousness</li><li>• National Green Tribunal</li><li>• EPA, 1986</li><li>• Implementation Issues</li></ul> |

### **Introduction**

Over the years, together with a spreading of environmental consciousness, there has been a change in the perception that there is a trade-off between environmental quality and economic growth where now people think they are complementary but the world fares poorly on implementation of environmental laws and regulations despite the fact that 38 times more green laws have been framed and approved in the last four decades, says the United Nations (UN) in its recent first ever global assessment of environmental laws.

### **Body**

- Under the influence of Stockholm declaration (1972), a full-fledged Ministry of Environment and Forests (MoEF) in 1985 was established, which today is the apex administrative body in the country for regulating and ensuring environmental protection.
- The main environmental laws, including under which various key environmental permits (or consents) are being issued in India, include the:
  - Water (Prevention and Control of Pollution) Act 1974 (Water Act), which also initially identified the powers, functions and hierarchy of the environmental agencies, the CPCB and the SPCBs.
  - Air (Prevention and Control of Pollution) Act 1981 (Air Act).
  - Environment (Protection) Act 1986 (EP Act) - A wide range of rules and notifications have been adopted under it, such as the - E-Waste (Management) Rules 2016, as amended in 2018 (E-Waste Rules), Bio-Medical Waste Management Rules 2016, Plastic Waste Management Rules 2016, Solid Waste Management Rules, 2016, Construction and Demolition Waste Management Rules 2016, etc.
  - Wild Life (Protection) Act 1972, Forest (Conservation) Act 1980, Public Liability Insurance Act 1991, Biological Diversity Act 2002.
- The Supreme Court has proactively incorporated advanced legal principles such as polluter pays, precautionary principles, absolute liability and public trust-doctrine to revive India's environmental laws. The environmental jurisprudence in India has matured and is ahead of many developed countries.



- The orders and directions of the Supreme Court cover a wide range of areas whether it be air, water, solid waste or hazardous waste. The field covered is very vast such as – vehicular pollution, pollution by industries, depletion of forests, illegal felling of trees, dumping of hazardous waste, pollution of rivers, illegal mining etc.
- The NGT provides a techno-legal framework to address the complex science and technology issues in environmental disputes. The NGT's jurisdiction spans all environmental law violations and can provide various remedies including compensation, injunctive relief and restoration of the ecology.
- As a result, public interest litigations have become less complex and more affordable. In less than five years, since its establishment, the NGT has received over 7,000 environmental complaints and has shut down or challenged industries as well as government agencies that are not in compliance with the environmental regulations.
- More recently, environment and social justice aspects are shaping economic policies. For instance, regulators shut down a soft drink major's bottling plant for failure to obtain clearance to extract groundwater which resulted in depletion of groundwater for community drinking as well as for farmers.
- Environmental compliance has become more significant with the Indian Government's "Make in India" initiative. As many companies are looking to invest in India, a successful business strategy would have to proactively understand, anticipate and plan for environmental compliance.
- This will help the companies to not only mitigate potential legal and financial expenses, but also help derive much social mileage as trendsetters in environmental stewardship. While environmental regulations may seem challenging, proper planning and strategy can turn potential losses into pleasant economic gain
- There has been an upward trend in terms of regulatory enforcement, which can be explained by various factors. For instance, various states have started to insist on the installation of continuous online emissions/effluent monitoring systems, which gives the State Pollution Control Boards (SPCBs) the necessary and objective information to monitor the compliance of companies in their jurisdiction.

But at the same time, the environmental jurisprudence and regulatory frameworks have many issues like -

- In India, we are perfect in the policy department but implementation is a problem. We have weak deterrents. The systems of accountability have been weakened, so monitoring is a huge problem. More than two-thirds of the states/union territories in the country have neither bothered to comply with the orders passed by the Supreme Court, nor complied with the directions given by the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- In a scenario where the judiciary is already struggling to clear the existing backlog of over 21,000 environment-related cases, lack of respect and poor implementation of the judiciary's orders only provides an explanation for degraded environment we live in.

- Poor coordination across government agencies, weak institutional capacity, lack of access to information, corruption and stifled civic engagement are the key factors behind the poor effectiveness and implementation of environmental regulations etc.
- From an economic perspective, environmental laws since the industrial revolution were framed by the economic requirements or demands of the time. The Forest Act of 1894 enabled indiscriminate deforestation to provide lumber for burgeoning industries and served to boost the bottom line of corporations at the cost of the environment.
- There is lack of independence given to the central and the state boards who still have to depend on the state and the central government for the appointment. This leads to a lack of competent people. The appointment is at the wish of the government.
- PCB's don't have legal authority and their decisions tend to be overruled by the government. There is also a lack of funds to the Pollution Control Boards and they don't even have proper infrastructure or laboratories.
- Further, there are certain laws which are not very elastic. The existing laws give importance to some specific types of pollution or specific categories of hazardous substances. Also, the present mechanism fails to accept the polluter pay principle. Environmental Litigation is more expensive.

**Way Forward –**

- A reward mechanism needs to be given to business, organizations etc. to detect violations and take action to address the issue. Financial subsidies, cost sharing should also be promoted.
- Public awareness and an increase in political will is a must. NGO's can play a very important role in this.
- There should be less political interference in the independent regulatory body. More decision making power needs to be given to the boards. There is also a need to establish a body of experts just like the civil services.

**Conclusion**

Present-day climate change is different. Air Pollution kills around 1.2 million people annually in India, which should be an alarming enough statistics to initiate reforms in environmental jurisprudence and regulatory framework for better lifestyle for future generations and restore balance to nature.

16. Increasing the FDI Cap alone is not enough to propel the defense sector. Do you agree? Critically comment.

**Approach** – You need to critically comment on the aspect of increasing FDI cap alone is not enough to propel the defense sector and then give your view regarding it.

|   |  |
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| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• New FDI rules</li><li>• Defense sector modernization</li><li>• India’s defense requirements</li><li>• Indigenization of technology</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• Stimulus Package</li><li>• Ordnance Factory Board (OFB)</li><li>• National Security grounds</li><li>• Defense Budget</li><li>• Defense PSU’s</li></ul> |
|---|--|

**Introduction**

In May 2020, the Indian Government as part of an economic stimulus package to respond to the Covid-19 pandemic, announced a proposal **to liberalize the foreign direct investment (FDI) framework** in India for the defence sector. The Indian Government outlined its intention to permit foreign investors to hold up to 74% of the equity share capital of Indian companies engaged in activities falling within the defence sector under the automatic route thus potentially paving the way for foreign companies to hold a majority controlling stake in such Indian companies.

**Body**

- The proposed liberalization of the FDI Policy for defence manufacturing is a welcome move and could attract large scale investments by foreign defence majors in the sector, thereby adding significant momentum to the Government's Make in India programme.
- In the era of globalisation, FDI has been an important source of external finance. According to the United Nations Conference on Trade and Development (UNCTAD), global FDI inflows crossed \$2 trillion in 2020, thus providing an important source of financial tool in times of COVID recession.
- The **increase in foreign ownership limits to 74%** of the share capital of the investee company in India will allow foreign defence majors to exercise substantial ownership and control over the investee company. Under the existing FDI framework which capped FDI under the Automatic Route to 49%.
- New investments which would allow the foreign shareholder to own up to 74% of the share capital of the investee company and to **control the operations and actions of such company**, thereby allowing for greater protection against any further transfer or alienation of proprietary technology licensed to such investee company.
- Under the existing FDI framework, investments in the defence sector are **subject to security clearance and guidelines of the MoD**. However, under the new rules, foreign investments in the defence sector have additionally been made subject to scrutiny on grounds of national security.

But at the same time, increasing the FDI Cap alone is not enough to propel the defence sector, due to the following factors –

1. The **extant consolidated FDI Policy** stipulates four conditions in relation to investment in the defence sector, at least three of which call for a review. If the total foreign investment remains within the limit prescribed for the automatic route, the need for obtaining government approval seems unwarranted.
2. Another condition applicable to FDI in defence subjects the investments to security clearance and guidelines of the Ministry of Defence (MoD). This manual is outdated and the application of its provisions in letter and spirit can be cumbersome.
3. Ambiguities are poised to increase with the foreign investment over 49% being subject to prior scrutiny from an undefinable national security angle. The new FDI policy could easily end up tying foreign investors in more knots and needlessly erecting barriers in an area ripe for growth. These stumbling blocks are sure to lock up any further investments in defence sector, rendering its growth unviable.
4. But apart from the increase in Foreign Direct Investment (FDI) limit, the other measures to boost defence sector include privatising of **the Ordnance Factory Board (OFB)**, which may the private sector as they always struggle in defence is because the OFB and other Defence Public Sector Undertakings (DPSU) always get government preference.
5. The raise in the FDI limit will only help if it is backed by good procurement policy. The government had revised the FDI limit to 49 per cent in July 2016 via the automatic route and also allowed 100 per cent on a case to case basis. But it did not result in increased FDI. In 2016-17, India failed to attract any FDI in defence.
6. India is notorious for delays in taking decisions, placing piecemeal orders, cancelling tenders and unreasonable qualitative requirements by the armed forces. Private companies that have invested in defence production hoping for government support have been left disappointed.
7. The creation of a negative list for import of weapons is not going to make a difference. The current defence procurement procedure has the provision under **'Buy Indian-IDD (Indian Designed, Developed and Manufactured)'** category. As the government is the only buyer of weapons, procurement of certain types of weapons can be put under any of the existing categories. This will help in boosting local procurement.

#### **Way Forward –**

- Instead of creating a separate budget for buying Indian-made weapons, the government should approve the long-standing demand for non-lapsing funds. It should consider project-wise allocation of funds that don't lapse and put the money in a special account.
- Several recommendations for amending the manual to make it industry-friendly were given by the Manohar Parrikar Institute for Defence Studies and

Analyses (MP-IDSA) in 2018, at MoD's behest, after interacting with the Indian and foreign industry representatives, but these remain unimplemented.

**Conclusion**

In conclusion, erratic investment policies subject to frequent change, alongside equally complex procurement procedures and arbitrary and bureaucratic application of rules which foster interminable delays, collectively militate against creating an investment friendly environment in India's defence sector which hamper its overall growth.



17. What is 'One Health'? What is the need of this approach? Discuss.

**Approach** – A straightforward question where in you need to discuss 'One Health' in the first part of the answer and the need of this approach in the second part.

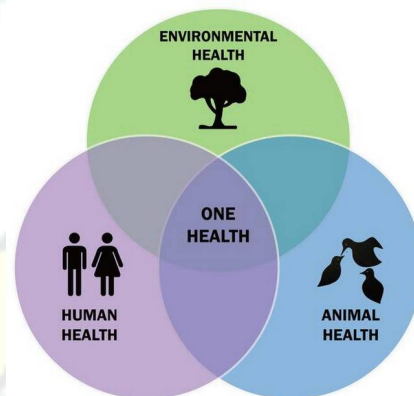
|  |   |
|--|---|
| <p><b>Related concepts:</b></p> <ul style="list-style-type: none"> <li>• WHO</li> <li>• Nipah virus strategy of Kerala</li> <li>• Inter-species Transmission of viruses</li> </ul> | <p><b>Keyword in the answer:</b></p> <ul style="list-style-type: none"> <li>• COVID-19</li> <li>• Shared Environment</li> <li>• Planetary Environmental Health</li> <li>• National Mission on Biodiversity</li> </ul> |
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**Introduction**

One Health is an approach that recognizes that the health of people is closely connected to the health of animals and our shared environment. One Health is not new, but it has become more important in recent years, especially in times of **COVID-19 pandemic**. This is because many factors have changed interactions between people, animals, plants, and our environment.

**Body**

- One Health' is an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes.
- **One Health is a collaborative, multisectoral, and transdisciplinary approach**—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.
- The areas of work in which a One Health approach is particularly relevant include food safety, the control of zoonosis and combatting antibiotic resistance.
- At its core, One Health is rooted in understanding **the interdependence of human and natural systems and promoting interdisciplinary** collaboration. Some of the global issues One Health works to address include environmental contamination, habitat use conflicts, biodiversity loss, emerging infectious diseases, antimicrobial resistance and ecosystem function degradation. In addition, the social determinants of health.



**Need for 'One Health' approach –**

- **Food and Agricultural Organization (FAO)** also advocated for adopting a comprehensive approach such as "One Health" to manage the intricacies of

changing the disease landscape. The Supreme Court of India's judgment in Animal Welfare Board of India vs. A Nagaraj case laid down the principle of eco-centrism, a nature centric approach.

- The Court, in its judgment, reminded the community that humans are only one part of the earth. The need is to create a sustainable level-based collaboration where third-parties can be integrated into the larger system of One Health to achieve scalability, sustainability, and cost effectiveness.
- Many of the same microbes infect animals and humans, as they share the ecosystems they live in. Efforts by just one sector cannot prevent or eliminate the problem. For instance, rabies in humans is effectively prevented only by targeting the animal source of the virus (for example, by vaccinating dogs).
- **Information on influenza viruses circulating in animals** is crucial to the selection of viruses for human vaccines for potential influenza pandemics. Drug-resistant microbes can be transmitted between animals and humans through direct contact between animals and humans or through contaminated food, so to effectively contain it, a well-coordinated approach in humans and in animals is required.
- The frequency with which new pathogens are emerging or old ones are re-emerging across the world are alarm calls for greater transparency, cross-country collaborations, and enhanced national infrastructure and capacity for integrated One Health science.
- **Planetary Environmental health** may affect human and animal health through contamination, pollution and changing climate conditions that may lead to emergence of new infectious agents. Worldwide, nearly 75 percent of all emerging human infectious diseases in the past three decades originated in animals.
- The world population is projected to grow from 7 billion in 2011 to 9 billion by 2050. To provide adequate healthcare, food and water for the growing global population, the health professions, and their related disciplines and institutions, must work together.

#### Measures -

- The Government of India has recently launched the **National Mission on Biodiversity and Human Well-being**. One of the components of the mission explicitly links biodiversity to human health through the One Health framework.
- India has both human disease (IDSP) and animal disease (NADRS) surveillances. But these two systems need a strategic approach where they can be integrated to prepare a roadmap for creating a unified One Health surveillance system in the country.

#### Conclusion

By promoting collaboration across all sectors, a One Health approach can achieve the best health outcomes for people, animals, and plants in a **shared environment** thus ensuring sustainable and healthy growth of all.

18. What are the ongoing issues in the global administration of the Internet? What is India's stand on these issues? Discuss.

**Approach** – You need to highlight the ongoing issues in the global administration of internet in the first part of the answer while in the second part, you need to discuss India's stand on these issues.

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|--|---|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Snowden issue</li><li>• International Telecommunication Regulations (ITR)</li><li>• UN WSIS</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• ICANN</li><li>• Information Age</li><li>• Internet Governance Forum,2005</li><li>• Root Servers</li></ul> |
|--|---|

**Introduction**

The Internet has revolutionized many sectors of our societies and indeed the very fabric of human communication. The Internet is the most important infrastructure of the information age, influencing politics, economics and culture. While national governments apply their laws on the Internet, the Internet is a global network of networks and presents many issues that span national jurisdictions, and therefore requires global governance.

**Body**

- ICANN has been assigned the task to manage Internet by the US Commerce Department's National. It is a non-profit body founded in 1998 that administrates domain names and Internet protocol addresses (IPs) globally.
- Some time back, **the Internet Corporation for Assigned Names and Numbers (ICANN)** in a meeting at Marrakesh (Morocco) decided that the ICANN will now be governed by a "multi-stakeholder" (multistakeholder ICANN community) model, including businesses, individual users and members of governments across the world.
- Since this group elects ICANN's board of directors in the first place, it can be said that ICANN will now be an independent organisation, with no external oversight.
- In 2005, **UN sponsored World Summit on Information Society** defined Internet Governance as – "development and application of rules, norms, principles, practices by govt, civil society, business, each within its own respective role, to enable the evolution and use of internet".
- Following the next summit of WSIS 2005, the UN sponsored Internet Governance Forum (IGF), which is meant to promote dialogue on Internet governance was established in 2006. However, on democratisation of the Internet, it could hardly go beyond sketching a rather vague model.
- The **Internet Governance Forum**, which held its 8th Meeting in Bali, Indonesia in October 2013, discussed, in the backdrop of recent revelations about government-led Internet surveillance activities, the need to ensure better



protection of all citizens in the online environment and to strive for a proper balance between actions driven by national security concerns and the respect for internationally recognised human rights, such as the right to privacy and freedom of expression.

- **The Snowden revelations** have exposed the extent of secret cyber surveillance by a single world power and have rang alarms on violations of basic human rights like online privacy as well as of dignity and sovereignty of nation states. This has suddenly made Internet administration one of the foremost international issues that various nations are seeking to address with a definite urgency.

#### **India's Stand –**

1. Despite having one of **the largest numbers of Internet users** in the world and having a strong base in ICT services, public opinion in India is ill-formed and government departments have not engaged in wider consultations in the process of formulating India's stance on Internet administration.
2. It is clear that initially India never proposed to change existing multi-stakeholder models promoted by private interests and supported by the US, notwithstanding India's intentions of forging a greater international cooperation in management of Internet related policy matters.
3. India's contribution towards deliberations on Internet administration is mature but lacks consistency and coherence. India along with the US, EU and Japan **did not sign the International Telecommunication Regulations (ITR)**, to come into effect from 1 January 2015, at the World Conference on International Telecommunications (Dubai, 2012).
4. India has made a bid to be a major player **in global Internet governance** — by making a pitch with the US to locate a **'root server' in India**. A root name server, as it's technically known, is at the base of the Internet. These servers translate readable host names into IP addresses, which is how a user gets to the right portal link.
5. While it is important for India to carefully align itself under difficult **geopolitics of the World Wide Web**, India should also buckle up for host of other issues of the global Internet that affects its economics.

#### **Conclusion**

C. Raja Mohan writes that India is still some steps away from nuancing its position on Internet administration that is in tune with India's political values and the aspirations of its flourishing IT sector and concern of civil society groups. Presently, **control of the Internet is in a few hands** – its administration challenges norms of democratic institutions and lacks any form of multilateral character. The challenge for developing countries therefore, is to propose **their framework and agenda of alternative multilateral Internet administration institutions** that would be fair towards them and are run democratically.

19. What are the objectives of the National Supercomputer Mission (NSM)? What are its key application areas? Examine.

**Approach** – A straightforward question where in you need to mention the objectives of National Supercomputer Mission (NSM) in the first part and then examine its key application areas in the second part of the answer.

|   |   |
|---|---|
| <b>Related concepts:</b> <ul style="list-style-type: none"><li>• Seismic studies</li><li>• Computational capacities</li><li>• Indian supercomputer roadmap</li><li>• PARAM series</li></ul> | <b>Keyword in the answer:</b> <ul style="list-style-type: none"><li>• National Knowledge Network</li><li>• C-DAC</li><li>• High Performance Computing</li><li>• Climate modelling</li><li>• Weather forecasting</li></ul> |
|---|---|

**Introduction**

Recently, the Centre for Development of Advanced Computing (C-DAC) launched the second phase of the ambitious National Supercomputing Mission (NSM). NSM was launched in 2015 and is jointly funded by the Department of Science and Technology (DST) and Ministry of Electronics and Information Technology (MeitY), and is a seven-year mission aiming at **establishing supercomputer facilities across 70 national research and academic institutions** and connecting them onto a National Knowledge Network (NKN).

**Body**

- The Mission envisages empowering our national academic and R&D institutions spread over the country by installing a vast supercomputing grid where these supercomputers will also be **networked on the National Supercomputing grid over the National Knowledge Network (NKN)**.
- The NKN is another programme of the government which connects academic institutions and R&D labs over a high speed network. Academic and R&D institutions as well as key user departments/ministries would participate by using these facilities and develop applications of national relevance.
- The Mission also includes development of **highly professional High Performance Computing (HPC)** aware human resource for meeting challenges of development of these applications where the long-term plan is to build a strong base of 20,000 skilled persons over the next five years who will be equipped to handle the complexities of supercomputers.

**Objectives of the Mission include -**

1. To make India one of the world leaders in Supercomputing and to enhance India’s capability in **solving grand challenge problems** of national and global relevance

2. To **empower our scientists and researchers** with state-of-the-art supercomputing facilities and enable them to carry out cutting-edge research in their respective domains
3. To minimize redundancies and duplication of efforts, and optimize investments in supercomputing
4. To attain **global competitiveness** and ensure self-reliance in the strategic area of supercomputing technology
5. The Mission implementation would bring supercomputing within the reach of the large Scientific & Technology community in the country and enable the country with a capacity of solving multi-disciplinary grand challenge problems.

NSM's key application areas can be examined from the points below:

- **Climate Modelling and Weather Prediction** - Supercomputers have the capacity to provide short term weather forecast by establishing an operational high-resolution local area system to provide improved guidance for weather forecasting. Subsequently, they are a massive aid in agri systems, where in India, agriculture supports almost half the population.
- **National Security/ Defence Applications** - Supercomputing tools can be utilised by the military to solve some of the most complicated and time-consuming problems thrown up by technological development which eventually help in saving precious human lives as well as gain strategic advantage.
- **Seismic Analysis and Disaster Simulations and Management** - forecasting disasters, especially earthquakes means relying on massive computer models and multifaceted simulations, which recreate the rock physics and regional geology and require big supercomputers to execute, thus helping in being prepared in advance for any eventualities.
- Some other applications include - Computational Chemistry and Computational Material Science and Nanomaterials, Discoveries beyond Earth (Astrophysics), Large Complex Systems Simulations and Cyber Physical Systems, Big Data Analytics, Finance, Information repositories/ Government Information Systems, Atomic Energy Simulations, etc.

### **Conclusion**

Globally, China has the maximum number of supercomputers and maintains the top position in the world, followed by the US, Japan, etc. where the **growth of indigenously designed systems** with most parts designed and manufactured in India will help the country in reducing the technology gap and ensure development of science and technology for tackling larger social issues in India and overcome them.

20. Examine the accomplishments of the Indian scientific community in the Antarctica region.

**Approach** – A simple and straightforward question where you need to discuss the accomplishments of Indian scientific community in Antarctica.

| Key words  | Related concepts   |
|--|--|
| <ul style="list-style-type: none"><li>• Antarctic Treaty</li><li>• Indian Antarctic Program</li><li>• Maitri, Bharti</li><li>• Polar Science</li></ul> | <ul style="list-style-type: none"><li>• Polar expeditions</li><li>• Svalbard Treaty</li><li>• NCAOR</li><li>• Dakshin Gangotri</li></ul> |

**Introduction**

The importance of Antarctica as a pedestal for front-ranking scientific research was recognized by India way back in 1981 itself, when the first Indian Scientific Expedition to Antarctica was launched. Since then, India has made great strides in initiating scientific projects of both national and global relevance.

**Body**

- Almost 98% of Antarctica is covered by ice and the continent has the cleanest air in the world. Politically, Antarctica’s status remains neutral, and it is regulated by the **1959 Antarctic Treaty**, which established Antarctica as a region of peace and cooperation. The signing of the **Svalbard Treaty** in February 1920 marked the beginning of India’s involvement with the Polar Regions.
- The Indian Antarctic Programme is a multi-disciplinary, multi-institutional programme under the control of the National Centre for Antarctic and Ocean Research, Ministry of Earth Sciences, Government of India. Under the programme, atmospheric, biological, earth, chemical, and medical sciences are studied by India, which has carried out 35 scientific expeditions to the Antarctic till now.
- **Dakshin Gangotri** was the first Indian scientific research base station established in Antarctica, as a part of the Indian Antarctic Program. It was established during the third Indian expedition to Antarctica in 1983/84. This was the first time an Indian team spent a winter in Antarctica to carry out scientific work.
- **Maitri** is India’s second permanent research station in Antarctica. It was built and finished in 1989, shortly before the first station Dakshin Gangotri was buried in ice and abandoned in 1990/91. India also built a freshwater lake around Maitri known as Lake Priyadarshini.
- **Bharti**, India’s latest research station operation since 2012 to help researchers work in safety despite the harsh weather. It is India’s first committed research facility. Research on tectonics, oceanography and geological structures, with

focus on understanding the phenomenon of continental breakup, is undertaken here.

- In 2008, India commissioned the **Sagar Nidhi**, the pride of the National Institute of Ocean Technology (NIOT), for research. The ship is the first of its kind in the country and has been used several times for the launch and retrieval of remotely operable vehicle (ROV) and the deep-sea nodule mining system, as well as for tsunami studies.
- Experiments mounted by Indian scientists in such disciplines as atmospheric sciences & meteorology, earth sciences and glaciology, biology and environmental sciences have also contributed directly to global experiments mounted under the aegis of the Scientific Committee on Antarctic Research (SCAR).

Some of the noteworthy accomplishments of Indian scientific community in Antarctica are:

1. Indian scientists have discovered 20 new microbes in the Antarctic and published over 300 research publications based on Antarctic studies.
2. Identification of new genes from the bacteria as genes required for the survival of bacteria at low temperature.
3. Identification of a number of lipases and proteases active at low temperatures and useful for the biotechnology industry.
4. Studies of cold adaptability of human beings in the harsh environment of Antarctica which have provided significant baseline data for use in similar studies on India's armed forces serving in the Himalaya.
5. Initiating novel programmes in the frontier realms of polar science, viz. Assessment of microbial diversity in Antarctic: Environmental monitoring and health of the Indian Antarctic Stations in pursuit of Antarctica-Treaty-System and its governance; Long-term monitoring and modelling of precipitation over Antarctica.
6. Ensuring a prominent and sustained presence of India in the Antarctica through initiation of scientific research in some of the frontier realms of polar science including paleo-climate reconstruction from the Antarctic coastal water.

### **Conclusion**

India has enormous potential to contribute to the pursuit of scientific exploration and the preservation of the Polar Regions. However, knowledge lag on the subject of Polar Regions among its population and the lack of determined political will are acting as major barriers to achieving any breakthrough in this direction. Thus, India needs to take into account the looming global environment crisis and voluntarily act in ways that are geared towards protecting the Polar Regions.