

G15-3.

# NEXT IAS

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(To be filled by candidate)

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Registration Number :	Date of Examination : 16.08.2023		
Exam Centre :	Old Rajinder Nagar <input type="checkbox"/>	Bhopal <input type="checkbox"/>	Online <input checked="" type="checkbox"/>

Test - 3

Code : TC073

## MTS IGP Batch 2023

### GENERAL INSTRUCTIONS

This Question-cum Answer (QCA) Booklet contains 56 pages. Immediately on receipt of the booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.

Candidates must read the instructions on this page and the following pages carefully before attempting the paper.

Candidates should attempt the questions strictly in accordance with the instructions specified in the question paper and in the space prescribed under each question in the booklet. Any answer written outside the space allotted may not be given credit.

Question paper will be provided separately and can be taken by the candidates after conclusion of the exam.

SUBJECT/PAPER  
GENERAL STUDIES

Invigilator's Sign. : .....



(For filling by Examiners only)

Evaluator Code :

Q.No	PgNo.	Maximum Marks	Marks	Total
1	1			
2	3			
3	5			
4	7			
5	9			
6	11			
7	13			
8	15			
9	17			
10	19			
11	21			
12	24			
13	27			
14	30			
15	33			
16	36			
17	39			
18	42			
19	45			
20	48			
Grand Total				

Signature

MACRO COMMENTS



## IMPORTANT INSTRUCTIONS

**CANDIDATES SHOULD READ THE UNDERMENTIONED INSTRUCTIONS CAREFULLY. VIOLATION OF ANY OF THE INSTRUCTIONS MAY LEAD TO PENALTY.**

### DONT'S

1. Do not write your name or registration no. anywhere inside this Question-cum-Answer Booklet.
2. Do not write anything other than the actual answers to the questions anywhere inside your QCA Booklet.
3. Do not tear off any leaves from your QCA Booklet, if you find any page missing do not fail to notify the supervisor/invigilator.
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### DO'S

1. Read the Instructions on the cover page and strictly follow them.
2. Write your registration number and other particulars, in the space provided on the cover of QCA Booklet.
3. Write legibly and neatly. Do not write in bad/illegible handwritings.
4. For rough notes or calculation, the last two blank pages of this booklet should be used. The rough notes should be crossed through afterwards.
5. If you wish to cancel any work, draw your pen through it or write "Cancelled" across it, otherwise it may be evaluated.
6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

Q.1 अप्रत्याशित कर (विंडफॉल टैक्स) से आप क्या समझते हैं? क्या आपको लगता है कि अप्रत्याशित करों से संपदा का प्रभावी ढंग से पुनर्वितरण हो सकता है और अधिक आर्थिक समानता को बढ़ावा मिल सकता है?

(150 शब्दों में उत्तर दीजिए) 10 अंक

What do you understand by Windfall tax? Do you think that windfall taxes can effectively redistribute wealth and promote greater economic equality? (Answer in 150 words) 10 Marks

Windfall tax refers to tax on windfall profits i.e. unexpected profits generated due to capital gains <sup>arising</sup> due to external factors like war, pandemic, additional infrastructure.

Eg:- i) Property prices of an area goes up if metro passes through that area.

ii) Oil companies made windfall profits due to Russia-Ukraine war.

Windfall taxes can lead to effective redistribution of wealth and promote greater economic equality.

ARGUMENTS IN FAVOUR:-

- Windfall tax is levied because the Company or individual made

windfall profits, not because he did any action or effort to make profits, but because he benefited from govt. investment (like metro) or because he benefited due to war.

→ Thus, windfall taxes can increase government revenue and enhance its capacity of redistribution of wealth.

### ARGUMENTS AGAINST :-

- Increase in govt. revenue may not lead to increase in social spending.
- ~~It is~~ Excessive taxation can make a country unfavourable for doing business.

Thus, the government must levy windfall taxes but then ensure that it is redistributed for greater equality in society.

- Q.2 नई मौद्रिक नीति समिति (एमपीसी) व्यवस्था के अंतर्गत मुद्रास्फीति लक्ष्यीकरण को क्रियान्वित करने की कथित सफलताओं और चुनौतियों पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss the perceived successes and challenges of implementing inflation targeting under the new Monetary Policy Committee (MPC) regime. (Answer in 150 words) 10 Marks

Inflation targeting refers to the regime in which RBI targets an inflation rate (now 4%) and accordingly, alters the interest rate to achieve the target.

### SUCCESSES OF INFLATION TARGETING

- Credibility of RBI has enhanced in the market
- Inflationary expectations have got anchored
- RBI has been successful in controlling demand-side inflation.

### CHALLENGES OF INFLATION TARGETING:-

- Growth suffers
- supply-side inflation cannot be ~~the~~ controlled through inflation-targeting



- Due to Russia-Ukraine war and disruption of supply chains, the inflation rate breached its maximum limit of 6%.
- Fed tightening has further contributed to inflation due to depreciation of rupee and costly imports.

Thus, the achievement of inflation targeting regime has been mixed. However, it has provided the much needed price stability without compromising with the growth.

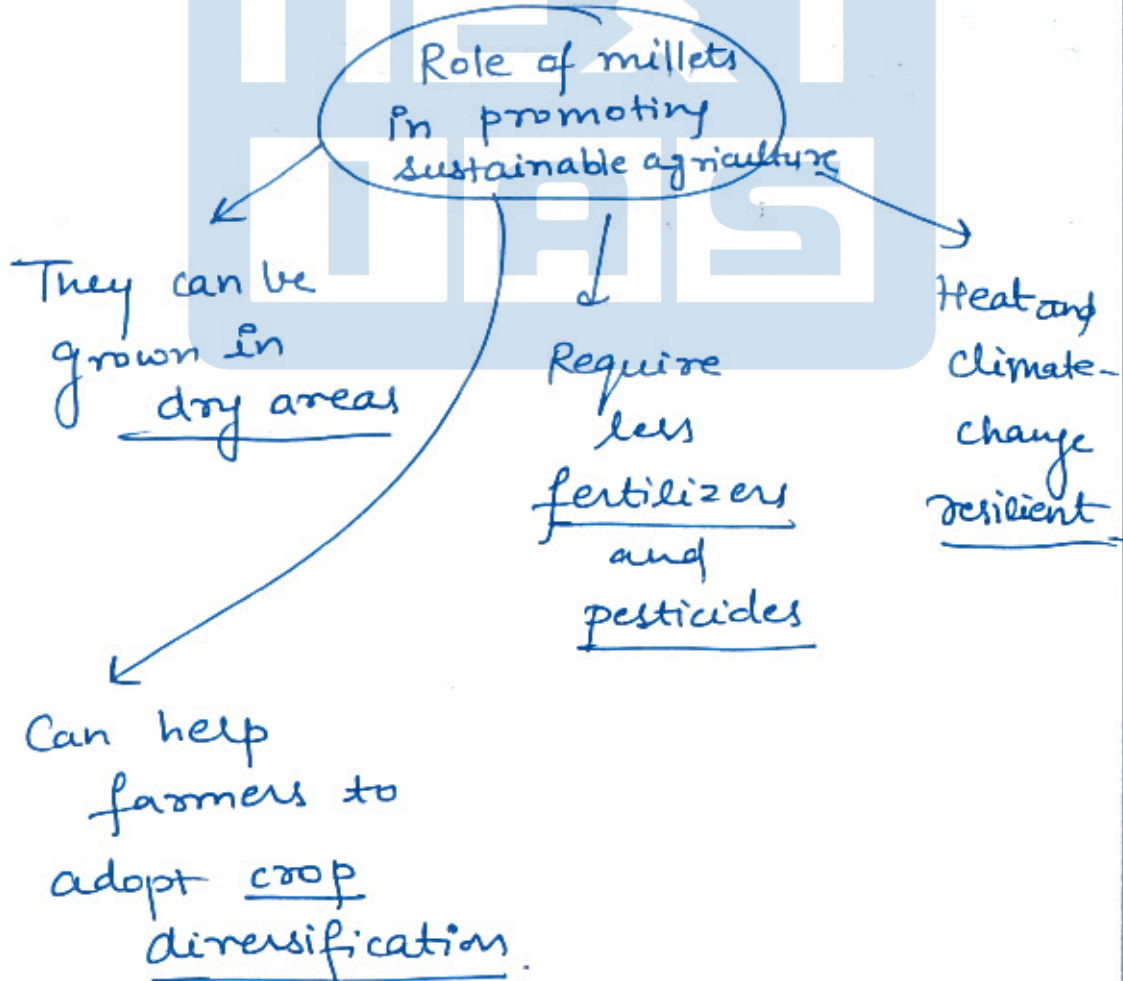
Q.3

भारत में सतत कृषि को बढ़ावा देने और खाद्य सुरक्षा में सुधार के लिए मोटे अनाज उत्पादन की क्षमता का आकलन कीजिए।  
(150 शब्दों में उत्तर दीजिए) 10 अंक

Assess the potential of millet production in promoting sustainable agriculture and improving food security in India.  
(Answer in 150 words) 10 Marks

Millets are the coarse cereals like jowar, ragi, bajra that are being promoted all over the world as 2023 is the International Year of millets.

Millets ~~are~~ require less water: thus, they are less dependent on monsoon and irrigation



## ROLE OF MILLETS IN IMPROVING FOOD SECURITY:

- They are climate-change resilient and hence their production won't suffer due to global warming, unlike other crops.
  - They are fibrous and more nutritious.
  - will help to reduce stunting, wasting and undernutrition.
  - They are gluten-free, hence good for diabetes and hypertension patients.
- Thus, millets are super-foods which are both sustainable and nutritious.

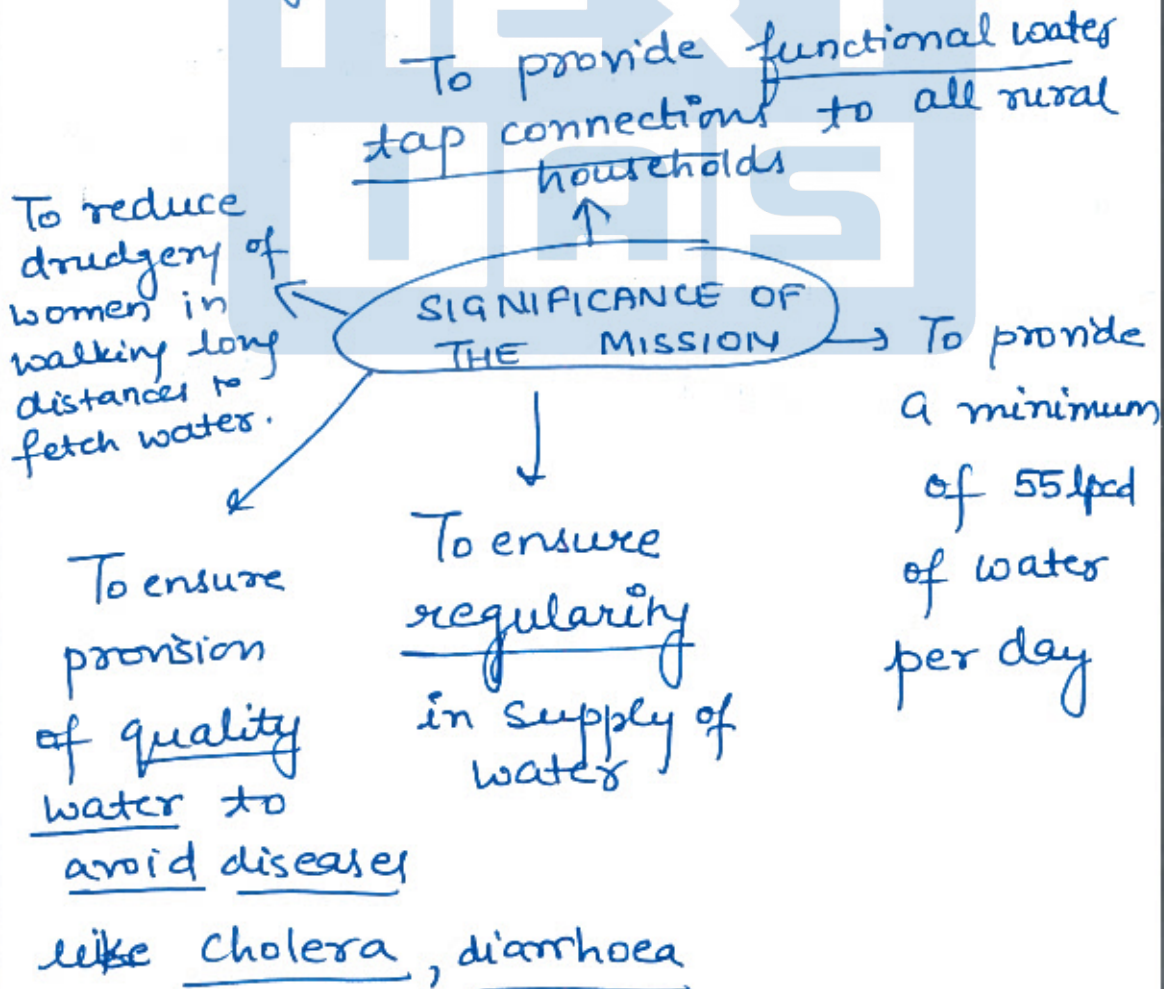
Q.4

जल जीवन मिशन में पेयजल की उपलब्धता और पेयजल तक पहुँच में क्षेत्रीय विषमता को समाप्त करने का सामर्थ्य है। मिशन के महत्त्व पर प्रकाश डालते हुए, वांछित उद्देश्यों की प्राप्ति में अंतर्निहित बाधाओं पर चर्चा कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Jal Jeevan Mission has the potential to end the regional disparity in the availability and accessibility of drinking water. Highlighting the significance of the mission, discuss the underlying impediments in achieving the desired objectives. (Answer in 150 words) 10 Marks

Jal Jeevan Mission is a huge scheme of Ministry of Jal Shakti, with a budget of ₹65,000 which aims to provide ~~water~~ drinking water to 19 crore rural households, schools and anganwadis.



### IMPEDIMENTS :

- Contaminated water source like river or groundwater can lead to contamination of drinking water
- Leakage in pipes cannot be detected
- Water meters (IoT based) not attached to monitor the supply and consumption of water by household.
- Misutilization of funds by states
- Lack of O&M of taps
- Water tariffs are still not being collected by local bodies.

### WAY FORWARD :-

- Community participation needed to test quality of water
- Regular O&M of taps must be done.

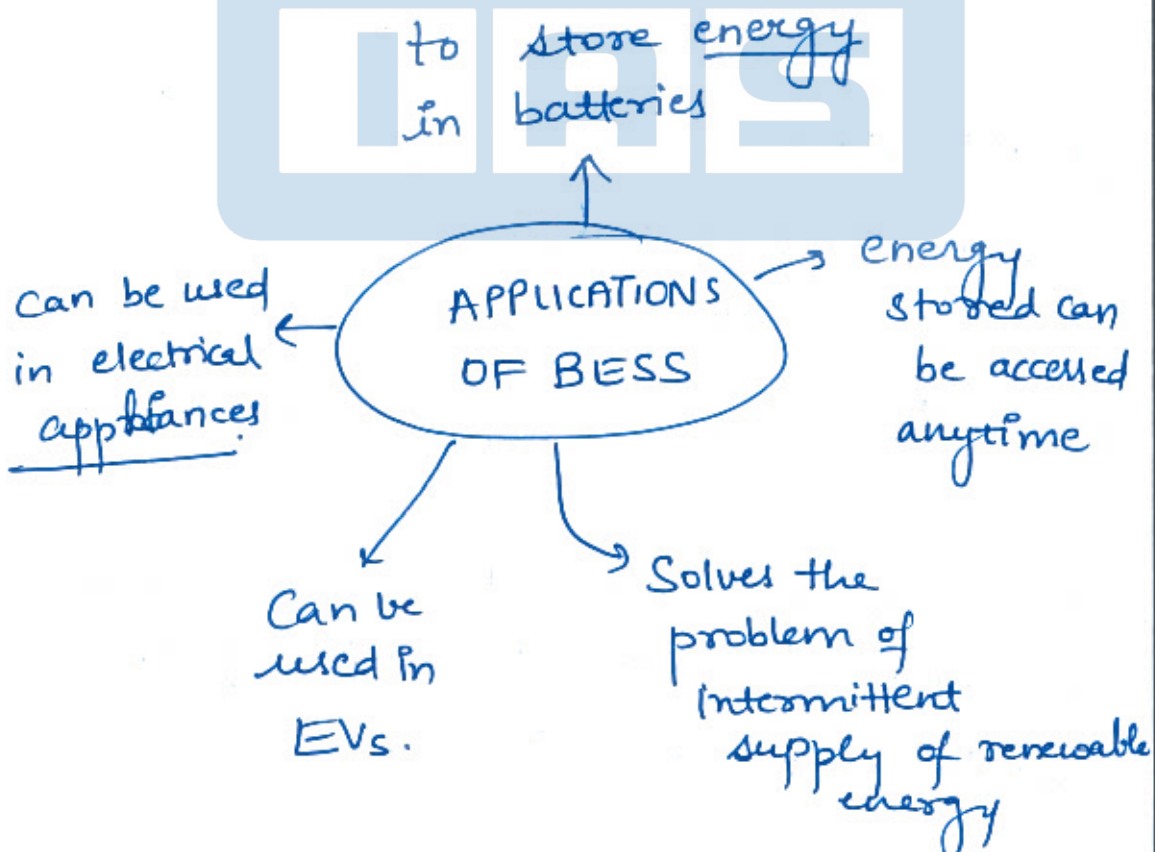
Thus, JIM has reduced regional disparities and enhanced access to drinking water, fulfilling the vision of SDG 6.

Q.5

बैटरी ऊर्जा भंडारण प्रणाली (बीईएसएस) से आप क्या समझते हैं? इसके अनुप्रयोगों पर चर्चा कीजिए और यह भारत के ऊर्जा कार्यक्रम में किस प्रकार क्रांतिकारी बदलाव ला सकता है। (150 शब्दों में उत्तर दीजिए) 10 अंक

What do you understand by Battery Energy Storage Systems (BESS)? Discuss its applications and how it can revolutionize the energy program of India. (Answer in 150 words) 10 Marks

To achieve Net Zero Status in carbon emissions by 2070, India is adopting the use of renewable energy like solar, wind and hydro ~~etc~~ energy. This energy must be stored in the batteries. To ensure this, BESS has been launched.



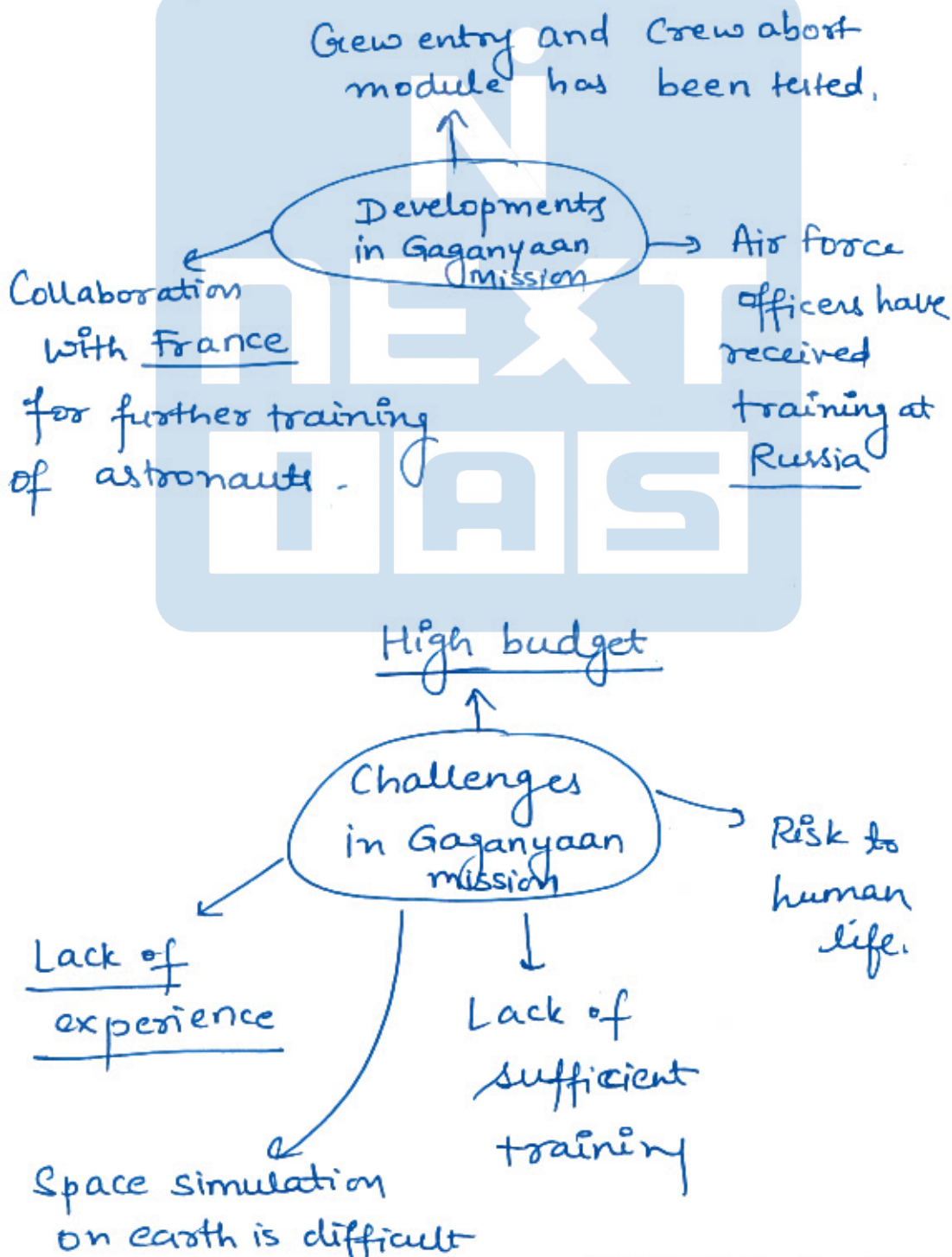
BESS will revolutionise energy program of India by taking it a step closer towards renewables and enabling it to decarbonise its systems to achieve net zero by 2070.



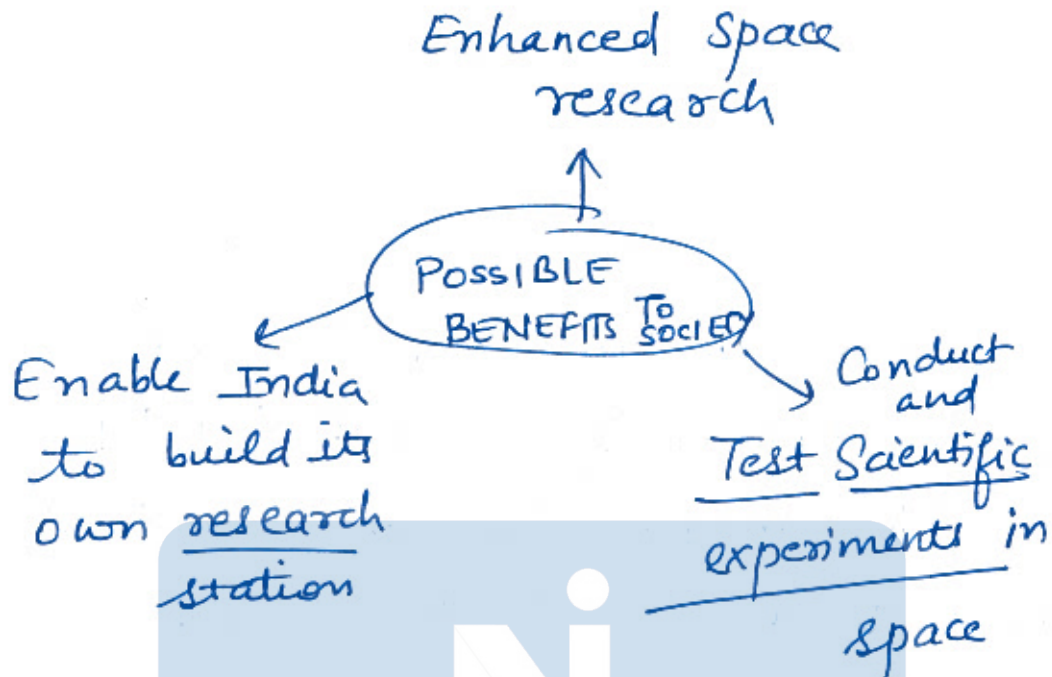
Q.6 इसरो के गगनयान मिशन में हुए विकास और उपस्थित चुनौतियों पर संक्षिप्त चर्चा कीजिए। समाज के लिए मिशन के संभावित लाभ क्या हैं? (150 शब्दों में उत्तर दीजिए) 10 अंक

Discuss in brief developments and challenges in the Gaganyaan mission of ISRO. What are the possible benefits of the mission for the society? (Answer in 150 words) 10 Marks

The Gaganyaan mission of ISRO aims to send a manned space satellite to the space.







Thus, Gaganyaan mission has a huge potential of benefitting society hence it must be pursued with full rigour.

Q.7

"जलवायु परिवर्तन और प्रदूषण से निपटने की हमारी खोज में हरित हाइड्रोजन एक सरल और जादुई समाधान हो सकता है"। भारत के राष्ट्रीय हरित हाइड्रोजन मिशन के आलोक में कथन का आलोचनात्मक विश्लेषण कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

"Green hydrogen can be the silver bullet in our quest to tackle climate change and pollution". Critically analyze the statement in light of India's National Green Hydrogen mission.

(Answer in 150 words) 10 Marks

Green hydrogen is produced by the electrolysis of water using renewable energy. It can be a silver bullet to tackle climate change.

ARGUMENTS IN FAVOUR :-

- ~~So~~ National Green Hydrogen Mission promotes the use of green hydrogen in vehicles, industries.
- Chemicals and fertilizers produced using green hydrogen will cause less pollution.

ARGUMENTS AGAINST :-

- Renewable energy production requires solar chips which requires mining of minerals like lithium, cobalt,

- Mining is itself a process that produces a lot of carbon emissions.
- Hydrogen is a highly ~~is~~ inflammable fuel, thus it can pose safety risks.

Thus, hydrogen has the potential to tackle climate change but safety concerns must also be addressed.

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Q.8

हाल ही में जोशीमठ, उत्तराखंड में आई आपदा के आलोक में, हिमालय क्षेत्र में आपदा प्रबंधन और पर्यावरण संरक्षण के लिए मुख्य सबक क्या हैं? (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the key lessons for disaster management and environmental conservation in the Himalayan region, in light of the recent disaster in Joshimath, Uttarakhand? (Answer in 150 words) 10 Marks

The recent disaster in Joshimath is a reminder of the fact that nature has limited carrying capacity, which must not be breached.

→ The warning for Joshimath had already been conveyed by M. C. Mishra Committee report and Dr. Ravi Chopra Committee's recommendations.

### KEY LESSONS FROM JOSHIMATH:-

#### • FOR DISASTER MANAGEMENT

- Rescue of people whose homes have developed cracks
- Relocation of people to new area
- Rehabilitation of people
- Compensation to people
- Reconstructing of livelihoods
- Disaster mitigation by draining excess water from mountain slopes.

## LESSONS FOR ENVIRONMENT CONSERVATION

- Construction must be avoided on surface that is resting on loose rocks and debris of landslides
- Building Codes to be adhered
- Large Hydropower Electric Projects be avoided
- Blasting of rocks be avoided
- More afforestation be done.

Thus, we must learn from Toshimath disaster and avoid similar occurrences in future.

Q.9

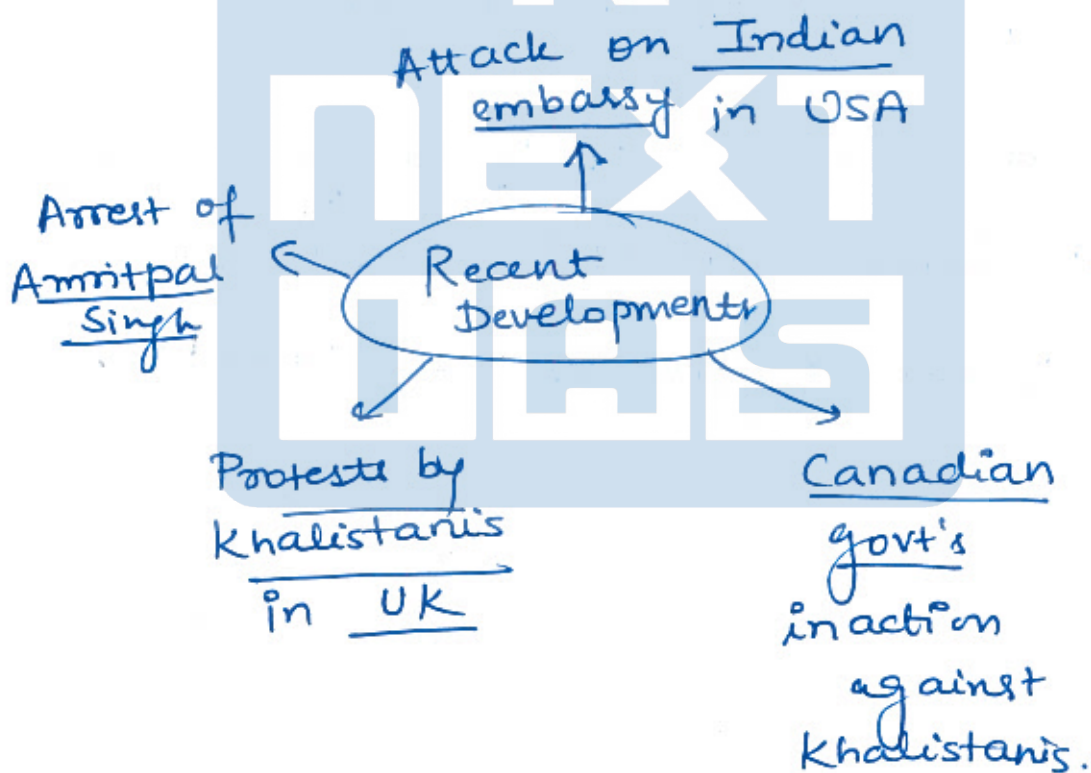
“पंजाब में हालिया कट्टरपंथी रुझानों से पता चलता है कि खालिस्तान का मुद्दा अभी भी उबल रहा है।” हालिया घटनाक्रम के संबंध में कथन पर चर्चा कीजिए और इससे निपटने के उपाय सुझाएँ।

(150 शब्दों में उत्तर दीजिए) 10 अंक

“The recent radical trends in Punjab show that the Khalistan issue is still simmering.” Discuss the statement with respect to recent developments and suggest measures to handle it.

(Answer in 150 words) 10 Marks

Khalistan is a separatist movement in Punjab which demands secession of Punjab from India to create a separate Khalistan.



Thus, Khalistanis are strengthening their network abroad to voice their demand for a Khalistan.

## MEASURES TO HANDLE IT :

- Diplomacy :- Indian diplomats to engage with diplomats of UK, US, Canada to ask them to treat Khalistanis as terrorists and threat to India's sovereignty.
- Police agencies to arrest Khalistanis
- Radicalization of youth on social media to be stopped.

Thus, the demand for Khalistan needs to be nipped in the bud for a united India.

Q.10 ड्रोन संचालन में आसानी और साथ ही इसके संचालक की अनामिता, भारत की सीमा सुरक्षा की चुनौतियों में वृद्धि करती है। विस्तारपूर्वक वर्णन कीजिए और सीमावर्ती क्षेत्रों में ड्रोन समस्या से निपटने के लिए सुझाव दीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The anonymity and ease of drone operation contribute to the challenges of India's border security. Elaborate and give suggestions to tackle the drone problem in border areas.

(Answer in 150 words) 10 Marks

Drone operations are being used widely by India's enemy countries to deliver drugs from Pakistan into India or for smuggling of different items across the border.

This poses a challenge to India's border security as:-

- Drones are anonymous
- They cannot be monitored
- Their movement is not captured by radars



Use detectors to  
detect movement of air  
drones in the air



SUGGESTIONS TO  
TACKLE DRONE  
PROBLEMS

Shoot Any  
Suspicious  
Unmanned  
aerial  
vehicle

Monitoring  
of airspace  
on the  
borders  
must be  
enhanced

Thus, India needs to take the  
above steps to deal with the  
growing menace of drones on  
the borders.

- Q.11 विद्युत संशोधन विधेयक, 2022 उपभोक्ताओं, डिस्कॉम के साथ-साथ पर्यावरण के लिए कई लाभ प्रस्तुत करता है। सविस्तार वर्णन कीजिए। साथ ही इसकी कमियों को भी सूचीबद्ध कीजिए और उन्हें दूर करने के लिए कुछ उपायों का भी सुझाव दीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Electricity Amendment Bill, 2022 brings several advantages for consumers, DISCOMs as well as the environment. Elaborate. Also, list out its shortcomings and suggest some measures to overcome them.

(Answer in 250 words) 15 Marks

Electricity Amendment Bill, 2022 aims to improve the efficiency in the power sector.

### ADVANTAGES FOR CONSUMERS :-

- it reduces the losses made by DISCOMs, thus enabling them to lower their tariffs
- it disincentivizes DISCOMs from resorting to load shedding, thus ensuring regular electricity supply to consumers.

### ADVANTAGES FOR DISCOMS :-

- The Bill aims to reduce aggregate, technical and commercial (AT&C) losses
- Thus, it improves efficiency of DISCOMs
- It provides a monetary incentive to those DISCOMs which reduce their AT&C losses.

→ It allows DISCOMs to purchase power from power generators under the Open Access regime.

### ADVANTAGES FOR ENVIRONMENT:-

- The Bill promotes the use of renewable power.
- This will prevent global warming and climate change.

### SHORTCOMINGS:

- It does not do away with cross-subsidisation system that exists in power sector.
- Thus, industries still pay high tariffs.
- Thermal power generators still do not have the technology to shift to renewables.

### MEASURES NEEDED

- Technology transfer for adoption of renewables.

Thus, Electricity Amendment Bill is a gamechanger which can revolutionise the power sector.



- Q.12 भारतीय प्रतिभूति एवं विनिमय बोर्ड (सेबी) शेयर बाजार के नियमन और निवेशकों के हितों की सुरक्षा में महत्वपूर्ण भूमिका निभाता है। दिये गए कथन के आलोक में, सेबी के समक्ष आने वाली चुनौतियों पर प्रकाश डालिए और इस संबंध में सुधारों का सुझाव दीजिये। (250 शब्दों में उत्तर दीजिए) 15 अंक

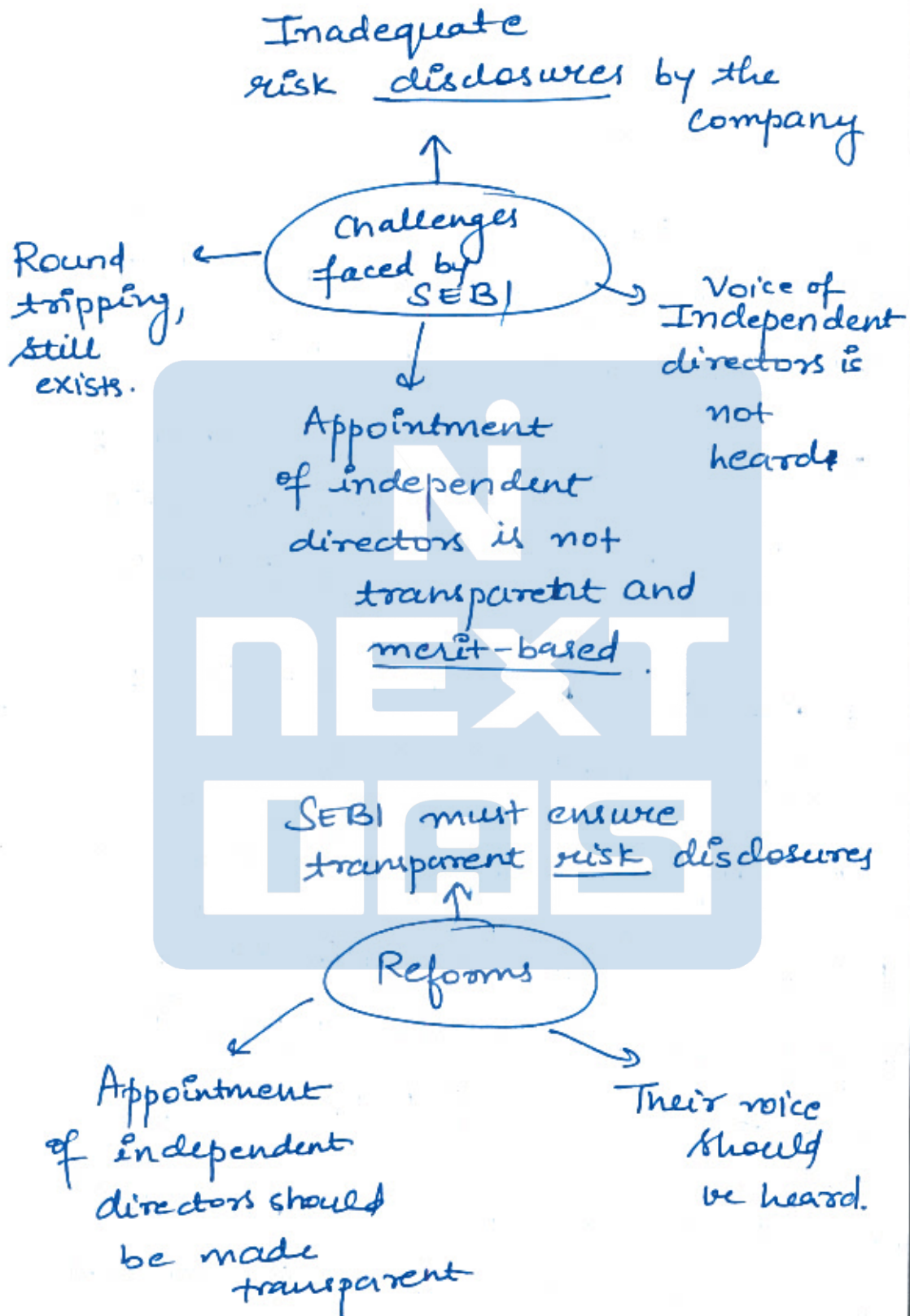
Securities and Exchange Board of India (SEBI) plays an important role in the regulation of the share market and safeguarding the interests of investors. In the light of given statement, highlight the challenges faced by the SEBI and suggest reforms in this regard. (Answer in 250 words) 15 Marks

SEBI regulates the share market and protects the interests of investors. It does so by :

- ensuring transparent disclosures by companies regarding the risks they have taken in their businesses,
- ensuring the company hires independent directors.
- Company avoids insider ~~house~~-trading

However, recently, the Hindenberg Report highlighted the lapses in disclosures by the ADANI group.

The report showed that the ADANI shares are oversubscribed i.e. trading at more than their fair value. Thus, SEBI had to intervene to prevent capital outflows from Indian stock market.



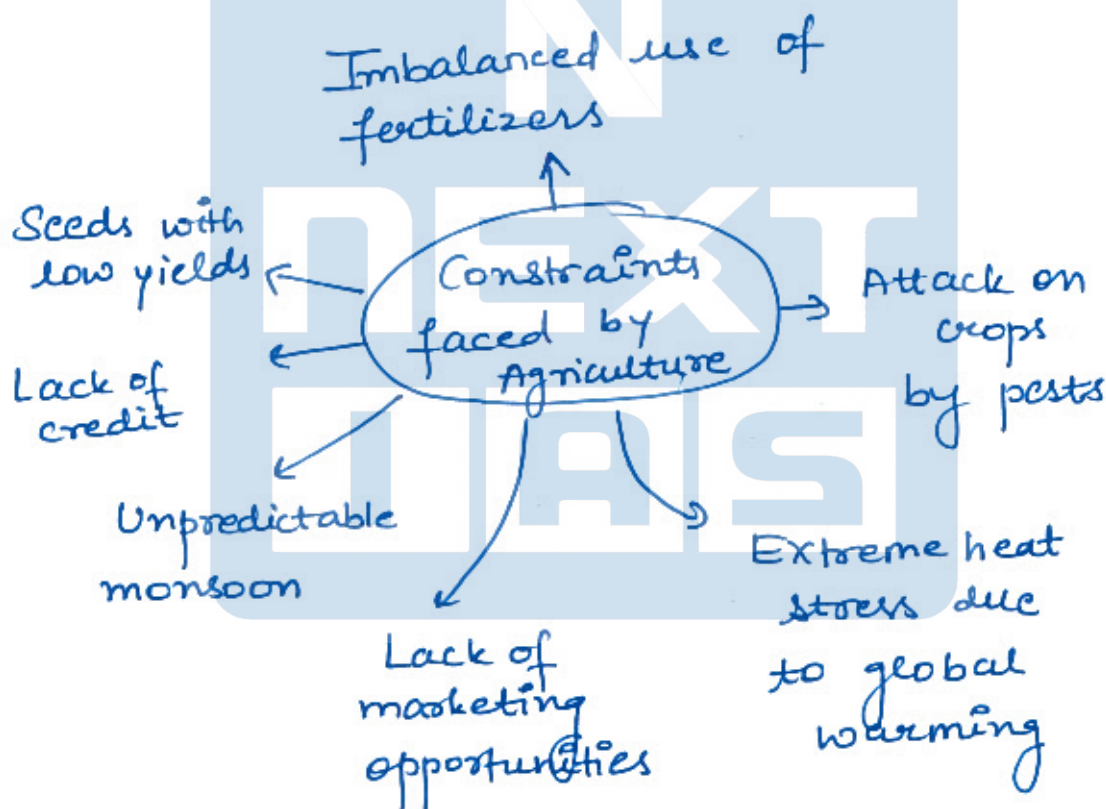
This will make Indian stock market more reliable and ensure capital inflows by investors.



- Q.13 भारतीय अर्थव्यवस्था में एक प्रमुख योगदानकर्ता होने के बावजूद, कृषि क्षेत्र कई बाधाओं से ग्रस्त है जो इसकी वृद्धि और विकास में बाधा डालते हैं। इन बाधाओं पर काबू पाने में प्रौद्योगिकी की भूमिका पर चर्चा कीजिए।  
(250 शब्दों में उत्तर दीजिए) 15 अंक

Despite being a major contributor to the Indian economy, the agriculture sector is plagued by several constraints that impede its growth and development. Discuss the role of technology in overcoming these constraints.  
(Answer in 250 words) 15 Marks

Technology plays a crucial role in the growth and development of the agriculture sector.



Due to the above constraints, farmers have not been able to achieve high growth.



## ROLE OF TECHNOLOGY :-

- ① High-yielding variety of seeds during Green revolution, increased the wheat and rice yields.  
→ Use of GM cotton has increased cotton yields and exports. Thus, biotechnology must be leveraged.
- ② Use of Drones and LiDAR can guide the farmers about the quantity of fertilizers and pesticides that they must use in farmers.
- ③ Polyhouse Technology can control the temperature available to crops and relieve them of extreme heat stress.
- ④ Micro-irrigation technology like drip irrigation and sprinkler system can deliver water straight to roots of plants.
- ⑤ E-NAM can help the farmers to market their produce and get good prices for their sales.

- Krishi Tv can provide assistance and latest information to farmers.
- Farmers can avail online credit.
- Online apps like MAUSAM provide updates regarding monsoon.

However, technology has also created problems.

For example, use of Happy Seeder machine to harvest crops has led to the problem of stubble burning.

However, this problem can be ~~used~~ solved only through technology. Use of PUSA decomposer can help to dissolve the stubble. But farmers should be made aware of this technology.

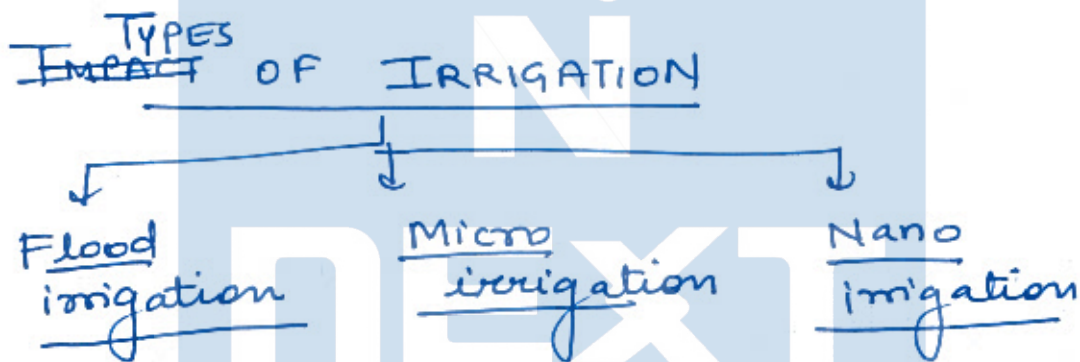
Technology has immense potential to benefit agriculture sector provided farmers are made aware of its benefits.

- Q.14 पर्यावरण एवं प्राकृतिक संसाधनों पर सिंचाई के प्रभाव का मूल्यांकन कीजिए, और कृषि में सिंचाई पद्धतियों की संधारणीयता और समता सुनिश्चित करने के लिए उपाय सुझाएँ। (250 शब्दों में उत्तर दीजिए) 15 अंक

Evaluate the impact of irrigation on the environment and natural resources, and suggest measures to ensure the sustainability and equity of irrigation practices in agriculture.

(Answer in 250 words) 15 Marks

Irrigation refers to a system through which water is supplied to the agriculture sector.



IMPACT ON ENVIRONMENT & NATURAL RESOURCE

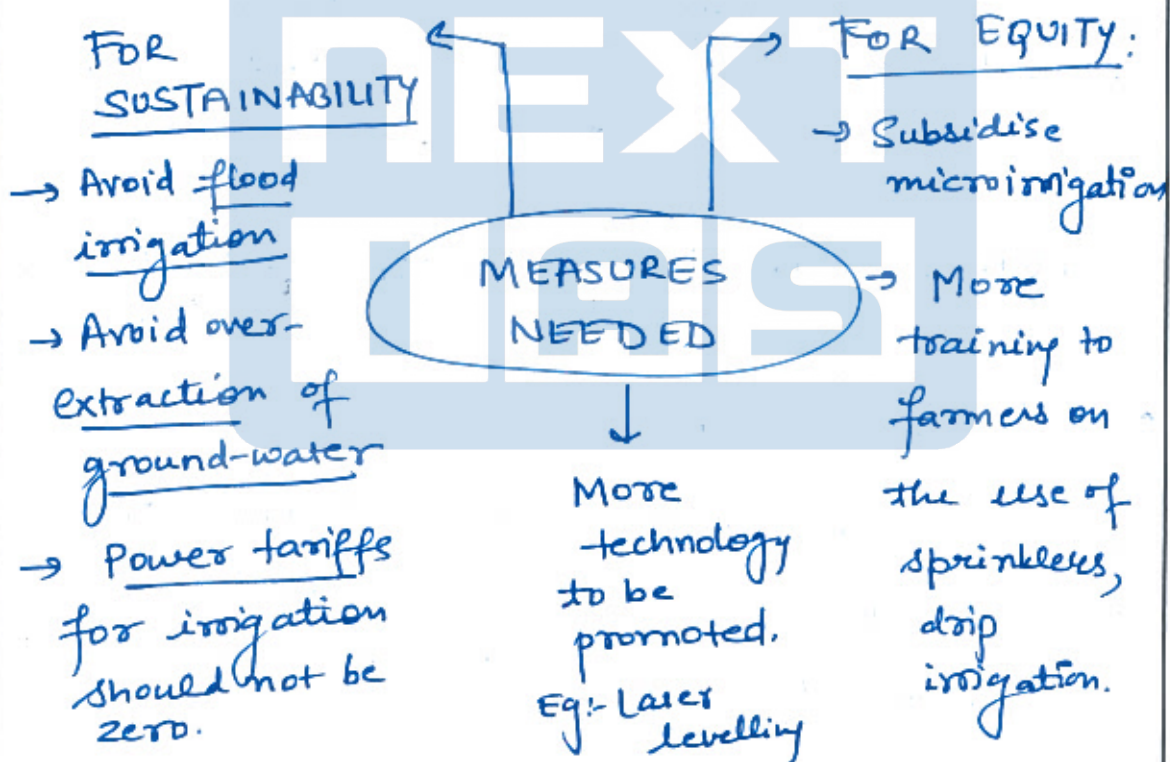
- Loss of groundwaters:

Tubewell irrigation involves extraction of groundwater. Excessive extraction can lower the water table.

- Increase in Salinity:

Flood irrigation used to grow rice, increases the saline content of the soil.

- Use of machine to pump groundwater ~~causes~~ relies on use of electricity, produced by thermal power plants, which lead to pollution.
- Drip Irrigation, Sprinklers save water and increase irrigation use efficiency.



Thus, the above measures need to be taken to make irrigation sustainable and equitable.



- Q.15 परमाणु ऊर्जा और अंतरिक्ष प्रौद्योगिकी के क्षेत्र में क्रमशः डॉ. होमी जहाँगीर भाभा और डॉ. विक्रम अंबालाल साराभाई के योगदान से भारत को रणनीतिक रूप से किस प्रकार लाभ हुआ? (250 शब्दों में उत्तर दीजिए) 15 अंक

How India benefitted strategically from the contributions of Dr. Homi Jehangir Bhabha and Dr. Vikram Ambalal Sarabhai in the fields of atomic energy and space technology respectively?

(Answer in 250 words) 15 Marks

Dr. Homi Jehangir Baba is called the father of Indian Nuclear Program. Due to his efforts, India conducted its first nuclear test in 1974.

- He established the Indian Atomic Energy Board.
- India gained expertise in nuclear fission and set up nuclear power plants in Kaiga, Kakrapar, Tarapur.
- These developments inspired India to conduct its second nuclear test in 1998. It was codenamed 'operation smiling Buddha'
- Thus, Dr. Bhabha laid the foundation for Nuclear research.
- India has signed a Civil Nuclear deals with USA and Japan.

→ Further, India is studying nuclear fusion reactions in the ITER experiment in France and ~~that~~ also, studying fusion reactions in the sun, through Aditya L1 mission.

### ROLE OF DR. VIKRAM SARABHAI IN SPACE TECHNOLOGY:

- He founded the ISRO at Thumba.
- Due to his efforts, India developed satellite launch vehicles like GSLV, PSLV.
- Aryabhata Satellite was the first satellite launched due to efforts of Dr. Sarabhai.
- Sarabhai also trained and nurtured young scientists like Dr. A.P.J. Abdul Kalam.
- Sarabhai also contributed to development of Communication,

earth-observation and education  
satellite (like INSAT).

→ Thus, it is due to efforts of  
Dr. Sarabhai that India has  
launched several missions like  
Chandrayaan, Mangalyaan and  
Gaganyaan.

Thus, both personalities have contributed  
towards making India a nuclear  
and space superpower.



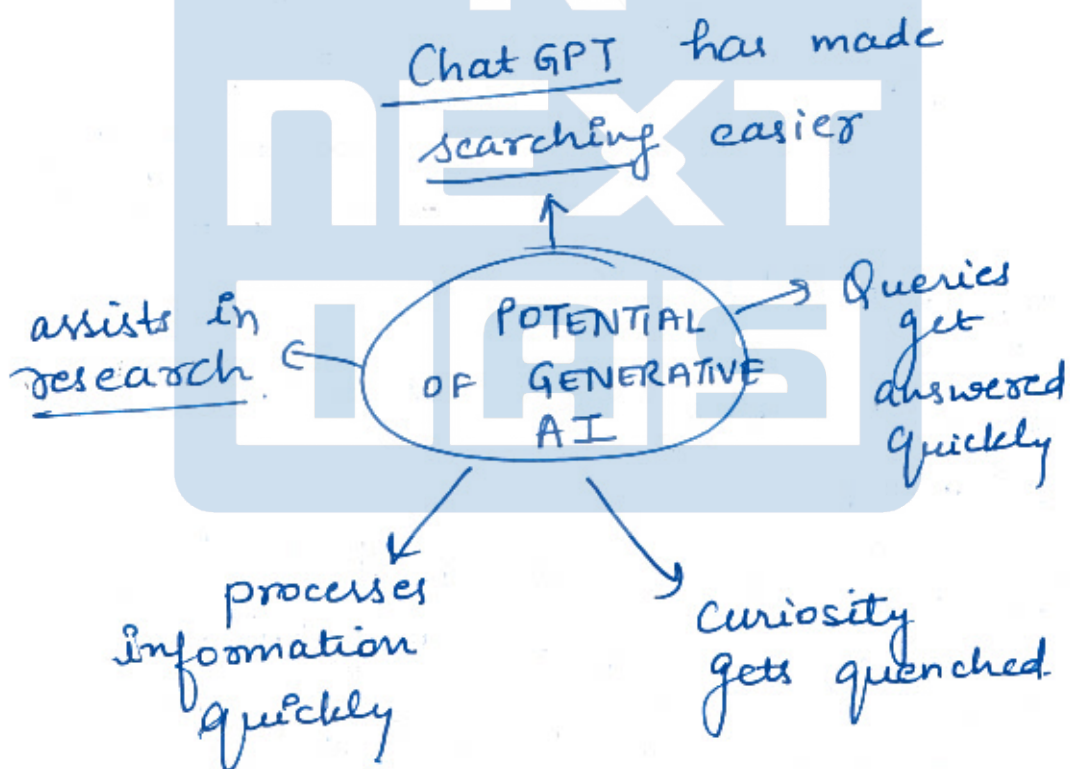
Q.16

जेनरेटिव एआई निकट भविष्य में नवाचार की सीमाओं को आगे बढ़ाने का सामर्थ्य रखता है, फिर भी इसका सामाजिक प्रभाव पर्याप्त चुनौतियाँ खड़ी करता है। सविस्तार उत्तर दीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

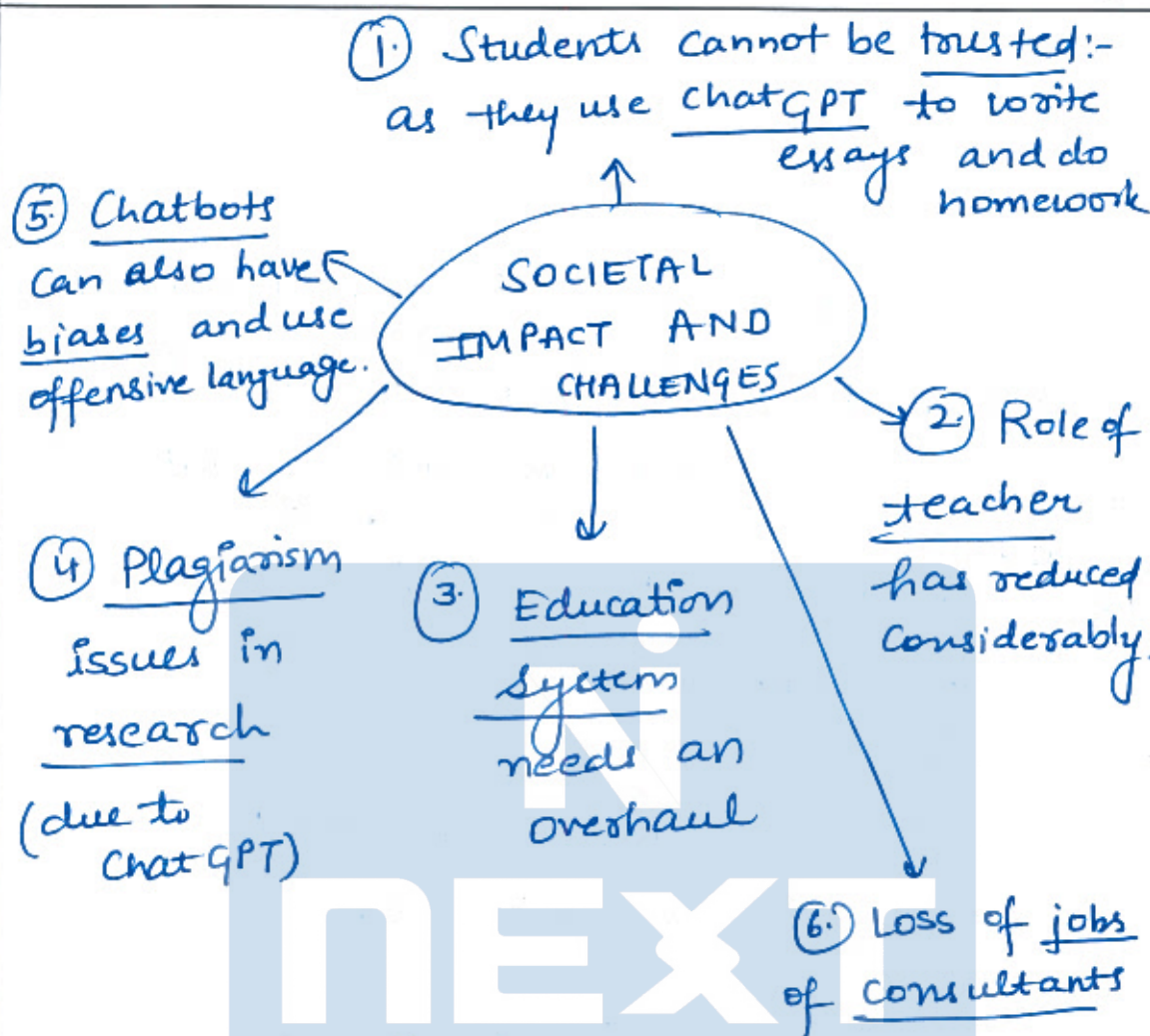
Generative AI holds the potential to push the boundaries of innovation in the near future, yet its societal impact raises substantial challenges. Elaborate. (Answer in 250 words) 15 Marks

AI refers to the intelligence acquired by machines by learning through a vast amount of data.

Generative AI holds great potential in the area of innovation.



Despite the innovation of Generative AI, its societal impact has a few challenges.



### WAY FORWARD :-

- Students need to be taught critical thinking
- Teachers now should impart life skills like empathy, compassion, teamwork, as giving information to students - can be performed by ChatGPT.
- Regulation of Generative AI is important to avoid plagiarism and biased responses.

Thus, the society needs to cope up  
and evolve with Generative AI.

Hence, this technology must be  
regulated, not strangled as it  
has ushered in innovation in the  
way we work.



- Q.17 नवंबर 2022 में मिस्र में COP27 संयुक्त राष्ट्र जलवायु परिवर्तन सम्मेलन में लॉन्च किये गए "जलवायु के लिए मैंग्रोव गठबंधन" के उद्देश्य को स्पष्ट कीजिए। उष्णकटिबंधीय देशों की तटीय पारिस्थितिकी को बनाए रखने में मैंग्रोव के महत्त्व पर विस्तार से प्रकाश डालिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

Explain the purpose of the "Mangrove Alliance for Climate" launched at the COP27 UN Climate Change Conference in Egypt in November 2022. Elaborate on the importance of mangroves in maintaining the coastal ecology of tropical nations. (Answer in 250 words) 15 Marks

The purpose of the "Mangrove Alliance for Climate" launched at COP27 is to protect and preserve mangroves.

The Alliance is aimed at pushing the countries to commit to mangrove protection, which is essential to avert climate change.

### IMPORTANCE OF MANGROVES IN MAINTAINING COASTAL ECOLOGY :-

- PREVENTION OF FLOODS :- Mangroves protect coastal areas from floods by acting as a barrier between sea and coastal area.

- PREVENTION OF SALINITY INGRESS :-  
Mangroves prevent the saline water of sea from entering the freshwater of rivers, thus saving the freshwater fishes.
- MANGROVES ACT LIKE KIDNEYS or filters of the coastal ecosystem as they absorb all the toxic substances.
- ~~At~~ PROVISION OF HABITAT to sea water organisms, thus benefitting them.
- PREVENT GLOBAL WARMING AND CLIMATE CHANGE

Thus, mangroves play an important role in maintaining coastal ecology.



Q.18 आपदा प्रतिरोधी बुनियादी ढाँचे के लिए गठबंधन का गठन भारत में आपदा प्रबंधन दृष्टिकोण को और अधिक मजबूती प्रदान करता है। टिप्पणी कीजिए। भारत में आपदाओं से निपटने के लिए एक नई रणनीति की आवश्यकता के औचित्य सिद्ध कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

The Formation of the Coalition for Disaster Resilient Infrastructure brings more robustness to the Disaster Management approach in India. Comment and justify the need for a new strategy to tackle Disasters in India. (Answer in 250 words) 15 Marks

The Coalition for Disaster Resilient Infrastructure (CDRI) is a global partnership that brings countries, UN agencies and private institutions together to make the infrastructure disaster-resilient.

→ The CDRI draws from the Sendai Principles of Disaster risk reduction.

→ The objective Formation of CDRI has brought more robustness to Disaster Management approach due to following reasons:

- The objective now is not just to minimize disaster losses but also to reduce risks to infrastructure

- Risk to infrastructure can be reduced through:
  - i) Reduction in exposure to Hazard
  - ii) Reduction in vulnerability
  - iii) Improving the capacity of infrastructure to cope with hazard.

For example, earthquake resistant buildings can be designed with light weight materials.

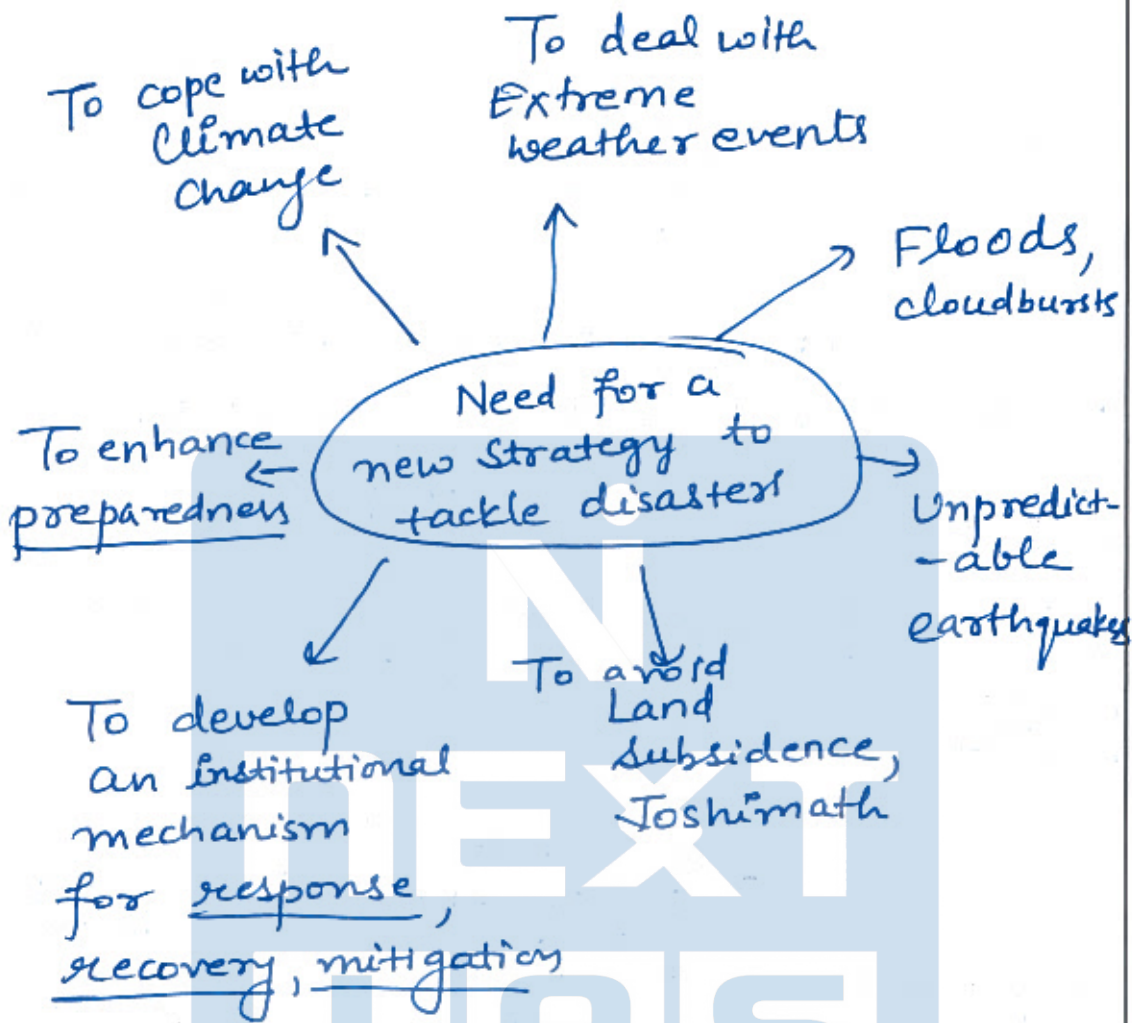
→ They can be made ductile so that they can sway with the earthquake and return to the original position once the earthquake is over.

→ Also, the infrastructure can be made resilient only if it is built in areas regarded as safe or less vulnerable (in microzonation studies)

→ Thus, CDRI aims to involve governments as well as communities as stakeholders in making the infrastructure more disaster-resilient.



NEED FOR NEW STRATEGY:



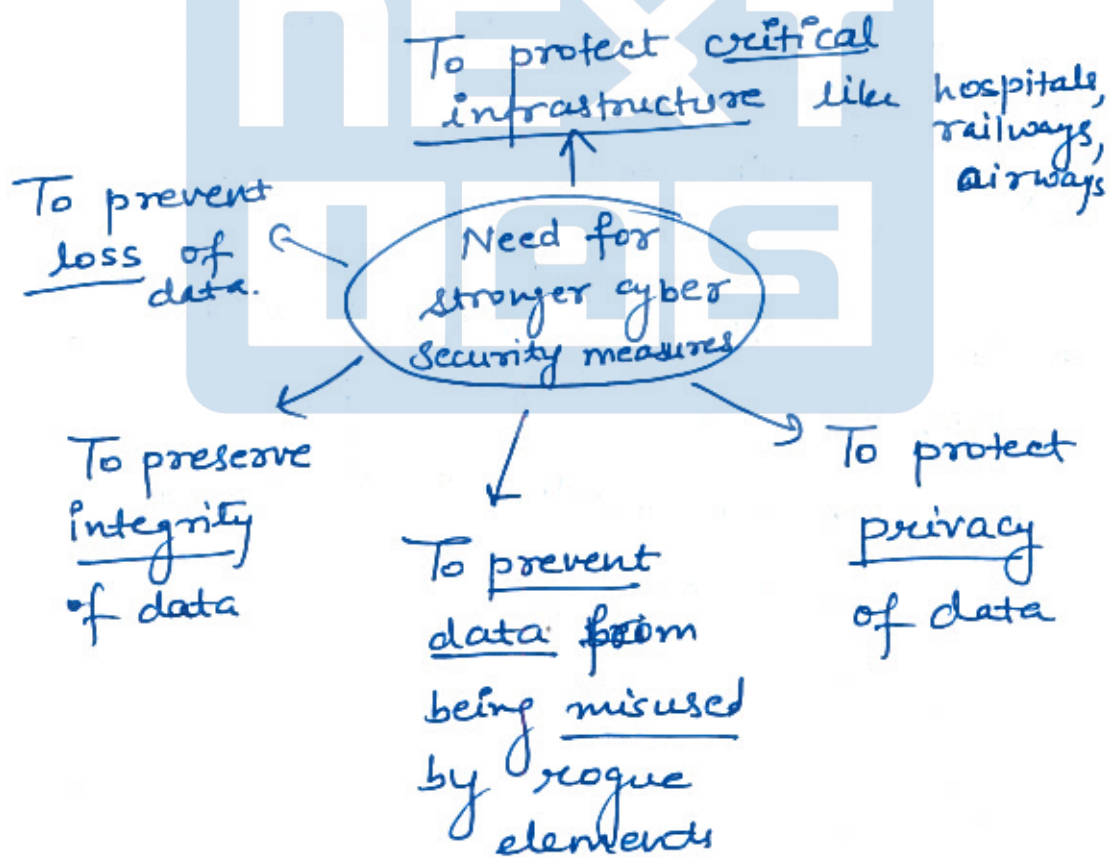
Thus, disasters can be handled deftly if we have a proper strategy alongside a resilient infrastructure.

Q.19 महत्वपूर्ण बुनियादी ढाँचे (क्रिटिकल इंफ्रास्ट्रक्चर) और प्रमुख निगमों को लक्षित करने वाले रैंसमवेयर हमलों में हुई हालिया वृद्धि ने मजबूत साइबर सुरक्षा उपायों और नीतियों की तत्काल आवश्यकता पर प्रकाश डाला है। इस प्रवृत्ति में योगदान देने वाले प्रमुख कारकों पर चर्चा करते हुए, विभिन्न क्षेत्रों पर इन हमलों के प्रभाव का विश्लेषण कीजिए।  
(250 शब्दों में उत्तर दीजिए) 15 अंक

The recent rise in ransomware attacks targeting critical infrastructure and major corporations has highlighted the urgent need for stronger cybersecurity measures and policies. Discussing the key factors contributing to this trend, analyze the impact of these attacks on various sectors.

(Answer in 250 words) 15 Marks

The recent ransomware attacks in the American Pipeline and in AIIMS are a manifestation of misuse of cyberspace for making profits.



## KEY FACTORS CONTRIBUTING TO THIS TREND

- All data is stored online
- Clouds are less secure and hence, it is easy to access data from clouds, rather than from internal server of an organisation.
- Greed for money leads to ransomware attacks
- Rise of cryptocurrency and anonymous transactions ensures ~~the~~ ransomware transactions.

## IMPACT OF THESE ATTACKS ON:

- TELECOM SECTOR :- can cripple communication and internet services.
- HEALTH SECTOR :- Health data of patients can be erased or misused
- RAILWAY SECTOR :- Railway accidents can occur if online railway signals are manipulated.

- DEFENCE SECTOR :- Defence data can be compromised.
- OIL SECTOR :- Oil pipelines can become non-functional.

Thus, cybersecurity must be strengthened to mitigate the impact of these ransomware attacks and to keep our critical infrastructure functional.

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Q.20 सीमा सुरक्षा के संदर्भ में, तटीय और स्थलीय सीमाओं के प्रभावी और कुशल प्रबंधन को सुनिश्चित करने के लिए विभिन्न सुरक्षा एजेंसियों के बीच सहयोग और समन्वय को कैसे बेहतर बनाया जा सकता है?

(250 शब्दों में उत्तर दीजिए) 15 अंक

In the context of border security, how can cooperation and coordination between different security agencies be improved to ensure effective and efficient management of coastal and terrestrial borders?

(Answer in 250 words) 15 Marks

Lack of cooperation and coordination between different security agencies is a major impediment to the efficient and effective management of our borders.

### 600 WAYS OF IMPROVING COORDINATION

i) For COASTAL BORDER SECURITY :-

- I4C and IMAC Centres have been opened in Gurgaon which provide real-time maritime updates to all agencies.
- This data must be utilized by agencies for effective coordination.
- Indian Coast Guard must collaborate

with the Coastal Police, Indian Navy and the lighthouse department to ensure Coastal security.

- GPS tags should be fitted on all boats and ships which can help the agencies to do real-time monitoring and avoid Mumbai-terror-attacks-like cases in future.

## (ii) FOR TERRESTRIAL BORDER SECURITY:

- Intelligence agencies must coordinate with law enforcement agencies.
- The CAPF forces must collaborate with local police officials to:
  - regulate the borders,
  - prevent drug trafficking,
  - prevent cattle smuggling.

Thus, coordination between agencies

must be enhanced for enhanced  
border security.



Space for Rough Work

Candidates must not  
write on this margin

