NOTE: Please remember that following ‘answers’ are NOT ‘model answers’. They are NOT synopsis too if we go by definition of the term. What we are providing is content that both meets demand of the question and at the same time gives you extra points in the form of background information.
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Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

With limited fiscal space and amidst the uncalled financial distress, the onus for economic revival rests with the RBI. Do you agree? Examine.(250 words)

Reference: The Hindu

Why this question:
The question is amidst the financial downturn that India is going to face in its near future owing to the distress caused by the corona outbreak.

Key demand of the question:
Explain in what way India’s financial distress was exacerbated by the pandemic. With limited fiscal space, the onus for economic revival rests with the RBI.

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

Structure of the answer:
Introduction:
Briefly explain the context of the question.

Body:
First, present the factors that have caused the financial crisis – The constantly evolving Covid-19 pandemic have cast a long shadow on the global economy, which was already jolted by the US-China trade war. Comment on the fears of a possible global recession; massive supply-chain related disruptions across a range of industries from containment efforts in China and other economies; amplification of demand-side shocks due to uncertainties as well as lockdowns and other containment measures domestically; and propagation of financial shocks and the US dollar credit crunch etc.

Discuss the role that RBI needs to play to handle the situation.

Conclusion:
Conclude by suggesting measures to address the issue.

Introduction:
The constantly evolving Covid-19 pandemic has cast a long shadow on the global economy, which was already jolted by the US-China trade war. India’s financial distress was exacerbated by the pandemic. This global shock comes at a particularly inopportune time for India, as the economy was already on a very concerning downward trajectory since the turn of FY 2018-19.

Body:
With the fears of a global recession on the horizon, Covid-19 appears to have dealt the global economy a triple-whammy:

- Massive supply-chain related disruptions across a range of industries from containment efforts in China and other economies.
- Amplification of demand-side shocks due to uncertainties as well as lockdowns and other containment measures domestically.
- Propagation of financial shocks and the US dollar credit crunch.

India’s financial situation currently:
The roots of India’s economic drag in recent years:

- Aftermath of the drastic demonetization experiment, which led to significant collateral damage.
- The effects of the rollout of the GST.
- Both these supply-side measures may have been well-intended, they have certainly contributed to marked economic disruptions.
- This has led to a deeply entrenched slowdown in the informal sector.
- This has, in turn, been exacerbated by acute banking sector problems, with banks being saddled by non-performing assets (NPAs) partly driven by “crony capitalism” stemming from the close nexus between banks and large “politically connected” businesses, giving rise to dubious lending practices and bad loans.
- Added to these banking woes has been a generalized credit crunch in the financial system due to stresses in the non-bank financial sector, especially following the collapse of Infrastructure Leasing & Finance Services (IL&FS).
- India’s inability to exploit investor interest in looking beyond China (as Vietnam has, for instance), is a failure of the country’s flagship “Make in India” initiative which seems to be becoming an excuse to revert to a degree of protectionism rather than of enhancing export competitiveness per se.

Impacts of COVID-19 on Indian Economy:

- The immediate economic and market impacts of the coronavirus have been on India’s financial markets as well as the rupee, which hit a new low vis-à-vis the US dollar in March due to global risk-off sentiment.
- For firms laden with dollar-denominated debts, a continuous weakening of the rupee is likely to intensify their struggles to repay their obligations.
- Beyond the financial shocks, India has to urgently find a way to cushion the demand-side shocks induced by potential lockdowns and other ongoing containment measures.
- A prolonged lockdown in the near future is likely to be economically costly, with the brunt of the pain falling disproportionately on those in the informal sector.
Fiscal measures needed:

- India will have to undertake more aggressive counter-cyclical fiscal measures at some stage to buffer against acute negative shocks arising from the spread of Covid-19.
- An appropriate fiscal response is imperative to uplift the economy and especially assist the most vulnerable, a massive fiscal expansion of the type envisaged by many other countries is likely to exceed the fiscal targets set by the FRBM.
- This would imply that the government has to either invoke the escape clause or ignore the rule temporarily with the hope of returning to a path of fiscal consolidation once the Covid-19 storm has been weathered.

Monetary measures by RBI:

- The Central bank has also taken some steps to ease the dollar credit crunch via long-term repo operations (LTRO).
- It offered a $2-billion swap for six months to ease the pressure on the rupee.
- RBI took measures although it has not been part of the coordinated action by central banks in taking even more aggressive measures to counter the heightened volatility and adverse economic fallout from the coronavirus.

Conclusion:

Even if the RBI rolls out more aggressive measures, the broader concern that still remains is the inadequate monetary policy transmission that limits the effectiveness of any monetary stimulus in India, especially in the context of an impaired financial sector. Thus, the government must refocus its priorities towards dealing with economic stabilization and upliftment rather than pursue the more controversial aspects of its social and political agenda.

In what way can the vision and goals of the newly emerged start-ups be made more realistic during uncertain times in the country? Elucidate.(250 words)

Reference: Live Mint

Why this question:
The question is amidst the woes start-ups across the country are facing owing to the effects of pandemic.

Key demand of the question:
Explain how the vision and goals of the newly emerged start-ups be made more realistic during uncertain times in the country and that can help start-ups pass the storm.

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

Structure of the answer:
Introduction:
A start-up is a company or project initiated by an entrepreneur to seek, effectively develop, and validate a scalable business model.

Body:
Briefly discuss the issues and challenges the start-ups across the country are facing from supply constraints to funding.
Explain with specific examples such as – The outbreak has created new challenges across sectors, with start-ups, particularly those in the health space, bearing the brunt of the disruption caused by the 21-day lockdown.
Suggest measures to address the above challenges.

Conclusion:
Conclude that proper strategy, increase in customer interaction etc. help startups to turn adverse situations into their favor and make them realize their goals better than before.

Introduction:
The full impact of covid-19 on the world and our economy is impossible to be gauged. It is one of the most severe global crisis faced by the world in last 100 years. Some startups in areas like edutech, online gaming, collaboration, food delivery or healthcare will see growth during this period, others will face difficult choices in the weeks and months ahead. Startups, particularly those in an early stage, operate with a high level of uncertainty during the normal course of business.

Body:

Indian Startup Ecosystem:
- India is home to the world’s third largest startup ecosystem, having added over 1,300 tech startups in 2019.
- India now hosts 24 unicorns—a term to describe startups valued at $1 billion—the third-highest number of unicorns in a single country in the world.
- The volume of investments in startups also grew.
- Startups created 60,000 direct jobs in 2019 alone.
- The start-up landscape in the country is becoming the epitome of innovation, with companies bringing out solutions that are aimed at solving locally relevant issues.
- Startups can act as vehicles for socio-economic development and transformation.
- India has immense potential both in terms of technological innovation and implementation of business models.
- In light of the current economic environment, IPOs from India into the US could emerge over the next 12 to 18 months

Measures for an emerging Indian startup ecosystem in such times of crisis:
- Focus on safety and engagement:
  - Many of our startups have been working from home for several weeks now.
  - Some have seen increase in productivity, while others have seen a drop of 15-20%.
  - The mantra here is to enable the teams with the right tools, develop daily rhythms to ensure seamless operations, set daily or weekly goals and, most importantly, communicate, communicate and communicate.
  - Engaging the employees, often and with empathy, is critical.
  - Set up a regular cadence of team video calls and check in often on how team members are doing—both personally and professionally.
- Plan for a range of ‘worst-case’ scenarios:
  - Map out all possible scenarios, come up with a strategy for each one and figure out how you can extend your runway in the most likely scenarios.
  - Think about what you can cut, from marketing costs through to leases.
The last area you should consider reducing is staff costs, because these are the people helping you build your dream.

If you must address talent, talk with your team about a combination of options—pay cuts or deferrals, alternate working days, furloughs and reassigning roles—before reducing headcount. And if you must cut pay, lead from the front.

Start with your own, then trim executive pay before others.

**Focus on customer engagement:**

- Take this time to get even closer to your customers.
- Think of innovative ways in which you can connect with your users: gamification, online forums, or even asking customers to co-create new product lines.
- If your brand can give back to the community in some way, do that, too. It’s a great time to show empathy and to demonstrate to customers that you care.
- If you are a B2B company, take this time to understand what your customers’ priorities are. Consider changing your narrative to align with those needs.

**Double down on your product:**

- This is a good opportunity to build the “must-have” you have been waiting to add to your product, or think about how to engage new audiences.
- By staying close to the market, you may find new opportunities.
- Companies with an offline component are accelerating their digital transformation. Logistics may be mired right now, but that will be resolved soon.
- Covid-19 is a wake-up call for consumer companies without an e-commerce strategy.

**Conclusion:**

The current crisis is not like any financial downturn we have seen in recent history. But tough times can bring out the best in startup, its leadership team and your organization, bringing teams closer together and driving clarity in a startup’s mission and vision.

**Can Health sector be a way out of the middle-income trap for India in the coming future? Discuss the possibilities and give your opinion. (250 words)**

**Reference:** Economic Times

**Why this question:**
The question propounds upon the prospects of the Indian health sector in the coming future.

**Key demand of the question:**
Explain the prospects of Indian health sector/industry post corona pandemic and if it can be a way out for its middle-income trap.

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

**Structure of the answer:**

**Introduction:**
Briefly explain the importance of India’s health sector.
Body:
First explain in what way India is amongst one of the most capable countries that are handling/containing the situation very well.
Explain the potential that India has in terms of Health industry.
Post-pandemic, India may thus support the world with health infrastructure as its centerpiece.
Hint at the on-going efforts of India to fight the pandemic.

Conclusion:
With a health-centered investment agenda, India can supply doctors, nurses, paramedics, technicians and other medical professionals to the world. It can also supply valuable data and analytics. Even with the country busy fighting the coronavirus, planners need to start thinking of tomorrow’s battles.

Introduction
Even before the coronavirus, India was at a crossroads. At roughly $2,000 a year, per capita income in 2018 was half of what the country needed to become an upper-middle-income economy. Catching up with advanced nations posed a more daunting challenge.

The debate was whether India should become a manufacturing hub to the world and take over China or prioritizing the domestic economy, expanding its rather narrow base of mass consumption. The answer in the post-pandemic world may support the second strategy, with health infrastructure as its centerpiece.

Body
India’s potential in healthcare
- According to the Indian Brand Equity Foundation (IBEF), India is the third-largest exporter of pharmaceutical products in terms of volume. Around 80% of the market is composed of generic low-cost drugs which seem to be the major driver of this industry.
- The medical devices sector is the smallest but one of the fastest-growing sectors in the country like the health insurance marketplace. Recently, the government has been positive on clearing regulatory hurdles related to the import-export of medical devices, and has set a few standards around clinical trials.
- India is a popular destination for medical tourists, given the relatively low costs and high quality of its private hospitals. International students / patients in India should expect to rely on private hospitals for advanced medical care.
- Alternate medicine: India also is a top destination for medical tourists seeking alternative treatments, such as Ayurveda medicine and naturopathies therapies. Homeopathy, Unani are also being popularized in recent times.
- Medical Education: Medical education infrastructures in the country have shown rapid growth over the past few years.
  - The country has 529 medical colleges, 313 Dental Colleges for BDS & 253 Dental Colleges for MDS.
  - The total number of admissions for academic year 2019-20 in Medical Colleges is approx. 70,000 including Government & Private Medical colleges.
  - The Dental Colleges saw an admission of 26,960 in BDS and 6,288 in MDS in the academic year 2018-19.
Can healthcare be India’s way out of Middle Income trap?

Yes

- India’s pharmaceuticals is robust and export of Hydro-chloroquine to many nations during the covid-19 crisis is a testament to this.
- The estimated Foreign Tourist Arrivals (FTAs) in the country on Medical purpose during the years 2015, 2016 and 2017 are **34 lakh, 4.27 lakh and 4.95 lakh** respectively. It offers a diverse portfolio of niche tourism products – cruises, adventure, medical, wellness, sports, MICE, eco-tourism, film, rural and religious tourism. India has been recognized as a destination for spiritual tourism for domestic and international tourists.
- Current financial year (2020), India is expected to rank amongst the top 3 healthcare markets in terms of incremental growth.
- The present year, the healthcare information technology market is expected to grow 1.5 times from current US$1 billion.
- By 2022, the diagnostics market is expected to grow at a CAGR of 20.4% to reach US$32 billion from US$5 billion in 2012.
- Current financial year, the Indian telemedicine market is expected to grow at a Compound Annual Growth Rate (CAGR) of 20% to reach US$32 million from US$15 million.

No: Shortcomings of India’s healthcare sector

- **Overstretched health infrastructure**: A single state-run hospital for every 55,591 people on average and a single hospital bed for every 1,844 people.
- **Shortfall of Doctors**: India needs about 10 times more doctors to meet the norms prescribed by the World Health Organization, a shortfall of at least 500,000 doctors.
- **Regional Disparity**: India’s health performance, an index that includes access to primary care, maternal mortality rates and child health, runs the spectrum, with some states outperforming others by almost 2.5 times, according to the government-run think tank NITI Aayog.
- **Health care spending**: India spent an average of **$62.72 per person** on health care in 2016, according to WHO, compared to China’s $398.33. India is yet to increase public expenditure on health to 2.5% of GDP as per the National Health Policy 2017 as against 1.2% GDP now.
- The World Health Organisation (WHO) data shows India’s Out of Pocket OOP expenditure stood at **65% in 2016**, the last year for which the comparative data is available.

Way Forward

- One way to solve this problem is to address the infrastructure issue, by standardising diagnostic procedures, building rural clinics, and developing streamlined health IT systems, and improving efficiency.
- The need for skilled medical graduates continues to grow, especially in rural areas which fail to attract new graduates because of financial reasons.
- India needs to be becoming a major international hub for the global healthcare industry. It is already home to the world’s largest medical tourism zone. The hubs would stimulate private investment in new developments from domestic and international players, Research & Development in medical field, advanced technology zone including Global University for Healthcare sector and its focus on becoming a global medical tourism hub.
The hub of a diverse healthcare economy that includes the life sciences and a digital health cluster that leverages the strong private investment/venture capital landscape, major academic medical centers, institutions of higher learning and a highly skilled and educated workforce to meet the shortage of healthcare workers in India.

Conclusion

There should be a strong commitment from both the public and private sectors. Players from both sides must work together and investing to continue building an ecosystem that fuels innovation in the life sciences and digital health industries. The healthcare innovations and unprecedented public-private support could boost the healthcare economy in India and overcome the middle income status.

Explain in what way using dollar swap line with other countries can help the Indian economy in uncertain times. (250 words)

Reference: Indian Express

Why this question:
India is working with the United States to secure a dollar swap line that would help in better management of its external account and provide extra cushion in the event of an abrupt outflow of funds, according to banking industry and government sources. Thus the question.

Key demand of the question:
Explain the utility and benefits of using a dollar swap line in the current conditions of the pandemic.

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

Structure of the answer:
Introduction:
Briefly explain what a dollar swap line is.

Body:
To start with explain that while India is largely expected to tide over any challenge posed by continued outflows of funds from the markets, a swap line with the US Federal Reserve provides additional comfort to the forex markets. Discuss how a swap facility works. Explain how a currency swap agreement acts as a tool for quantitative easing of the Indian economy.

Conclusion:
Conclude with importance of it.

Introduction:
Dollar swap is a kind of currency swap wherein between the two countries, there is an agreement to exchange currencies with predetermined terms and conditions. India is working with the United States (US) to secure a dollar swap line. It would help in providing an additional comfort in an event of any abrupt outflow of funds. India already has a currency swap facility with other central banks like Japan, SAARC nations, UAE etc. Currently, India, China, Russia, Saudi Arabia and South Africa do not have a currency swap line with the US.

Body:

Working of Currency swap lines:
- In a swap arrangement, based on the market exchange rate at the time of the transaction,
- The US Fed provides dollars to a foreign central bank, and
- The bank provides the equivalent funds in its currency to the Fed.
The parties agree to swap back their currencies at a specified date in the future, at the same exchange rate as in the first transaction.

These swap operations carry no exchange rate or other market risks, as transaction terms are set in advance.

Current need for currency swap line:

Forex reserves/assets are assets held on reserve by a central bank in foreign currencies. These may include foreign currencies, bonds, treasury bills and other government securities. These are held to ensure that a central bank has enough funds if its national currency weakens/devalues rapidly.

As concerns on the economic effects of COVID-19 hit investor sentiment, Foreign institutional investors (FIIs) have been large sellers of Indian equity and debt markets in March and April so far leading to outflow of funds from the country.

To stabilize the rupee which recently fell below the 76 level against the dollar, India liquidated its forex assets.

India’s foreign currency assets had declined by around $7.50 billion in two weeks to $439.66 billion as on March 27.

According to Reserve Bank of India (RBI) data, 63.7 per cent of India’s foreign currency assets—or $256.17 billion—is invested in overseas securities, mainly in the US treasury.

While India is expected to comfortably tide over any challenge posed by continued outflows of funds from the markets, given the adequacy of foreign exchange reserves, a swap line with the US Fed provides an additional comfort to the forex markets.

Advantages of dollar swap line:

A swap line with the US Federal Reserve would help in better management of the external account of India.

It would also provide extra cushion in the event of an abrupt outflow of funds from the forex markets.

So far, foreign institutional investors (FIIs) have been large sellers in the Indian equity and debt markets in March and April 2020.

There is apprehension that the economic impact of COVID-19 will last for a significant length of time.

So, the government and the Reserve Bank of India (RBI) cannot lower their guard on the management of the economy and external account.

Conclusion:

These swap operations carry no exchange rate or other market risks as transaction terms are set in advance. Central banks and Governments engage in currency swaps with foreign counterparts to meet short term foreign exchange liquidity requirements or to ensure adequate foreign currency to avoid Balance of Payments (BOP) crisis till longer arrangements can be made.

Explain in the backdrop of the COVID-19 pandemic, how dependence on a more liberalized economic model has proved to be counter-productive and disastrous for the country. (250 words)

Reference: The Hindu

Why this question:
The authors of this article argue that the COVID-19 pandemic reveals how dependence on a more liberalized economic model has proved to be counter-productive and disastrous in the current scenario. Thus the question.

**Key demand of the question:**
One must evaluate the challenges related to the liberalized economic model amidst the COVID-19 pandemic.

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

**Structure of the answer:**

**Introduction:**
Briefly set the background of the question’s context.

**Body:**
To start with, explain the change in the industrial model in the past – in the late 1980s, transnational corporations started shifting their production base to developing countries, especially Asia, in search of cheap labour and raw materials. Developed countries supported the move as it helped them shift the polluting and labour-intensive industries to other countries, while still retaining the ownership. Thus, the world witnessed the development of global supply chains in many products. Discuss the current case; explain the fallacies brought out by the COVID-19 situation. Take hints from the article to form your answer content. Present the case of India.

**Conclusion:**
Conclude that the current pandemic should lead the countries to rethink and reevaluate the economic efficiency theory propounded by the LPG principle. There should be the emphasis on an industrial policy that helps maintain core capacity in essential products.

**Introduction:**
India’s LPG reforms in 1991-92 marked the beginning of the end of the ‘License Raj’ in India. The Budget also announced the reduction of import duties and paved the way for foreign-manufactured goods to flow into India. Though many developing countries participated in the global production, the substantial value addition in developing countries happened in a few production hubs, of which China emerged to be a major one.

**Body:**
Economic liberalization and its impacts on the governments’ capacity to deal with the crisis:

- **Undermining the manufacturing capabilities of health products in India through imports:**
  - The short-sighted liberalization policy measures, with the objective of enhancing profitability of the private sector, allowed the import of raw materials from the cheapest sources and resulted in the debasing of the API industry, especially in essential medicine.
  - According to a report of the Confederation of Indian Industry (CII), nearly 70% of India’s API import is from China.
  - The disruption in the supply of API due to the COVID-19 outbreak has impacted the production of not only medicines required for COVID-19 patients, but also of other essential medicines in India.

- **Import dependency:**
Dependence on imports affects the ability of Indian diagnostic companies to provide an affordable test for all those who want to test for COVID-19. Now the country is not able to get required quantities of test kits, PPE and parts of ventilators through importation.

The dependence on Reagents, an important chemical component for testing, is limiting the capacity of the government from expanding testing because the cost of each test is ₹4,500.

There are only a few domestic manufacturers who can produce PPE and medical devices like ventilators.

- **Loss of jobs and poor working conditions:**
  - Through liberalization developing countries were asked to ease their labour protection laws to facilitate global production and supply chains popularly known as global value chains.
  - As a result, people were forced to work in precarious working conditions without any social security net.
  - This created an unorganized army of labourers and is preventing many developing country governments from effectively offering relief.
  - The resultant loss of manufacturing base has affected the ability of many governments, including of developed countries, to put up an effective response to the crisis.
  - The U.K. Prime Minister asked the country’s manufacturers to produce ventilators in order to provide care for critical COVID-19 patients.
  - Spain nationalized all its private hospitals.
  - In an indirect show of power, Chinese billionaire Jack Ma sent a flight containing 5.4 million face masks, kits for 1.08 million detection tests, 40,000 sets of protective clothing and 60,000 protective face shields to the U.S exposing USA’s import dependency.

- **Lack of credible information about the private sector:**
  - For instance, as part of the removal of ‘License Raj’, the government stopped asking for information from the manufacturer to file the quantity of production of various medicines.
  - As a result, it has taken weeks now and a series of meetings for the government to gather information about stocks and the production capacity of pharmaceutical companies.
  - Similarly, there were difficulties in finding out India’s production capacity of PPE, medical devices and diagnostics.
  - The only government data available in the public domain is with regard to the production of vaccines.

**Way forward for the private sector companies in today’s crisis:**
In the Covid-19 response, the private sector in the country — for-profit and not-for-profit segments — has to play an even more important role, as it is the dominant provider of health services.

The National Sample Survey Office’s 71st round data shows that private hospitals, clinics and nursing homes provide over 70% of health care.

Data on the nearly 10 million treatments received under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) corroborate this finding.

According to the World Health Organization, a critical lesson from the 2014-16 West African Ebola crisis is that both the public and private sectors need to work in tandem in responding to large-scale epidemics. So, the private sector-led economic growth model deserves a rethinking so that there is better coordination between the government and the private sector to deal with such a crisis.

**Analyse the impact of Corona virus pandemic on the Indian Pharma sector.(250 words)**

*Reference: Economic Times*

*Why this question:*
The article brings to us a detailed narration of the effects of ongoing pandemic on the Indian Pharmaceutical Industry.

*Key demand of the question:*
One must discuss the challenges and opportunities pertaining to India’s pharmaceutical industry.

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

**Structure of the answer:**
**Introduction:**
Briefly state the ongoing crisis across the country owing to the pandemic onset.

**Body:**
The question is pretty much straightforward and there isn’t much to deliberate. Bring out the impact of the pandemic on the pharma industry – explain first the stress it puts on the resources of the industry, then move onto explain the avenue that it provides to Indian pharma sector to establish its global footprint.

**Conclusion:**
Conclude amidst all negativities it brings the Pharma Industry a chance to become a remarkable industry in the world.

**Introduction:**
India is the largest provider of generic drugs globally. Indian pharmaceutical sector industry supplies over 50 per cent of global demand for various vaccines. The novel coronavirus pandemic in China, with its epicentre in Wuhan, capital of Hubei province, threatens to starve India’s pharma industry of key inputs. India is massively dependent on imports of active pharmaceutical ingredients (API), the bulk drugs that give medicines their therapeutic value, largely from 30-40 units in Hubei.

**Body:**

**Indian Pharmaceutical industry:**
- The Indian pharma industry has been a world leader in generics both globally and in domestic markets contributing significantly to the global demand for generics in terms of volume.
- Made-in-India drugs supplied to the developed economies such as the US, EU and Japan are known for their safety and quality.

**Threats posed by Coronavirus on Indian Pharma industry:**
- **Competition in drug manufacturing:**
  - In recent years, India has seen increasing competition from China, which it has been able to leverage due to its inherent cost advantage, manufacturing intermediates and APIs at a cost much lower than those in India.
  - This has resulted in a gradual increase in API imports from China to India and this in turn has led to killing of domestic manufacturing capacity for certain key APIs and their advanced intermediates.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
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<tbody>
<tr>
<td>2014-15</td>
<td>2.77</td>
<td>1.78 (64%)</td>
</tr>
<tr>
<td>2015-16</td>
<td>2.97</td>
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<td>2017-18</td>
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<td>2.06 (69%)</td>
</tr>
<tr>
<td>2018-19</td>
<td>3.56</td>
<td>2.41 (68%)</td>
</tr>
</tbody>
</table>

All figures in $billion; figures in parentheses (rounded off) are percentage of China imports in total

*Source: Lok Sabha questions*

- **Risks from India pharma’s China linkages**
  - India’s large import dependence on China (nearly 70% by value) has become a significant threat to India’s healthcare manufacturing and global supply chain.
  - While Indian pharma players over a time period have steadily migrated up the value chain to focus on value-added formulations with higher margins, but this over dependence on China has increased the threat to the nation’s health security as some of these critical APIs are crucial to mitigate India’s growing disease burden.

- **Supply chain disruption for India pharma:**
  - Any disruption in supply chain of APIs can result in significant shortages in the supply of essential drugs in India.
  - Some of the critical APIs for high-burden disease categories such as cardiovascular diseases, diabetes and tuberculosis are listed in the National List of Essential Medicines (NLEM).
• **Major earning cuts ahead for pharma firms:**

  ▪ Edelweiss Securities says the novel coronavirus, or COVID-19, pandemic has caused severe supply-side disruptions in various sectors, earnings will be cut by 10-15%.
  
  ▪ Pharma as a sector has emerged as a strong contender to drive the next leg of rally, whenever it comes. In anticipation, pharma stocks have seen a huge run up in the last 10 days.
  
  ▪ This is not just true for India, but globally too pharma companies have performed well.
  
  ▪ While in the short term, most companies will bounce back from the last 5 year of underperformance, this time around, the leader will be different.

The Department of pharmaceuticals has charted out a plan to boost domestic local manufacturing of Active Pharmaceutical ingredients(API) in order to reduce its import dependence on China. The plan includes:

• Development of clusters.
• Incentives to promote indigenous manufacturing.
• Strengthen regulatory mechanism.
• Higher fee structure to reduce import.
• Single window clearance for setting up manufacturing plant.

**Other measures needed:**

• India’s strong innovation capabilities aided partnerships would help in overcoming these problems.
• Developing our R&D sector to reduce dependency on foreign countries for raw materials
• The introduction of pharmaceutical product patents and the mandatory implementation of good manufacturing practices is the need of the hour.
• It is necessary for the Indian pharmaceutical industry to become globally competitive through world-class manufacturing capabilities, with improved quality and a higher efficiency of production, and there is a need to stress on the up-gradation of R&D capabilities.
• Training and development of human resources for the pharmaceutical industry and drug research and development should be done accordingly;
• There is also a need to promote **public-private partnership** for the development of the pharmaceuticals industry; promote environmentally sustainable development of the pharmaceutical industry; and enable the availability, accessibility, and affordability of drugs.
• Improvement in industrial practices to provide better training and support services for employees to perform their job functions.
• A drugs price index would surely make sense.
• Using multilateral organization like WTO against the illegal trade practices.
• Funding for the pharma companies might be a way to move forward.
• IPR Think Tank formed by the Government to draft stronger national IP policies.

**Way forward:**

• In 2015, the ‘Katoch committee’ put out a set of recommendations on reviving API production, which include reviving PSUs for manufacturing critical drugs such as penicillin and paracetamol.
The setting up of mega parks with common effluent treatment plants, testing facilities and captive power plants has been mooted.

On the financial side, the panel has suggested setting up a professionally managed equity fund for producing APIs and duty exemptions for capital goods imports.

These facilities can have developed to world class standards, restoring the recent damage to India’s reputation on the quality front.

The government’s ban on Foreign Direct Investments (FDI) through the automatic route from land border sharing neighboring countries though well-intended may come with unintended consequences. Analyse.(250 words)

Reference: The Hindu
Why this question:
The spokesperson of the Chinese Embassy has said that, India’s recent policy to curb opportunistic takeovers of domestic companies goes against the World Trade Organisation (WTO) principles.

Key demand of the question:
Explain the effect of the government’s ban on Foreign Direct Investments (FDI) through the automatic route from land border sharing neighboring countries, also discuss the associated consequences.

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

Structure of the answer:
Introduction:
Briefly state the context of the question.

Body:
To start with, discuss the changes in the Foreign Direct Investment (FDI) policy. Under the revised FDI policy, prior government approval is mandatory for FDI from countries which share a land border with India. The new policy states that when an entity of a country, which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route. India shares land borders with Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar. Discuss the possible advantages and disadvantages associated with the policy.

Conclusion:
Conclude with way forward.

Introduction:
A Foreign Direct Investment (FDI) is an investment in by foreign investors in the foreign based company. Mainly there are two types of FDI, one is Green Field Investment (a fresh company is established in a foreign country) and the other is Portfolio Investment (shares of a foreign company are purchased or ownership acquired in a foreign company). FDI under the automatic route does not require prior approval either by the government of India or by the Reserve Bank of India. Investors only require to notify and file documents in the concerned RBI office.

In a decision fraught with geopolitical and economic ramifications, the Indian government amended its foreign direct investment (FDI) policy to put a blanket ban on investments through the automatic route by entities from countries that share a border with India.

Body:
The move is seen as an attempt to ward off the threat of “opportunistic” Chinese takeover of Indian companies, whose valuations have been badly hit by the coronavirus pandemic. The curbs,
which were already in force for investments from Pakistan and Bangladesh, will extend to entities where Chinese citizens have “beneficial ownership” to ensure that the restrictions are not circumvented by routing investments via Hong Kong, Singapore or other countries.

**Rationale behind restriction on Automatic route of FDI inflow:**

- The Indian government’s move, cleared by the Union Cabinet, comes days after it emerged that the People’s Bank of China has increased its stake in HDFC Bank, the country’s largest private lender, to over 1%.
- But while the PBOC investment came through the portfolio investment route, the FDI move is more strategic and is aimed at blocking any attempt to restrict entities from across the border to acquire a significant beneficial interest.
- Stock market regulator SEBI is separately keeping tabs on investments from China and some other countries.
- The latest move by the department for promotion of industry and internal trade, the agency responsible for FDI policy, will not just impact new investments but also equity infusion in existing companies in India, where Chinese entities have equity stakes.
- Most FDI flows into India are under the automatic route, which means companies only need to inform authorities after the investment is made.
- The latest move signals a growing worry within government that China might seek to acquire Indian companies by exploiting their financial vulnerability.
- The stunning move is in stark contrast to the restraint the Indian government has exercised in not joining the global chorus of indignation over China’s attempt to conceal the outbreak of the pandemic in Wuhan — a lapse that has been widely adjudged to have been a major contributor to the enormity of the public health emergency that has already claimed over 1.5 lakh lives globally and crippled economies and markets.

**Significance of restricting Investments:**

- Sources said the government had explored the option of putting a general ban on foreign investment through the automatic route, but decided against it due to wariness of being seen as having turned protectionist and insular.
- Putting FDI from all countries under the approval route would have also slowed down inflows, which are critical at this time.
- With the threat of Chinese capital moving in appearing serious, the authorities decided to be specific in a turn away from the cautiousness that has defined New Delhi’s approach towards Beijing.
- Sources said that during the deliberations one school of thought had favoured a more nuanced approach, arguing that greenfield investments should be let in, but the leadership decided to go the whole hog.

**Concerns raised against the move:**

- The additional barriers set by Indian side for investors from specific countries violate WTO’s principle of non-discrimination, and go against the general trend of liberalisation and facilitation of trade and investment.
- The Chinese embassy not only cited its investments but also the “donations” made by Chinese companies to help fight the Covid-19 pandemic.
• As of December 2019, China’s cumulative investment in India has exceeded 8 billion US dollars, far more than the total investments of India’s other border-sharing countries. The impact of the policy on Chinese investors is clear.

• Chinese investment has driven the development of India’s industries, such as mobile phone, household electrical appliances, infrastructure and automobile, creating a large number of jobs in India, and promoting mutual beneficial and win-win cooperation.

• Chinese enterprises actively made donations to help India fight COVID-19 epidemic.

• China also accused India of not conforming “to the consensus of G20 leaders and trade ministers to realize a free, fair, non-discriminatory, transparent, predictable and stable trade and investment environment, and to keep our markets open.”

• Therefore, Without the appropriate legal and regulatory sanction, India might experience reciprocal measures.

• In order to protect India’s unicorn, there is need to devise a scheme of preferential or special shares which a unicorn can issue to foreign investor.

• These shares will preserve the decision making by Indian innovators, while also providing them access to foreign capital.

Way forward:

• There is a need for India to develop new legal and institutional tools. As the ones employed by US and EU member states such as data protection laws or revised mergers and acquisitions rules, and institutional bodies.

• The Chinese have already restarted manufacturing when the rest of the world still grappling with coronavirus.

• China has several months’ advantage over all other major economies and can therefore secure significant benefits.

• After each crisis in recent years, China has consolidated itself. Indian government is trying to pre-empt acquisitions.

• Countries need to strengthen their domestic capabilities to meet the Chinese challenge.

It’s not just Demand and Supply, there’s more to the story of Crude Oil prices, examine the factors that affect the oil prices across the world.(250 words)

Reference: Hindustan Times

Why this question:
The question is based on fall in Oil prices and what opportunities do the sudden crash in crude oil prices offers for India, How the country should make the most of a second oil windfall.

Key demand of the question:
Explain the fall in oil prices, and examine the factors that contribute to the fall apart from mere demand supply equation.

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

Structure of the answer:
Introduction:
Briefly talks about the impact of recent oil prices crash in general and its causes.

Body:
Explain that It’s not just Demand and Supply, there’s more to the story of Crude Oil prices. Four major factors help determine the price of oil: Supply & consumption, government policies, Geopolitics and
financial markets. Elaborate on the above factors with suitable examples. Discuss what opportunities the current situation holds for India.

Conclusion:
Conclude with what should be India’s role amidst the oil shocks across the world and how should it benefit from it.

Introduction:
The price of Texas oil futures fell below zero dollars per barrel on Monday. In theory, and for a fleeting moment, an empty barrel of crude oil was worth more than a full one. This was a symbolic milestone, a consequence of a lack of storage and quarter-end fire sales rather than a stable market situation.

Body:

Current scenario:
- This unprecedented shift comes as the global oil markets continue to grapple with a pandemic-driven collapse in demand. At the start of 2020, a barrel of WTI cost around $60.
- Prices had dropped swiftly because of the coronavirus, landing at around $18 a barrel.
- Then on 20th April, they plummeted through the floor.
- WTI for May delivery settled at a negative $37.63 — meaning traders are paying $37.63 to get someone to accept a delivery of a barrel of oil.
- The plunging price of WTI was driven by a trading contract deadline to oil traders to sell off the current futures contract.
- And they needed buyers that are capable of receiving and storing that much oil. And, those buyers are in short supply.

Factors that affect the crude-oil price:

- Situation prior to COVID-19 outbreak:
  - Even before the COVID-19 outbreak induced lockdowns across the world, crude oil prices had been falling over the past few months.
  - The reason was too much supply and too little demand.
  - In early March, Saudi Arabia and Russia disagreed over the production cuts required to keep prices stable.
  - The OPEC plus, which includes those countries which export Oil, failed to reach an agreement in March, 2020 on production cuts to arrest the falling prices in the wake of COVID-19 pandemic.
  - As a result, oil-exporting countries, led by Saudi Arabia, started undercutting each other on price while continuing to produce the same quantities of oil.
  - This was an unsustainable strategy under normal circumstances but what made it even more calamitous was the growing spread of novel coronavirus disease, which, in turn, was sharply reducing economic activity and the demand for oil.

- Post-lockdown:
  - With each passing day, the developed countries were falling prey to COVID-19 and with each lockdown, there were fewer flights, cars and industries etc. using oil.
This meant that the supply-demand mismatch continued to worsen right through March and April.

Other factors:

- Similar to the stock market, which involves trading investments in various companies, people also trade in commodities at financial markets.
- People purchase “futures” — a sort of bet on whether a commodity will increase in price at a later date. Once locked into a futures contract, the buyer will get his or her commodity at that price and that date, regardless of whether the market price has changed or not.
- Laws aimed at preventing climate change will likely raise the price of energy, too.
- Taxes on petroleum products by nations can also affect consumption pattern and consequently, the prices.
- The governments continue to find ways for people to switch to power sources like wind and solar energy — and drive more fuel efficient cars — so it’s possible that the demand for oil will go down, simply because we won’t need it as much anymore.

Impact on India:

- The Indian crude oil basket does not comprise WTI — it only has Brent and oil from some of the Gulf countries — so there is no direct impact.
- But oil is traded globally and weakness in WTI is mirrored in the falling prices of the Indian basket as well.

Way forward for India:

- India should look at how it can quickly enhance its strategic reserves to benefit from the falling prices; China, for instance, is doing just that.
- India should assure future supplies as this is a good time to enter into long-term contracts.
- And finally, India should also judge how the present oil crisis will affect, for better or for worse, its long-term energy strategy.

Conclusion:

New Delhi should keep a firm eye on its long-standing goals of promoting solar and wind energy, shifting more baseload power to natural gas, and shutting its most-polluting coal-fired power plants, but it is unlikely that even the most cost-effective of these will be able to match oil prices in the short and maybe even medium term.

Discuss the significant possible contributions that the “Swamitva Yojana” can make to boost rural economy.(250 words)

Reference: narendramodi.in

Why this question:

On Panchayati Raj Diwas (April 24th), the Prime Minister of India launched ‘Swamitva Yojana’ or Ownership Scheme to map residential land ownership in the rural sector using modern technology like the use of drones.

Key demand of the question:

Explain in detail the significant possible contributions that the “Swamitva Yojana” can make to boost rural economy.

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

**Structure of the answer:**

**Introduction:**
Briefly explain the coming of the scheme into picture.

**Body:**
To start with, present a brief overview of the scheme. Explain the key features of the Yojana. Discuss the benefits of the scheme and highlight the need and significance of the scheme. Bring out challenges or concerns associated if any and suggest solutions to the same.

**Conclusion:**
Conclude that the new scheme is likely to become a tool for empowerment and entitlement, reducing social strife on account of discord over properties.

**Introduction**

On the Panchayati Raj Diwas on April 24, the prime minister launched the ‘Swamitva Yojna’, or the ownership scheme, to map residential land ownership in the rural sector with the help of modern technology like drones.

The scheme aimed to revolutionize property record maintenance in India was launched on the Panchayati Raj Diwas by the prime minister, who also interacted with members of Gram Panchayats across the country through video conferencing.

**Body**

**Swamitva Yojana: Features**

- **Objective**: The Swamitva Scheme is to provide an integrated property validation solution to the rural areas of the country.

- **Technology used**: Under this scheme now the demarcation of inhabited land of the rural area will be done according to the latest surveying methods using drones.

- **Implementing Agency**: The Panchayats of the rural areas were expecting the launch of this scheme for a long time. For the demarcation of inhabited land, the latest surveying method is Drone’s technology.

- The scheme will be carried out in close coordination with the Central Panchayati Raj ministry, Survey of India, Panchayati Raj departments and Revenue departments of various states.

**Benefits to boost rural economy**

- It is expected to go a long way in settling property rights in rural hinterlands and likely to become a tool for empowerment and entitlement, reducing social strife on account of discord over properties.

- The delivery of property rights through an official document will enable villagers to access bank finance using their property as collateral.

- The residential land in villages will be measured using drones to create a non-disputable record.
  - It is the latest technology for surveying and measuring of land.
  - Drones will draw a digital map of every property falling within the geographical limits of a village and demarcate the boundaries of every revenue area.
• The property records for a village will also be maintained at the Panchayat level, allowing for the **collection of associated taxes from the owners**. The money generated from these local taxes will be used to build rural infrastructure and facilities.

• Freeing the residential properties including land of title disputes and the creation of an official record is likely to result in appreciation in the market value of the properties.

• The accurate property records can be used for facilitating tax collection, new building and structure plan, issuing of permits and for thwarting attempts at property grabbing.

**Significance of the Scheme**

• The need for this Yojana was felt since several villagers in the rural areas don’t have papers proving ownership of their land.

• In most states, survey and measurement of the populated areas in the villages has not been done for the purpose of attestation/verification of properties.

• When we look at the benefits of this scheme we will have to understand this point that most people don’t have the papers of their land in a rural area. In this case, the chances of disputes get increased in rural areas. This scheme will fill this gap and make the people aware of their ownership of land in rural areas.

• Swamitva Yojana is aimed to fill the above gap to provide ownership rights to people in the villages.

• As the property record of a village will be managed at the Panchayat level, the collection of taxes from the local landowners will also be done at this level only and collected money will be used for the **benefit of the local area and people**.

**Challenges**

• The scheme does not spell out how to resolve existing disputes on land in the rural areas.

• There is a lack of grievance redressal mechanism and villagers have no means to place their objections or bring notice to the authorities regarding any discrepancies.

• The scheme has not addressed the level of reliability of the drone survey, as accuracy rate may vary.

• Before implementation, people must be apprised of the scheme thoroughly and made aware of their rights and benefits accruing out of it.

• Without the cooperation of the people and their acceptance, the scheme will be difficult to implement.

**Conclusion**

The scheme will go a long way in achieving social justice and securing the lives of rural people by providing them definite legal assurance of their land ownership.

**What is direct monetization of deficit? Do you think it could be a comprehensive solution for the government to prevent the looming financial crisis? Critically examine.**

**(250 words)**

**Reference:** *Indian Express*

**Why this question:**

The article highlights that with the economy stalled; there isn’t enough money in the market for the government to borrow. It explains if it can ask the RBI to print more money and in such a case how does the process work, and what are the arguments against it.

**Key demand of the question:**
Explain the concept of direct monetization of deficit and present arguments for and against it.

**Directive:**

**Critically examine** – When asked to ‘Examine’, we have to look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications. When ‘critically’ is suffixed or prefixed to a directive, one needs to look at the good and bad of the topic and give a fair judgment.

**Structure of the answer:**

**Introduction:**
Briefly define the idea of direct monetization of deficit in the present context.

**Body:**

Explain first the current scenario, discuss as to what triggers a demand for direct monetization. Discuss the scope and feasibility of “Direct” Monetization by the government for Deficit Financing as an option of the last resort. Explain if India has done this in the past. Highlight the issues involved.

**Conclusion:**

Conclude with what should be the way forward.

**Introduction**

The COVID-19 spread has meant that the Indian economy, which was already slowing down rapidly over the past couple of years, has completely stalled. Most estimates suggest that India’s GDP (gross domestic product) will barely grow in the current financial year - that is, if it does not contract as is likely to be the case in most major economies of the world.

With a nationwide lockdown, incomes have fallen and so have consumption levels. In other words, the demand for goods (say a pizza or a car) and services (say a haircut or a holiday) in the economy has gone down.

**Body**

**Direct Monetization of Deficit**

- It is a scenario where the government deals with the RBI directly, bypassing the financial system and asks it to print new currency in return for new bonds that the government gives to the RBI.
- Now, the government would have the cash to spend and alleviate the stress in the economy — via DBT to the poor or starting social and capital expenditure etc.
- In lieu of printing this cash, which is a liability for the RBI (recall that every currency note has the RBI Governor promising to pay the bearer the designated sum of rupees), it gets government bonds.
- Such bonds are an asset for the RBI since such bonds carry the government’s promise to pay back the designated sum at a specified date.
- And since the government is not expected to default, the RBI is sorted on its balance sheet even as the government can carry on rebooting the economy.

**Why is Direct Monetization needed?**

- **Lack of Demand**: The income levels have fallen as the economy has come to a stand still.
This in turn has led to fall in the consumption levels. In other words, the demand for consumer goods and services in the economy has gone down.

- **Financing the fiscal deficit:** To reboot the economy, government has to come up with a stimulus package for various sectors. And as the expenditure for fighting the pandemic was unforeseen in the budget, these packages will cause fiscal slippage and needs to be financed through various mechanisms. Direct monetization is one of the ways this can be done.

- **No credit available for borrowing:** For the government to borrow the money, the market should have it as savings. Data show that savings of domestic households have been faltering and are barely enough to fund the government’s existing borrowing needs.

- **Receding foreign capital:** Foreign investors, too, have been pulling out and rushing to “safer” economies like the US, and are unwilling to lend in times of such uncertainty.

**Feasibility of Direct monetization**

- **Used in the past:** Until 1997, the RBI “automatically” monetized the government’s deficit. In 1994, Manmohan Singh (former RBI Governor and then Finance Minister) and C Rangarajan, then RBI Governor, decided to end this facility by 1997.

- Recently C Rangarajan had said that monetization of the deficit was inevitable. Such a large increase in expenditure could not be managed without monetization of government debt.

- Countries like the UK have decided to tread this path. The Bank of England extended direct monetization facility to the UK government.

- Ideally, this tool provides an opportunity for the government to boost overall demand at the time when private demand has fallen, like it has today with enough caution.

- Good inflation is also needed. With a lockdown, the most immediate issue that policymakers have to contend with would be a dramatic fall in inflation.
  - That has deleterious impact on taxes, wages and ability of the government to take on more debt.
  - The risk of very low inflation (no-one is still talking about deflation in India yet) is as real as the one of high inflation.
  - “Printing money” ensures a backstop to ensure a certain amount of inflation in the economy – enabling the government to inflate away at least part of the new debt it is taking on to provide a safety net for the economy.

**Issues with Direct Monetization**

Direct monetization of deficit is a highly contested issue. Ex-RBI Governor Subbarao cautioned that India must remember that the balance of payments crisis in 1991, and a near-crisis in 2013, were, at heart, a result of extended fiscal profligacy.

- **Inflation:** Government expenditure using this new money boosts incomes and raises private demand in the economy.
  - With RBI printing a lot of money to buy G-Secs, money supply will shoot up and engender an inflationary spiral.
Thus, it fuels inflation and if the government doesn’t stop in time, more and more money floods the market and creates high inflation.

- **Data lag**: Inflation data is revealed with a lag, it is often too late before governments realise they have over-borrowed. Higher inflation and higher government debt provide grounds for macroeconomic instability.

- Another oft-quote risk of DM is **external vulnerability**. The rationale is that aggressive DM could devalue the currency, causing foreign investors to lose confidence and pull out money, putting the existing fiscal financing plan at risk.

- The other argument against direct monetizing is that governments are considered inefficient and corrupt in their spending choices — for example, **whom to bail out and to what extent**.

### Conclusion

Consistency in policymaking is often touted as a virtue. But in extreme scenarios more than otherwise, consistency is merely a hobgoblin of mediocre minds. We need inspirations beyond mediocrity to kick-start India back into action. Monetization is perhaps the sharpest inspiration in the quiver today.

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

Can the ongoing COVID-19 crisis be converted into an opportunity for reforming the agri-marketing system in the country? Give reasons in support of your arguments.(250 words)

Reference: *Indian Express*

**Why this question:**
The article authored by Ashok Gulati brings a different perspective of the effects of COVID-19 and in what way India can use it as an opportunity to reform its agri markets.

**Key demand of the question:**

Explain in what way the ongoing COVID-19 crisis can be converted into an opportunity for reforming the agri-marketing system in the country.

**Directive:**

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

**Structure of the answer:**

**Introduction:**

Briefly explain the current situation across the world.

**Body:**

To start with, explain the crisis that agriculture sector is facing owing to the COVID-19 effects. Explain what needs to be done to the put agri-system on an efficient path. Take hints from the article and list down the suggestions. Discuss the possible challenges involved while suggesting solutions for the same.

**Conclusion:**

Conclude with a futuristic approach for the Agri system of the country.

**Introduction:**
The significant disruption in supply chains as a result of the lockdown has led to farmers being stuck with a large amount of produce, especially of perishables like milk, fruits and vegetables, flowers and even poultry meat and eggs. Due to this glut, farm prices are collapsing, pushing farmers into destitution. Many of them are dumping milk and vegetables on the roads. With the procurement season for rabi crops having started, the mandi system will choke, and social distancing will go for a toss if immediate steps are not taken to organise procurement operations in an orderly manner. The wisdom lies in converting this crisis into an opportunity for reforming the agri-marketing system.

Body:

Hurdles for free movement and trade in agri produce due to lockdown:

- The supplies are plentiful but the shutting down of hotels, restaurants and catering businesses has led to demand destruction from institutional buyers.
- With abundant availability and demand now largely restricted to direct household consumption, there could be scope for panic buying and hoarding and people going without food.
- Inter-state movement restrictions and arbitrary actions by local authorities to enforce the lockdown — including closing down produce collection centres and warehouses of organized retailers.
- The links in the chain connecting farmers to consumers have broken down, in turn opening up arbitrage opportunities for unscrupulous speculators.
- Agriculture is a ‘state subject’ and a large part of investment as well as regulatory progress is happening at the state level. The lack of coordination between the states at this time of crisis would be a debacle.
- **Limited reach of mandis:** Also, this procurement system has failed to cover the entire country evenly (back of the envelope calculation suggests that on an average, a farmer needs to travel 12 kms to reach the nearest mandi and more than 50 kms in NE India) while according to the recommendations by National Farmers Commission, availability of markets should be within a 5 km radius.
- **Inadequate infrastructure for storage:** The Planning Commission has recently estimated the gap between agri-warehousing supply and demand at 35 mn MT.
- **Lack of cold storage infrastructure:** India’s current cold storage capacity at 25 MT is barely sufficient for 10% of fruit and vegetables produced in the country.

Measures to reform the agri-marketing system in country:

- Abolish/reframe the APMC Act and encourage direct buying of agri-produce from farmers/farmer producer organisations (FPOs). The companies, processors, organised retailers, exporters, consumer groups, that buy directly from FPOs need not pay any market fee as they do not avail the facilities of APMC yards.
- The warehouses can also be designated as markets, and the warehouse receipt system can be scaled up. The private sector should be encouraged to open mandis with modern infrastructure, capping commissions.
- Futures trading should be encouraged by allowing banking finance to hedge for commodity price risks.
- Promote e-NAM through proper assaying and grading the produce and setting up dispute settlement mechanism; rope in major logistics players for delivery of goods.
- Procurement must be staggered through coupons and incentives that give farmers an additional bonus for bringing produce to the market after May 10, or so.
The amount provided under PM Kisan should be increased from Rs 6,000 to at least Rs 10,000 per farming family to partially compensate them for their losses.

Conclusion:
Post crisis, India must ask for fundamental reforms in the UN System, including the WHO, making it more transparent, competent, and accountable.

Policy action is the need of the hour to bridge the growing gap between irrigation potential creation and that actually utilized with path-breaking command area development. Comment. (250 words)

Reference: Economic Times

Introduction:
A recent ministry of earth sciences (MoES) report says that large parts of the country, including Uttar Pradesh, Bihar and West Bengal, have been witnessing “significantly decreasing trends” in rainfall patterns over the last three decades. It suggests pressing need to boost proactive policy to better manage water resources both at the Centre and in the states.

Body:

Present Water Crisis in India:
- Water levels in India’s major reservoirs have fallen to 21 per cent of the average of the last decade.
- Fifty-four per cent of the country’s groundwater is declining faster than it is being replenished.
- There is a crippling dependence on monsoon rains to replenish most of India’s key water sources—underground aquifers, lakes, rivers and reservoirs.
- Close to half the country, about 600 million people, face severe scarcity year after year.
- A June 2018 Niti Aayog report forecasts water demand will be twice the present supply and India could lose up to 6 per cent of its GDP.
- India’s water table is falling in most parts; there is fluoride, arsenic, mercury, even uranium in our groundwater.
- The groundwater and sand extraction from most river beds and basins has turned unsustainable.
- Tanks and ponds are encroached upon.
- Dug-wells and borewells are constructed with alarming impunity to slide deeper and deeper to suck water from greater depths.
- Water is being diverted from food-crops to cash-crops; livelihoods to lifestyles; rural to urban—mismanagement is a bigger reason for the drought.
- Water shortages are hurting India’s ability to produce power and 40% thermal power plants are in areas facing high water stress, a recent World Resources Institute report says.
- Not only farmers, urban dwellers in cities and towns across India are also staring at a never seen before drinking water scarcity.
- Residents in the arid Thar desert of Rajasthan are spending Rs 2,500 to buy 2,500 litres of water which they share with their cattle.

Policy actions needed:
- The way ahead is to step-up recharge of aquifers and groundwater resources, even as we better allocate resources for surface irrigation systems and their maintenance.
The rational pricing of water for irrigation brooks no delay. In parallel, the reasonable rational pricing of urban water supply is required to modernise and augment the network.

Further, we need to shore up resources for water treatment and reuse. Note that only about 2% of urban centres have both sewerage systems and sewage treatment plants. This need to very substantially change going forward.

The rejuvenation of rivers, as envisaged in the National Water Framework Bill, needs legislating. The destruction of catchment areas and river flood-plains have adversely affected river flows nationally, which needs reversing.

We need concrete steps to reverse the build-up and consequent destruction of catchment areas and river flood-plains, to augment discharge channels and boost water flow to effectively prevent flooding, including in urban areas.

Conclusion:

There is a need to modernise the regulatory framework for accessing groundwater soon after massive expansion in mechanical pumping led to the realisation that recharge could not keep pace with use.

A special plan like the Marshall Plan of USA in 1948 is the need of the hour to address the agrarian distress amidst the ongoing crisis. Comment.(250 words)

Reference: Indian Express

Why this question:
The author talks about the agrarian reforms that the country needs in the current crisis hours and in what way we require Marshall plan like that of USA to address the situation.

Key demand of the question:
Explain the factors responsible for the ongoing agrarian crisis; discuss what needs to be done to address the situation.

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

Structure of the answer:
Introduction:
Explain what Marshall plan of USA in 1948 was.

Body:
To start with, highlight the agrarian problems the country is facing currently. One can present the case study of eastern India as suggested in the article. List down the challenges in detail. Take hints from the article and explain what can be done and what lessons can be taken from the Marshall plan of USA, 1948. Suggest solutions to address the scenario.

Conclusion:
Conclude with way forward.

Introduction

In the context of today’s economy, under siege because of the coronavirus pandemic, what matters is not how big a country’s GDP is or how fast it has been growing; the real challenge is how best and how quickly a country can bounce back to a growth rate of 7-8 per cent per annum.

Our survival is dependent on agriculture and a good harvest depends on quality seeds delivered to farmers by the seed sector, both public and private. As we are in the midst the coronavirus crisis, it is imperative that good seeds and other farm inputs reach farmers in time for the kharif season.

Body
**State of Economy amidst Covid-19 pandemic**

- The IMF’s projections for GDP growth for this year seem to be either in the negative or below 2 per cent for almost all major countries of the G-20 group.
- India could do a little better compared to the other BRICS nations, but its growth will most likely be below 2 per cent.
- Many experts reckon that India could also go into negative GDP growth this year, if it does not reboot the economy properly and in time.
- The all India relief package of Rs 1.7 lakh crore announced by the central government earlier, which is about 0.8 per cent of the country’s GDP, is too small to reboot the economy.
- The lockdown has choked off almost all economic activity. In urban areas, leading to the widespread loss of jobs and incomes for informal workers and the poor.
- Estimates by the Centre for Monitoring Indian Economy show that unemployment shot up from 8.4% in mid-March to 23% in the first week of April.
- In urban areas, unemployment soared to 30.9% as of April 5. The shutdown will cause untold misery for informal workers and the poor, who lead precarious lives facing hunger and malnutrition.

**What was the Marshall Plan 1948?**

- It was a call for a comprehensive program to rebuild Europe.
- Fanned by the fear of Communist expansion and the rapid deterioration of European economies in the winter of 1946–1947, Congress passed the Economic Cooperation Act in March 1948 and approved funding that would eventually rise to over $12 billion for the rebuilding of Western Europe.
- The Marshall Plan generated a resurgence of European industrialization and brought extensive investment into the region.
- It was also a stimulant to the U.S. economy by establishing markets for American goods.
- The Marshall Plan also institutionalized and legitimized the concept of U.S. foreign aid programs, which have become an integral part of U.S. foreign policy.

**Agrarian distress due to pandemic**

- Preliminary reports show that the non-availability of migrant labor is interrupting harvesting activities, particularly in northwest India where wheat and pulses are being harvested.
- There are disruptions in supply chains because of transportation problems and other non-availability of demand for farm produce. Although farm produce were essential goods, smooth transport of these were not facilitated.
- Prices have declined for wheat, vegetables, and other crops, yet consumers are often paying more.
- Media reports show that the closure of hotels, restaurants, sweet shops, and tea shops during the lockdown is already depressing milk sales.
- Meanwhile, poultry farmers have been badly hit due to misinformation, particularly on social media, that chicken are the carriers of COVID-19.

**Need for stimulant to India to fight agrarian distress**

The government has correctly issued lockdown guidelines that exempt farm operations and supply chains. But implementation problems leading to labor shortages and falling prices should be rectified.
• Keeping supply chains functioning well is crucial to food security. It should be noted that 2 to 3 million deaths in the Bengal famine of 1943 were due to food supply disruptions—not a lack of food availability.
• Farm populations must be protected from the coronavirus to the extent possible by testing and practicing social distancing.
• Farmers must have continued access to markets. This can be a mix of private markets and government procurement.
• Small poultry and dairy farmers need more targeted help, as their pandemic-related input supply and market-access problems are urgent.
• Farmers and agricultural workers should be included in the government’s assistance package and any social protection programs addressing the crisis.
• As lockdown measures have increased, demand has risen for home delivery of groceries and E-commerce. This trend should be encouraged and promoted.
• The government should promote trade by avoiding export bans and import restrictions.

Conclusion

Hence besides chalking new plans and announcements, this is the right time to take pragmatic steps to address the fault lines in India’s agricultural and farming sector, to bring rural prosperity and dispel agrarian distress.

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

Do you agree with the view that the covid-19 pandemic presents a window to second white revolution for India? Give reasons in support of your arguments.(250 words)

Reference: Financial Express

Why this question:
The Author explains in detail the possible opportunities that the current pandemic brings with it with respect to the dairy farming in the country.

Key demand of the question:
Explain the prospects for second white revolution brought out by the COVID-19 pandemic to India.

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

Structure of the answer:
Introduction:
In short explain the effect of the pandemic in general on the agriculture sector and otherwise.

Body:
The body of the answer must explain How COVID-19 could benefit the dairy industry. Take hints from the article and present points in favour of your argument like — Covid-19 pandemic has thrown up the real possibility for our dairy industry to benefit as large sections of consumers may shift from meat-based to dairy-based protein. Covid-19 crisis has witnessed reverse migration of labour force from urban to rural areas leading to social disruptions. On the positive side, we can look at this as an
opportunity; these workers can be encouraged and incentivized to join their family agriculture/dairy farms etc.

**Conclusion:**
Conclude on a positive note that it’s the right time to encash the opportunity and help and aid our farmers with a new ray of hope.

**Introduction:**
Dairy industry has proved to be more resilient than many other sectors in terms of the extent of supply chain disruptions during the COVID-19 lockdown. Millions of our animal-owning households, the majority being smallholders, particularly those connected to producer-centric institutions continued to milk their cows and buffaloes, and sell the surplus to the village milk collection centres. Milk was then pooled, cooled, and transported to processing centres where it was pasteurised, packaged and dispatched to thousands of marketing outlets, finally finding its way to millions of homes.

**Body:**

**Sustenance of dairy industry during CoVID-19:**

- To enhance the marketing of milk and milk products, many dairy organisations, initiated home delivery of milk and milk products through mobile carts, vans, e-commerce, etc.
- All these measures helped stabilise milk sales, opening up opportunities to use e-commerce.
- Many smart and progressive dairy farmers converted their surplus milk into khoa, paneer, ghee, etc, and sold it to the neighbourhood markets through informal channels.
- The US is contemplating to purchase milk, convert it into commodities which could be used as international humanitarian aid.
- All these measures helped sustain dairy industry.

**Potential of White Revolution 2.0:**

- Post-liberalisation and Milk and Milk Products Order (2002) was abolished, dairy businesses observed a radical shift toward a strategic product diversification towards functional and traceable foods like nutrition-based health drinks, packaged milk products (such as paneer), and frozen/probiotic products and so on.
- Market structure, conduct, and performance has dramatically changed post 2000s. Besides the established cooperative federations like Amul, other state cooperative federations and multinationals (namely, Nestle, Danon, and Lactalis) are aggressively harnessing the untapped business potential.
- White revolution 2.0 can strengthen the scope of vertical integration between cattle feed industries, dairy machinery firms, producer cooperatives unions, state marketing federations, advertising and marketing firms, logistics and distribution agencies.
- The dairy industry in India is unique. With six lakh villages housing about 90 crore people, dairying is not just a large economic activity but also an integral part of our social and cultural heritage
- Can help small farmers to reduce dependence on crop sales
Can increase source of income of farmers in low yielding areas like Marathwada, Bundelkhand etc

India is surrounded by countries and regions that are milk-deficient, such as the Middle East, South Asia and Southeast Asia.

There is ample scope for export of value-added milk products to Bangladesh, China, Singapore, Thailand, Malaysia, Philippines, Japan, the UAE, Oman and other gulf countries, all of which are located close to India.

At present, the population of South Asia alone is growing at 1.3 per cent a year; it is likely to be 2.2 billion by 2050. This presents an opportunity for India’s dairy industry

Challenges to White Revolution 2.0:

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

Measures needed:

- India may consider reducing GST on ghee and milk fat, from 12% to 5% to bring it at par with the GST rate for SMP. This has been a long-standing demand of the dairy industry and will ultimately benefit milk producers, increase rural incomes, spur demand and hasten economic recovery.
- Increase in the market share depends on how dairy firms’ capabilities and their resources are utilised given the opportunities and threats emanating from emerging markets economies.
- Contract/corporate dairying and emerging global dairy trade are required to rope in dairy supply chains stakeholders in order to expand their outreach and “on-the-go” product positioning into the target segment.
- Digital technology-enabled dairy firms need to identify their compatible partners and competitors for co-creation through product-process innovation via relationship/value-based marketing.
-Freshness in milk, and convenience to store milk or milk products can be a technology innovation brought in by large dairy firms in association start-ups.
  - Education and Training at Panchayat level for small and medium size farmers
  - Subsidizing cattle production and encouraging cattle markets
  - Facility of logistics for produced milk
  - Improved Veterinary facility specially in artificial insemination of cattle
• Encouraging private sector firm to procure dairy produced at rural level
• Low interest loans for small and medium scale farmers for cattle purchase
• Encouraging rural women to take up animal husbandry
• Insurance of cattle against diseases like Anthrax, Foot and Mouth, Peste des Ruminantes, etc.
• Nurture dairy entrepreneurs through effective training of youth at the village level coupled with dedicated leadership and professional management of farmers' institutions.
• Agricultural practices, sanitation, quality of drinking water & fodder, type and quality of pipelines - all of these need to be aligned to the goal of healthy milk.

Conclusion:
Covid-19 pandemic has thrown up the real possibility for our dairy industry to benefit as large sections of consumers may shift from meat-based to dairy-based protein. Covid-19 has made people more aware of the need to adopt a healthy diet. Covid-19 crisis has witnessed reverse migration of labour force from urban to rural areas leading to social disruptions. On the positive side, we can look at this as an opportunity; these workers can be encouraged and incentivized to join their family agriculture/dairy farms.

Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management.
“Supply chain challenges in a situation of a long nationwide lockdown are immense, and complex.”, discuss the possible role that e-commerce can play in such a situation.(250 words)
Reference: Financial Express

Why this question:
The question is based on the Supply chain challenges that the country is witnessing amidst the lockdown.

Key demand of the question:
The answer must discuss the role of e-commerce in the present times of lockdown and the prospects that it brings with it to handle and manage the supply chain constraints.

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

Structure of the answer:
Introduction:
Briefly define what constitute supply chain, and what are the constraints being witnessed with respect to it in the current times.

Body:
Explain that – Supply chain challenges in a situation of a long nationwide lockdown are immense, and complex. While maintaining the flow of essential supplies, it is equally important that people
across the country have access to them, preferably while remaining within their homes. E-commerce can play a big role in this regard, and keep the supply chain efficiently functioning. Take hints from the article and list down the positives.

**Conclusion:**
Conclude that with suitable logistical linkages and state support, e-commerce can help ensure maintenance of supply chains and facilitating access to essential goods.

**Introduction**

Unprecedented circumstances are upon us. As covid-19 mutates across the sphere, with governments unsure and citizens fretting, there is little doubt over the scale of the challenge that lies ahead. With a worldwide recession looming, the pandemic will test our collective resilience.

At this time, **supply chain challenges** in a situation of a long nationwide lockdown are immense, and complex. While maintaining the flow of essential supplies, it is equally important that people across the country have access to them, preferably while remaining within their homes. The elderly, and those vulnerable—persons having diseases like diabetes, heart problems—have to be kept securely inside the “cocoon” of their homes to ensure social distancing, while ensuring their needs, including medicines, are being met. Delivery right to their homes, or at their doorsteps may be critical during the pandemic.

**Body**

**Supply Chain Management**

- Supply chain management is the **management of the flow of goods and services** and includes all processes that **transform raw materials into final products**.
- It involves the active streamlining of a business’s supply-side activities to maximize customer value and gain a **competitive advantage in the marketplace**.
- SCM represents an effort by suppliers to develop and implement supply chains that are as efficient and economical as possible.
- Supply chains cover everything from **production to product development** to the information systems needed to direct these undertakings.
- Maintenance of a supply chain is a complex process, and can be interrupted, or clogged in many ways—manufacturing shutdowns, transport restrictions, speculative behaviour and panic buying, issues in last-mile delivery, etc.
- During the crisis, this becomes even more important with regard to **essential products**.

**Role of E-commerce in handling supply chain challenges**

E-commerce can play a big role in this regard, and keep the supply chain efficiently functioning.

- With suitable logistical linkages and clarity of respective roles, and support from government agencies, it can **facilitate coordination between local FMCG enterprises and traditional kirana outlets**.
- E-commerce platform can dynamically connect centers of supply and demand with modern tools of technology. **Eg:** In case of everyday essentials such as dairy and groceries, Big-basket has emerged a huge player in providing linkage between supplier and consumer.
- **Employment Sustenance:** It can sustain and maintain, if not create, jobs at the same time. It is reported that Flipkart, India’s largest e-commerce company, is already in discussion with several kirana aggregators to start such pilots.
- **Ensuring social distancing**: E-com delivery could be scaled up for **doorstep delivery** in affected areas, and complement their mutual efforts. In hotspots and red zones of the country, door delivery of services can flatten the curve by avoiding people to step out even for essentials.

- **Delivering Food**: An online platform like Zomato is being used to connect with brick-and-mortar restaurants to deliver food. This way, it is not only helping local businesses survive, but also providing a link for food to those who may not be in a position to cook.

- **Past Precedence**: It was the SARS virus of 2003 that impelled the enormous growth of e-commerce in China. The emergence of Alibaba, JD.com, Taobao, Tmall, etc, witnessed explosive growth of e-commerce, on-demand, ultramodern delivery, as well as logistics infrastructure which overtook global trade and commerce.

- **Employment and empowerment**: These had an overall positive effect by generating millions of jobs (estimated 30 million in China) and sources of livelihood for micro-entrepreneurs who found a way to market. It also had a **significant impact for women**, whose movement is sometimes particularly constrained by cultural circumstances.

**Way-forward**

Among the areas for improvement are:

- **End-to-end stock visibility**: Organizations need to know what they have in their warehouses, in store, what is selling at what time, and where, so they can quickly react to changing conditions and customer needs. Having unified inventory visibility across channels in a single database is crucial. This not only enables organizations to make rapid and agile replenishment and stock transfers — it also means they avoid overspend on inventory.

- **Complex supplier monitoring**: Understanding how suppliers’ and their subcontractors’ locations are spread out globally, and knowing which products pass through those sites, is critical to manage any disruptions. This enables organizations to quickly predict how the supply chain will be impacted over the coming weeks, giving them time to immediately execute mitigation strategies.

- **Analytics and artificial intelligence**: Deploying tools infused with strong analytics capabilities will enable organizations to get ahead of demand, respond to changing market conditions, improve demand forecast accuracy, and suggest better allocation and replenishment strategies. By combining internal and external data, supported by AI, applications can work on scenario analysis and “what-if” conditions, creating complex models to plot the best course of action.

- **Process automation**: Workflow automation leads to even faster and more agile replenishment processes. For example, systems that provide low-stock alerts can automatically order goods for a particular store quickly and cost-effectively from the right location.

**Conclusion**

There will be several innovations in online learning, pharmaceuticals, medical research, and various existing and new applications of e-commerce. It was the Second World War that gave rise to the big economic powers. This war with coronavirus, which has thrown a new gauntlet, can be a huge opportunity for us. There is no doubt we shall rise up to it as in the past, during earlier wars, and the brainpower of Indian millennials, which has been demonstrated around the world, will bring out new solutions to the various current problems.
Discuss the possible role that Geographical indication (GI) tags play in Rural Development of the country. (250 words)

Reference: The Hindu

Why this question:
Bangalore blue grape is a variety of fox grape grown in districts around Bengaluru, Bengaluru rural, Chikkaballapur and Kolar districts. It has been given the Geographical Indication (GI) status in 2013. Almost all the growers of Bangalore Blue grapes are now in dire straits as their crops have started drying up with no buyers due to the COVID-19 lockdown.

Key demand of the question:
Explain the role of Geographical indication (GI) tags play in Rural Development of the country.

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

Structure of the answer:
Introduction:
Briefly define what GI is.

Body:
A GI or Geographical Indication is a name or a sign given to certain products that relate to a specific geographical location or origins like a region, town or country. Using Geographical Indications may be regarded as a certification that the particular product is produced as per traditional methods, has certain specific qualities, or has a particular reputation because of its geographical origin. List down the positives of the GI. Discuss the role of GI in Rural Development – Geographical indications are mostly traditional products, produced by rural communities over generations that have gained prominence on the markets for their precise qualities. Some benefit are – The supply chain is structured around a common product reputation Increased and stabilized prices for the GI product Distributed through all the levels of the supply chain adds value Natural resources can be preserved on which the product is based Preservation of traditions and traditional expertise.

Conclusion:
Conclude with way forward.

Introduction:

A geographical indication (GI) is a name or sign used on products which corresponds to a specific geographical location or origin. It acts as a certification that the product possesses certain qualities, is made according to traditional methods, or enjoys a certain reputation.

Since the COVID-19 lockdown came into force, coupled with several other issues, meant there are no takers for many GI tag crops like Bangalore Blue variety of Grapes, Dilkush variety of seeded green grapes and many more GI tag products.

Body:

Laws governing the GI tag:

- Under Paris Convention for the Protection of Industrial Property, GIs are covered as an element of IPRs.
- GI is governed by WTO’s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- In India, GI tag is governed by Geographical Indications of Goods (Registration and Protection Act), 1999.
• This Act is administered by Controller General of Patents, Designs and Trade Marks, who is also Registrar of Geographical Indications.

**Role that Geographical indication (GI) tags play in Rural Development of the country:**

• GI tag helps the producers to differentiate their products from competing products in the market.

• It enables the producers to build a reputation and goodwill around their products, which often fetch a premium price.

• The products help in export earning, promotion of tourism, cultural heritage and national identity.

• For example, Kanjeevaram silk sarees and Pochampally Ikat contribute to exports and popularity.

• GIs have great potential to play a major role in trade between countries.

• Legal protection to GIs protect livelihoods and encourage employment generation.

• Owing to the premium prices that many GIs command today, there is a possibility of preserving many traditional skills.

• Benefit to the rural economy by improving the incomes of farmers or non-farmers

• GI allows genuine producers to capture the market and creates entry barriers for fakes

**Concerns / Challenges:**

- The special treatment to wines and spirits in TRIPS Agreement appears to be developed country-centric. Developing countries, including India, seek the same higher level of protection for all GIs as was given under TRIPS for wines and spirits.

- The battle for GI tag between states. For instance, the previous row between West Bengal and Odisha over the ownership of Rasogolla

- False use of geographical indications by unauthorized parties is detrimental to consumers and legitimate producers.

- Cheap Power loom saris are sold as reputed Banarasi handloom saris, harming both the producers and consumers

- Such unfair business practices result in loss of revenue for the genuine right-holders of the GI and also misleads consumers.

- Protection of GI has, over the years, emerged as one of the most contentious IPR issues.

**Way forward:**

- The benefits of GI tag are realised only when these products are effectively marketed and protected against illegal copying.

- Effective marketing and protection requires quality assurance, brand creation, post-sale consumer feedback and support, prosecuting unauthorised copiers, etc.

- For internationally recognised products like Darjeeling tea, international protection is of crucial importance.

- Legal protection to GIs also extends to protection of traditional knowledge and traditional cultural expression contained in the products.

- Hence Intellectual Property is a power tool for economic development and wealth creation particularly in the developing world.
- GIs have the potential to be our growth engine. Policy-makers must pay a heed to this and give Indian GI products their true reward.

Give an account of distribution of sugar industry in India. Also, highlight the problems plaguing the sugar sector in the contemporary times.(250 words)

Reference: Indian Express

Why this question:
The article brings to us insights in the sudden dip of sugar prices besides the price crash in oil that the world is witnessing.

Key demand of the question:
The student must account for distribution of sugar industry in India in detail and highlight the problems plaguing the sugar sector in the contemporary times.

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

Structure of the answer:
Introduction:
In short explain the importance and relevance of sugar industry in India owing to the agricultural nature of the economy.

Body:
India is the world’s largest producer of sugarcane and cane sugar and contributes about 8% of the total sugar production in the world. At present, this is the second largest agro-based industry of India. Factors responsible for distribution of sugar industry use a map of India to depict the distribution and add value to your answer. Discuss the problems faced by the sugar industry in India, present the factors of the contemporary times too such as the effect of oil price crash amidst the COVID-19 fear.

Conclusion:
Conclude by suggesting solutions as to what needs to be done to overcome these challenges.

Introduction:
India is the second largest producer of sugar (17.1%) in the world after Brazil. Within India, Uttar Pradesh (36.1%), Maharashtra (34.3%) and Karnataka (11.7%) are the three largest producers. Sugar production in India has increased from 24.8 million tonnes in 2015-16 to 32.25 million tonnes in 2017-18 and is expected to touch 35.5 million tonnes in 2018-19. But the domestic demand remains stagnant at around 25 million tonnes. More than 50 million farmers engaging in sugarcane cultivation in over four million hectares of land (with over five lakh employees in sugar mills). Increasing mismatch has further depressed sugar prices, resulting in increasing sugar arrears.

Body:
Distribution of sugar industry in India:
A high yield sugarcane variety, India witnessed bumper harvests in the last 3 seasons, but sugar prices have fallen and sugarcane farmers have been incurring heavy losses.

The issues faced by sugarcane farmers in the country are

- **Coronavirus pandemic:**
  - The closure of restaurants, weddings and other social functions not taking place, and people avoiding ice-creams and sweetened cold beverages that might cause throat infections.
  - The impact of coronavirus-induced lockdowns on out-of-home consumption and institutional (as opposed to direct household) demand for sugar is obvious.

- **Multiple Prices:**
  - Fixation of Fair Remunerative Price is another bone of contention between the Centre and sugar mills. The Centre decides FRP annually and the states can hike it by issuing a state advisory price or SAP. But mills want the price of sugarcane to be linked to the price of sugar.
  - The higher FRP and SAP poses a grave threat to groundwater levels, the depletion of which is already a grim ecological catastrophe in India.

- **Glut in Production:**
  - New seed variety, CO-0238, the country has witnessed bumper harvests in the last three seasons, particularly in 2017-18.
But sugar prices have fallen because of the demand-supply mismatch and sugarcane farmers have been incurring heavy losses.

36 MMT of sugar, against consumption of 26 MMT, is being produced since 2018, which involves high risks like high storage costs and spoilage.

Unpaid dues to farmers:

The sugar production by mills also went up across the country, due to which the sugar prices plummeted so much that the sugar mills in India cumulatively owe Rs 22,000 crore to farmers for cane supplied in 2017-18.

Mismanaged policy:

In December 2009, the government announced its National Policy on Biofuels, which called for blending petrol with 5 per cent ethanol.

In 2015, the target was raised to 10 per cent. But this was never achieved. Brazil, the world’s biggest sugarcane producer, depends on ethanol, and not sugar, as main revenue source from sugarcane and blends 27 per cent ethanol with petrol.

There are several impediments to the solutions proposed by the government which include sugar subsidies, exporting excess production of sugar, production of ethanol from sugarcane to use in cars and buying excess sugar and hoarding it as buffer stock

Delay in payment of late fees:

After the crushing season is over, the mill is supposed to transfer the money to farmers’ bank accounts within 14 days, failing which it should pay 15 per cent interest annually on the amount, says the Union government’s Sugarcane Control Order of 1966. But mills rarely pay on time.

Infrastructure issues:

Sugarcane is a weight-losing crop which needs to be crushed at the earliest from time of harvest.

The poor connectivity, lack of transportation facilities and distant sugar-mills cause huge losses to farmers due to decline in quality of sugarcanes.

Miscalculations:

In October 2016, Uttar Pradesh announced the average sugarcane yield estimates for every district for 2017-18. These estimates are the basis on which the mills buy sugarcane. Farmers say that these estimates have turned out to be much less than the actual yield.

Way forward:

Rangarajan committee (2012) proposed decontrol of sugar industry and linking sugarcane prices with market price of sugar to account for this structural imbalance.

Based on the report, Commission for Agricultural Costs and Prices (CACP) recommended a hybrid approach of fixing sugarcane prices, which involved fair and remunerative price (FRP) or floor price and revenue sharing formula (RSF). Under this approach farmers’ revenue from sugarcane would be higher if the price of sugar and by-products is high.
• This is similar to many other committees formed by the government to recommend the sugar industry decontrol. Committees under Mahajan (1998), Tuteja (2004), Thorat (2009) and Nandakumar (2010) had similar recommendations.
• Ease the market control of government on export and import. The move is to help India (17% of world production) to enable its exports (only 4% of world export), but leaving it all to the market is risky.
• Do away with minimum distance between mills to enable competition.
• The new national policy on biofuels 2018, expands the scope of raw material for ethanol production by allowing use of Sugarcane Juice.
• Policy modifications to increase the ethanol blending vis-à-vis the foreign countries like Australia which has 85% blending. Better prices for ethanol can also help in export of the same.
• To diversify crops and ensure that sugarcane production falls. This requires long-term investment, and the government will have to encourage farmers to cultivate crops like pulses and oilseeds.
• Better irrigation techniques to reduce the water usage.
• Reducing the information asymmetry to improve farmer’s knowledge about the possible output in a year using BigData technique.

Case-study: In 2012, the sugarcane-water stories of farmers in Barwani, Madhya Pradesh, and Rajgoli, Maharashtra, were replete with sour details when International Finance Corporation (IFC) of the World Bank Group intervened along with Olam International and Solidaridad. The collaboration, called ‘Madhu Shree’, recognised water as a key risk-factor, because in 2015, it was rated as the highest global risk by the World Economic Forum, considering its contribution to three of the top five global risks.

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

Can we integrate “Assemble in India for the world” into “Make in India” to achieve an unprecedented opportunity to chart a China-like, labour-intensive, export trajectory that was witnessed till recent times? Evaluate. (250 words)

Reference: Money Control

Why this question:
The question is based on the observations pointed out by this year’s economic survey.

Key demand of the question:
Explain the advantages and possibility of integrating “Assemble in India for the world” into “Make in India” to achieve an unprecedented opportunity to chart a China-like, labour-intensive, export trajectory that was witnessed till recent times.

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

Structure of the answer:
Introduction:
On the much debated job creation issue, the Survey highlights that India can look at creating employment by emerging as a major hub for final assembly in a range of products.

Body:
To start with, explain that the Survey says India has unprecedented opportunity to chart a China-like, labour-intensive, export trajectory by integrating “Assemble in India for the world” into Make in India. Discuss the observations made by survey. Give your opinion about the way ahead.

**Conclusion:**
Conclude on a positive note and suggest at the potential that Indian markets have.

**Introduction:**

The survey finds that by integrating “Assemble in India for the world” into Make in India, India can create 4 crore well-paid jobs by 2025 and 8 crore by 2030. Our trade policy must be an enabler because growth in exports provides a much-needed pathway for job creation in India. Exports of network products, which is expected to equal $7 trillion worldwide in 2025, can contribute a quarter of the increase in value-added for the $5 trillion economy by 2025. Contrary to recent fears, careful analysis that controls for all confounding factors shows that India has gained from trade agreements: a 0.7 per cent increase per year in trade surplus with partner countries for manufactured products and 2.3 per cent per year for total merchandise.

**Body:**

**Challenges for ‘Assemble in India’**: 
- lack of diversification in our export basket.
- Lack of specialization and state of economies of scale.
- Stringent labour laws.
- Lack of ease of doing business like credit facilities, land, electricity etc.
- Unskilled labour.
- In contrast to India, export growth of capital-intensive products from China has been driven by its high level of participation in GVCs (global value chains) within these industries

**Measures needed:**
- India needs to specialize more in the areas of its comparative advantage and achieve significant quantity expansion.
- India must replace China as the major exporter of capital-intensive products.
- India has gained a competitive advantage in relatively low and middle income country markets driven by the nature of its specialization. This must be replicated in the richer economies.
- India can benefit significantly from utilizing the potential opportunities from greater trade with high income markets. However, this requires a reorientation of our trade specialization towards labour-intensive product lines.
- The above could be achieved by selective focus on traditional labour-intensive sectors such as textiles, especially man-made fibres, and increased participation in GVCs.
India can look at creating employment in two groups of industries, given our comparative advantage in labour-intensive activities and the imperative of creating employment for a growing labour force.

Way forward:

- First, there exists a significant unexploited export potential in India's traditional unskilled labour-intensive industries such as textiles, clothing, footwear and toys.
- Second, India has huge potential to emerge as a major hub for final assembly in a range of products, referred to as “network products” (NP).
- The Global Value Chains (GVCs) in these industries are controlled by leading MNEs such as Apple, Samsung, Sony etc. within “producer driven” networks. In general, these products are not produced from start to finish within a given country; instead, countries specialize in particular tasks or stages of the good’s production sequence.
- Focus on “Network Products”: A group of Industries, where production processes are globally fragmented and controlled by leading Multi-National Enterprises (MNEs) within their “producer driven” global production networks. Examples of network products include computers, electronic and electrical equipment, telecommunication equipment, road vehicles etc. For
- Laser-like focus must be placed on enabling assembling operations at mammoth scale in network products. As an India that harbours misplaced insecurity on the trade front is unlikely to grab this opportunity, our trade policy must be an enabler.
- policy measures should focus on reducing input tariffs, implementation of key factor market reforms, providing an enabling environment for the entry of lead firms into the country and reducing the service link costs.

Do you think Jio-Facebook alliance can reshape the retail landscape in India? Analyse the opportunities and obstructions that may arise from such a deal for India.(250 words)

Reference: Indian Express

Why this question:
The question is amidst the recent Jio-Facebook alliance and study of its impact.

Key demand of the question:
Explain the effect of Jio-Facebook alliance on the retail landscape in India; discuss the possible advantages and disadvantages of the deal.

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

Structure of the answer:
Introduction:
Explain the context of the question.

Body:
To start with, discuss the impact of the alliance first. Explain how the deal brings new opportunities for businesses of all sizes, and especially for the millions of small businesses across the country. Then move on to highlight the concerns associated. Discuss solutions that can address such concerns.

Conclusion:
Put forward a futuristic conclusion.

Introduction:
Reliance Industries and Facebook announced that the California-based social media giant will acquire a 9.99 per cent stake in Jio Platforms limited, the holding company of Reliance Jio, for $5.7
billion (Rs 43,574 crore). The deal which pegs the value of Jio platforms at Rs 4.62 lakh crore will help the Reliance group to reduce its debt burden, something the oil-to-telecom conglomerate has been actively working towards. The two companies expect to benefit from the synergies created by partnerships between the various arms of Reliance — retail and telecom — and Facebook’s platforms such as WhatsApp.

Body:

Implications on retail landscape in India:

Benefiting Millions of Small Businesses:

- At its core, Reliance’s idea is to create an ecosystem, by enabling customers to access the local Kirana stores using WhatsApp, combining both offline and online retail.
- This deal will support the Reliance group’s ambitions for JioMart, an internet venture that aims to grant millions of small sellers across India access to a mass market of customers online.
- This ability to connect millions of local businesses with end consumers, and provide them with a seamless online transaction experience could radically alter the country’s retail landscape.

Boosting India’s Internet Scenario:

- This strategic partnership with India’s one of the largest telecom operators will be key to India’s future technological plays, particularly in virtual reality (VR) and Internet of Things (IoT), and 5G network.
- India’s internet framework may get a technological boost, and that too reaching citizens in a short time.
- This deal may help in deepening financial inclusion as 400 million users of WhatsApp, may leverage Facebook’s Whatsapp pay-UPI platform.
Also, because of Facebook’s Libra cryptocurrency service, this deal could be a step further for experimenting crypto-based payments and blockchain technology on a large scale in India.

Opportunities:

- The deal, it said, will allow both Facebook and Jio to monetise their digital platforms, engage customers online, and provide direct connectivity between users and merchants.
- Usage of digital platforms is likely to grow significantly in the medium term amid severe disruptions caused by lockdowns and social distancing measures.
- A scaling up of this model will also provide opportunities for cross-selling — significantly increasing the upside for firms and increasing the valuation of its retail arms.
- At present, though, the reach of WhatsApp Pay is limited — just over a million Indians are reported to currently have access to the pay feature.
- But this sort of model is popular in other Asian economies such as China, Korea and Japan where apps like WeChat have a wide range of product offerings, which induces consumer stickiness.
- The deal may also open up the entire WhatsApp consumer base — the near ubiquitous chatting app has a consumer base of around 400 million — to Reliance, including those on other telecom platforms such as Airtel and Vodafone.

Challenges:

- For one, given the dominant market position of the players, concerns over the market structure and its implications for consumer welfare are bound to arise.
- Second, the tie-up also raises questions on net neutrality with the possibility of preferential treatment being granted.
- Facebook’s Free Basics platform was shut down by the Telecom Regulatory Authority of India (TRAI) due to net neutrality concerns.
- In 2015, it experimented with Free Basics, which provided free access to basic Internet services as a partnership with service providers.
- Also, violation of principles of net neutrality is difficult to prove, owing to technical issues like low bandwidth, the difference in network capacity in different areas.
- Third, given the data privacy issues highlighted in the past by the Cambridge Analytica episode, for instance, there are apprehensions over the enormous amounts of data that will be collected by these entities, especially when India still does not have a personal data protection law.
- Data is also referred to by many experts as the new oil or new currency of the 21st century.
- This is due to the fact that the vast quantities of data generated by users of online services can be processed into valuable information for commercial and strategic gains by technological giants like Amazon, Google etc.

Conclusion:

This mega-deal will have major implications on India’s retail and internet landscape. However, in the context, the role of regulatory bodies such as the Competition Commission of India and Telecom Regulatory Authority of India assumes much importance. The nature of such regulation will decide the overall fate of India’s market, whether it will turn into digital Sarvodaya or will deepen the digital divide.
Science and Technology - developments and their applications and effects in everyday life; Achievements of Indians in science & technology; indigenization of technology and developing new technology.

What is clean hydrogen? Discuss the potential that clean hydrogen industry holds in ensuring cuts in the global greenhouse gas emissions.(250 words)

Reference: Down To Earth

Why this question:
The article talks about the potential that the clean hydrogen industry holds for doing away with global greenhouse gas emissions.

Key demand of the question:
Explain what clean hydrogen is; discuss its significance in curbing the global greenhouse emissions.

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

Structure of the answer:
Introduction:
Briefly define what clean hydrogen is. Hydrogen is a clean fuel that, when consumed in a fuel cell, produces only water. Hydrogen can be produced from a variety of domestic resources, such as natural gas, nuclear power, biomass, and renewable power like solar and wind.

Body:
Highlight the facts pointed out by ‘Hydrogen Economy Outlook’. The report suggested that renewable hydrogen could be produced for $0.8 to 1.6/kg in most parts of the world before 2050. Explain the fact that Hydrogen has the potential to power a clean economy. In the years ahead, it will be possible to produce it at low cost using wind and solar power, to store it underground for months, and then pipe it on demand to power everything from ships to steel mills.

Take hints from the article and explain the significance.

Conclusion:
Conclude with significance of the clean hydrogen.

Introduction:
Hydrogen is a clean fuel. It is an energy carrier that can be used for a broad range of applications. Also it could serve as a possible substitute to liquid and fossil fuels. Its physical properties could be stated as following. At standard temperature and pressure, hydrogen is a nontoxic, nonmetallic, odorless, tasteless, colorless, and highly combustible diatomic gas with the molecular formula H2.

Widespread adoption of clean hydrogen can cut global greenhouse gas emissions by up to 34 per cent in fossil fuel-dependent sectors by 2050 — and at a manageable cost — according to a new study by research firm BloombergNEF (BNEF).

Body:

potential of clean hydrogen industry in reducing greenhouse gas emissions:

- Hydrogen as a fuel has long been touted as an almost magical solution to air pollution crisis. The only by-product or emission that results from the usage of hydrogen fuel is water — making the fuel 100 per cent clean.
Hydrogen is considered an alternative fuel. It is due to its ability to power fuel cells in zero-emission electric vehicles, its potential for domestic production, and the fuel cell’s potential for high efficiency.

In fact, a fuel cell coupled with an electric motor is two to three times more efficient than an internal combustion engine running on gasoline.

Hydrogen can also serve as fuel for internal combustion engines.

The energy in 2.2 pounds (1 kilogram) of hydrogen gas contains about the same as the energy in 1 gallon (6.2 pounds, 2.8 kilograms) of gasoline.

Benefits of hydrogen as a fuel:

- **It is readily available.** It is a basic earth element and is very abundant. However, it time consuming to separate hydrogen gas from its companion substances. While that may be the case, the results produce a powerful clean energy source.
- **It doesn’t produce harmful emissions.** When it is burned, it doesn’t emit harmful substances. Basically, it reacts with oxygen without burning and the energy it releases can be used to generate electricity used to drive an electric motor. Also, it doesn’t generate carbon dioxide when burnt, not unlike other power sources.
- **It is environmentally friendly.** It is a non-toxic substance which is rare for a fuel source. Others such as nuclear energy, coal and gasoline are either toxic or found in places that have hazardous environments. Because hydrogen is friendly towards the environment, it can be used in ways that other fuels can’t even possibly match.
- **It can be used as fuel in rockets.** It is both powerful and efficient. It is enough to provide power for powerful machines such as spaceships. Also, given that it is environmentally friendly, it is a much safer choice compared to other fuel sources. A fun fact: hydrogen is three times as powerful as gasoline and other fossil fuels. This means that it can accomplish more with less.
- **It is fuel efficient.** Compared to diesel or gas, it is much more fuel efficient as it can produce more energy per pound of fuel. This means that if a car is fueled by hydrogen, it can go farther than a vehicle loaded with the same amount of fuel but using a more traditional source of energy. Hydrogen-powered fuel cells have two or three times the efficiency of traditional combustion technologies. For example, a conventional combustion-based power plant usually generates electricity between 33 to 35 percent efficiency. Hydrogen fuel cells are capable of generating electricity of up to 65 percent efficiency.
- **It is renewable.** It can be produced again and again, unlike other non-renewable sources of energy. This means that with hydrogen, you get a fuel source that is limited. Basically, hydrogen energy can be produced on demand.

Limitations to Hydrogen production:

- Hydrogen is the most abundant element in the universe, but it does not occur in deposits or reserves like fossil fuel. It needs to be actually produced using chemical reactions.
- And here lies hydrogen’s biggest roadblock to wider acceptance — hydrogen today is almost entirely produced from fossil fuels.
- Hydrogen is produced by extraction from organic matter, hydrocarbons and, of course, water.
- Majority of the hydrogen that is produced comes from steam-reforming, which combines steam with natural gas at very high temperatures. The most popular gas used for this process is methane.
- Hydrogen, using renewables, is far more expensive to produce. And hydrogen-fueled vehicles are also more expensive than even battery-electric ones.
- It is highly flammable. Since it is a very powerful source of fuel, hydrogen can be very flammable. In fact, it is on the news frequently for its many number of risks. Hydrogen gas burns in air at very wide concentrations – between 4 and 75 percent.
- It is difficult to store. Hydrogen is very hard to move around. When speaking about oil, that element can be sent though pipelines. When discussing coal, that can be easily carried off on the back of trucks. When talking about hydrogen, just moving even small amounts is a very expensive matter.
- The clean hydrogen industry is small and costs are high. There is a big potential for costs to fall, but the use of hydrogen needs to be scaled up and a network of supply infrastructure created.

**Conclusion:**

China uses hydrogen fuel cell-powered trams while Germany runs hydrogen-trains. Hydrogen is used in bikes, cycles, scooters, trucks, aeroplanes and most other forms of transportation. NASA even launched space shuttles with hydrogen fuel. With a view to accelerate development of hydrogen energy sector in India, a National Hydrogen Energy Road Map (NHERM) was prepared and adopted by the National Hydrogen Energy Board in January, 2006 for implementation.

**What are ‘Cytokine storms’? Discuss its effect on body’s immune system.**

**Reference:** [Indian Express](https://www.indianexpress.com)

**Why this question:**
The article presents a detailed discussion of what is the cytokine storm and how is it triggered when a virus (or antigen) enters the body for the first time? How does the body’s immune system work? Thus the question.

**Key demand of the question:**
Explain the concept of cytokine storms and discuss its effect on body’s immune system.

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

**Structure of the answer:**

**Introduction:**
Define what cytokines are – Cytokines are a class of immune regulatory proteins that are secreted by the cells especially of the immune system.

**Body:**
Explain what a Cytokine Storm Syndrome is – it a form of Systematic Inflammatory Response Syndrome that can be triggered by a variety of factors such as infections and certain drugs. It occurs when large number of white blood cells are activated and release inflammatory cytokines which in turn activate yet more white blood cells. Move on to explain Role of Cytokine storm in the human immune system. Present the case of COVID-19 patient, explain the effect in detail.

**Conclusion:**
Conclude with the fact that cytokine is seen as a likely major cause of mortality in both 1918-20 spanish flue that killed more than 50 million people worldwide. And H1N1(swine flue) and H5N1 (bird flu) outbreaks in recent years.
contaminated by a secondary bacterial pneumonia — often enhancing the mortality in patients. Sometimes, a cytokine storm may be severe or life threatening and lead to multiple organ failure. Also called hypercytokinemia.

Accumulating evidence suggests that a subset of patients with severe Covid-19 might have a “Cytokine Storm Syndrome” (CSS).

Body:

Role of Cytokines

Effect on body’s immune system:

- Cytokines are inflammatory immunological proteins that are there to fight off infections and ward off cancers.
- They are signalling proteins that are released by cells at local high concentrations — a cytokine storm
- The release of inflammatory mediators increases the blood flow to the area, which allows larger numbers of immune system cells to be carried to the injured tissue, thereby aiding the repairing process. Thus, inflammation has an important protective function.
- However, if this inflammatory response is not regulated, very dangerous consequences can follow. This is when a ‘cytokine storm’ can be triggered.
- A severe immune reaction, leading to the secretion of too many cytokines in the bloodstream, can be harmful since an excess of immune cells can attack healthy tissue as well.
- The damage to the surrounding cells can be catastrophic, leading to sepsis and potentially, death.

Conclusion:

Cytokine storms are not exclusive to coronavirus patients. It is an immune reaction that can occur during other infectious and non-infectious diseases as well. CSS is seen as a likely major cause of mortality in both the 1918-20 Spanish Flu that killed more than 50 million people worldwide, and the H1N1 (swine flu) and H5N1 (bird flu) outbreaks in recent years. If the clinical features of CSS are not recognised and adequate treatment is not promptly instituted, multiple organ failure can result. Researchers writing in The Lancet have suggested that all severe COVID-19 patients should be screened for hyper inflammation.

“The coronavirus speeds up the transition to a digital economy while exposing the digital gap between countries and societies”, Examine.(250 words)

Reference:  Indian Express

Why this question:

The question aims to evaluate the effect of the corona pandemic on the digital economy of the world society.

Key demand of the question:

Explain the impact of the pandemic on the digital economy, the hints towards the digital divide and the need and necessity to bridge it.

Directive:

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

Structure of the answer:

Introduction:
Briefly explain the current stage of digital economy across the countries.

Body:
Explain that the global crisis brought on by the coronavirus pandemic has pushed us further into a digital world, and changes in behaviour are likely to have lasting effects when the economy starts to pick up. But not everyone is ready to embrace a more digitized existence.

A new analysis from UNCTAD maps the changing digital landscape since the last major global calamity, the 2008/09 financial crisis. It looks at how a digitally enabled world is working for some, but not all equally.

According to the analysis, the coronavirus crisis has accelerated the uptake of digital solutions, tools, and services, speeding up the global transition towards a digital economy.

Explain that Inequalities in digital readiness hamper the ability of large parts of the world to take advantage of technologies that help us cope with the coronavirus pandemic by staying at home. Suggest way forward.

Conclusion:
This situation has significant development implications that cannot be ignored. We need to ensure that we do not leave those who are less digitally equipped even further behind in a post-coronavirus world.

Introduction

While the coronavirus pandemic presents business risks in some areas, it also offers opportunities in others, like boost to the Digital Economy. The key is to acknowledge the potential threats while exploring the possibilities.

Body

Digital Economy transition in the wake of pandemic

- With businesses closing their doors and governments urging their citizens to stay home, the coronavirus has had a profound global impact.
- Across the globe, the reduced in-store activity is driving increased e-commerce activity. For example, consumers in India are turning to online grocery shopping.
- According to an assessment by DMEXCO survey in USA, the COVID-19 crisis will accelerate the pace of the digital transformation. Nearly the entire digital sector is currently working from home.
- Working from home environment will be accepted more and more by employers and employees in these situations.
- Collaboration tools like Skype video conferencing, BlueJeans video, Cisco Webex are being re-invented. More companies will opt for customized version of these tools in the near future.
- Expansion of the internet will accelerate. Data protection and security will get more focus henceforth.

However digital economy remains elusive to most part of the third world nations and even within India there remains a huge Digital Divide. Even today smart phones, computers and internet are inaccessible to many around the world. Most of the digital infrastructure is centred around urban areas.

Digital Divide and inequality

- Increasing penetration of digital technology by bridging the existing digital divides is associated with greater social progress of a country.
- Social capital: Once an individual is connected, Internet connectivity and ICTs can enhance his or her future social and cultural capital.
Economic disparity is created between those who can afford the technology and those who don’t.

A direct correlation between a company’s access to technological advancements and its overall success in bolstering the economy.

Education: The digital divide also impacts children’s ability to learn and grow in low-income school districts. Without Internet access, students are unable to cultivate necessary tech skills in order to understand today’s dynamic economy.

Lack of information: Almost all India’s socio-economic problems had links to the “digital divide”, which had come to stay during the era of digital revolution and then again during the era of internet revolution in India.
  - Rural India suffered from information poverty. Information is controlled by a few at the top of the pyramid who restrict its percolation down to those at the bottom.
  - Political empowerment and mobilisation in the age of social media is difficult when there is digital divide.

India’s potential

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

- Burgeoning population: Rising affluence will make India the third-largest consumer market by 2025, making it imperative for companies to adapt their business models for meeting the changing customer needs. Consumption expenditure will increase three times to hit $4 trillion by 2025, according to a report by the Boston Consulting Group.
- Growing online presence of the population: IAMAI report says that Urban India with an estimated population of 455 million already has 300 million using the internet.
- Rural India has only 186 million internet users. The numbers are expected to reach 500 million soon.
- Digital India and governance: Indian government’s initiative of Digital India to revolutionize the ICT is a welcome step. The programs of connecting every Gram panchayat with internet under BharatNet and mobile connection will strengthen the competition for tech industries.
- Skilled workforce: With young workforce and continuing policy reform, India has not only emerged as the fastest-growing economy, but its stars also shine bright amid the current global gloom. About 400 million strong workforce between the age group of 21-40 is ready to make India the labour capital of world.

Conclusion

India must quickly identify the gaps and potentials and leverage our strengths to ensure digital connectivity for all. We can improve the stagnant economy and accelerate the pace of growth by enabling digital revolution in every nook and corner of India, especially in the post-pandemic world.

What is hydroxychloroquine? Why is it in demand? Do you think it is the silver bullet to address the ongoing pandemic? Analyse.(250 words)

Reference: Indian Express

Introduction:

Hydroxychloroquine (HCQ) is a medication used for the prevention and treatment of certain types of malaria, specifically for chloroquine-sensitive malaria. It is also used in treatment of rheumatoid arthritis, lupus, and porphyria cuanea tarda. The government of India banned export of
hydroxychloroquine, with immediate effect to ensure sufficient availability of the medicine in the domestic market on April 4. The US President warned about “retaliation” if India did not heed his request for the drug. Following this India partially lifted a ban on the export.

Body:

Reasons for HCQ in demand:

- The International Journal of Antimicrobial Agents (IJAA), reported that Azithromycin (antibiotic) added to hydroxychloroquine was significantly more efficient for COVID-19 elimination.
- However, the study was flagged as being too small to draw a definitive conclusion.
- By late March, Trump had begun to call the drug a “game changer”, and has since been pushing it.
- At the end of last month, the Indian Council of Medical Research (ICMR) issued an advisory recommending the use of hydroxychloroquine in asymptomatic healthcare workers treating COVID-19 patients.
- ICMR also allowed doctors to prescribe it for household contacts of confirmed COVID-19 patients.
- However, the government has stressed that the drug can only be used in COVID-19 treatment on prescription, and that it should not instill a sense of “false security”.
- In March, Following the ICMR’s advisory on the drug, various patients and healthcare professionals are learnt to have stocked up on hydroxychloroquine.
- The drug was then moved to a Schedule H1 status, which means patients who need the drug would have to get a fresh prescription every time they needed to purchase it.

HCQ- a silver bullet to address the ongoing pandemic?

- The drug shows antiviral activity in vitro against coronaviruses, and specifically, SARS-CoV-2.
- Further, the study suggests that prophylaxis (treatment given to prevent disease) with hydroxychloroquine at approved doses could prevent SARS-CoV-2 infection and may help to improve viral shedding.
- Clinical trials are under way in China to know whether the drug can be used for treatment.
- At the same time, research in other parts of the world has sparked interest in a more expansive use of the anti-malarial medicine.
- A study by Chinese researchers, for instance, showed that the drug speeded up the recovery of COVID-19 patients who had suffered pneumonia.
- Experiments on the drug have also yielded promising results in France. Some experts have called for more tests before hydroxychloroquine is held up as a cure for COVID-19.
- But some of the early naysayers of the drug, including the US Food and Drug Administration, have now come around to recommending its use in emergency situations.
- Hydroxychloroquine as a COVID-19 palliative, by all accounts, seems to be a work in progress.
- However, in a world embroiled in a grim struggle against COVID-19, reports of the early success of the drug have generated hope especially in the US, the country hit hardest by the pandemic.
- In such a situation, it is critical that India’s decision on the US request be an informed and considered one.

Conclusion:

India has one of the lowest manufacturing costs in the world – lower than that of the U.S. and almost half of the cost in Europe. As the country plans to intensify the battle against the novel
coronavirus in hotspots, the GoM’s decision must be based on consultations with a wide range of experts — scientists, public health and foreign policy experts and representatives of the pharma industry. India should look up to and invest in biotechnology. India’s biotechnology industry, comprising biopharmaceuticals, bio-services, bio agriculture, bio-industry and bioinformatics is expected to grow at an average rate of around 30% a year and reach $100 billion by 2025. To ensure health security of Indian people, revival of R&D and public sector API manufacturers through bodies like CSIR is necessary.

What do you understand by Genome Sequencing? Discuss the various efforts by India in this regard and how will it lead to precision medicine and develop its commercial gene testing services? (250 words)

Reference : Indian Express.

Why this question:
The ongoing analysis of the gene sequences of the novel coronavirus has so far not revealed anything to suggest that the virus present in India is in any way different from that circulating in other parts of the world. There is also no evidence, as of now, of any one particular strain of the virus being more deadly than the other, scientists have said.

Key demand of the question:
The question is straightforward; one must explain the concept of what is genome sequencing and in what way it will help in precision medicine and commercial gene testing services.

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

Structure of the answer:
Introduction:
In brief explain the context of the question.

Body:
Explain first what is whole genome sequencing? Discuss the various efforts taken by the Government of India in this regard. Explain the challenges involved.

Conclusion:
Conclude with significance of such a project.

Introduction:
A genome is the DNA, or sequence of genes, in a cell. Most of the DNA is in the nucleus and intricately coiled into a structure called the chromosome. The rest is in the mitochondria, the cell’s powerhouse. Every human cell contains a pair of chromosomes, each of which has three billion base pairs or one of four molecules that pair in precise ways. The order of base pairs and varying lengths of these sequences constitute the “genes”, which are responsible for making amino acids, proteins and, thereby, everything that is necessary for the body to function. It is when these genes are altered or mutated that proteins sometimes do not function as intended, leading to disease.

Body:

Genome sequencing is the process that involves deciphering the exact order of base pairs in an individual. This “deciphering” or reading of the genome is what sequencing is all about. Costs of sequencing differ based on the methods employed to do the reading or the accuracy stressed upon in decoding the genome.
**Importance of Genome Sequencing:**

- A genetic test, which is commercially available at several outlets in the country, usually involves analysing only a portion of the genome that’s known to contain aberrant genes linked to disease.
- It is important to ensure that India, with its unparalleled human diversity, is adequately represented in terms of genomic data and develops indigenous capacity to generate, maintain, analyse, utilize and communicate large-scale genome data, in a scalable manner.
- Ever since the human genome was first sequenced in 2003, it opened a fresh perspective on the link between disease and the unique genetic make-up of each individual.
- Nearly 10,000 diseases including cystic fibrosis, thalassemia are known to be the result of a single gene malfunctioning.
- While genes may render some insensitive to certain drugs, genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.
- The human genome has about 3.2 billion base pairs and just 10 years ago cost about $10,000. Now prices have fallen to a tenth.

**India’s efforts towards Genome sequencing:**

- Two institutes of Centre for Scientific and Industrial Research (CSIR) Centre for Cellular and Molecular Biology (CCMB), Hyderabad and Institute of Genomics and Integrative Biology (IGIB), New Delhi have started working together on the whole genome sequencing of novel coronavirus
- **IndiGen Genome project:**
  - The IndiGen initiative was undertaken by CSIR in April 2019, which was implemented by the CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi and CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad.
  - The objective is to enable genetic epidemiology and develop public health technologies applications using population genome data.
  - This has enabled benchmarking the scalability of genome sequencing and computational analysis at population scale in a defined timeline.
  - The ability to decode the genetic blueprint of humans through whole genome sequencing will be a major driver for biomedical science.
  - IndiGen programme aims to undertake whole genome sequencing of thousands of individuals representing diverse ethnic groups from India.
- **Genome India:**
  - The Government of India has cleared a gene-mapping project called “Genome India” recently.
  - To build a grid of the Indian “reference genome”, to understand fully the type and nature of diseases and traits that comprise the diverse Indian population.
  - This is spearheaded by the Centre for Brain Research at Bengaluru-based Indian Institute of Science as the nodal point of about 20 institutions.
- Each of these institutions will do their bit in collecting samples, doing the computations, and then the research.
- It hopes to form a grid after collecting 10,000 samples in the first phase from across India, to arrive at a representative Indian genome.
- Most genomes have been sourced from urban middle-class persons and are not really seen as representative.
- Over 95% of the genome samples available, which are the basis of new, cutting-edge research in medicine and pharmacology, use the Caucasian genome as the base.
- So, this Indian genome project is seen as a necessity.

**Conclusion:**

CSIR is planning to train more clinicians for gene data interpretation and rope in more labs for sequencing. Apart from IGIB and CCMB, National Institute of Biomedical Genomics in Kolkata and Indian Institute of Science in Bengaluru will also be part of the IndiGen project. More physicians are being trained to study medical genetics for speedier analysis.
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UPSC TOPPERS

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- Vishal A
  AIR 5, CSE 2014
- Naresh Kumar
  AIR 16, CSE 2014

2015
- Shweta Shrikala
  AIR 8, CSE 2015
- Kriti Choudhary
  AIR 14, CSE 2015

2016
- Ravi K
  AIR 1, CSE 2016
- Dharmakant R S
  AIR 45, CSE 2016

2017
- Amol Deshpande
  AIR 3, CSE 2017
- Aneek R
  AIR 2, CSE 2017

2018
- Shweta Shrikala
  AIR 9, CSE 2018
- Rohit Sharma
  AIR 33, CSE 2018

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

What do you understand by Convalescent plasma therapy? What are its key features? Discuss the pros and cons associated with it. (250 words)

Reference: Indian Express

Introduction:

The convalescent plasma therapy aims at using antibodies from the blood of a recovered Covid-19 patient to treat those critically affected by the virus. The therapy can also be used to immunize those at a high risk of contracting the virus — such as health workers, families of patients and other high-risk contacts. Several countries including China and the US have already started the clinical trials of the Convalescent Plasma Therapy due to the absence of a coronavirus-specific treatment to cure the infected patients. Recently, Kerala has got the Indian Council of Medical Research (ICMR) approval for the clinical protocol exploring the feasibility of convalescent plasma transfusion which may be administered to severe Covid-19 patients.

Body:

Key features:

- Convalescent Plasma Therapy, also known as passive antibody therapy, provides a person with already developed antibodies to fight a virus.
- Under the Plasma Therapy, the COVID-19 patients will be infused with an antibody-rich blood plasma of the people who have recovered from the novel Coronavirus.
- The Convalescent Plasma Therapy is based on the antibodies and proteins developed by the immune system that protects the body from any potential harm.
- When any virus attacks the body, the immune system produces antibodies to attack the virus. These antibodies are produced by immune cells ‘B lymphocytes’, found in blood plasma.
- The person who recovers from a virus has developed antibodies that stay in blood to fight the same virus, if it returns. And if these antibodies are infused into other person infected with the same virus, they recognize the virus and attack it. However, these antibodies stay for short period in other person’s blood.
- Some antibodies neutralize the virus and some work by mobilizing the immune cells to combat a disease.

Pros:

- Advantages of the therapy are that it is the viable option in our healthcare system.
- It is quickly doable and there are no major side effects.
- The most important thing is that convalescent sera is easily transportable to any part of the country/worldwide by maintaining adequate cold-chain process similar to vaccine
- Adding therapeutic plasma exchange in tertiary care centres using convalescent sera of COVID-19 will be the more effective way of therapy in COVID-19 patients.

Cons:

- Therapy is expensive
- Limited number of plasma donors
• Only the critically-ill patients who need support care will get Plasma Therapy treatment. The therapy will not be used for patients showing mild or no symptoms.
• Despite the potential utility of passive antibody treatments, there have been few concerted efforts to use them as initial therapies against emerging and pandemic infectious threats.
• The absence of large trials certainly contributes to the hesitancy to employ this treatment.
• Also, the most effective formulations (convalescent plasma or hyperimmune globulin, H-Ig) are unknown.
• Convalescent plasma has the advantage that while its antibodies limit viral replication, other plasma components can also exert beneficial effects such as replenishing coagulation factors when given to patients with hemorrhagic fevers such as Ebola.
• On the other hand, individual convalescent plasma units demonstrate donor-dependent variability in antibody specificities and titers. H-Ig preparations, in contrast, contain standardized antibody doses, although fractionation removes IgM, which may be necessary against some viruses.
• Nonetheless, the construction of a strategic stockpile of frozen, pathogen-reduced plasma, collected from Ebola-convalescent patients with well-characterized viral neutralization activities, is one example of how to proceed despite existing unknowns.

Risks involved

Besides speaking about the success of the convalescent plasma therapy, the study by John Hopkins immunologists stated some of the risks associated with it:

• Transfer of blood substances: As the blood transfusion takes place, there are risks that an inadvertent infection might get transferred to the patient.
• Enhancement of infection: The therapy might fail for some patients and can result in an enhanced form of the infection.
• Effect on immune system: The antibody administration may end up suppressing the body's natural immune response, leaving a Covid-19 patient vulnerable to subsequent re-infection.

Conclusion:

The Convalescent plasma therapy was first used during the 1918 Spanish Influenza outbreak. The approach was used recently during the outbreak of SARS, MERS and Ebola viruses. The convalescent plasma therapy is akin to passive immunization as, according to researchers, it is a preventive measure and not a treatment for the Covid-19 disease.

Elaborate on the recent developments made in Indian Telemedicine. Examine the possible inadequacies of the medium and suggest measures to address the same. (250 words)

Reference: The Hindu

Introduction:

The World Health Organization (WHO) refers to telemedicine as “healing from a distance”. It is the remote delivery of healthcare services. It is the use of telecommunications technology and information technologies to provide remote clinical services to patients. Physicians use telemedicine for the transmission of digital imaging, video consultations, and remote medical diagnosis
Recent developments made in Indian Telemedicine:

- Indian Space Research Organization made a modest beginning in telemedicine in India with a Telemedicine Pilot Project in 2001, linking Chennai’s Apollo Hospital with the Apollo Rural Hospital at Aragonda village of Andhra Pradesh.
The efficacy of telemedicine has already been shown through the network established by the Indian Space Research Organization (ISRO), which has connected 22 super-specialty hospitals with 78 rural and remote hospitals across the country through its geo-stationary satellites.

ISRO has also provided connectivity for mobile telemedicine units in villages, particularly in the areas of community health and ophthalmology.

The setting up of the National Telemedicine Taskforce by the Health Ministry of India, in 2005, paved way for the success of various projects like the ICMR-AROGYASREE, NeHA and VRCs.

Telemedicine division of MoHFW, GOI has set up a National Telemedicine Portal for implementing a green field project on e-health establishing a National Medical College Network (NMNC) for interlinking the Medical Colleges across the country with the purpose of e-Education and a National Rural Telemedicine Network for e-Healthcare delivery.

AROGYASREE is another internet-based mobile telemedicine conglomerate that integrates multiple hospitals, mobile medical specialists and rural mobile units/clinics. The project is an initiative of Indian Council of Medical Research (ICMR).

Benefits of Telemedicine in India:

- India only has one government doctor for every 1,139 people, whereas the World Health Organization (WHO) recommends a ratio of 1: 1,000.
- The shortage of doctors is limiting face-to-face consultations among patients. Secondly, India also has a shortage of hospital beds, which makes hospitalization tricky.
- Telemedicine will reduce the time of consultations and improve the quality of healthcare services in urban as well as rural areas, removing many of infrastructural challenges.
- Telemedicine is a sector that bridges the healthcare gap between rural India and urban India.
- In rural India, where the access to medical facilities, specialists’ opinion and advance healthcare amenities are limited, telemedicine acts as a healthcare provider bringing access to the specialist doctors to these areas.

Challenges to telemedicine:

- Unclear Policies
  - Because technology is growing at such a fast pace, it’s been difficult for policymakers to keep up with the industry.
  - There is great uncertainty regarding matters like reimbursement policies, privacy protection, and healthcare laws. In addition, telemedicine laws are different in every state.

- Fewer Face-to-Face Consultations:
  - Several physicians and patients are finding it difficult to adapt to telemedicine, especially older adults.
  - Physicians are very concerned about patient mismanagement.
  - While advances in medicine have made it more efficient to use technology, there are times when system outages occur.
  - There is also the potential for error as technology cannot always capture what the human touch can.

- Technology Is Expensive
- Healthcare systems that adopt telemedicine solutions can attest that it requires a lot of time and money.
- Implementing a new system requires training and sometimes staff members find it difficult to welcome this change.
- Practice managers, nurses, physicians, and more have to learn how to utilize the system so that practices can see the benefits.
- Although telemedicine is expensive in the beginning, healthcare systems should see a positive return on investment over time due to more patients and less staff.

Conclusion:

Technology plays a crucial role in fight against COVID-19. The pandemic has contributed to the understanding of various ways in which available technologies can be put to better use and presented people with multiple opportunities to harness these devices, techniques and methods to get on with life in the time of lockdown. Among the primary uses is telemedicine that can help reach patients where access to medical care is difficult. While unleashing the full potential of telemedicine to help people, experts and government agencies must be mindful of the possible inadequacies of the medium, and securing sensitive medical information; such cognizance should guide the use of the technology.

An efficient and equitable intellectual property system can help India to realize intellectual property’s potential as a catalyst for economic development and social & cultural well-being. Discuss. (250 words)

Reference: Business Standard

Why this question:
The question is premised on the importance and relevance of efficient and equitable intellectual property system for our country and in what way it can act as a catalyst for economic development and social & cultural well-being.

Key demand of the question:
Explain the importance of intellectual property system to the country and draw its relations to economic development and social & cultural well-being of the country.

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

Structure of the answer:
Introduction:
Explain IPR – Intellectual property rights (IPR) are the rights given to persons over the creations of their minds: inventions, literary and artistic works, and symbols, names and images used in commerce. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time.

Body:
To start with, explain why there is need of IPRs. Present the case of India and the rule and regulations available with it in respect of IPR regimen. Discuss the national IPR policy. Highlight the challenges and concerns associated.

Conclusion:
Draw a balanced conclusion justifying how an effective IPR system can act as a catalyst for economic development and social & cultural well-being.
Introduction

Intellectual Property Rights (IPRs) are legal rights, which result from intellectual invention, innovation and discovery in the industrial, scientific, literary and artistic fields. These rights entitle an individual or group to the moral and economic rights of creators in their creation. For ex: In India, patents are granted for a period of 20 years from the date of filing of the patent application.

It is also to be noted that the patents are valid only within the territory where they have been granted. Once a patent expires, protection ends and the invention enters the public domain. In India, Patent Acts, 1970 regulate the IPRs.

Body

Need for IPR’s in India

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

India’s National IPR Policy

The National Intellectual Property Rights (IPR) Policy 2016 was adopted in May 2016 as a vision document to guide future development of IPRs in the country. It’s motto is “Creative India; Innovative India”.

- **Thrust on IPR Awareness, Outreach and Promotion** - To create public awareness about the economic, social and cultural benefits of IPRs among all sections of society.
- **Generation of IPRs** - To stimulate the generation of IPRs.
- **Legal Framework** - To have strong and effective IPR laws, which balance the interests of rights owners with larger public interest.
• Administration and Management - To modernize and strengthen service-oriented IPR administration.
  ▪ It sets in place an institutional mechanism for implementation, monitoring and review. It aims to incorporate and adapt global best practices to the Indian scenario.
  ▪ Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce, Government of India, has been appointed as the nodal department to coordinate, guide and oversee the implementation and future development of IPRs in India.
  ▪ The ‘Cell for IPR Promotion & Management (CIPAM)’, setup under the aegis of DPIIT, is to be the single point of reference for implementation of the objectives of the National IPR Policy.

• Commercialization of IPRs - Get value for IPRs through commercialization.

• Enforcement and Adjudication - To strengthen the enforcement and adjudicatory mechanisms for combating IPR infringements.

• Inclusive Development - To strengthen and expand human resources, institutions and capacities for teaching, training, research and skill building in IPRs.

Challenges associated with IPR’s in India

• Policy recommends scientist and professors to convert all their discoveries into IP which in turn has the potential to curb the free flow of knowledge.

• Policy is aimed commercialization and monetizing on IPR’s. Rather focus must be to create good and quality innovation that is beneficial for all.

• Foreign investors and MNCs alleges that Indian law does not protect against unfair commercial use of test data or other data submitted to the government during the application for market approval of pharmaceutical or agro-chemical products. For this they demand a Data Exclusivity law.

• IPR policy is driven by the agenda of IP maximalism, where IP owners’ rights will be maximized at the cost of public interest. This (policy) will influence courts and judges who might consider rights of patentees above that on common man in certain cases.

• Connection between patenting and application of patented knowledge is yet to be established. Hence, patenting and not applying the new invention could deter progress.

• Policy recommends criminalization of unauthorized copying of movies – which is just a civil wrong.

• Compulsory Licensing: It is problematic for foreign investors who bring technology as they are concerned about the misuse of CL to replicate their products. It has been impacting India-EU FTA negotiations.

• India continues to remain on the United States Trade Representative's (USTR’s) ‘Priority Watch List’ for alleged violations of intellectual property rights (IPR).
• Not understanding the modes of creativity and sharing in “shadow economy”, the policy leans towards superimposition of formal IP framework.

• While IP could accelerate innovation in certain technologies it in turn impedes in others. Policy recommends scientist and professors to convert all their discoveries

Need of the hour

• India will be unable to take full advantage of the transformative benefits of a strong IP system unless and until it addresses gaps in its IP laws and regulations.

• Fostering an environment where innovation flourishes and a knowledge economy is built, is the key idea. Hence, the policy should have a balance.

• Success of India’s flagship programmes - Make in India and Start up India - depends on the boost of innovation ecosystem with better IPR safeguardings.

• It should encourage patenting and at the same time ensure that patentability of a product/process does not deter further innovation and progress.

Conclusion

Support for innovation has to be accompanied with instruments that guard local companies against the misuse of market power, coercive bargaining and aggressive acquisition strategies. India needs to spread awareness on IPR in public and for its traditional industries to enable fair monetization of IP Rights. An efficient and equitable intellectual property system can help all countries to realize intellectual property’s potential as a catalyst for economic development and social & cultural well-being.

Conservation, environmental pollution and degradation, environmental impact assessment.

While discussing the seaweed distribution and resource potential in India bring out the challenges of rising seaweed tides.(250 words)

Reference: Geography and You, Research Gate

Why this question:
The question is straightforward and is based on the theme of Seaweed; its utility as a resource and possible concerns associated with it.

Key demand of the question:
Explain the seaweed distribution and resource potential in India; also bring out the challenges of rising seaweed tides.

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

Structure of the answer:
Introduction:
First define what Seaweed is – Seaweed or sea vegetables are forms of algae that grow in the sea. They’re a food source for ocean life and range in color from red to green to brown to black. Seaweed grows along rocky shorelines around the world, but it’s most commonly eaten in Asian countries such as Japan, Korea and China

Body:
To start with, discuss the distribution and resource potential of seaweeds in India. According to a report from the Central Marine Fisheries Research Institute (CMFRI), only 30 million tonnes of seaweeds, valuing €8 billion, are being harvested every year. In India, seaweeds grow abundantly along the Tamil Nadu and Gujarat coasts and around Lakshadweep and the Andaman and Nicobar islands. Discuss the importance of seaweed cultivation to India. Then move onto explain the challenges – highlight the issue of coastal eutrophication, disruption to coastal tourism, negative impact on the health of coasts etc.

**Conclusion:**
Conclude by suggesting solutions to address the issues associated.

**Introduction**

Seaweeds are a group of primitive non-flowering marine plants with no distinguishable root, stem and leaves. They are valuable renewable marine living resource and distributed in the intertidal, shallow and deep waters of the sea up to 150m depth. They also occur in estuaries and backwaters. Seaweeds grow on rocks, dead coral stones, pebbles, solid substrates and other plants as epiphytes. Based on the type of pigments, morphological and anatomical characters, seaweeds are broadly classified in to green, brown, red and blue-green algae.

**Body**

**Distribution in India**
- In India, several species of green, brown, red and blue-green algae with luxuriant growth occur along the southeast coast of Tamil Nadu from Rameswaram to Kanyakumari covering 21 islands in Gulf of Mannar.
- In Gujarat coast, seaweeds occur abundantly at Okha, Dwarka, Porbandar, Veraval, Diu and Gopnath.
- Rich seaweeds are present in Lakshadweep, Andaman - Nicobar Islands and also in and around Mumbai, Ratnagiri, Goa, Karwar, Varkala, Vizhinjiam, Visakhapatnam and coastal lakes such as Pulicat and Chilka.
- In Indian waters so far 271 genera and 844 species of marine algae have been reported.
- Apart from the commonly available 200 species of seaweeds, about 680 species of marine algae belonging to Rhodophyta, Phaeophyta, Chlorophyta commonly known as red, brown and green seaweeds have also been identified in both inter-tidal and deep water regions. Among these seaweeds green algae are rare. Brown algae are widely distributed. Red algae are small and delicate, with a feathery appearance.

**Advantages for India**

- **Export Potential:** According to a report from the Central Marine Fisheries Research Institute (CMFRI), only 30 million tonnes of seaweeds, valuing €8 billion, are being harvested every year.
  - India can cultivate more and harvest more with its vast 7500km coastline.

- **Economic/Commercial usage:** Seaweeds new renewable source of food, energy, chemicals and medicines. Provides valuable source of raw material for industries like health food, medicines, pharmaceuticals, textiles, fertilizers, animal feed etc.
  - Seaweeds used for production of Agar, Algimates & Carrageenan.
  - Chemicals from brown seaweeds such as alginic acid, mannitol, laminarin, fucoidin and iodine have been extracted successfully on a commercial basis.
  - As the alginites can absorb many times their own weight of water, have a wide range of viscosity, can readily form gels and are non-toxic, they have countless uses in the manufacture of pharmaceuticals, cosmetic creams, paper and cardboard, and processed foods.

- **Social benefits:** Provide occupation for the coastal people.
  - Provide continues supply of raw material for seaweed based industry.
  - Provide seaweeds of uniform quality for use in industry.
  - Conserve natural populations of concerned seaweeds.
  - Seaweed farming is an ecofriendly activity.
  - Major tool to treat coastal pollution in the sea and reduce CO2 in global warming

- **Challenges in cultivation**
  - The major problems in the seaweed industry include over exploitation leading to a scarcity of raw material, poor quality raw material and also water scarcity.
  - There are labor shortages during the paddy harvesting and transplanting season.
• The lack of technology to improve processed product quality, and a lack of information on new and alternative sources of raw materials.

• Despite the great number of sheltered bays and lagoons suitable for mariculture, not many large-scale (eg: Pepsico) attempts to grow seaweed have been made in India so far.

• The culture period of Porphyra Indica is only 4 months during winter season, as it cannot grow in rest of the year due to high temperatures. Moreover, the yield is not economical.
  ▪ The same is true for Enteromorpha intestinalis as these are the 2 algae which are directly edible in India.

• Efforts are needed to increase production through improving harvesting techniques, removal of competing species, creation of artificial habitats and seeding of cleared areas.

• Eutrophication is one of the harmful effects of seaweed cultivation if done unscientifically. This will decrease the dissolved oxygen and lead to mass kill of marine species near the shore.

**Conclusion**

There is a huge potential in India for seaweed cultivation, which in turn will provide alternate livelihood and income to the local fishermen community. Food processing industries must divulge into this sector to leverage our ample resources and improve exports in seaweed products.

**Does India need to have a long-term Water management plan gaining higher importance within the Master Plan of cities? Examine.** (250 words)

*Reference: Financial Express*

**Introduction:**

Indian cities have witnessed unprecedented growth over the past few decades that, in turn, has had a drastic impact on water availability. Depleting water resources, changing climate and unsustainable water cycle management are exacerbating the water situation. Many Indian cities have witnessed water exigencies in the form of severe drought and flood. Around 600 million Indians face high to extreme water stress. By 2030, India’s demand for water might be double the available supply.

**Body:**

**Need for India to have long-term water management plan:**

▪ Indian cities need to diversify their water resources portfolio.

▪ Indian cities often fail to anticipate water-related issues and are left to react to these.

▪ With ageing assets, water theft and non-revenue water, our cities cannot continue to dole out water subsidies, which eventually lead to paucity of funds that could have helped upgrade the water infrastructure.

**Measures needed to be taken:**

▪ A long-term Water Master Plan should gain higher importance within the Master Plan of cities.
- **Rain-water harvesting:** Few Indian cities have bye-laws that mandate rainwater harvesting. This will need strong legislation and engineering interventions.
- **Recycled water:** Recycled water presents itself as an important component of the water portfolio. It is a climate-change resilient water resource, which can be reliably produced using advanced treatment technologies.
- **Desalination plants:** India too has some desalination plants across few coastal cities, and can capitalise Singapore’s strong experience in seawater desalination in bringing down per unit cost of water and developing seawater as a sustainable water source.
- **Integration of digital technology into water management:** The availability of smart metres, water-efficient devices and infrastructure monitoring devices to plug any leakages will be useful to sustain operations and maintenance.
- **Awareness and Education:** Encourage people to reduce their water use by 10 litres a day, observe water conservation week, public visits and engagement, and water visitor centres for people to understand and appreciate the value of water.

**Case study of Singapore:**

- Singapore’s water story offers many valuable lessons that can be learned, contextualised and implemented in Indian cities.
- At the time of its independence, Singapore faced lack of perennial surface water sources, flooding and polluted water ways, limited groundwater availability with a risk of seawater intrusion and dependence on a neighbouring country for drinking water.
- It was able to turn around this vulnerability.
- Today, Singapore’s diverse water portfolio—four national taps comprising of surface water, recycled water, harnessed rainwater and desalinated water, ensure that the country’s water needs are met sustainably.
- In Singapore, recycled water is called NEWater, wherein used water is treated using advanced treatment technologies (combination of micro and ultra-filtration followed by reverse osmosis and UV disinfection) to ensure that the recycled water complies with the highest water quality standards, and is fit for human consumption.
- Singapore utilises desalinated sea water as its third source of water.
- Integrated and long-term water resources’ planning has been Singapore’s strength. Supported by strong governance, Singapore’s National Water Agency (NWA) judiciously manages the price for its water services, and proactively invests in planning for the future next drop of water. This is supported by strong public outreach and stakeholder engagement programmes, to bolster the value of water.

**Conclusion:**

Indian cities can learn a lot from Singapore, but there is no point blaming them without giving them a fair chance to fight. If we have any hesitation taking this decision, we can always go back to the wise words of the founding father of Singapore, the late Lee Kuan Yew, ‘Water dominated every other policy. Every other policy had to bend at the knees for water survival’.
Disaster and disaster management.
Post COVID-19 crisis, the world would witness changes in the geopolitical and geo-economic order. In this context, discuss how the changes can occur across the global institutions and regions. (250 words)

Reference: The Hindu.

Why this question:
The question is amidst the possible geopolitical and geo-economic order that the world would witness owing to the COVID-19 scenario.

Key demand of the question:
Explain the effect of the COVID-19 pandemic on the entire world with special focus on the effect it brings to global institutions and regions.

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

Structure of the answer:
Introduction:
Briefly elaborate on the ‘new normal’ brought by the COVID-19 pandemic.

Body:
To start with, Discuss in brief, what are the new geopolitical and Geo economic order shifts the pandemic brought. Explain the effect of it on the institutional changes with focus on WHO, UNSC etc. Bring out in detail how the changes are varied across the regions-West, Europe and Asia etc.

Conclusion:
Conclude with a forward looking approach.

Introduction:
COVID-19 pandemic is set to drastically alter geopolitics and human society. The pandemic is unprecedented and has led to radical uncertainty. COVID-19 would change the world and reshape the human society. There is already concern that a diminution in human values could occur, and with this, the concept of an international community might well cease to exist.

Body:
Possible geo-economical change:

- China, which is already one of the most prominent nations of the world and an important player in international institutions, could grow even stronger.

- China is considered indispensable as the world’s supplier of manufactured goods.

- China now seeks to benefit from its early recovery from the pandemic to take advantage of the problems of the rest of the world, by using its manufacturing capability to its geo-economic advantage.

- The current pandemic could hollow out the financial viability of many companies, institutions and banks across the world. There are reports of China’s intentions to acquire financial assets and stakes in banks and companies across the world, taking advantage of the scaled-down value of their assets.

- China is poised to dominate the global economy.
Possible geo-political changes:

- By offering medical aid and other essential supplies to several Asian and African countries during the current pandemic threat, China would gain a geopolitical advantage by its action.
- China with its Belt and Road Initiative, which seeks to combine regional connectivity alongside gaining a virtual economic and substantial stranglehold across Asia, is ostensibly preparing the way for a China-centric multilateral globalisation framework.

Changes occurring in global institutions:

- Existing international institutions such as the United Nations, the United Nations Security Council and the World Health Organization (WHO) are being blamed of having failed to measure up to the challenge posed by the pandemic.
- The UN Security Council has not been able to take any concrete action in dealing with the situation.
- WHO has been blamed of being China-centric. WHO’s underestimation and inaction during the initial phase could have amplified the pandemic to such large scales.
- The UN and other global organizations have not been able to ensure a common vision or approach among the many nations. They have failed to ensure cooperation and collaboration among its members.
- That prestigious global institutions are under attack, even in such critical times, speaks about the mood prevailing across the world.

Changes occurring at the regional level:

A faltering West:

- COVID-19 would effectively change the existing global order that has existed since the late 1940s. The geopolitical fallout of this pandemic could be the decreased dominance of the west.
- The U.S. has been weakened economically and politically due to COVID-19. The U.S.’s capacity to play a critical role in world affairs seems to have diminished. The United States will be compelled to cede ground to the rising Chinese power.
- The Brexit came as a body blow to the EU. Europe too has been badly affected by the pandemic. Germany which has played a major role in promoting EU is turning inwards.
- Both France and a post-Brexit United Kingdom will also be focusing more on domestic issues.
- Europe, in the short and medium term, will prove incapable of defining and defending its common interests, leaving it with very little influence in world affairs.

West Asia:

- In West Asia, both Saudi Arabia and Iran are set to face difficult times.
- The oil price meltdown will aggravate an already difficult situation across the region.
- Given Israel’s non-dependency on oil and it being relatively less impacted due to the pandemic, it might emerge stronger out of the pandemic.

India:
The economic downturn might reduce India’s room for manoeuvring in global affairs.

The increasing Chinese investment in South Asia could see its influence grow in the South Asian region and diminish India’s influence in the region.

India’s leverage in West Asia will suffer due to the declining oil prices.

The large Indian expatriate community in West Asia would be severely affected and may seek repatriation back to India. This would substantially reduce the inflow of foreign funds to India from the region.

Conclusion:

The COVID-19 pandemic is unprecedented, involving as it does far too many variables. The very complexity of the novel coronavirus leads to radical uncertainty. Hence, it unlikely that the world will ever be the same again. Thus, there is a need for the global community to work together by taking all the countries into confidence and supporting them. Together we stand, divided we fall – the adage holds perfectly apt for the coming times.

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

The outbreak of the COVID-19 pandemic and subsequent countrywide lockdown to prevent its transmission have variedly impacted the Indian Maoists. Critically examine.

(250 words)

Reference: idsai.in, Economic Times

Why this question:

The lockdown has certainly increased Maoists’ desperation to meet their demands of food supplies and other essentials. Maoists, all across the left wing extremism (LWE)-affected states, primarily procure their rations and other essential commodities through a network of aides from village-level haat bazaars (weekly markets). With haat bazaars being temporarily shut, they are reportedly facing acute shortage of food supplies. Also, since the entire economic and construction activities have been grounded in these areas to ensure the efficacy of the lockdown, the Maoists’ finances have taken a beating given that extortions from contractors, mining industry, truck drivers, etc., formed a major part of their finances.

Key demand of the question

One needs to examine how the COVID-19 lockdown has halted the finances and other support system to the Maoists, leading to increased pressure on the villagers nearby. Also one needs to talk about how this has led to variations in the form of attacks as seen in Sukma recently, while a faction of Naxals have apparently called for truce with the government authorities.

Directive word

Critically examine – When asked to ‘Examine’, we have to look into the topic (content words) in detail, inspect it, investigate it and establish the key facts and issues related to the topic in question. While doing so we should explain why these facts and issues are important and their implications. When ‘critically’ is suffixed or prefixed to a directive, all you need to do is look at the good and bad of something and give a fair judgement.

Structure of the answer

Introduction:

In a few introductory lines briefly discuss the COVID-19 lockdown across nation and how it has affected the supplies of goods and services across the nation to one and all.

Body:
The question must discuss the following points:
How the naxals are affected due to the lockdown and breakage in supply of goods and services.
The ramifications of the same in the form of attacks on the security forces, threats on the local villagers, headmen of village, exploiting the villagers for meeting their ends etc.
Also on the other hand, how a faction of naxals are calling for a truce with the government.
Also discuss why there is a need to remain cautious with respect to internal security and measures to attain the same.

Conclusion:
Give a balanced way forward.

Introduction:

Naxalism is considered to be one of the biggest internal security threats India faces. Naxal violence is related to the intensity of the feeling of people of their deprivation and their commitment to take revenge against those who are believed to be responsible for such denial. Recently, 17 security personnel killed in Sukma Maoist attack in Chattisgarh.

The outbreak of the COVID-19 pandemic and subsequent countrywide lockdown to prevent its transmission have variedly impacted the Indian Maoists. While there are no verified inputs that suggest confirmed cases of coronavirus among their cadres, the lockdown has certainly increased Maoists’ desperation to meet their demands of food supplies and other essentials.

Body:

Impacts on Maoists:

- Maoists, all across the left wing extremism (LWE)-affected states, primarily procure their rations and other essential commodities through a network of aides from village-level haat bazaars (weekly markets).
- With haat bazaars being temporarily shut, they are reportedly facing acute shortage of food supplies.
- Also, since the entire economic and construction activities have been grounded in these areas to ensure the efficacy of the lockdown, the Maoists’ finances have taken a beating given that extortions from contractors, mining industry, truck drivers, etc., formed a major part of their finances.

The resulting impacts on the villagers and tribals:

- The Maoists are reported to have devised a few coping mechanisms to overcome the impact of the lockdown on their supplies of rations and finances, albeit in a minuscule way.
- The Maoists in Bastar are forcing the village headmen and others to arrange rations for them. Places where villagers are unable to arrange large stocks of rice, the Maoists are snatching a one-month free ration from each of the below poverty line (BPL) families.
- The Maoists are also allegedly transporting stranded migrant workers to their respective villages in lieu of money.
- The lockdown situation has increased Maoists’ desperation and they are exploiting the villagers for meeting their ends.

Truce call by a few Maoists’ to overcome the effects of lockdown:

- The Maoists had reportedly offered a temporary unilateral ceasefire early this month in the states of Andhra Pradesh and Odisha, especially in the regions falling under Andhra Odisha Border Special Zonal Committee (AOBSZC).
While the Maoists’ refrain is to ‘facilitate government’s relief operations in their core areas to fight COVID-19’, it is believed that the offer is opportunistic and misleading.

The factors that might have influenced the Maoists’ decision to initiate a truce call are: achieving a possible breather in hitherto intensified security offensive in their core areas, and the increased social pressure to pave the way for COVID-19 relief operations in remote villages, which otherwise might increase the miseries of the underprivileged masses.

The veracity of the truce call is also debatable as it has not come from the all-powerful Central Committee of the Communist Party of India (Maoist) or CPI (Maoist).

But challenges remain:

Moreover, the Maoists have not relented on their violent campaigns in the most affected states of Chhattisgarh, Jharkhand and Bihar.

The Maoist ambush of March 21-22, wherein 17 security personnel were killed and 15 others severely injured in Chhattisgarh’s Sukma District is a case in point.

The Maoists are, in fact, shoring up their strength and preparing for future operations.

They are reportedly holding village-level meetings and recruiting ground-level forces in the remote villages of Jagdalpur, Dantewada, and Sukma districts.

It is believed that the Maoists could also offer money and enlist the jobless migrant workers returning to their villages.

Recently, a large group of armed Maoists from Andhra Pradesh, Telangana, Maharashtra, Jharkhand, Odisha and West Bengal has reportedly joined their Bastar colleagues to up the ante against the security forces.

They are torching road construction vehicles, digging up the roads that lead to the strategically important police camps in remote villages and planting landmines on the deserted lanes to target the security patrols.

Besides, the Maoists’ recent forays in the areas of Todma and the Dantewada-Katekalyan main road are testimony of their increased activities during the lockdown.

Measures needed:

Good governance:
  - The presence of Naxals in the country also reveals the loopholes in the law and order of the country which has failed to curb the menace.
  - Central government needs to implement a coherent national strategy to end Naxalism.

Dialogue:
  - Dialogues between the Naxal leaders, and the government officials can be a way work out a solution.
  - The government should initiate sincere dialogue with Naxalites.

Generate more employment and increase wages:
  - Insecure livelihood and unemployment in the areas have left the people with no option but to join the Naxals.
  - If we are actually thinking of ways to end Naxalism, we’ll first have to provide the people of the area with proper employment opportunities with increased wages.
• Rehabilitation and resettlement:
  ▪ mining grounds, irrigation areas, industries, etc., in the area without any provision for the resettlement of the displaced people has only added to the woes of the poor
  ▪ There needs to be more emphasis on rehabilitation of these affected population

• Prevent environmental degradation:
  ▪ Environmental degradation in the form of destruction of land and water resources due to mining and industrial activates
  ▪ The locals are left with disrupted lives and adversely affecting tourism

• Stop the political marginalization of weaker sections
  ▪ Weaker sections of the society, the schedule castes and schedule tribes still face discrimination from the upper class.
  ▪ These downtrodden sections don’t enjoy equal participation in casting and contesting politically, making them soft targets of Naxals.

• Remove disparity:
  ▪ Economic disparity and the growing distance between rich and the poor is one of the main problems that has contributed to the growth of Naxalism
  ▪ This distance needs to be filled to an extent hastily to stop Naxalism

• Let ordinary citizens have access to basic resources
  ▪ One of the major reasons for unrest is the exploitation of forest and lands of the tribal people for industrial purposes.
  ▪ The loss of land and the lack of basic facilities like education, freedom, sanitation and food

• Take steps for welfare of the tribals:
  ▪ The socially backward tribals form the major support base for Naxalites because of inequality, illiteracy and lack of opportunities.
  ▪ It’s important to prevent these people from falling in the Naxal trap.

• Modernize law enforcement agencies:
  ▪ the major policing lies in the hands of the state governments
  ▪ At federal level, many agencies are under the command of Union Ministry of Home Affairs
  ▪ Central government must inroads into these disturbed states with their agencies well-equipped with modern artillery and assist the usually poorly-equipped agencies of the state.

Need of the Hour:
• Central and State governments, the administration and the security establishment need to recognise that the movement cannot be approached from a purely law and order point of view.
• The process of improving the conditions of the poor and the tribals clearly need to be speeded up if the movement is to be effectively checked.
• Winning the hearts and minds of the tribal population and other marginalised groups will lie at the core of the counter-insurgency strategy
• Development of road and rail infrastructure will not only enhance economic growth and development but will also help in countering Maoist propaganda
• The improved road connectivity will also have a multiplier effect on the effectiveness of the security forces in carrying out operations.
• Providing incentives and alternate life support system to those surrendered

Conclusion:

Through a holistic approach focusing on development and security related interventions, the LWE problem can be successfully tackled. Civil society and the media should build pressure on the Maoists to eschew violence, join the mainstream and recognise the fact that the socio-economic and political dynamics and aspirations of 21st Century India are far removed from the Maoist worldview. An ideology based on violence and annihilation is doomed to fail in a democracy which offers legitimate forums of grievance redressal.

Security challenges and their management in border areas - linkages of organized crime with terrorism.

Despite upsurge in exports and cut in imports of Defence equipment, India’s Defence sector remains uncompetitive globally. Examine.(250 words)

Reference: The Hindu

Key demand of the question:
According to latest estimates released by the Stockholm International Peace Research Institute (SIPRI), the Indian defence exports have increased and defence imports have decreased during the period between 2009-13 and 2014-18. Thus the question.

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

Structure of the answer:
Introduction:
Briefly put forth the background of the question.

Body:
To start with, discuss why India’s defence model faces challenges despite the positive trends generated by ‘Make in India’. Discuss the positives and negatives of Make in India drive. Explain the factors contributing to falling imports apart from the make in India concept; Indian defence acquisitions have also fallen due to the cancellation of big-ticket items. SMEs still face stunted growth because India’s defence industrial model is at odds with global trends in that it tends to create disincentives for the private sector. Suggest upon the current export trends. Thus, from a volume and value standpoint, Indian defence exports, while showing a promising upward trend has failed to meet desired success globally. To help ideas meet action, there is a need to create an environment for greater participation of private industry.

Conclusion:
Conclude that to ensure that ‘Make in India’ initiative reaches its full potential, focus should be laid on export promotion/facilitation and export regulation.

Introduction:
Indian defence sector has been largely dependent on foreign imports. However, this trend is not in the long term Security interest of the Nation. However, the trend has been changing in recent times. According to the latest estimates released by the Stockholm International Peace Research Institute (SIPRI) in the period between 2009-13 and 2014-18, Indian defence imports fell even as exports increased.

Body:

Reasons for India’s reduced imports:

- **Make in India initiative**
  - Defence Procurement Procedure, 2016 lays out measures necessary for building India’s defence Industry
  - A new category called ‘Buy Indian Indigenously Designed, Developed and Manufactured’ (IDDM) was created under DPP-2016 which was given highest preference in defence procurement.
  - For imported defence goods, its Components & service parts from Indian enterprises (private & public sector) have been prioritised by the government
  - Simplifying “Make” procedures especially for MSMEs to encourage indigenous defence production
  - Relaxed norms that makes private partners eligible for technology transfers so as to boost their capabilities.
  - In 2018-19, the three armed services sourced 54% of their defence equipment from Indian industry for their combined capital and revenue expenditures

- **Contribution by SMEs:**
  - Small and Medium Enterprises (SMEs) until 2016 accounted for 17.5% share of the Indian defence market.
  - According to government of India data for the financial year 2018-19, the three armed services for their combined capital and revenue expenditures sourced 54% of their defence equipment from Indian industry.

- **Cancellation of defence contracts:**
  - Government has cancelled the defence contracts which led to significant reduction of import bill
  - In 2015, government reduced the size of the original acquisition of 126 Rafale Medium Multi-Role Combat Aircraft (MMRCA) from Dassault to 36 aircraft, which is also responsible for significantly driving down the import bill.
  - India-Russia joint venture for the development of the advanced Su-57 stealth Fifth Generation Fighter Aircraft (FGFA). India cancelled involvement in 2018 due to rising dissatisfaction in delays with the project as well as the absence of capabilities that would befit a fifth generation fighter jet.

- **Public sector contribution:**
Among arms producers, India has four companies among the top 100 biggest arms producers of the world.

It is estimated, according to SIPRI, their combined sales were $7.5 billion in 2017, representing a 1% jump from 2016.

The largest Indian arms producers are the Indian Ordnance Factories and the Hindustan Aeronautics Limited (HAL), which are placed 37th and 38th, respectively, followed by Bharat Electronics Limited (BEL) and Bharat Dynamics Limited (BDL). All four of these companies are public sector enterprises and account for the bulk of the domestic armament demand.

- Delays in supplying equipment:
  - Delays in supplying of equipments by vendors also led to falling imports.
  - For instance, T-90 battle tanks & Su-30 combat aircraft from Russia; Submarines from France

Reasons for rise of defence exports

- In the last two fiscal years, 2017-18 and 2018-19, exports have witnessed a surge from ₹7,500 crore to ₹11,000 crore, representing a 40% increase in exports.
- Removal of export barrier: Government has removed several products that were earlier restricted from exports
- Government dispensed with the No Objection Certificate (NOC) under the DPP that restricted exports of aerospace products & several dual-use items

Way forward:

- To boost indigenization, DRDO needs to be given more autonomy like space and atomic energy departments
- With opening up of 100% FDI in defence sector, giving private players an opportunity would bring in the money as well as competition to the Defence PSUs.
- Setting up of the planned defence industrial corridors.
- Robust Defence Diplomacy, for which a cadre of defence diplomats should be created so that new co-ordination with world can bring new idea and innovations.
- Setting up of a Defence Export Organization to promote export of defence equipments.
- Instituting an Independent Audit addressing issues of inefficiency and accountability, this shall help in keeping the flow of ideas and innovation.
- Setting up an aerospace university, can help in bringing new ideas and innovations

Conclusion:

Thus, from a volume and value standpoint, Indian defence exports, while showing a promising upward trend has failed to meet desired success globally. To help ideas meet action, there is a need to create an environment for greater participation of private industry. To ensure that ‘Make in India’ initiative reaches its full potential, focus should be laid on export promotion/facilitation and export regulation.
“Biological weapons are gradually being recognized as one of the crucial future threats to international security”, do you agree? Comment. (250 words)

Reference: Financial Express

Introduction:

**Biological weapon**, also called **germ weapon**, any of a number of disease-producing agents—such as bacteria, viruses, rickettsiae, fungi, toxins, or other biological agents—that may be utilized as weapons against humans, animals, or plants. Biological weapons, like chemical weapons, radiological weapons, and nuclear weapons, are commonly referred to as weapons of mass destruction, although the term is not truly appropriate in the case of biological armaments. Lethal biological weapons may be capable of causing mass deaths, but they are incapable of mass destruction of infrastructure, buildings, or equipment.

Body:

The UN chief, in his message on the 45th anniversary of the Biological Weapons Convention’s entry into force, said that all countries should reaffirm their unequivocal rejection of the use of disease as a weapon.

**Challenges posed by bioweapons:**

- The technology associated with the manufacture of biological weapons is relatively inexpensive, and because it is similar to that used in vaccine production facilities, it is easy to obtain.
- The microbial agents needed for most biological weapons are widely available.
- It is difficult to gauge the extent of biological weapons development in other nations since production facilities require little space and are not easy to identify.
- For instance, the acquisition and dissemination of even the most highly restricted organism, Variola major, is not an implausible scenario.
- There is growing concern that biological weapon designs or materials from this program might find their way to other nations or terrorist groups.
- Finally, the series of revelations following the Gulf War regarding the true capacity and scope of Iraq's biological weapons program has been alarming.
- In addition to creating many tons of pathogens and toxins, including B. anthracis and C. botulinum toxin, Iraq also admitted that it had loaded bombs and missiles with biological agents

**Impact of Bioterrorism:**

- Bioweapons offer terrorist groups and “rogue states” like Pakistan that are waging an unconventional war against the Indian government for the last three decades an affordable way to counter India’s overwhelming military superiority.
- Genetic maps of deadly viruses, bacteria and other microorganisms are already broadly available in the public domain.
- In effect, biological warfare is using non-human life to disrupt — or end — human life. Because living organisms can be unpredictable and incredibly resilient, biological weapons are difficult to control, potentially devastating on a global scale, and prohibited globally under numerous treaties.
- The threat of bioterrorism is increasing as a result of the rise of technical capabilities, the rapid expansion of the global biotechnology industry, and the growth of loosely sophisticated networks of transnational terrorist groups that have expressed interest in bioterrorism.
Measures needed to control Bioweapons:

- Existing prevention strategies are insufficient to guarantee that biological weapons will not be used. Furthermore, it is clear that biological weapons are proliferating.

- **Awareness and education:**
  - ID professionals are called on every day to diagnose and treat patients with fever, pneumonia, rash, and flulike symptoms; therefore, it is the ID professional who would be among the clinicians most likely to recognize the diseases caused by biological weapons.
  - Professional educational and training curricula should be enhanced so that ID professionals are better capable of recognizing the diseases that would follow use of a biological weapon such as anthrax, plague, or smallpox.

- **Laboratory diagnosis:**
  - Should the recognition of an unusual disease or pattern of illnesses prompt consideration of possible biological weapon use, members of the ID community will be called on to advise upon the most rapid procedures for diagnostic confirmation of disease.
  - In anticipation of this, ID experts should become familiar with the processes by which either the hospital laboratory or the local or state health department, in consultation with the Centers for Disease Control and Prevention (CDC) as necessary, will perform diagnostic studies to implicate or exclude biological weapons use.

- **Systems for distributing therapeutics:**
  - Should a biological weapon use be confirmed, treatment and intervention strategies for the ill and for the exposed but not yet ill will be critical. Depending on the disease, antibiotics, and/or vaccines or other therapies, as well as quarantine, could be lifesaving.

- **Scientific research:**
  - The ID community already does research that seeks new strategies for diagnosis, prevention, or treatment for infectious disease.
  - Commensurate with this, the ID community might elect to encourage and reward basic science research efforts that seek to produce novel diagnostic technologies, preventive, or therapeutic interventions for the diseases caused by biological weapons.

**Way forward for India:**

The Indian government along with friendly nations need to pool their resources and make major investments in the research and development of state-of-the-art devices that are capable of instantaneously detecting lethal bacteria and viruses in the environment. Clinical labs capable of deploying cutting edge technologies need to be set up. Also, the production and stockpiling of new vaccines needs to be increased. A surveillance system should be set up nationwide that should be staffed with clinicians and veterinarians who are trained to identify a bioweapon attack immediately after such a weapon is unleashed. Advanced countries like the Netherlands and Israel have already initiated such steps. Consequently, a nationwide response plan against any bioweapon attack is in place.
Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

What do you understand by round tripping? Discuss the concerns associated and suggest ways to address them. (250 words)

Reference: The Hindu

Why this question:
In a major relief for New Delhi Television Limited (NDTV), the Supreme Court has quashed an income tax re-assessment notice issued by revenue authorities against the premier news broadcasting company. Thus the question.

Key demand of the question:
Explain the concept of round tripping and discuss the concerns associated and suggest ways to address them.

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

Structure of the answer:
Introduction:
Briefly define round tripping. Discuss the concerns associated and suggest ways to address them.

Body:
Round tripping refers to money that leaves the country through various channels and makes its way back into the country often as foreign investment. This mostly involves black money and is allegedly often used for stock price manipulation. Round tripping is often done through a series of transactions that don’t have any substantial commercial purposes, which makes it fall within the trappings of GAAR. List down the concerns associated with round tripping. Detail upon the efforts being taken the government in this direction.

Conclusion:
Conclude by suggesting measures to tackle them.

Introduction
Round tripping refers to money that leaves the country through various channels and makes its way back into the country often as foreign investment. This mostly involves black money and is allegedly often used for stock price manipulation. It is also a money laundering and tax evasion technique.

Round tripping is often done through a series of transactions that don’t have any substantial commercial purposes, which makes it fall within the trappings of GAAR.

Body
Round Tripping: Concerns

- Round-tripping is a method used to show an increase in volume in a thinly traded stock.
- It is also known as round-trip transactions or ‘Lazy Susans’ and is a characteristic of the New Economy companies.
- It is a market-manipulation practice used to misrepresent the number of transactions occurring on any given day. This leads to loss of tax-revenue to the governments.
- Companies used round-tripping to distort the market by establishing false revenue benchmarks, aiming to meet or beat the numbers.
- Round-trip trading artificially inflates volume and revenues, but in reality, it adds no profit.
- It is a form of barter that involves a company selling “an unused asset to another company, while at the same time agreeing to buy back the same or similar assets at about the same price.
- This process is sometimes used as a means of increasing the apparent amount of sales and revenue generated by the seller during a specific financial period.
- Round trip stock trading is one method that companies use to deceptively increase income. It is also a method used to show an increase in volume in a thinly traded stock. Most of the time, round trips occur when the person is a day trader.
- **SEBI** had recently issued a notice against listed firms including United Spirits, GMR, Unitech and Sterlite for investing in group companies through a foreign account held with UBS. The companies are alleged to have indulged in stock price manipulation and insider trading through this route.
- **Stakeholder interest**: If a company is under the regulator’s radar for round-tripping allegations, it implies the possibility of poor corporate governance. Putting money into such stocks may contain high risk of unravelling and eventual collapse.

### Addressing problems of Round Tripping

- The government amended the **tax treaty with Mauritius in 2016**, removing the tax arbitrage on capital gains. Under **POEM (place of effective management) rules**, overseas subsidiaries are treated as domestic entities for tax purposes if they are controlled and managed from India.
- As per RBI notification, Indian company can’t acquire stakes in an offshore firm which has already invested in an Indian entity “under the automatic route”.
- The data under **Foreign Exchange Management Act of 1999 (FEMA)** indicates non-reporting or delayed reporting by many, including large companies, for both FDI and OFDI. It must be amended for monitoring and reporting by the companies.
- India must sign **information disclosure agreements with tax havens** such as Mauritius, Cyprus and such other countries to monitor round-tripping of funds.
- **Information exchange** will help with monitoring the investments especially post the extension of the automatic route to OFDI (Outward foreign direct investment).
- **More powers to RBI and SEBI regulators** for probing cases of round-tripping.
- Agreement on **stringent KYC norms** by the countries involved can help in tracking the route of investments and impose taxes accordingly.

It must also be ensured that investigation must not lead to harassment despite following the law of the land. Proper guidelines and clear laws can ensure Ease of Doing Business in India as well as attract investments from foreign companies and investors.

### Conclusion

Round Tripping makes the government lose large amount of revenue. Round tripping is not regarded to serve any purpose apart from aiding in the evasion of tax in India. Round tripping is not prohibited under Indian laws as of now. It is, however, argued that such a practice severely impacts revenues from capital gains tax. India must go for taking the course of law, to ensure there is no evasion of tax.

Deliberate upon the case of ‘infodemic’ of misinformation and cybercrime amidst the COVID-19 pandemic.(250 words)

**Reference**: *Indian Express*

**Why this question:**
The author highlights the fact that it is time for the digital leaders to flatten the curve of the infodemic. Thus the question.

**Key demand of the question:**
Explain what is an infodemic and how does it lead to misinformation and cybercrimes; illustrate using the present case of COVID-19.

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

**Structure of the answer:**
**Introduction:**
Define what constitutes an ‘Infodemic’.

**Body:**
From selling fake coronavirus cures online to a cyber-attack on hospitals’ critical information systems, criminals are exploiting the COVID-19 crisis. Infodemics are an excessive amount of information about a problem, which makes it difficult to identify a solution. They can spread misinformation, disinformation and rumors during a health emergency. Infodemics can hamper an effective public health response and create confusion and distrust among people. Explain then the importance of awareness, role of media, cyber security etc.

**Conclusion:**
Conclude that we are fighting an ‘infodemic’. Our common enemy is a virus, but our enemy is also a growing surge of misinformation. So to overcome this virus, we need to urgently promote facts and science. We also need to promote hope and solidarity over despair and division.

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**Conclusion:**
Conclude that we are fighting an ‘infodemic’. Our common enemy is a virus, but our enemy is also a growing surge of misinformation. So to overcome this virus, we need to urgently promote facts and science. We also need to promote hope and solidarity over despair and division.
Infodemic refers to an excessive amount of information concerning a problem such that the solution is made more difficult. Some experts believe that an infodemic, or an excessive amount of both correct and incorrect information, is spreading around the world. The worst-case scenario is that inaccurate information is potentially spreading faster than the virus itself, causing people to make poorly informed decisions. The WHO has declared misinformation and fear as some of the biggest challenges they face with the new coronavirus.

Body:

Challenges posed by Infodemic:

- WHO is leading the effort to slow the spread of the 2019 coronavirus disease (COVID-19) outbreak.
- But a global epidemic of misinformation—spreading rapidly through social media platforms and other outlets—poses a serious problem for public health.
- Every outbreak will be accompanied by a kind of tsunami of information, but also within this information you always have misinformation, rumours etc.
- But the difference now with social media is that this phenomenon is amplified, it goes faster and further, like the viruses that travel with people and go faster and further.
- In a country such as India, where 400 million turn to a single messaging app for sharing news and stories about any and everything, more than 240 million are on Facebook and, often, using it as the predominant source of news, a critical mass of misinformation leads to misdirected behaviours.
- In times of crises, cybersecurity is critically important, he stressed, adding that a huge number of people under lockdown or movement restrictions are now working and studying remotely, making them susceptible to cybercrime.
- Some instances are hard to ignore some dominant narratives: Bioweapons origins of the coronavirus (false); Bill Gates was behind it (false); UNICEF’s recommendations for warding off infection (unauthorised).

Measures taken up:

- Immediately after COVID-19 was declared a Public Health Emergency of International Concern, WHO’s risk communication team launched a new information platform called WHO Information Network for Epidemics (EPI-WIN), with the aim of using a series of amplifiers to share tailored information with specific target groups.
- WHO is also working closely with UNICEF and other international agencies that have extensive experience in risk communications, such as the International Federation of Red Cross and Red Crescent Societies.
- Social-media companies must sort, rank, and prioritize true and reliable information now more than ever.
- Web companies such as Pinterest have already introduced headers and links on their homepages with information about Covid-19, for example.

Way forward:

- Maintaining a system of fact-checking and tough standards regarding COVID-19 and weeding out messages, hashtags and transmitters that fail to meet them.
- The traditional media has a key role in providing evidence-based information to the general public, which will then hopefully be picked up on social media.
For both social and conventional media, it is important that the public health community help the media to "better understand what they should be looking for, because the media sometimes gets ahead of the evidence".

We, as users, have a responsibility to find better ways to seek advice or substitutes for that dopamine rush of sharing a message instantly liked, commented on and shared by others.

As a society, much like our global response to the coronavirus, we cannot rely on bottom-up decisions.

We need decisive leadership from the top. In the digital nations we inhabit, Facebook, Facebook-owned WhatsApp, YouTube, Twitter, TikTok, it is imperative that the leaders of these nations act—and act now.

It is about time, Mark Zuckerberg (Facebook/WhatsApp), Sundar Pichai (Google/YouTube), Jack Dorsey (Twitter) and Zhang Yiming (TikTok) made some tough calls, much like what their own political leaders have done.

It would be more useful if instead of a coy “Forwarded” note, WhatsApp had a note that said, “For Reliable Medical Advice, Check Out the WHO” or some other trustworthy medical authority

Conclusion:

It is time to step up and help us all practise social media distancing by enforcing stricter standards. Beyond India, the entire developing world relies on your platforms for news about the pandemic. If there ever was a time to demonstrate vision and leadership, this is the time for the digital leaders to flatten the curve of the infodemic before it flattens the most vulnerable populations on the planet.

Who is to blame for the menace of rumors? Is it a policy issue or is it due to the lackadaisical approach by the social media companies or is it a combination of both?

Discuss. (250 words)

Reference: The Hindu

Why this question:
The article discusses the threat of fake news to the efforts against COVID-19 and the necessary measures to tackle it. Thus the question.

Key demand of the question:
Explain the menace of rumors, discuss the reasons causing it and suggest measures to address them.

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

Structure of the answer:
Introduction:
Briefly discuss the context – Misinformation linked to supposed cures for COVID-19 and misleading claims have proliferated on social media networks.

Body:
To start with, explain the dangers posed by inaccurate information. Discuss the reasons that often lead to creation of such rumors – misinformation, explain whether it’s a policy issue or is it due to the lackadaisical approach by the social media companies or is it a combination of both. Take a balanced stand and give your opinion with suitable justifications.

Conclusion:
Conclude with way forward.

Introduction:
A rumour is an untested piece of information, opinion, report or story. Therefore, its veracity is doubtful. This unverified, ambiguous status is at the heart of a rumour, making it largely what it is. The moment an account is publicly demonstrated and accepted to be true or false, it ceases to be a rumour. In a sense then, a rumour’s truth or falsity is irrelevant to its efficacy or impact.

Periods of social stress or natural disasters are fertile ground for rumours, which not only spread like wild fire but have grave consequences — scapegoating, social boycott, violence and arson, even lynching and murder.

Body:

Previous instances of rumour mongering during crisis:

- 1984 Pogrom against Sikhs
- For Centuries rumours were created against Jews, who were falsely accused of poisoning wells during wars, epidemics or civil unrest.
- In late 18th century Paris was replete with the rumour that the rich had distributed lethal, contaminated flour to the poor.
- It is no surprise then that during the current COVID-19 pandemic, the rumour mill has Muslims deliberately throwing infected Rs. 2,000 notes on the road or Muslim street vendors spitting on vegetables and fruits.

Factors that lead to menace of rumours:

- **Situations of information void or information overload:** Unable to satisfactorily make sense of their world in these uncertain contexts, humans become cognitively unstable and anxious. To meet their cognitive needs, they are forced to rely on bits and pieces of available knowledge, on a patchwork of half-truths, a rag bag of allusions that together provide a fragile, uncorroborated framework for interpreting events.

- **Emotional anxiety:** when added to this cognitive framework, and one has a ready-made arena for rumours to flourish. An overheated mind burns all evidence that comes its way and surrenders to rumours, often in the service of emotional needs. During demonetisation, amidst despair and anxiety at losing their own money, the poor still found emotional satisfaction in the rumour that crores of rupees secretly stored in cash by the rich were rendered worthless.

- **Acute Crisis Situation:** In times of acute crisis, people lean on knee jerk speculation and prejudice. A group consisting of ‘outsiders’, already distrusted and disliked, becomes an easy target, ready to be blamed for the current mess.

- **Polarized Societies:** In polarized societies, fear and vulnerability make rumour mongering easy.
  - The desire to conform gets the better of a questioning mind. Rather than face sanction and ostracization for sticking out, people find it safer to emulate members of their group.
  - Ironically, a belief gets entrenched after like-minded people discuss it among themselves. Discussion has a cascading effect; the more one talks about it, the more the biased rumour grows.
  - A denial by a mistrusted outsider, no matter how great her expertise, only ends up solidifying rumours. Group dynamics in polarised societies works with a logic all of its own; every person is necessarily partisan. A neutral ground for impartial voices is simply unimaginable.

Way forward:

- To transform the conditions that are conducive to rumours. This can reduce their efficacy.
Depolarizing society, loosening the grip of prejudice and calmly addressing the collective anxieties and obsessions of a group are deterrents, but, alas, only in the long run.

Regulatory laws to check rumours are imperative in the short run.

The community leaders and democratically elected office holders can play an important role. They should vehemently deny injurious rumours and reduce its propagation and spread.

Social media companies should support the government by tracking such rumours and quickly removing it from their platforms.

Social media often acts as a petri dish for rumors and delusions that can go viral and infect the minds of millions, examine and suggest what needs to be done to overcome the challenges of social media.(250 words)

Reference: *India Today*, *Economic Times*

**Why this question:**
Few videos, purportedly of the gruesome incident of the Palghar mob lynching have gone viral on social media. The disturbing visuals have resulted in nationwide outrage with hash tags like Palghar and lynching trending on Twitter in India.

**Key demand of the question:**
One must bring out the evil side of the social media – explain in what way it often acts as a petri dish for rumors and delusions that can go viral and infect the minds of millions. Suggest measures to address the issue involved.

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

**Structure of the answer:**

**Introduction:**
Briefly explain the context, discuss the increasing use of social media with respect to rumors and delusions.

**Body:**
To start with, explain what constitutes social media. Discuss the role played by it; positives and negatives, explain how it is different from the print media and the regulated media. Discuss that Rumours tend to rise in times of uncertainty. Unlike more harmless rumors, conspiracy theories centre on a rejection of mainstream ideas and common sense in favour of a more sinister and secret narrative. Discuss some recent examples justifying the statement in question. Suggest measures to address the problem.

**Conclusion:**
Conclude with way ahead.

**Introduction**
The world has been battling a deluge of misinformation and influence operations for a long time now. The advent of internet, social media platforms and real time messengers has given a free run to criminals, miscreants, nation states and other motivated actors. In fact, society, today is experiencing something called an ‘information disorder’ where it has become extremely difficult to disambiguate truth from falsehood.

**Body**

**Role of social media**
There are more than 500 million internet users in India and today social media is not only a subset of internet rather the internet itself.
Insta Secure Synopsis

Positives

- Social media has the potential to aid public servants in their work – not only for promotional activities, but also as a "grievance redressal" mechanism. Eg: Many outreach programs were possible during covid-19 pandemic after users complained on social media.

- Outreach: Given its characteristics to potentially give “voice to all”, immediate outreach and 24*7 engagement, Social Media offers a unique opportunity to governments (civil servants) to engage with their stakeholders especially citizens in real time to make policy making citizen centric.
  - Eg: PM Modi disseminating info on social distancing and government measures through Twitter.

- Real Time engagement: Social Media releases the shackles of time and place for engagement. They can connect policy makers to stakeholders in real time.

- Managing Perceptions: One of the big challenges for government is to avoid propagation of unverified facts and frivolous misleading rumors with respect to government policies. Leveraging these platforms can help to counter such perceptions and present the facts to enable informed opinion making. Eg: Asking citizens to read information from trusted websites, downloading government apps etc.

Misinformation through social media

- Creating fear and Panic: A small indiscretion of forwarding an unverified message can lead to loss of life or cause a serious disturbance of public order.
  - With governmental and public resources pushed to limits, it is incumbent upon the general public to perform diligence in their interactions with reference to the Pandemic.
  - On April 16, a group of villagers in Palghar district of Maharashtra dragged out three men out of their car and beat them to death on suspicion that they were thieves. The attack on the three took place amid a nationwide lockdown.

- Communalizing the pandemic: The Tablighi incident during the coronavirus pandemic added fuel to already tense environment in Delhi and elsewhere. News regarding the same circulated widely on social media, unabated, further giving the pandemic a communal color.

- False remedies such as distributing unchecked concoctions, medicines and herbs at egregious prices to unsuspicious innocent people online. It may lead to worsening the underlying conditions in people and endanger their lives.

- Accountability issues: Challenges with respect to fixing the liability of intermediaries. It is also difficult to trace the origin of fake news circulation.

- Jurisdictional challenges: Complications in jurisdiction as Facebook, twitter etc. operate as subsidiaries of foreign internet companies with their servers located outside India.

- Anonymity: Police officers have expressed concern over multiplicity of fake profiles. There is no accountability of a crime.

- Encrypted Message: Use of Whatsapp to send and receive messages, concerns the government because the communications sent via such devices and applications are encrypted.
Measures to be taken

- **Strict Law enforcement: Section 505(1) of Indian Penal Code, 1860:** The punishment for making, publishing or circulating any statement, rumour or report which may cause fear or alarm to the public, or to any section of the public.
  - **Section 66D of Information Technology Act:** Whoever, by means for any communication device or computer resource cheats by personating. Punishment includes imprisonment of for a term which may extend to three years and shall also be liable to fine which may extend to one lakh rupees.
  - **Section 54 of the Disaster Management Act, 2005:** Whoever makes or circulates a false alarm or warning as to disaster or its severity or magnitude, leading to panic. Punishment is Imprisonment which may extend to one year or with fine.

- Ascertain the source and origin of the message. If one is not sure of the authenticity and correctness of the message or its content, one may make attempts to be sure of the veracity of the matter before forwarding it to others.

- In case of any claims made in the message one has received, conduct secondary checks on google or other sites before disseminating it.

- If the message incites strong emotions, it is likely to be sent for such purposes. Any shocking or outrageous claim made needs to be verified before it is sent to others who may believe it completely.

- In case of the message containing videos or pictures, there is a possibility of them being edited or used out of context to mislead unsuspecting recipients. A simple reverse image search on google can reveal the original source and context of the picture. Any harm resulting from such forwarding can make the person doing so liable to legal consequences.

- Use factchecking services, there are many reputed factchecking sites, which help people to verify claims made on social media or messages which have gone viral. Eg: Whatsapp checkpoint Tipline, The logical Indian.

- Sometimes there would be obvious spelling, punctuation mistakes or other grammatical errors which can point out the inauthenticity of the message. One needs to develop a healthy scepticism towards content on social media.

- The recent initiative of WhatsApp’s launching of a ‘Coronavirus Information Hub’ in partnership with International Fact-Checking Network (IFCN), World Health Organization (WHO), United Nations Development Programme (UNDP) and United Nations Children’s Fund (UNICEF) is an appreciable move.

**Conclusion**

The state and its different enforcement apparatus have to remain ever vigilant in the online and virtual worlds to protect individuals and society from the lurking dangers of an Infodemic. This entails timely detection of content before it goes viral and causes widespread damage, taking it down with the help of social media platforms and intermediaries and tracing the sources of such mischief. Media outlets and the press also have an enhanced responsibility to make people aware and increase literacy about the menace of fake news and misinformation.
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