

# NEXT IAS

## MAINS TEST SERIES 2.0 - 2025 (FLT)

(To be filled by candidate)

Test No. : 07

TEST CODE : FLT2507

Name of Candidate: Susashi Yadav Mobile No. ....Roll No. : MT23FLTON013 Start Time ..... End Time.....Date of Examination: ..... Medium : English  Hindi 

Q. No.	Maximum Marks	Marks Obtained
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
TOTAL MARKS - 100		

Q. No.	Maximum Marks	Marks Obtained
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
TOTAL MARKS - 150		

GRAND TOTAL - ..... / 250

EVAL CODE: ..... EVAL DATE: .....

## GENERAL INSTRUCTIONS

- Immediately on receipt of the QCA 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 mention all relevant details like Name, Email, Roll No, Mobile, etc. in the space allocated.
- Candidate is expected to attempt all 20 questions within the given timeline.
- Answers must be written in the medium authorized at the time of admission.
- Candidates must write answers for the specific question under the respective question itself. Any answer written outside the space allotted may not be given credit.
- Please write neatly. Avoid illegible writing.
- Do not write/mark irrelevant matters in the QCAB.

## सामान्य निर्देश

- QCA पुस्तिका प्राप्त होने पर कृपया तुरंत जांच लें कि इस QCA पुस्तिका में कोई पृष्ठ या सामग्री आदि गलत छपी हुई या फटी हुई या गायब तो नहीं है। यदि ऐसा है, तो इसे एक नई QCA पुस्तिका से बदल लें।
- अभ्यर्थियों को सभी प्रासंगिक विवरण जैसे नाम, ईमेल, रोल नंबर, मोबाइल नंबर आदि का आवंटित स्थान पर उल्लेख करना होगा।
- अभ्यर्थियों से अपेक्षा की जाती है कि वह आवंटित समय-सीमा के भीतर ही सभी 20 प्रश्नों के उत्तर-लेखन का प्रयास करें।
- प्रत्येक उत्तर, प्रवेश के समय चुनी गयी भाषा के माध्यम में ही लिखे जाने चाहिए।
- अभ्यर्थियों को विशिष्ट प्रश्न के उत्तर संबंधित प्रश्न के नीचे ही लिखने होंगे। आवंटित स्थान के बाहर लिखे गए किसी भी उत्तर का क्रेडिट नहीं दिया जाएगा।
- कृपया साफ-सुथरा लिखें। अपठनीय लेखन से बचें।
- QCAB में अप्रासंगिक तथ्यों को न लिखें / न ही चिह्नित करें।

REMARKS: .....

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Q6.

Introduction	Body	Conclusion

Q7.

Introduction	Body	Conclusion

Q8.

Introduction	Body	Conclusion

Q9.

Introduction	Body	Conclusion

Q10.

Introduction	Body	Conclusion

Q11.

Introduction	Body	Conclusion

Q12.

Introduction	Body	Conclusion

Q13.

Introduction	Body	Conclusion

Q14.

Introduction	Body	Conclusion

Q15.

Introduction	Body	Conclusion

Q16.

Introduction	Body	Conclusion

Q17.

Introduction	Body	Conclusion

Q18.

Introduction	Body	Conclusion

Q19.

Introduction	Body	Conclusion

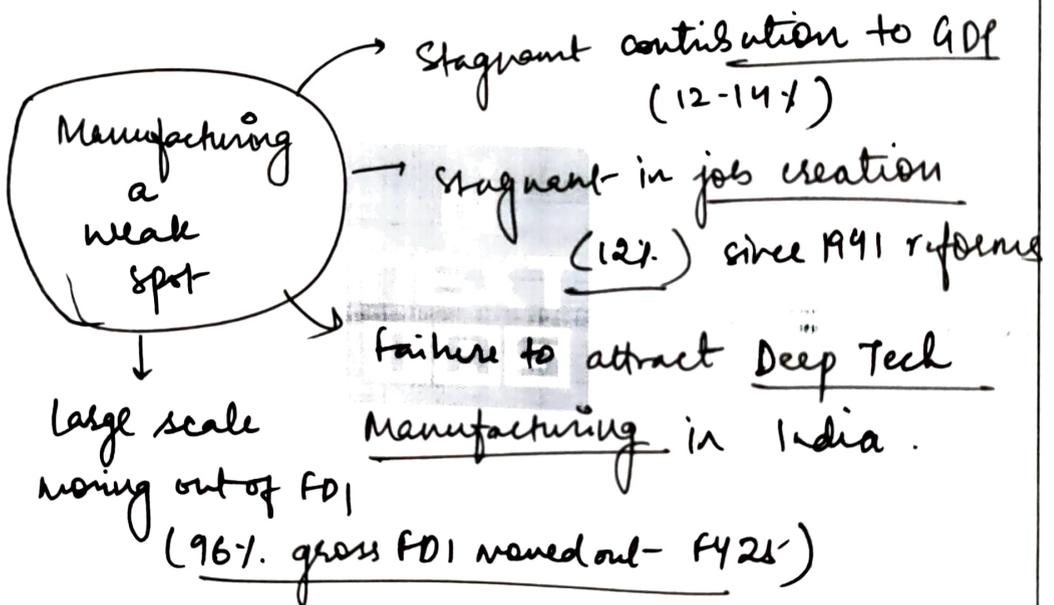
Q20.

Introduction	Body	Conclusion

1. मेक इन इंडिया के एक दशक बाद भी, भारत का विनिर्माण क्षेत्र इसकी विकास गाथा में एक कमजोर कड़ी बना हुआ है। भारत जीडीपी वृद्धि और रोजगार सृजन में अपनी क्षमता का उपयोग करने के लिए अपने विनिर्माण क्षेत्र को मौलिक रूप से कैसे नया रूप दे सकता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Even after a decade of Make in India, India's manufacturing sector has remained a weak spot in its growth story. How can India fundamentally reset its manufacturing sector to utilise its potential in GDP growth and job creation? (Answer in 150 words) 10 Marks

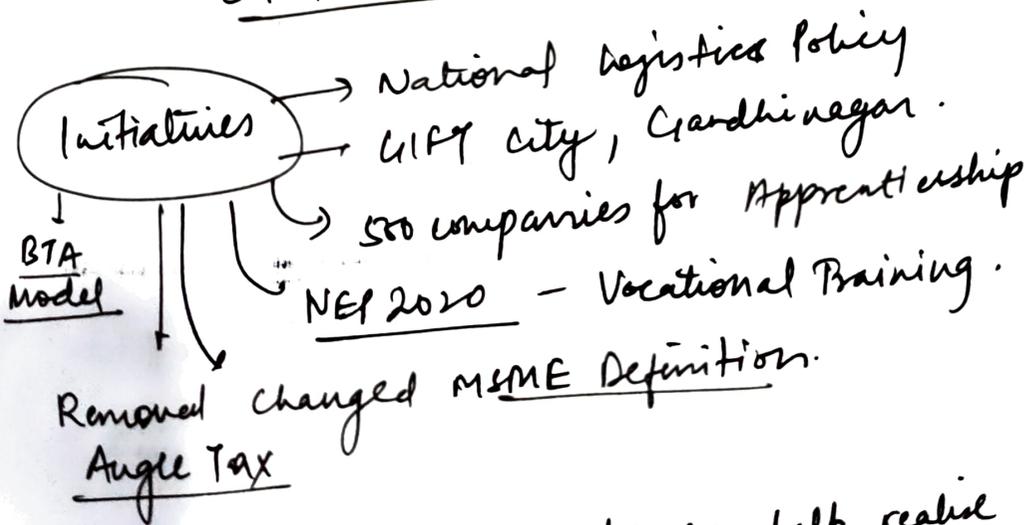
Government launched Make in India in 2014 to focus on Indigenisation of Manufacturing Sector and boost employment.



### Methods to Reset Manufacturing Sectors

- ① Targetting of emerging ['Sunrise sectors']  
 - Tea Food Processing Industry  
 (Shanta Kumar Committee)
- ② Invest in emerging sectors like AI, Robotics, Internet of Things - ~~via~~.

3. Increased R&D expenditure (current 0.67%)  
- Increase private sector investment
4. Promotion of Secondary Agriculture (Palwani Panel) - Promote Food Processing Industry.
5. Sealing of MSMEs - changed definition.
6. Promoting increased FDI in sectors like Multi Retail Brands.
7. Increase Industry - Academia linkages.  
- Apprenticeship to be compulsory.
8. Utilise (China + 1) strategy to attract FDI via diplomacy.
9. Increased Infra Investment - Regulatory Cost to be Reduced



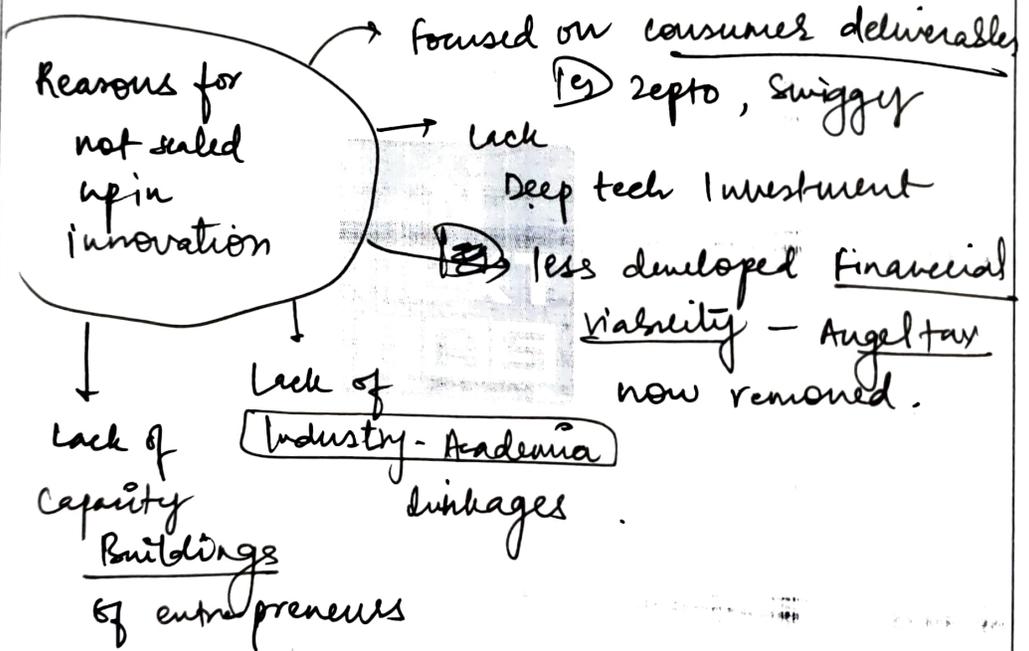
India's manufacturing sector can help realise Double Digit growth rate for India.

2.

भारतीय स्टार्टअप्स ने अपार संभावनाएं दिखाने के बावजूद नवाचार को आगे नहीं बढ़ाया है। चर्चा कीजिए। भारतीय स्टार्टअप को मूल्य श्रृंखला में ऊपर जाने के लिए उपाय सुझाएँ? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Indian startups, despite showing great potential, have not scaled up on innovation. Discuss. Suggest measures for Indian startups to go up the value chain. (Answer in 150 words) 10 Marks

India has over 1.5 lakh registered startups.  
 & approx 117 unicorns shows great potential  
 as India has 2nd largest startup ecosystem



Measures for startups to go up in value chains

① Education sector

- promote entrepreneurship at school level
- financial education & tax regime to be inculcated.
- Industry academia linkages at-

technical institutes (eg) IITs, DTUs etc.  
IT Madras collab with DRDO

## ② Financial Viability

- Promote FDI
- Promote Bank loans
- Promote Angel Investors

## ③ Governance & Regulation

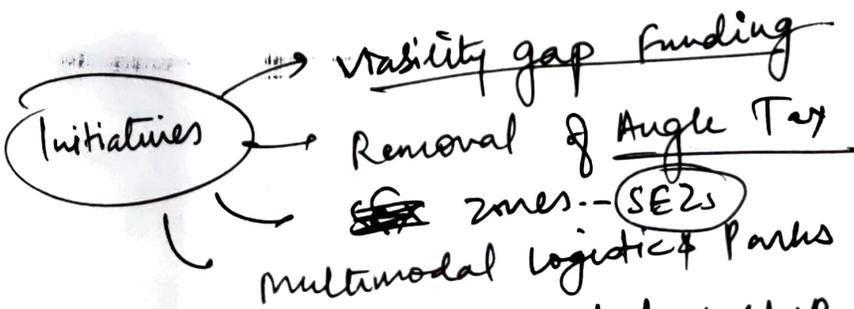
- Relatively less stringent requirement in regulations.
- One stop clearance centres for startups

## ④ Promotion of Deep tech startups.

- collaboration with government sectors.
- (eg) Agnikul Cosmos in satellite manufacturing

- Provide new ventures

(eg) liberalisation of Atomic Act & Civil Liabilities Act to promote startups in Nuclear energy.



These initiatives have helped startup become the growth driver of India's 4th largest economy

## NEXT IAS

3.

एक मजबूत सार्वजनिक वितरण प्रणाली (पीडीएस) के बावजूद, खाद्य सुरक्षा भारत की जनसंख्या के लिए एक चुनौती बनी हुई है। वर्तमान पीडीएस प्रणाली में क्या कमियां हैं? प्रणाली में सुधार के लिए उपाय सुझाएं।  
(उत्तर 150 शब्दों में दीजिए) 10 अंक

Despite a robust Public Distribution System (PDS), food security remains a challenge to the Indian population. What are the deficiencies in the current PDS system? Suggest reforms to improve the system.  
(Answer in 150 words) 10 Marks

India has the largest Public Distribution System covering over 67% of the population.

Cooked Meals for lactating, pregnant women → Coverage → Household (Antyodaya Priority Sector) 35 kg / household.  
↓ Monetary Benefit ₹ 6000 / household.

Food Security still a challenge - India Ranks

- 130 in Global Hunger Index.
- High Malnutrition.
- 57% women are anaemic.

Deficiencies of current PDS system

① Food items coverage → largely wheat, rice - it doesn't address nutritional requirement

② Corruption leads to leakage - 40% leakage reported.

③ Rotting of grains  
— due to inefficient  
system like (Plinth)  
& (Cover)

Case study: Chattisgarh

- Computerised shops.
- yellow coloured  
PDS trucks
- have reduced PDS  
losses to less than  
10% unlike 40%  
nation

④ Inclusion & Exclusion  
errors of beneficiaries.

### Reforms to Improve

① Increase food coverage — Milletts, Pulses etc  
to meet nutrition needs.

② Use of Technology to address corruption  
→ GPS enabled transport trucks (Delhi)  
→ One Nation One Ration Card (to  
address migrant workers)  
→ computerisation & auto update of  
of take home rations by beneficiary.  
→ Web based portal of Beneficiary to  
ensure greater transparency & A/c.

③ Decentralisation deprivatisation of  
PDS shops to SHGs, FPOs etc.  
(Chattisgarh)

PDS system can help ensure better reach  
and enable social infra of country to  
growth sector

4.

हाल ही में शुरू किए गए डिजिटल कृषि मिशन के प्रमुख घटकों पर चर्चा कीजिए। यह मिशन किसानों के कल्याण में सुधार करने में कैसे सहायता करेगा? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the key components of the recently launched Digital Agriculture Mission. How will this mission help in improving farmers' welfare? (Answer in 150 words) 10 Marks

Government had launched Digital Agriculture Mission (2021-2025) to ensure better productivity & tech efficiency of Farmers.

### Key Components

- ① Technical Integration of farmers via adoption of new digital India → use AI & Internet of things
- ② Develop Digital Platform for better information dissemination  
(eg) AgMARKET.
- ③ Develop Database of Farmers digitally  
(eg) Agri Stack to better utilise services to farmers.
- ④ Precision Farming → It helps increase output by 20% & Decrease input cost by 10%. → (eg) GPS enabled Tractor to

better ~~seed~~ fertiliser delivery

- (5) PPP in Agriculture → promote private firms via contract farming & Food Processing Industry
- (6) Supply Chain Management → via blockchain based integration (eg) Farm2Kitchen company uses.

It'll Help Farmers by

- (1) Increasing farmer's income - goal of Doubling - 1.7 lakh 1 yr (Calcutta Panel)
- (2) Created Integrated platform help better Price Realisation (eg) eNAM portal.
- (3) Tech enabling - Better Decision Making (eg) Brain Wired helping livestock monitoring
- (4) Better efficiency in (eg) PM-KISAN help them ₹6000 annually.

Challenges

Digital Divide (267. Rural Household - internet (NSSO))

cybersecurity challenges

Small & Marginal Farmer couldn't adopt because

High cost

Farmers serve as backbone of country with 46% population, they need to be taken up in Digital India.

5. एक्सऑम-4 मिशन क्या है? एक्सऑम-4 मिशन में भारत की भागीदारी भारत के मानव अंतरिक्ष कार्यक्रम को कैसे सशक्त करेगी? (उत्तर 150 शब्दों में दीजिए) 10 अंक
- What is the Axiom-4 mission? How will India's participation in the Axiom-4 mission help in bolstering India's human space programme? (Answer in 150 words) 10 Marks

★ Recently Sudhanshu Shukla went on to International space station via Axiom-4 mission & became 1st Indian to do so.

### Axiom-4 Mission

- ① It was a private sector mission aided by NASA to reach International space station
- ② It was sponsored by ISRO to send Sudhanshu Shukla & study space. and help in India's upcoming Gaganyaan mission.
- ③ Major aim was to study impacts & necessity of outer space.

India's participation will bolster India's Human space programme - Gaganyaan

- ① Help develop Human capsule of the mission's rocket → develop highest Safety standards, evacuation etc

- ② Helped in Human Resource training  
 → India aims to send 3 astronauts  
 to 400km for 3 days. It helped  
 → Study Psychological impacts &  
 → Muscle Density impacts
- ③ It also help carry out various experiments  
 → growing of cowpea seeds.  
 → It shall help in microgravity  
 understanding.
- ④ Axiom-4 mission also aid in India's  
long term vision of Bhartiya Antarix  
Station (BAS) → 1st module 2028.
- ⑤ Axiom-4 mission gave the necessary  
Scientific & Intellectual boost to the  
 ISRO and our space programme.

Overall, Sudhanshu shukla's conversation with  
 Honorable PM Modi and remarks like  
 "I am absorbing all the knowledge like a  
 sponge." helped boost our future mission

6. परिशुद्ध औषधि की अवधारणा का परिचय दीजिए। दुर्लभ एवं विशिष्ट रोगों के उपचार में परिशुद्ध औषधि की भूमिका पर (उत्तर 150 शब्दों में दीजिए) 10 अंक टिप्पणी कीजिए।  
Introduce the concept of precision medicine. Comment on the role of precision medicine in the treatment of rare and specific diseases. (Answer in 150 words) 10 Marks

Science in biotech has advanced to new dimensions. in this precision medicine is advanced concept. (India is Pharmacy of World) - 60% of vaccine

### Precision Medicine

- 1- It targets the specific human cells.
- 2- It identifies the target cell of the disease causing organism & attack only that.
- 3- Nano technology like Nanomicelles  are used in Precision drug Delivery

### Role of Precision Medicine in Treatment of Rare & Specific Diseases

- ① It helps in targetted drug delivery  
 Cancer cells targetted via CAR-T cell therapy

- ② They also help in identifying the fixed combination doses to have equal impact.
- ③ They help in (Research & Development) on animals for diseases like (Osteoporosis).
- ④ They help in efficient Absorption & Utilisation of the drug by the Body.  
(eg) Japanese encephalitis drug treatment
- ⑤ Precision medicine generally have smaller side effect
- ⑥ Reduces chances of AMR since they have particular use case.

Challenges → costly treatment unlike generic drug treatment  
↓  
Considered invasive since low development of technology to deliver drugs.  
aid to deliver drugs.

But, precision medicine provides a better treatment & more R&D & IPR and Compulsory licensing Regime could Balance impacts of precision medicine

7. चर्चा कीजिए कि जैव विविधता अधिनियम, 2002 और हाल ही में अधिसूचित जैविक विविधता (पहुंच और लाभ साझाकरण) विनियमन, 2025 पारंपरिक उद्योगों की वृद्धि सुनिश्चित करते हुए पहुंच और लाभ साझाकरण को कैसे बढ़ावा देते हैं।  
(उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss how the Biodiversity Act, 2002, and the recently notified Biological Diversity (Access and Benefit Sharing) Regulation, 2025, promote access and benefit sharing while ensuring the growth of traditional industries.  
(Answer in 150 words) 10 Marks

Biological Diversity Act, 2002 adopted on lines of UN-convention on Biological Diversity is India's regulatory mechanism aiding Biodiversity conservation in India.

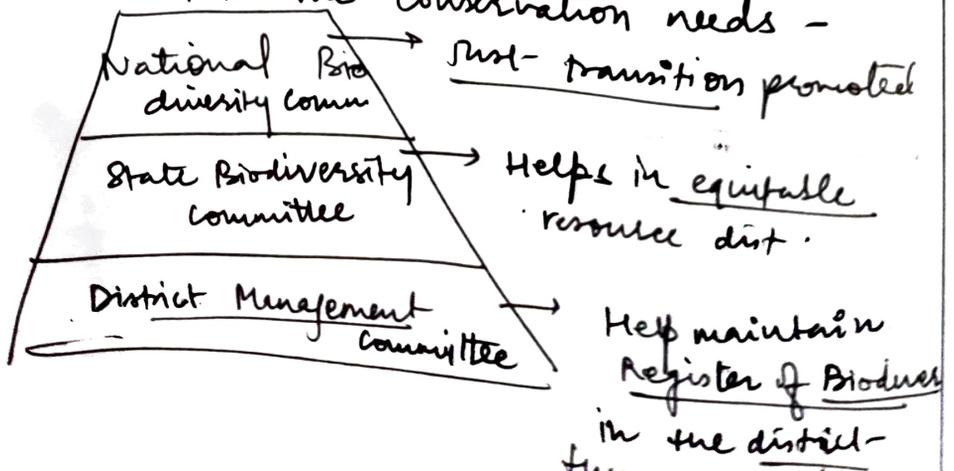
BDA, 2002 and BD (Access & Benefit sharing) Regulations, 2025 - promote Access & Benefit Sharing

1.) 3 Major Aims of BDA, 2002

- 1 → conservation of Biodiversity
- 2 → Access & Benefit sharing.
- 3 → equitable distribution of Resources

2.) It provides for 3 level committee to

look into the conservation needs -



3. Provides for free access to AYUSH & traditional practitioners without need to pay license fees
4. It provides for development of common fund like CAMPA to mitigate & distribute resources.
5. Foreign Researchers need to obtain license to publish reports & get benefits.
6. Traditional Industry growth
- Development of Traditional Knowledge Development-library to ensure protection of IPR rights
  - Tej Turmeric patenting by DSA was challenged for inflammatory needs.
  - Promotion through Ministry of AYUSH
  - Research Institutes like Trevely
  - Including private sector participation

Thus, Biodiversity Act & Regulations of 2002 aim to achieve Golden Mean in access & Benefit sharing & Industry development.

8. "आपदा जोखिम न्यूनीकरण की दिशा में तैयारी (तत्परता) पहला कदम है।" इस संदर्भ में, भारत में आपदा तैयारी और पूर्व चेतावनी प्रणालियों को सुदृढ़ बनाने में भारतीय मौसम विज्ञान विभाग (IMD) की भूमिका का आकलन कीजिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

"Preparedness is the first step towards disaster risk reduction". In this context, assess the role of the Indian Meteorological Department (IMD) in strengthening disaster preparedness and early warning systems in India. (Answer in 150 words) 10 Marks

With climate change, disasters have become more frequent & intense, making it important to prepare & move from Reactive → Proactive approach

### Role of IMD in strengthening Disaster Preparedness & early warning

- ① Hazard Mapping by IMD. ~~affected~~

→ 69% of India vulnerable to Earthquake  
→ entire coastal area to cyclones.

- ② Collection of Data to develop targetted Mitigation Measures..

(eg) 20% increase in Heat waves can lead to central government declaring Heat waves as natural disaster.

- (3) Collaboration with UN + International Meteorological Organisation (IMO) to better understand vulnerability to global disaster impacting India - (Yes) La Nina & El Nino
- (4) Early warning system  
 - colour coded warning on daily bases.  
 (Yes) Red, Green, Orange, Yellow  
 warning for Heat Waves  
 → Help in evacuation plans & temporary shelter (Yes) Odisha cyclone Feni reported 0 deaths.  
 → Help in NDRF preparation.
- (5) Help trace Vulnerability in terms of Infra.
- (6) Help better Policy Making  
 (Yes) National Disaster Management Plan  
 - 10 Point Programme included climate change
- Thus, IMD as an Institution can strengthen India's Resilience to Disasters

9.

भारत की लंबी समुद्री सीमा किस प्रकार आंतरिक सुरक्षा के लिए गंभीर चुनौतियाँ प्रस्तुत करती है? इन चुनौतियों से निपटने हेतु सुझाव प्रस्तुत कीजिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

How does the long maritime border of India present immense internal security challenges? Suggest measures to address these challenges. (Answer in 150 words) 10 Marks

Revised recently, India has a long coastline of 11,098 km. It poses various opportunities like trade, ports development but also challenge to Internal Security.

### Challenges

- 1) Structural challenges + Duality of control
  - 1) State & centre overlapping responsible
    - ↳ for police patrolling → manage our border
  - 2) Multiple Border Protection Agency

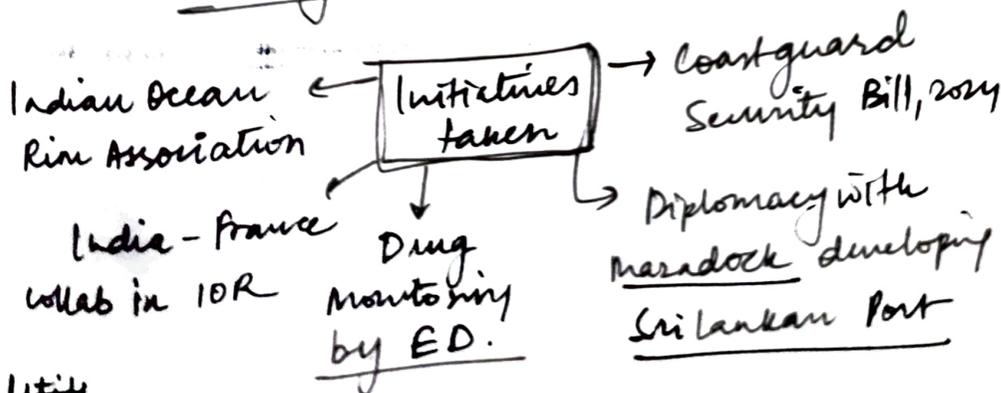
(eg) Police Marine, Indian Coast Guard, Indian Navy, BSF on Sir Creek & Sundarban

present Co-ordination challenge
- 2) Geographical - difficult terrain - Sir Creek & Sundarban - difficult to patrol.
- 3) Environmental challenge → Marine Pollution
  - (eg) - fire onboard - Merchant Navy vessel

- ④ Piracy (eg) Indian Navy saved 'RVEN' vessel from pirates.
- ⑤ Fisherman challenge - frequently caught by Sri Lanka & Pakistan.
- ⑥ Increasing presence of USA & China (SL Hambantota Port)

Measures to Address

- ① Delineating Responsibilities of Centre & State
- ② Delineating Roles of Indian Coast Guard
- ③ Fisherman awareness, communication in local languages
- ④ Patrolling of Major & Minor Ports by CISF
- ⑤ Protection to critical Infrastructure like Bombay High → Indian Navy.

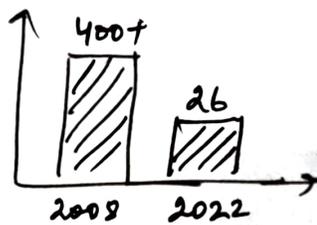


Maritime security emerges as important necessity to ensure Internal Security.

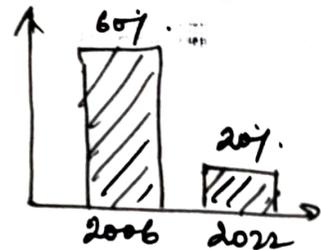
10. जम्मू और कश्मीर में आतंकवादी गतिविधियों में कमी के बावजूद, ओवर ग्राउंड वर्कर्स (OGW) और छद्म (परोक्षी) आतंकवादी समूह भारत की आंतरिक सुरक्षा के लिए गंभीर खतरा बने हुए हैं। इन खतरों को निष्क्रिय करने के लिए क्या रणनीतियाँ अपनाई जा सकती हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Despite decline in terrorist activities in Jammu and Kashmir, Over Ground Workers (OGWs) and proxy militant groups continue to pose a serious threat to India's internal security. What strategies can be adopted to neutralize these threats? (Answer in 150 words) 10 Marks

Art 370 has allowed better integration of state of Jammu & Kashmir with India & thus helped reduce terrorist activity -



Data on terror incidents



Infiltration incidents

But overground workers - aiding militants by hiding as normal workers.

Challenges posed by OGWs & Proxy Militants

- ① Difficult to trace - since normally engaged in regular works.
- ② Provide critical information to the terrorist & threaten peace.
- ③ Promote illegal infiltration into India.

④ Act as supplier of warfare Material & often hide terrorists

⑤ Psychological warfare since no war no peace situation. presents grey warfare

### Strategies to Neutralise these threats

① Surveillance & mapping by community engagement

② Neutralising by Indian Army, when fully identified

③ Social & Economic Development

→ Democratic election (58% voter turnout)

→ Land Revolt to promote Agriculture & economy.

④ Indian Army project Himayat for Rehabilitation

⑤ Operation Sadbhavana to build trust.

⑥ Watan ko Jano to promote tourism.

⑦ Promote dialogues & negotiations.

Jammu & Kashmir has integrated & reduced terror & promoted Sufiyat & Kashmiriyat

11. "अवसंरचना का विकास त्वरित और समावेशी आर्थिक विकास का एक प्रमुख चालक है"। दीर्घकालिक विकास को प्राप्त करने में अवसंरचना में निवेश के महत्व पर प्रकाश डालते हुए, अर्थव्यवस्था में अवसंरचना के नेतृत्व वाली वृद्धि को प्रोत्साहित करने में भारत की सफलताओं और विफलताओं पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक
- "Infrastructure development is a key driver of accelerated and inclusive economic growth". Highlighting the importance of infrastructure investment in achieving long-term growth, discuss India's successes and failures in stimulating infrastructure-led growth in the economy. (Answer in 250 words) 15 Marks

India's investment in Infrastructure has reached ₹ 11.11 lakh cr in FY25. showing highest infra investment in last decade.

Infrastructure driver  
of Accelerated & Inclusive growth

- ① Public goods are non exclusionary (AY23,24)
- ② Infra development boosts other sectors (Mehru - Mahalanobis model)
- ③ Infra development boost manufacturing which acts as backbone in economy.

Importance of Infra Investment in Achieving  
[long term growth]

- ① Fixed capital goods that has long-term life eg Railways working same lines since British times.

- ② They help reduce logistics costs (12+11% to 8-9%) target.
- ③ Infra Investment help in forward & backward linkages of Manufacturing sector.



- ④ Help in Human connectivity & provide better skilled labour, (eg) Airports in Bengaluru, helped attract International labour
- ⑤ Help generate employment (eg) PPP model boost private investment

### Successes of India in Infra-led growth

- ① Port development - 13 Major & 217 minor carry 90% of cargo by volume 68% by value
- ② Road → Industrial corridors like Ahmedabad-Calcutta, Delhi-Mumbai helped sustain major industry like TATA.
- ③ International Infra - IMEE, INSTC, KMT etc

- (3) Pipeline infra like HVT pipeline helped meeting energy needs
- (4) Renewable energy transition → India 4th largest wind energy, 3rd largest solar energy capacity
- (5) Boost employment → at 2.57% lowest unemployment rate

### Short coming / Failures

- (1) Investment driven by public sector (78%)  
failure to move in private sector (22%)
- (2) Logistics cost still high - Bad Multi Modal Mix → Road - 60% of cargo, world only 25-30%
- (3) Indian Investment ratio is 30% of GDP, need 40% to be vishit bhav
- (4) Railway sector boost not utilised. 1947-  
~~to~~, 50000 km railway line, 70yrs later only 65000 km

Infrastructure is the boost to all other sector & we need to realise potential of PPP (Kulkar Committee) to boost Infra sector



12.

मौद्रिक नीति समिति (एमपीसी) की जिम्मेदारियाँ क्या हैं? एक स्थायी मुद्रास्फीति दर बनाए रखते हुए आर्थिक सुधार को व्यापक बनाने के लिए आरबीआई की मौद्रिक नीति पहल कितनी प्रभावी रही है?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

What are the responsibilities of the Monetary Policy Committee (MPC)? How effective has the RBI's monetary policy initiatives been to broaden economic recovery whilst maintaining a sustainable inflation rate?

(Answer in 250 words) 15 Marks

India has established Monetary Policy Committee (MPC) under RBI Act, 1934 to ensure better macro-economic outcomes.

### Responsibilities of MPE

- ① To keep inflation under control & in targeted range (2-6%).
- ② Ensure economic growth trajectory of the country.
- ③ maintain macro-economic stability

### Effectiveness of RBI's MP initiatives

Economic Recovery + Sustainable Inflation Rate

### Challenges It faced

- ① High Inflation - largely due to Headline Inflation. 1st time MPC had to report to government, because failure to keep inflation in control for 3 quarters

2.) India's economic growth (Budget-2024-25) projected at 6.8% lowest since COVID recovery.

3.) RBI monetary Policy decided to keep Repo Rate constant at \_\_\_\_\_.

4.) ~~Vol~~ Volatile (₹ exchange rate)

(Achievements)

1.) IMF noted - India one of the fastest growing economy & future prospects of positive growth rate.

2.) Inflation currently under the targeted range ( $4 \pm 2\%$ )

3.) Inflation driven by Food Prices like ToP - beyond RBI's control to manage their inflation + Seasonal Inflation

4.) FDI though gross declined but Net FDI has started Recovering showing growth.

5.) Economic Survey (2024-25) - noted only quarterly dip in growth

(1) Stabilised rupee exchange rate in current-days.

Limitations of RBI monetary Policy in curbing inflation & maintaining growth.

- ① Other factors play imp role.
  - ①- Govt's Fiscal Policy  $\rightarrow$  Tax exemption raised to ₹12 lakh in Budget.
  - ②- low transmission Repo Rate change & slow reflection in economy
    - Bank Rate change  $\downarrow$
    - People Borrowing changes  $\downarrow$
  - ③- Increased Disposable income & focus on consumer goods lead to increased demand in economy.
  - ④- Exploring other markets like Bitcoin, Black market economy limits RBI's monetary Policy Reach.

Despite these limitations, RBI has been the backbone of India's financial trajectory & Govt & RBI working in close collaboration to make India Viksit Bharat by 2047

13. भारत में खाद्य प्रसंस्करण उद्योग के अवसर और चुनौतियाँ क्या हैं? अपार संभावनाओं के बावजूद इस उद्योग में कुल निजी निवेश कम क्यों रहा है? उपाय सुझाएँ।  
(उत्तर 250 शब्दों में दीजिए) 15 अंक

What are the opportunities and challenges of the food processing industry in India? Why has the overall private investment remained low in the industry despite immense potential? Suggest measures.  
(Answer in 250 words) 15 Marks

There are over 8.3 lakh food processing industry in India, providing large scale rural employment.

### Opportunities of Food Processing Industry

#### ① Backward linkages

1 - High production - largest producer of spices, pulses, milk. 2nd largest of rice, wheat, cotton, sugarcane. Meat - 4th.

2 - Huge workforce - disguised unemployment in Agriculture can be moved to PPI - Secondary Agriculture (Dalwai Panel)

3 - Agricultural University - ICAR - engaged in Research & skilled develop

#### ② Forward linkages

- 1 - increasing consumer demand
- High Disposable Income
  - Demand for processed food

→ Demand for Nutrition & Health Alternatives

Case study: Sahyadri Farms - in Maharashtra

- linked farmers - organised
- export foods to USA, UAE etc
- Doubling farmer's income

Challenges for Food Processing Industry & Reasons  
for low

① Backward linkages

- 1- Fragmented landholdings (86% < 2ha land)
- 2- limited collection centres & primary production
- 3- low processable variety  
(eg) Nagpur - Orange not suitable for orange juice - sour taste
- 4- limited Quality control
- 5- APMC regime
- 6- Essential commodities Act, 1955 - limited storage facility
- 7- No formal Contract Farming Laws

② Forward linkages challenge

- 1- lack of market intelligence  
(eg) not able to tap A2 Milk marketability - better indigenous cows.
- 2- Export challenges - Red Topion, customs clearance
- 3- limited Private labelling

Reason further, including challenges mentioned above, for limited Private Investment - -

- ① Stringent Regulatory Mechanisms  
- multiple levels act as deterrent.
- ② Limited Ease of Doing Business  
Facilities like Warehousing - not available at multiple posts. Majority minor
- ③ Limited Food Processing - only 10%. USA - 80%.

### Measures to Increase Private Investment

- 1) Change in Legal Mechanism  
→ liberalise AFME regime  
→ Essential Commodities Act } SC Committee on Farm Laws
- 2) Promote Private Labelling (e.g. Reliance Fresh).
- 3) Organised sector of Micro Food Enterprises.
- 4) Measures like land pooling.

government initiatives → Announcement of 10,000 FPOs in Budget

↓ largest Cold Storage via PACS.

↓ Training to farmers startup - viability gap funding

These initiatives help tap India's Agri Food Processing Potential.



14. सूक्ष्म-सिंचाई प्रणालियाँ भारतीय कृषि में क्रांति ला सकती हैं, किन्तु इसे अपनाना सीमित है। इस संदर्भ में, चर्चा कीजिए कि सूक्ष्म-सिंचाई सतत जल प्रबंधन में कैसे सहायता कर सकती है। इसके व्यापक रूप से अपनाए जाने में क्या बाधाएँ हैं? उन्हें दूर करने के उपाय सुझाएँ।  
(उत्तर 250 शब्दों में दीजिए) 15 अंक

Micro-irrigation systems can revolutionize Indian agriculture, but adoption remains limited. In this context, discuss how micro-irrigation can help in sustainable water management. What are the barriers to its widespread adoption? Suggest measures to overcome them.

(Answer in 250 words) 15 Marks

Micro Irrigation includes using small drip and nozzle system to give water directly to the roots.

Micro Irrigation can help in sustainable water management

1- High water use efficiency - (80-90%)

Flood Irrigation Method only 38%.

2- Precision in Root targetting

3- Prevent ground water overextraction  
- currently 25% of the world

4- Ensure soil sustainability

5- Can also promote -  fertigation thus reduced water use in fertiliser.

6- Can be done via - traditional water conservation Methods (eg) aquifers in Andhra Pradesh community managed water from aquifer for Micro Irrigation

## Barriers to its widespread Adoption

- 1- High upfront cost in installation of Drip Infrastructure
- 2- Fragmented landholdings make extensive system unviable (86% farmers have less than 2ha land & own 48% of total agri land)
- 3- Lack of technical understanding by the farmers (mostly illiterate or academic agricultural knowledge)
- 4- Increasing feminisation of Agri but limited decision making to adopt Micro Irrigation
- 5- Other Alternatives attractive
  - Electricity subsidy & KPM kushhi Sinchaji Yojana promote pumpset based irrigation.
  - easy access to groundwater (Indian Easement Act) & lack of awareness on water scarcity
  - Tradition of doing flood irrigation Resistance to change.

## Methods to overcome

- 1- Subsidy by the government - - for initial installation cost.
- 2- Education of farmers → via Panchayat level committees, regular workshops.
- 3- Organisation of land owners in PDS & collective installation of Micro Irrigation
- 3- Targetting of women through SHGs & develop the system.
- 4- Better awareness generation.
- 5- Adopt & water-efficient crop

Thus, Micro Irrigation system can help in meeting the future needs of water &

Initiatives like Haryana - Mera Paani Meri Virasat

Can be tapped to attract farmers.

15. 'मेजोराणा 1 और विलो जैसे उन्नत चिप के विकास के साथ, क्वांटम कंप्यूटर अब केवल एक सिद्धांत नहीं, बल्कि वास्तविकता बन चुके हैं।' क्वांटम कंप्यूटिंग के सिद्धांत क्या हैं? भारत में क्वांटम प्रौद्योगिकियों के विस्तार (वर्धन) में राष्ट्रीय क्वांटम मिशन कैसे सहायक है? (उत्तर 250 शब्दों में दीजिए) 15 अंक

'With the development of advanced chips like Majorana 1 and Willow, quantum computers are no longer a theory but a reality'. What are the principles of quantum computing? How does the National Quantum Mission help in scaling up quantum technologies in India?

(Answer in 250 words) 15 Marks

Majorana 1 by Microsoft and Willow by Google represents a leap forward in Quantum computing presenting potential of supercomputer  $\rightarrow$  quantum computers  
FLOPS  $\rightarrow$  QUBIT

### Principles of Quantum Computing

(1) Superposition - It means a Quantum computer can maintain both 0 & 1 situation simultaneously.   
 unlike supercomputer.

(2) Entanglement  $\rightarrow$  Two quantum remain in entangled state. If one opens other opens. ~~at home~~ McD. Burger experiment

  $\rightarrow$  Distance doesn't matter.

3. Quantum superiority] establish fastness & superiority over supercomputer.

4. Quantum Coherence - means Quantum computer experience greater Resistance during operations.

### National Quantum Mission Help in Scaling

1. Developing Quantum Research Labs.

2. Funding - help setup new labs in institutions like IITs & IISc Bangalore

3. Promotion to private sector

[eg] Quantum Labs Only Labs shall become world's 1st company to develop Quantum secure communication

4. Promote International collaborations

5. Accessibility to Raw material in making chips like silicon etc to be easily accessible.

## Challenges in India developing Quantum Technology

- ① Lack of Regulatory mechanism.  
No dedication National Quantum Council
- ② Limited Investment in Research  
only 0.67% of GDP
- ③ Limited Private Partnerships - 78%  
of Investment by government-
- ④ Import dependency on China for  
Rare Earth Elements
- ⑤ Need Huge Electricity Consumption

But India's efforts in Research & Quantum Mission shall help India

in Racing Ahead in the SUNRISE SECTOR



16.

कार्य सिद्धांत, पहुँच, विस्तार क्षमता और सीमाओं के संदर्भ में फाइबर ऑप्टिक संचार के साथ उपग्रह संचार की तुलना कीजिए एवं अंतर बताइए।

Compare and contrast satellite communication with fiber optic communication in terms of working principles, accessibility, scalability, and limitations.

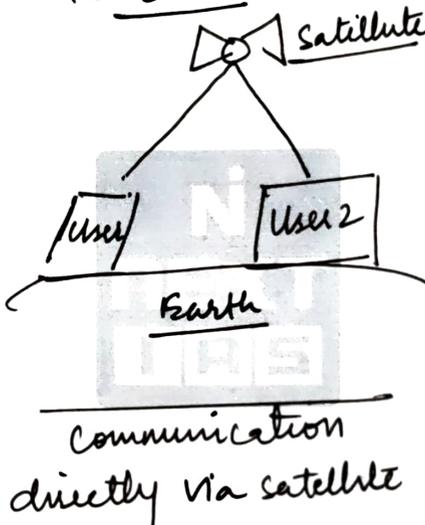
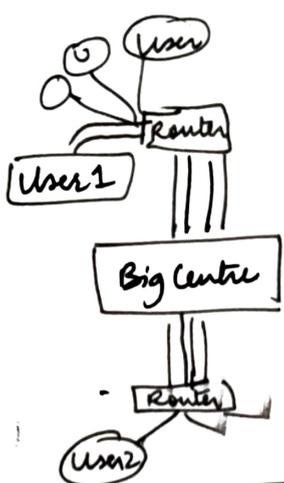
(Answer in 250 words) 15 Marks

Installation of Starlink by Elon Musk's company has initiated the move from fibre optics to Satellite Based Communication

### Comparison of Satellite communication & Fibre optic communication

- ① Both aim to provide seamless Internet connectivity to end users.
- ② They aim to ensure fast services moving from 4G-5G services in India
- ③ Two types of Internet service possible by both → Direct to Device.  
→ Router Based wifi system.
- ④ They aim to ensure last mile service delivery

Contrast-

<u>Basis</u>	<u>Satellite Based</u>	<u>Optical Fibre</u>
<u>Working Principles</u>	<ul style="list-style-type: none"> <li>→ Provide Internet via <u>network of Satellites</u>.</li> <li>→ installed in <u>space</u> in <u>LEO</u>.</li> </ul>  <p>Communication directly via satellite</p>	<ul style="list-style-type: none"> <li>→ Provision via <u>fibre communication</u></li> <li>→ they're generally running <u>under ground, oceans</u> etc.</li> </ul>  <p>Through Multiple Channels</p>
<u>Accessibility</u>	<ul style="list-style-type: none"> <li>→ Available in any remote Area</li> <li>→ Advantage in hilly areas where optical fibre difficult to set up</li> <li>→ Advantage during</li> </ul>	<ul style="list-style-type: none"> <li>→ Accessible in areas where <u>Towers</u> &amp; <u>Optical Fibre</u> cables are <u>setup</u>.</li> </ul>

## NEXT IAS

Pg 38

Candidates must not  
write on this margin

Disaster Management  
- continuous  
Communication

→ need Physical  
Infrastructure to  
operate

Scalability

Can be scaled with  
new satellites.  
to reach global  
coverage.

- Sovereignty issues  
in installing  
optical cables.

Limitations

→ Not fully developed  
→ cost  
higher

[Latency] & Speed

→ limitations in  
Area coverage

→ Challenges during  
Disasters like  
cyber  
failure to  
operate

→ Issue of Privacy  
cos can be  
used for  
monitoring.

→ Space Debris &  
Space Race boost

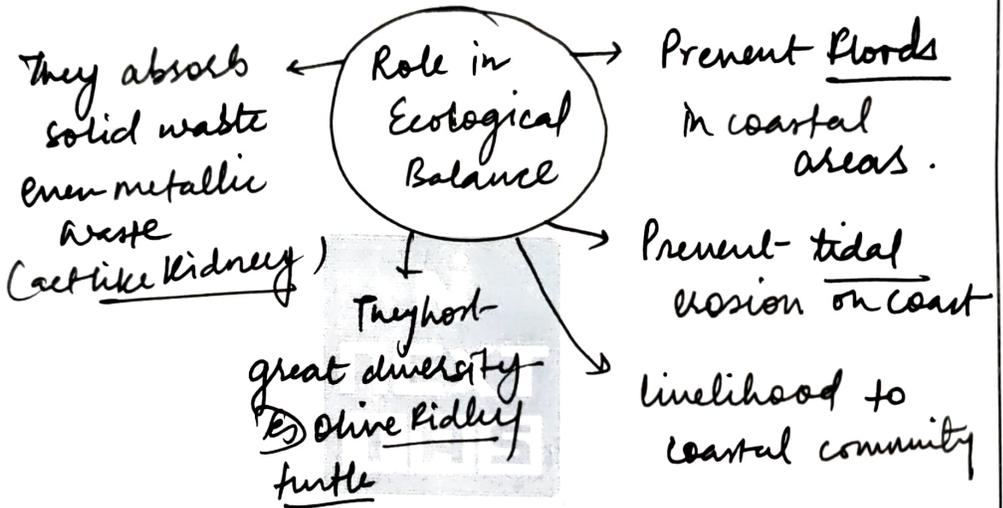
→ monopoly currently

Both are equally advanced tech and  
India need to boost private sectors  
via (Viability Gap Funding) to tap the  
emerging sector

17. आर्द्रभूमि पारिस्थितिक संतुलन बनाए रखने में महत्वपूर्ण भूमिका निभाती हैं, फिर भी उन्हें कई मानवजनित और जलवायु संबंधी खतरों का सामना करना पड़ता है। चर्चा कीजिए। आर्द्रभूमि के संरक्षण एवं संवर्धन के लिए भारत सरकार द्वारा क्या कदम उठाए गए हैं? (उत्तर 250 शब्दों में दीजिए) 15 अंक

Wetlands play a crucial role in maintaining ecological balance, yet they face several anthropogenic and climate-related threats. Discuss. What steps have been undertaken by the Government of India to conserve and promote wetlands? (Answer in 250 words) 15 Marks

Wetlands are areas with water levels below 7m and often turn marshy.



### Challenges Faced by Wetlands

#### 1) Anthropogenic Threats

- clearing of wetlands.

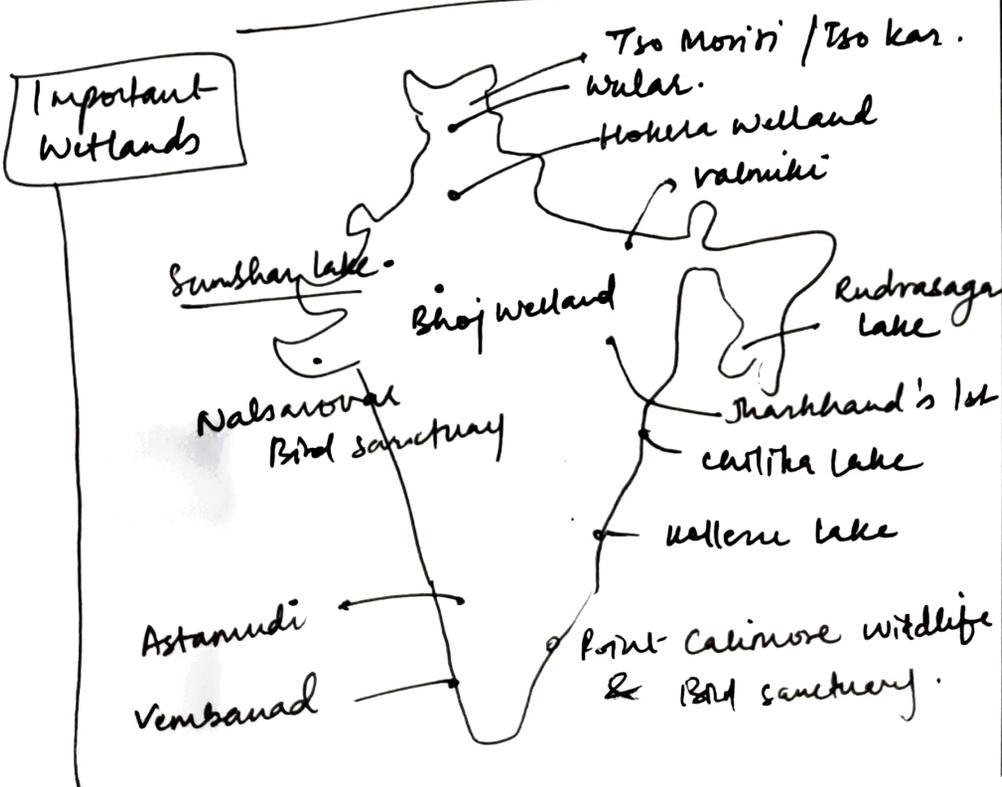
→ encroachment in Urbanisation areas (eg) Bengaluru

→ Increased Irrigation + Pesticide = Eutrophication - changing pH level of wetland waters

- Recreational activities (eg) Ranthambore & leading to solid waste generation in these areas.
- Drying traditional idea of conservation (eg) Sundarbans.

2.) Climate change

- Reduced Migratory Birds to wetlands disturb ecological balance.
- Frequent extreme weather events (eg) Neeladevi bhana declining water tables.
- changing water rainfall pattern (eg)



## Initiatives by government

- ① Inclusion in Ramsar Sites - over 85 Indian wetlands are included in
- ② National Wetland Conservation Programme.
- ③ Amrit Charohar scheme - launched in 2023  
Wetland utilisation & Carbon capture
- ④ Wetland Rejuvenation Programme by MoEFCC - data collection, health Assessment.
- ⑤ National Plan for conservation of Aquatic Ecosystem.

The above initiatives have helped India conserve its Biodiversity & maintain better Aquifers.

अनुचित भीड़ नियंत्रण तंत्र के कारण होने वाली भगदड़, जो कि रोकी जा सकती है, भारत में लगातार लोगों की जान ले रही है। ऐसी आपदाओं के अंतर्निहित कारणों पर चर्चा कीजिए। कुशल भीड़ प्रबंधन के लिए कौन-से संस्थागत और प्रौद्योगिकीय उपाय किए जा सकते हैं?

In spite of being preventable, stampedes due to improper crowd control mechanisms continue to claim lives in India. Discuss the underlying causes of such disasters. What institutional and technological measures can be taken for efficient crowd management?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

(Answer in 250 words) 15 Marks

Recent incidents like 'Mansa Devi Temple' stampede & death of over 10 individuals present the challenge of preventing the preventable.

### Causes of stampedes

① Lack of prior information collection on possibility of crowd

(eg) Bengaluru stampede outside stadium

② Lack of efficient manforce to manage large crowds.

(eg) Bhollu Baba incident - Hathras.

③ Lack of regulatory challenges & pro active action

(eg) Issuing over 2600 tickets to private general ward still no arrange ments at New Delhi Railway stations

- (4) Political & VIP culture leading to ~~root~~ route diversion poses challenge to manage crowd eg Maha Kumbh
- (5) Lack of Personnel capacity Building and training.
- (6) Lack of civil sense among the people also poses the challenge.

### Measures to address such challenges

#### Institutional

- (1) Data collection & information on crowd estimation
- (2) Clearly defining Rights & Responsibilities  
eg Challenge in Bangalore
- (3) Collaboration & information liability by the organisers of the event
- (4) Promoting private Manforce - Contract to manage crowded events and areas.

- ① Development of Dedicated corridors at generally crowded areas (eg) Mathura, Kashi doone.
- ② Capacity training of police forces.

### Technological

- ① GPS enabled tagging of vehicular movements.
- ② Installation of cameras & continuous monitoring (eg) Maha Kumbh 2024
- ③ Data Collection & organisation could be done via technology like AI.
- ④ Information Dissemination via LED Screen in multiple languages at the crowded areas to prevent Misinformation at these centres.

Thus, Institutional & Technological changes can help in saving precious lives.

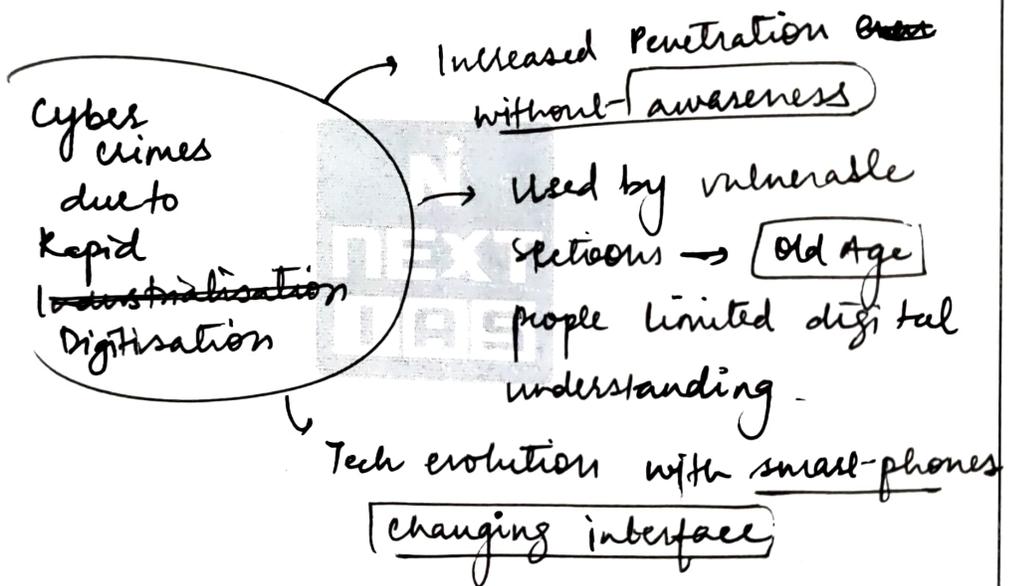
## NEXT IAS

19.

भारतीय समाज के तेजी से डिजिटलीकरण के साथ, डिजिटल गिरफ्तारी जैसे साइबर अपराध में भी वृद्धि हुई है। साइबर सुरक्षा के प्रमुख तत्वों पर प्रकाश डालते हुए, भारत की साइबर सुरक्षा अवसंरचना को सुदृढ़ करने के लिए आवश्यक उपायों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

With the rapid digitalization of Indian society, cyber crimes like digital arrest have also increased. Highlighting the major elements of cybersecurity, Discuss the measures needed to strengthen India's cybersecurity infrastructure. (Answer in 250 words) 15 Marks

Indian cyber crime control Bureau Reported to block over '4.5 laker' mule accounts, possibly using digital arrest money laundry



Government has highlighted cyber crime threats

### Major elements of cyber security

1.) Maintaining Confidentiality:

1- Encryption (eg) whatsapp

2- Access control (eg) Aadhar

3- Authentication (eg) UPI 2 factor

authentication system.

- 2.) maintaining transparency & Integrity.  
(eg) Digital signatures.
- 3.) Access during crisis & disaster of our  
online data (eg) Digilocker document.
- 4.) Access to privacy (eg) Virtual Private Networks  
like VPNs.
- 5.) Prevention of Data leakages (eg) Domino's.  
↳ maintain Data Integrity.
- 6.) Safety of Critical Information Infrastructure  
(eg) ATIMS data server attack.

### Challenges to cybersecurity in India

- 1.) Limited applicability of legal Measures.  
(eg) IT Act, 2000.
- 2.) Software Attacks like Denial of Service Attack  
makes users vulnerable.
- 3.) Hardware challenges - Bluebugging, cookies,
- 4.) Involvement of State Actors, (eg) possibility  
of Chinese involvement in Mumbai  
power grid attack.

5. Social challenges -
- media scavenging (eg) Rhea Chakrabarty
  - Cyberbullying & Harassment
  - Deepfakes & AI (eg) Rashmika Mandhanna.

Thus, new technological developments make cyber security challenging

Measures needed to strengthen

Steps taken

- 1.) Robust legislative framework
  - ① IT Act, 2008
  - ② Digital Personal Data Protection Rules, 2023.
- 2.) Institutional Strengthening
  - Training
  - Define Roles & Responsibility
  - ① CERT-In
  - ② Cybercells in each district.
  - ③ ICG
- 3.) Making Social Media Institutions Responsible
  - ① Big Data Social Media Fiduciary to Setup audit, officers to monitor data.

Hon'ble PM remarks "I dream of Digital India where cyber security is part of National Security" should be carried forward



अवैध आब्रजन भारत के लोकतंत्र, संप्रभुता और आंतरिक सुरक्षा के लिए खतरा उत्पन्न करता है। इस कथन के आलोक में, चर्चा कीजिए कि हाल ही में पारित आब्रजन और विदेशी अधिनियम, 2025 अवैध आब्रजन के मुद्दे से प्रभावी ढंग से निपटने में कैसे सहायता करता है। इस अधिनियम से संबंधित संवैधानिक और संभावित मानवाधिकार संबंधी चुनौतियाँ क्या हैं? (उत्तर 250 शब्दों में दीजिए) 15 अंक

Illegal immigration poses a threat to India's democracy, sovereignty, and internal security. In light of this statement, discuss how the recently passed Immigration and Foreigners Act, 2025, helps in effectively addressing the issue of illegal immigration. What are the constitutional and potential human rights challenges associated with the Act? (Answer in 250 words) 15 Marks

While India sent back over 2000 illegal immigrants to Bangladesh in month of June. India also saw USA sending over 17,000 illegal migrants over last few years to India. It represent a stark situation.

### Threat posed by Illegal Immigrants

#### ① Democracy

- Illegal Aadhar & voter card ID.
- manipulate voting & develop Biased targeting.
- Undermine democratic mandate of 'welfare of citizen' limited resources.

#### ② Sovereignty

- create territorial Integrity & 15 resource use challenges.

#### ③ Internal Security

- organised crimes like Drug Trafficking

→ Ethnic conflicts (eg) Assam challenges leading to Assam Accords.

## Immigration & Foreigners Act, 2025

### Addressing the challenge

- 1.) Help In Mapping the Illegal Migrants in Border states.
- 2.) It shall allow the ~~the~~ central government to have Repatriation via Diplomatic channel.
- 3.) Help address Illegal immigrants via Organised approach
- 4.) Develop Rehabilitation channels
- 5.) Remove Resource constraints on land & Redistribution of land to citizens.

It addresses the SC Judge Remarks like 'Is India a Dharmashala'?

However, it runs in conflict with our wider vision as a Nation of Vasudhiva Kutumbakam

## Challenges Associated with Act

### 1. Constitutional challenge

→ undermine the right of foreigner's Tribunal → legal authority to declare an immigrant as foreigner.

→ challenged the Diplomatic Relations, where state designation of individual as foreigner.

### 2. Humanitarian Rights challenge

→ Bureaucratic Apathy & objectivity in NRC left 19 lakh individual as non-citizen.

→ Inclusion, exclusion error shall exist

→ Sending back the persecuted to the same dire situation against human Right to line CUNDHR

### Way Forward

→ Adopt Humane approach  
→ Develop Repatriation & Negotiation channels  
↓  
Robust method & multiple document- to be acceptable to establish citizenship.

India has been a believer in global citizen & we must uphold Human Rights balancing sovereignty right.