



PRELIMS QUALIFIED

Writing Mains 2025

# NEXT IAS

## MAINS TEST SERIES 2.0 - 2025 (FLT)

(To be filled by candidate)

TEST CODE : FLT2503

Test No. 03

Name of Candidate: ADITYA MATHUR Mobile No. ....

Roll No. : MT25FLT033 Start Time 2:30 PM End Time 5:30 PM

Date of Examination: 16.07.2025 Medium : English  Hindi

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

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

GRAND TOTAL - ...../ 250

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

### GENERAL INSTRUCTIONS

1. 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.
2. Candidates must mention all relevant details like Name, Email, Roll No, Mobile, etc. in the space allocated.
3. Candidate is expected to attempt all 20 questions within the given timeline.
4. Answers must be written in the medium authorized at the time of admission.
5. 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.
6. Please write neatly. Avoid illegible writing.
7. Do not write/mark irrelevant matters in the QCAB.

### सामान्य निर्देश

1. 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।
2. अभ्यर्थियों को सभी प्रासंगिक विवरण जैसे नाम, ईमेल, रोल नंबर, मोबाइल नंबर आदि का आवंटित स्थान पर उल्लेख करना होगा।
3. अभ्यर्थियों से अपेक्षा की जाती है कि वह आवंटित समय-सीमा के भीतर ही सभी 20 प्रश्नों के उत्तर-लेखन का प्रयास करें।
4. प्रत्येक उत्तर, प्रवेश के समय चुनी गयी भाषा के माध्यम में ही लिखे जाने चाहिए।
5. अभ्यर्थियों को विशिष्ट प्रश्न के उत्तर संबंधित प्रश्न के नीचे ही लिखने होंगे। आवंटित स्थान के बाहर लिखे गए किसी भी उत्तर को क्रेडिट नहीं दिया जाएगा।
6. कृपया साफ-सुथरा लिखें। अपठनीय लेखन से बचें।
7. QCAB में अप्रासंगिक तथ्यों को न लिखें / न ही चिह्नित करें।

REMARKS: .....

FOR OFFICE USE ONLY

<u>Student Concerns / Query</u>	<u>Evaluator's Feedback / Response</u>
1 .....	1 .....
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2 .....	2 .....
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3 .....	3 .....
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<u>MARKING SCHEME *</u>			
Marks Per Ques	Below Average	Average	Above Average
10 Marks	Below 3.00	3.00 - 3.75	4.00 and above
15 Marks	Below 4.50	4.50 - 5.75	6.00 and above

\* Subject to change without prior notice.

<u>IMPORTANT QR CODES</u>	
 Topper's Copy	 Common mistake and Correct Filled QCAB
 Copy Scanner App	 Next IAS Test Centre Location

**MACRO COMMENTS**

*The Purpose of MTS 2.0 Score Improvement Program (SIP) is to provide constructive suggestions on 'How to improve Answer Writing and thereby score better marks.*

Q1.

Introduction	Body	Conclusion

Q2.

Introduction	Body	Conclusion

Q3.

Introduction	Body	Conclusion

Q4.

Introduction	Body	Conclusion

Q5.

Introduction	Body	Conclusion

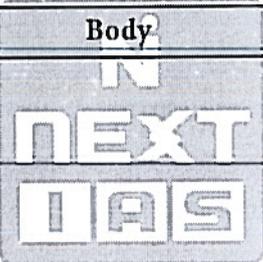
Q6.

Introduction	Body	Conclusion

Q7.

Introduction	Body	Conclusion

Q8.

Introduction	Body	Conclusion
		

Q9.

Introduction	Body	Conclusion

Q10.

Introduction	Body	Conclusion

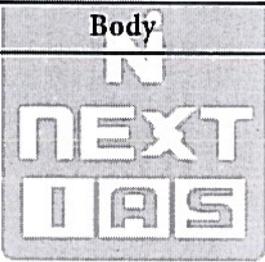
Q11.

Introduction	Body	Conclusion

Q12.

Introduction	Body	Conclusion

Q13.

Introduction	Body	Conclusion
		

Q14.

Introduction	Body	Conclusion

Q15.

Introduction	Body	Conclusion

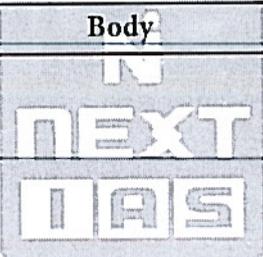
Q16.

Introduction	Body	Conclusion

Q17.

Introduction	Body	Conclusion

Q18.

Introduction	Body	Conclusion
		

Q19.

Introduction	Body	Conclusion

Q20.

Introduction	Body	Conclusion

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1.

सरकारी बजट में जेंडर बजटिंग की ओर हाल ही में किए गये प्रयास महिला सशक्तिकरण के लिए इसके महत्व को दर्शाता है। भारत में जेंडर बजटिंग की दिशा में हालिया पहल और उनके महत्व क्या हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक  
 The recent push towards gender budgeting in the Government Budget reflects its importance for women empowerment. What are the recent initiatives towards gender budgeting in India and their importance? (Answer in 150 words) 10 Marks

Gender budgeting is defined as the equitable distribution of scarce resources to women as per their needs (XII Five Year Plan)

Recent Push Towards Gender Budget → ① Mandatory: in all ministries (as per finance Ministry)

→ ② Equitable Policies: Eg Mahila Saman Savings Certificate

→ ③ Outcome budget: Maximize outcomes for women. Eg collateral free loans in Standup India Scheme

Recent Initiatives for Gender Budget

① Standup India Scheme: Provide collateral free loans to women entrepreneurs

② PM Jan Dhan & Mudra Yojna: Ensure financial empowerment

③ Higher Interest Rates: for saving deposits of women & girl child

- (4) Higher Outlay in ICDS: Ensure adequate nutrition to pregnant & lactating women
- (5) Gender based targets: ensure equitable allocation of funds. (Eg) MGNREGA

### Importance

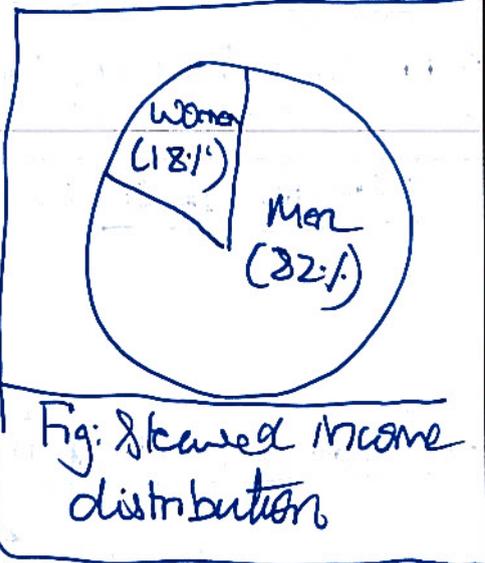
- (1) Women empowerment:

as part of development  
(Pam Rajput Committed)

- (2) Sustainable Policies:

Using women as important  
participants in growth (Eg) Women entrepreneurs

- (3) Inclusive Growth: (Eg) Collateral free loans to  
Kudumbashree



India must strive for women-led  
women owned growth to ensure Viksit &  
Shreshth Bharat by 2047



2.

बंदरगाह आधारित विकास को भारत में आर्थिक विकास और क्षेत्रीय एकीकरण के प्रमुख चालक के रूप में देखा जाता है। चर्चा कीजिए कि सागरमाला पहल किस प्रकार बंदरगाह आधारित विकास और तटीय अर्थव्यवस्था को बढ़ावा दे सकती है। (उत्तर 150 शब्दों में दीजिए) 10 अंक

Port-led development is seen as a key driver of economic growth and regional integration in India. Discuss how the Sagarmala initiative can promote port-led growth and the coastal economy. (Answer in 150 words) 10 Marks

Ports can play a central role in India's growth but are muted by systemic challenges. (Eg) High Congestion

Port Led Development

I Economic Growth:  
 ① Lower logistics cost (12.1% now against 8.9% average in West)  
 ② Employment generation

II. Regional Integration:  
 ① Better transport: (Eg) JLN Port  
 ② Backward linkages: (Eg) Road near ports

Sagarmala Initiative  
 ① Develop port infra (Eg) Cranes  
 ② Facilitate private investment  
 ③ Lower cost of transport: (Eg) low turnaround time

I Port Led Growth:

① Ports as Centers: of high economic growth (Eg) Kandla Port

② Hintelane Integration: (Eg) Better rail

& road connectivity

③ Competitive exports:

to earn forex

(Eg) Electrical products

④ Integration in world

economy: (Eg) Singapore as big port

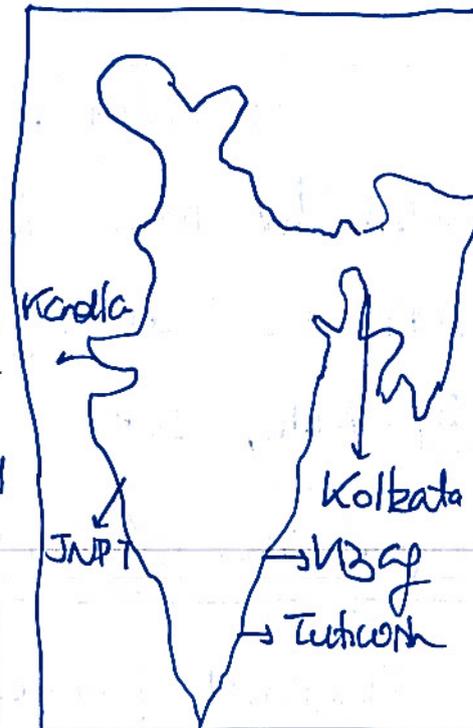


Fig: Major Ports

II. Coastal Economy

① Multiplier effect: due

to higher investment. (Eg) Iron & steel industry

② Employment: to local people & migrate

③ Private Investment: (Eg) Major Port Authorities Act 2021 (London Port model)

India must follow port-led development by ensuring high investment & ease of doing business to ensure inclusive & long term growth.

3. गैर-कृषि अर्थव्यवस्था में पशुपालन के महत्व पर चर्चा कीजिए। पशुपालन को बढ़ावा देने के लिए हाल ही में प्रस्तावित पशुधन जनगणना की क्या आवश्यकता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the importance of livestock farming in a non-farm economy. What is the need for the recently proposed livestock census in promoting animal husbandry?

(Answer in 150 words) 10 Marks

According to RBI, animal husbandry contributed more than 33% to agricultural GVA in India. (RBI State of Economy Report)

(Eg) Milk, wool

### Importance of Livestock farming

① Augment farmer income: by better prices.

(Eg) to Pisciculture (fish)

② Food Security: to people (Eg) Milk -

India is largest producer with 25% global output

③ Earn Forex: Via exports. (Eg) Meat via land borders

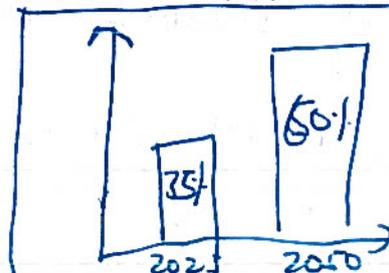
④ Backward & forward linkages: (Eg) FPI

industries for milk products

⑤ Rural development: as 65% population

in rural areas

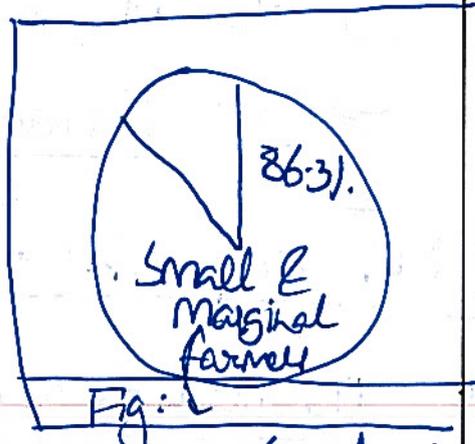
Urban population



Livestock Census: Every 5 years to count livestock per head in India by Agric Ministry

Need

- ① Estimation: of livestock
- ② Data Centric Policies: (Eg) Vaccinations
- ③ Ownership Rewards: due to farmers disparity
- ④ High Productivity: via targeted inputs.  
(Eg) Rashtriya Gokul Mission



- Way Forward
- ① Promote livestock productivity (Dalwai Committee)  
(Eg) Meat, honey
  - ② High Private Investment
  - ③ Promote exports (Suejit Bhalla Committee)

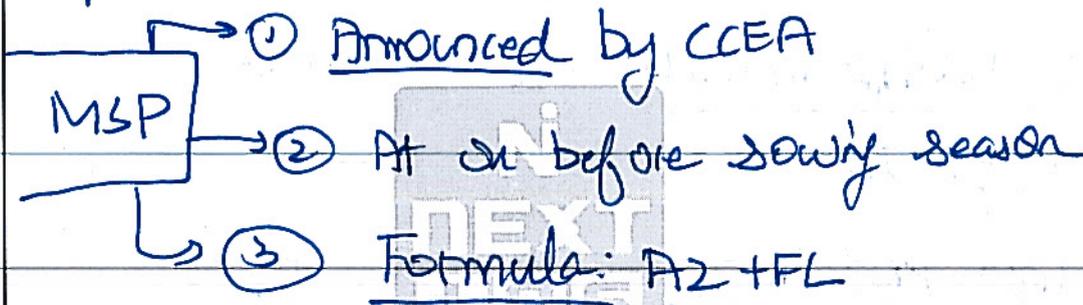
India must enhance livestock GVA to double farmer income by 2027 & attain SDG - 2 (Zero Hunger)

4. न्यूनतम समर्थन मूल्य किसानों की आय को बढ़ाने में कैसे मदद कर सकते हैं? न्यूनतम समर्थन मूल्य का लाभ प्राप्त करने में किसानों को किन चुनौतियों का सामना करना पड़ता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक

How can minimum support prices help in promoting farmers' income? What are the challenges faced by farmers in accessing the benefits of minimum support prices?

(Answer in 150 words) 10 Marks

Minimum Support Price (MSP) is defined as minimum assured price announced by govt to assure farmers of remunerative prices. (Eg) MSP for cotton.



### MSP Helping Promotion of farmer income

- ① Assured Remuneration: of farmer inputs & labor
- ② Ensures supply: of key crops (Eg) wheat
- ③ Annual Increase: in MSP prices
- ④ Promotes diversification of crops: (Eg) Niger seed
- ⑤ High rural demand: due to farmer incomes

Challenges faced by farmer

- ① Skewed nature: MSP only available for wheat & paddy in reality
- ② Inclusion & exclusion errors (Wadhwa Committee)
- ③ Not available to most farmer (Shanta Kumar Committee)

④ Environmental harm  
 (E) Rice guzzles water

⑤ Poor enforcement:  
 MSP at local levels  
 → ① Computerization of MSP Records

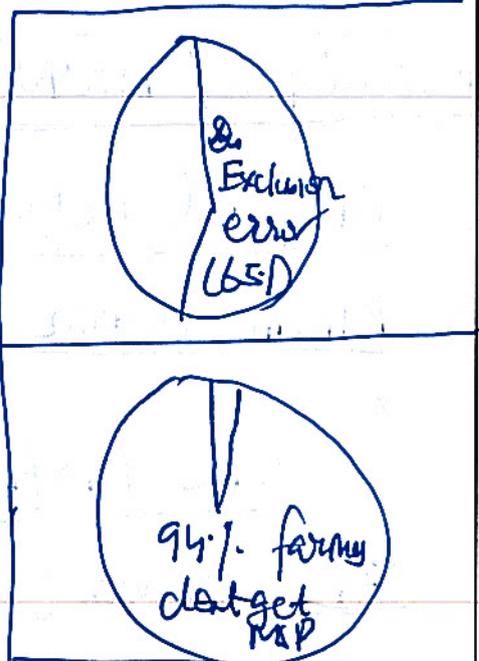


Fig: MSP Issues

- Solutions**
- ② MSP for millets (high nutrition)
  - ③ Promote crop diversification (E) oilseeds
  - ④ Expand storage capacity

India must reform MSP to double farmer income, ensure food security & grow India via farmer-led development



5. कृत्रिम तंत्रिका नेटवर्क क्या हैं? मशीन लर्निंग और कृत्रिम बुद्धिमत्ता में उनके महत्व पर चर्चा कीजिए।  
(उत्तर 150 शब्दों में दीजिए) 10 अंक
- What are artificial neural networks? Discuss their importance in machine learning and artificial intelligence.  
(Answer in 150 words) 10 Marks

Artificial neural networks are defined as networks <sup>(ANN)</sup> developed by humans that mimic neurons of human brain cells.

### Meaning of ANN

- ① Artificial networks: built by humans
- ② Mimic human brain: due to large interconnections
- ③ Used in Artificial Intelligence

ⓔg) Llama (Meta)

### Importance in Machine Learning

- ① Continuous Improvement: due to large number of nodes & inter-nodes.  
ⓔg) ChatGPT 1.0 and 2.0
- ② Process large information: due to

# formation of large language models (LLM)

(Eg) Perplexity

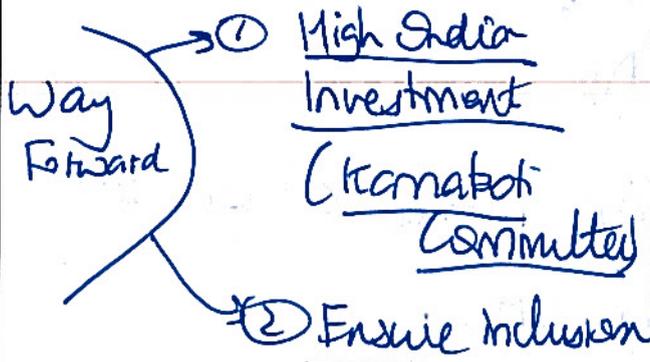
(3) Better outcomes: due to synthetic intelligence

## Importance in AI

(1) Develop New Models: (Eg) Deepseek (China)

(2) Allow 4th Industrial Revolution

(Eg) Factory Optimization



(Eg) Bhashiki (translation)

ANN is a lynchpin to advance human

centric artificial intelligence (Sam Altman)

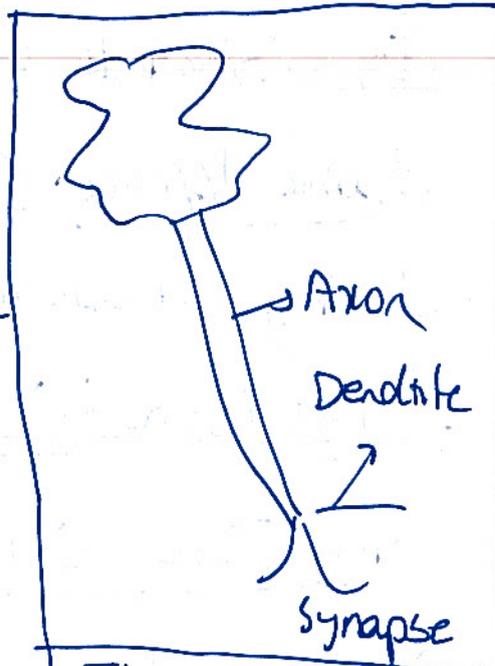


Fig: Mammal Neuron

6.

रक्षा क्षेत्र और आधुनिक युद्ध में मानव रहित हवाई वाहनों (यूएवी) के महत्व पर चर्चा कीजिए।

(उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the importance of Unmanned Aerial Vehicles (UAVs) in the defense sector and modern warfare. (Answer in 150 words) 10 Marks



Unmanned aerial vehicles have proved to be effective & devastating in impact in modern warfare. Eg Op Sindur

## Importance of UAV

### I. Defence sector

① Strategic Defence: of border & territory.

Eg Nishant UAV in India

② Hard & Soft Kill: of adversary UAV.

Eg Ghatak UAV

③ Flexible defence: Eg Drones & lasers to destroy adversary UAV.

### II. Modern Warfare:

① Grey Zone Warfare: Start of full scale war.

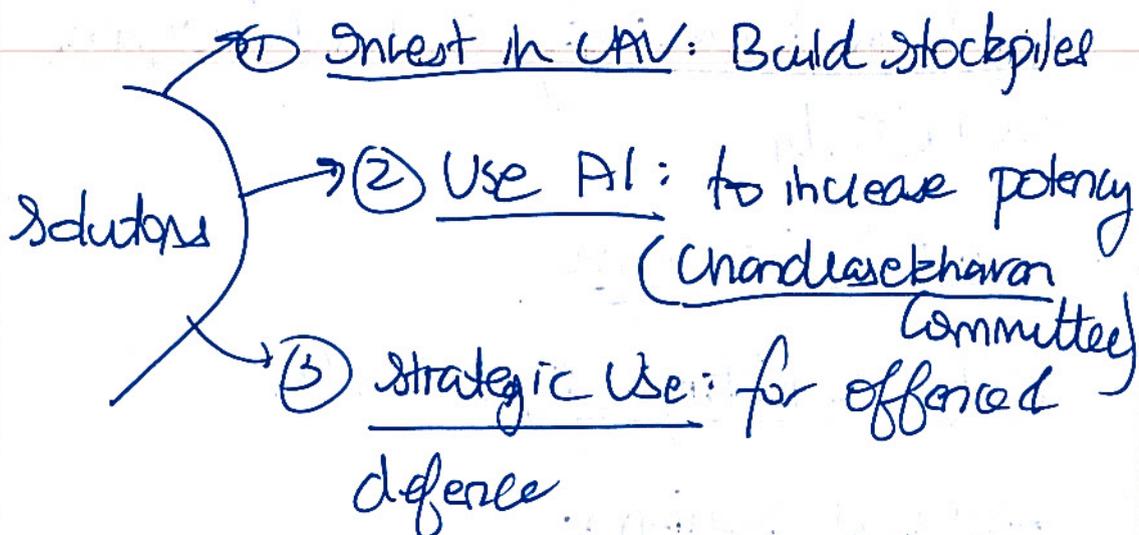
Eg Use by India against Pak in Op Sindur

② Low Cost Attack: on high value targets. Eg Ukraine's Op Spider Web to target Russian planes

③ Strategic Signalling: Eg Iran attacks on Israel using cheap drones.

④ Strategic support: Eg Turkey sold UAV to Pakistan used in their attack on India

⑤ AZAD: Using drone swarms.  
Eg Israel eliminated Iranian air defence radar



India must invest in UAV to win Grey Zone & Hybrid low intensity conflicts of 21st Century (EXCDS Bipin Rawat)

7. समुद्री और तटीय पारिस्थितिकी तंत्र पर तेल रिसाव के पर्यावरणीय प्रभावों की जांच कीजिए। तेल रिसाव की सफाई के लिए इस्तेमाल की जाने वाली विभिन्न विधियाँ क्या हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Examine the environmental impacts of oil spills on marine and coastal ecosystems. What are the various methods used for cleaning-up of oil spills?

(Answer in 150 words) 10 Marks

Recent Oil Spill off Kerala Coast  
reminded world of danger of oil spills

## Environmental Impacts of Oil Spills

### I. Marine Ecosystems:

- ① Loss of biodiversity: (Eg) Aquatic animals
- ② Lower Photosynthesis: due to reduced sunlight penetration (Eg) Exxon Valdez Oil Spill
- ③ Long term harm: (Eg) Reduced ecosystem productivity

### II. Coastal Ecosystem

- ① Reduced Fishing: (Eg) Kerala
- ② Reduced tourism:
- ③ Perpetual Poverty: of poor dependant on seas for survival

## Methods of Cleaning Oil Spills

① Physical Removal:

by ships

② Ex Situ treatment:

ⓔg On Shoreline

③ Bio-remediation:

ⓔg Oilzapper bacteria  
(made by TERI)



Fig: Oil Spills

World must evoke policies to ensure  
no oil spills (MARPOL Convention)  
and eliminate its impact on marine  
ecosystem & coastal communities.

8. भूकंप संबंधी आपदाओं के प्रति उत्तरी भारत की संवेदनशीलता पर चर्चा कीजिए। उनके प्रभावों को कम करने में भारत की तैयारियों पर प्रकाश डालें।  
 Discuss the vulnerability of northern India to earthquake-related disasters. Highlight India's preparedness in mitigating their impacts.  
 (उत्तर 150 शब्दों में दीजिए) 10 अंक  
 (Answer in 150 words) 10 Marks



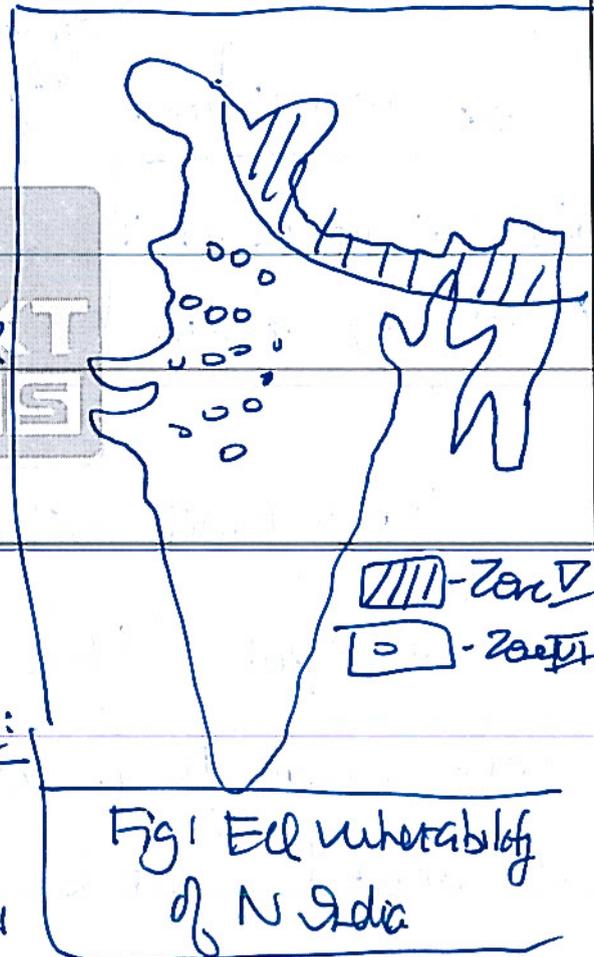
Recent earthquake with focus near Jind, Haryana showed India's vulnerability to earthquakes.

Sudden shaking of Earth's surface due to stress release of tectonic plates (Morgan & Powell)

Vulnerability of North India

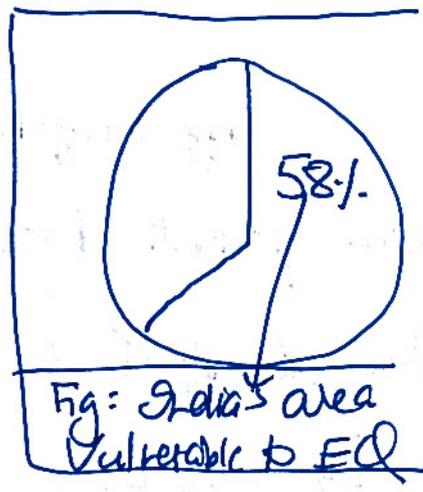
① Very High Intensity: in Himalayan region due to faults & thrusts. (Eg) Joshimath fault

② High Intensity: due to faultlines (Eg) Frawali- Malda fault

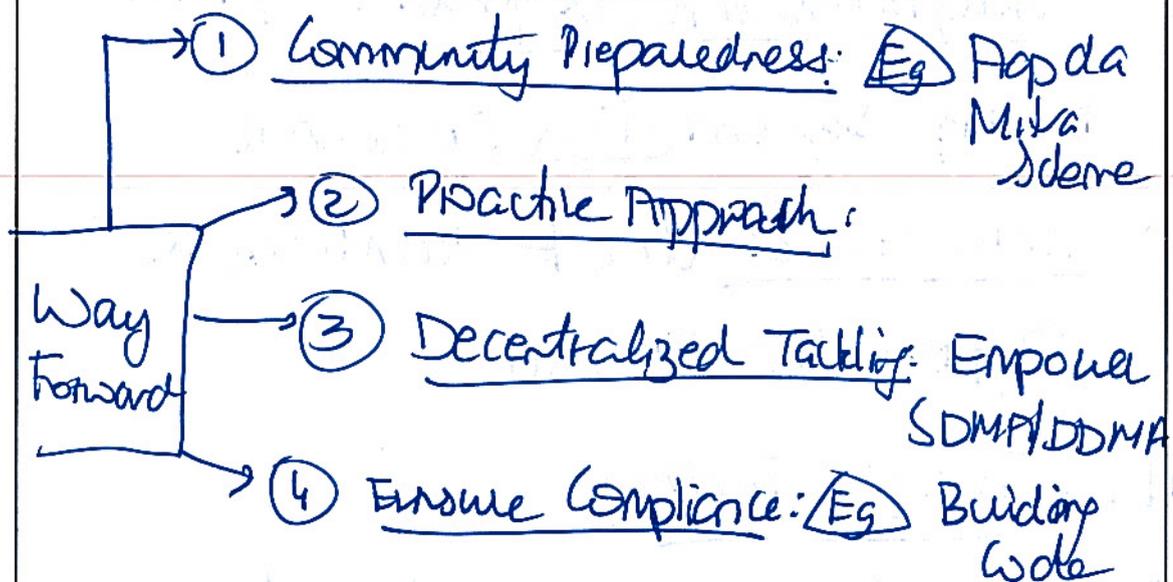


India's Preparedness

- ① NERMP: to understand plate movement
- ② National Building Code: EQ resistant buildings
- ③ Centre for Seismology: Study EQs



- ④ Retrofitting: of old buildings (NDMA Guidelines)  
 Eg Schools, hospitals



India must historically tackle earthquakes (Hyogo Framework) in line with data & preparedness (NIDM Study)

9. चर्चा करें कि क्रिप्टोकॉरेंसी और अन्य उभरती प्रौद्योगिकियां मनी लॉन्ड्रिंग और आतंकवाद के वित्तपोषण के खतरे में कैसे योगदान करती हैं। इस समस्या से निपटने के लिए भारत सरकार द्वारा क्या कदम उठाए गए हैं?

(उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss how cryptocurrency and other emerging technologies contribute to the menace of money laundering and terror financing. What steps have been undertaken by the Government of India to tackle this issue? (Answer in 150 words) 10 Marks

Cryptocurrency & emerging tech  
are potent tools in hands of Money  
laundering & terrorism.

(Eg) Terror finances

Contribution to both

I. Money Laundering:

① Integration of illegal funds: in formal

banking system (Eg) Dogecoin

② Hide Source: due to decentralized

Crypto. (Eg) Ethereum

II. Terror Finances

① No Oversight: by Central Bank

② Easy to Use: by terror groups

(Eg) JEM

India's steps

Fact box:  
4-5% world economy run by laundered funds

- PMCA: Tackle ML with stringent law.  
(Eg) Section 45 (difficult bail)
- ② NIA: Investigate terror finances
- steps → ③ KYC Norms:
- ④ ML Rules: Cover CA etc
- ⑤ Int'l Cooperation: (Eg) MLAT Treaties
- ⑥ FATF Review: of India was successful

India & world must tackle crypto & emerging tech to ensure no illegal use while respecting human rights like privacy (Christchurch Call for Action)



10. हाइब्रिड युद्ध क्या है? यह पारंपरिक युद्ध से किस प्रकार भिन्न है? भारत हाइब्रिड युद्ध की चुनौतियों का सामना किस प्रकार कर सकता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक  
 What is hybrid warfare? How is it different from conventional warfare? How can India navigate the challenge of hybrid warfare? (Answer in 150 words) 10 Marks

Hybrid Warfare is defined as new age warfare that transcends & goes beyond conventional, kinetic warfare. Eg Cyber attacks.

Difference with Conventional Warfare

Basis	Conventional Warfare	Hybrid Warfare
① Meaning	Kinetic war on battlefield	Kinetic + non-kinetic war
② Scope	Narrow	Large
③ Area	Battlefields	Battlefield, cyberspace, social media
④ Cost	Generally higher	Can be lower
⑤ Example	Israel-Hamas war	Op Sindoor (dual war + info war)

## India's Navigation

- ① Military Modernization: (Eg) ITC,  
(Bhetkar Committee), Strijen portal
- ② Build Capability: (Eg) Cyber Warfare  
(Meena Hemchandra  
Committee)
- ③ Counter Adversary: (Eg) PIB fact check  
during op Sindoor
- ④ Protect & attack: Cyberspace. (Gulshan  
Rai  
Committee)  
(Eg) Cert-In
- ⑤ Low Cost Weapons: (Eg) UAV, DEW  
weapons
- ⑥ Collaboration with friendly nations.  
(Eg) Israel

India must prepare for two & a half  
front war & also hybrid war to  
ensure our victory (CDS Anil Chauhan)

11.

भारत द्वारा मजबूत डिजिटल अर्थव्यवस्था के लिए प्रयास करने के बावजूद, भारत को डिजिटल समावेशन के संबंध में चुनौतियों का सामना करना पड़ रहा है। चर्चा कीजिए। डिजिटल संसाधनों तक समान पहुँच सुनिश्चित करने के उपाय सुझाएँ।  
(उत्तर 250 शब्दों में दीजिए) 15 अंक

Despite India's push for a robust digital economy, India faces challenges with regard to digital inclusion. Discuss. Suggest measures to ensure equitable access to digital resources.

(Answer in 250 words) 15 Marks

Digital economy is defined as use of emerging technology to advance and grow modern economies to ensure inclusive growth. (Eg) UPI for cashless payments

### India's Push for Digital Economy

① Government Push: for our processes

(Eg) Niyat Portal (exports), UMMNGs app (govt services), CPGRAMS (governance redressal)

② Ease of doing business: (Eg) C-PACE

portal (voluntary liquidation of Company), MCA-21 (Company services)

③ Non-Govt sector: (Eg) FCRA portal

④ Government services: (Eg) Telemanas

(mental health), computerization of PACS



- ⑤ Private Citizen Use: Eg UPI (digital payments), Co-Win (Immunization), NAVIC (navigation)

## Challenges of Digital Inclusion

### I. Socio-economic Challenges

- ① Digital Divide: Only 36%.

rural population uses internet

- ② Unequal internet → skewed in urban areas

- ③ Poor penetration: of govt push in all regions

Eg Low Common Services Centres in villages

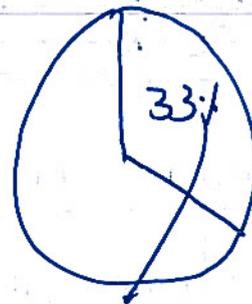


Fig: Women with mobile phones in India

### II. Technological Challenges

- ① Poor Utility: Eg Complex apps

- ② Govt apathy: bureaucrat inertia

- ③ Cyber vulnerability: Eg AIIMS  
Cyber attack, digital scams

## Measures for Equitable Access

### I. Technological

- ① Use of freely apps - (Eg) UPI Lite
- ② Saturation of Common Service Centres
- ③ Better penetration of Bharatnet cables
- ④ Cyber protection: (Eg) <sup>Talim</sup> Manual (Eg) Bharatnadihi

### II. Socio-economic

- ① Enhance Access: of internet to vulnerable sections. (Eg) women, transgender
- ② Better targets: of policy with data
- ③ Empower: People to ensure digital resources used equitably.

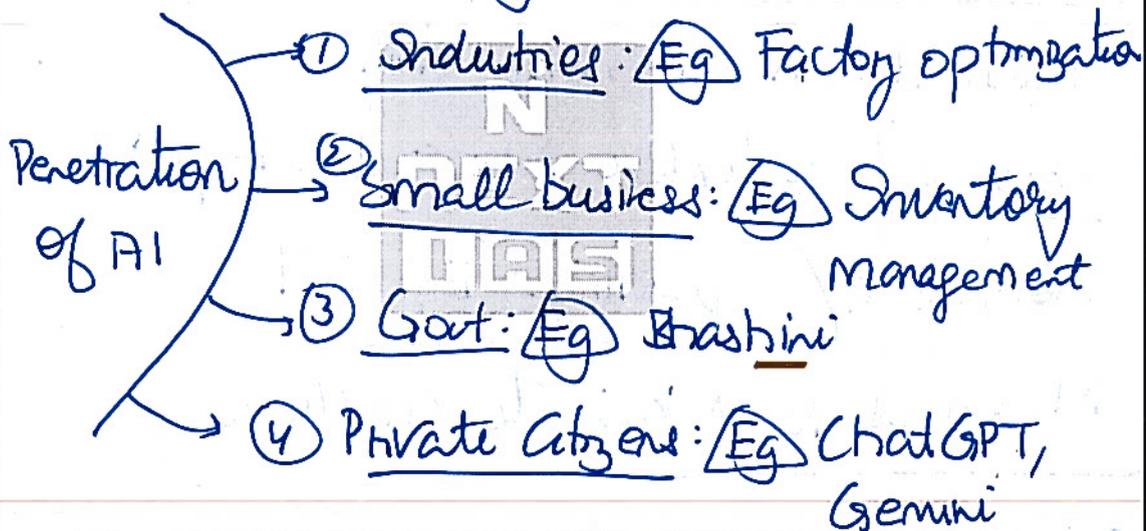
India must build on gains achieved to ensure tech-savvy & Amanibhar  
Bharat led by digital economy  
 (Hon'ble PM)

12.

जैसे-जैसे कृत्रिम बुद्धिमत्ता अर्थव्यवस्था के विभिन्न क्षेत्रों में प्रवेश कर रही है, वैसे-वैसे नौकरियों का खत्म होना एक वास्तविकता बनती जा रही है। रोजगार पर एआई के प्रभावों का विश्लेषण करते हुए, इस चुनौती से निपटने और रोजगार वृद्धि को बढ़ावा देने के उपाय सुझाएं। (उत्तर 250 शब्दों में दीजिए) 15 अंक

As artificial intelligence penetrates into various sectors of the economy, job losses are becoming a reality. Analysing the impacts of AI on employment, suggest measures to navigate this challenge and promote job growth. (Answer in 250 words) 15 Marks

World Economic Forum estimates that India's GDP can increase by USD 1.5 trillion just by proper adoption of artificial intelligence (AI).



### Impact of AI on Employment

#### I. Positive

- ① New Jobs: using AI (Eg) Coders, GCC
- ② High paying skilled employment (NASSCOM Report)
- ③ High Growth Rates: of employment & economy (WEF Report)



## II. Negative

- ① Loss of Jobs: due to disruption Potential of AI. (Eg) scribes, clerks, assistants
- ② Skewed Impact: higher in some sectors. (Eg) less in lawyers & judges.
- ③ Rise in structural unemployment: due to mismatch in available skills
- ④ Loss of talented labor: due to poor avenues of upskilling. (Eg) ITIs

## Measures to Navigate Challenge

### I. Minimize Job Losses

- ① Skilling: of all people (Sharda Prasad Committee)
- ② Collaborate: with private sector to ensure smoother transition.

(Eg) Monthly meeting of FICCI & govt

Factbox:  
Only 4.6% of Indian skilled  
(96% in South Korea)

③ Incentives: to companies to upskill people (Eg) Tax breaks

④ Best Practices: from other nations  
(Eg) Japan AI policy's human centrality

## II. Promote Job Growth

① Increase R&D: to 2% of GDP to  
create new jobs

② Promote labor intensive industries (Abid Hussain Committee)

(Eg) Textiles, leather

Factbox:  
India spends  
only 0.66%  
of GDP on R&D  
(3.39% by US)

③ Long term strategy: to create jobs

India must embrace AI & mitigate impact of AI's double-edged sword to lead world in 4<sup>th</sup> Industrial revolution & become a Knowledge economy.

13. भारत में फसल-उपरांत होने वाला नुकसान प्रतिवर्ष लगभग ₹1,52,790 करोड़ है। भारत में फसल-उपरांत होने वाली हानियों के लिए किस हद तक कृषि उत्पादों के परिवहन और विपणन में आने वाली बाधाओं को जिम्मेदार ठहराया जा सकता है? (उत्तर 250 शब्दों में दीजिए) 15 अंक

India's post-harvest losses amount to approximately ₹1,52,790 crore annually. To what extent can post-harvest losses in India be attributed to the constraints in the transport and marketing of agricultural products? (Answer in 250 words) 15 Marks

India wastes a large portion of its agricultural produce every year for a variety of reasons, contributing to India's myriad challenges. (Eg) Poor storage infra.

### Post Harvest Losses in India - Factors

#### I. Constraints in Transport & Marketing

① Poor transport: due to poor quality roads & last mile connectivity.

② Intra-transport losses: due to poor cold supply chain (Eg) Refrigerated trucks

③ Poor Market: Absence of truly unified national market.

(Eg) state-led APMC perform marketing

Factbox  
India loses 16% of its fruits in transit every year

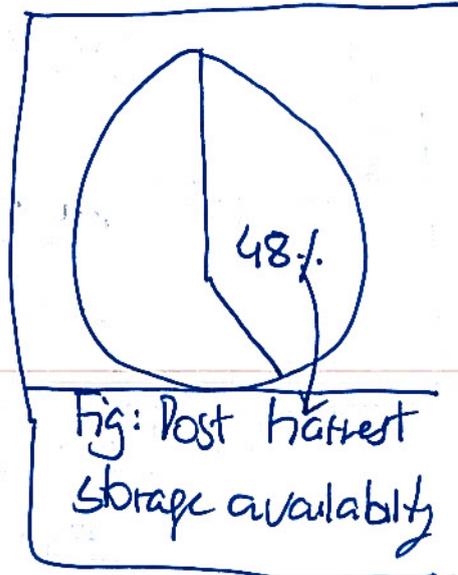
④ Farmer Abused: by private companies leading to higher losses.

However, India's post harvest losses also happen due to other factors.

II Storage: Lack of last-mile cold-storage facilities (Amind Subramanian Committee)

III Absence of Incentives:

for private players to enter & optimize supply chains. (Eg) Farm laws protest deterred investors



IV Poor Planning: due to govt apathy.

V Poor Use of Tech: to ensure longer life (Eg) Nuclear irradiation

VI High Transport Charges: (Eg) Rail freight

- Solutions
- ① Investment: in cold storage infra in each village (Sharda Kumar Committee)
  - ② Better logistical support: by building better roads (Arun Chakrabarty Committee)
  - ③ Build Unified National Market: Eg E-NAM (Committee)
  - ④ Provide Extension Services  
Eg NMAET (CNC Mishra Committee)
  - ⑤ Promote Tech Use: Ensure longer crop life
  - ⑥ Facilitate private Investment:  
Eg Mitcool Startup
  - ⑦ Capital expenditure: build durable assets (Kelkar Committee)

India must eliminate post harvest losses to promote Kisan led New India & ensure developed India by 2047.



14. भारतीय कृषि में प्रत्यक्ष और अप्रत्यक्ष सब्सिडी क्या हैं? इन सब्सिडी ने देश की फसल विविधता और कृषि अर्थव्यवस्था को किस प्रकार प्रभावित किया है? (उत्तर 250 शब्दों में दीजिए) 15 अंक

What are the direct and indirect subsidies in Indian agriculture? How have these subsidies impacted the cropping diversity and farm economy of the country?

(Answer in 250 words) 15 Marks

India spends more than 2 lakh crore rupees annually on various subsidies provided to farmers for agricultural stability. (Eg) PMKSY (crop insurance)

### Subsidies in Indian Agriculture

Direct Subsidies	Indirect Subsidies
<p>① <u>Cash transfers:</u> (Eg) PM KISAN Samman Nidhi (₹ 6000 annually in 3 equal installments)</p> <p>② <u>Other transfers:</u> (Eg) State level cash disbursement</p>	<p>① <u>Fertilizer:</u> (Eg) Price Controlled urea</p> <p>② <u>Free electricity</u> in many states</p> <p>③ <u>Interest subvention</u> (Eg) Kisan Credit Cards</p> <p>④ <u>Extension services</u> (Eg) Krishi Vigyan Kendras</p> <p>⑤ <u>MSP.</u> (Eg) Rice, wheat</p>

# Impact of Subsidies

## I. Cropping Diversity

① Promote Monocropping: due to skewed MSP (Chitale Committee). (Eg) Rice

② Hinders Diversification: due to no MSP (Eg) Millets

③ Dissuades Cultivation: (Eg) Low procurement for pulses.

④ Harms Crop Yield: due to excess inputs. (Eg) Fertilizer excess → soil acidity

## II. Farm Economy

① Disempowerment of farmers: become dependent on govt doles. (Eg) Loan Waiver (UjH Patel Committee)

② Skewed Use: (Eg) MLP

③ Farmer Suicides: (Eg) Crop failure due to climate change



Fig: 94% farmer don't get MSP

- Way Forward
- ① Empower farmers: with right subsidies & eliminate others  
(Eg) Electricity (Kelkar Committee)
  - ② Build Farm Resilience: via precise inputs. (Eg) PM PRANAM Scheme (Optimum fertilizer)
  - ③ Optimize MSP: Provide for pulses, millets (Shanta Kumar Committee)
  - ④ Build Resilience: (Eg) GM Crops for climate change
  - ⑤ Use Tech: (Eg) Precision agriculture, Drone didi Scheme
  - ⑥ Enhance Price Support: (Eg) PM Aasha Scheme
  - ⑦ Provide extension services:  
(Eg) Krishi Vigyan Kendras

Farmers must be RENEWED

(Respected, empowered, nurtured to

build a future ready Bharat)



15. भविष्य के अंतरिक्ष संचालन और मिशनों में पुनः प्रयोज्य प्रक्षेपण वाहनों की क्षमता पर चर्चा कीजिए। पुनः प्रयोज्य प्रक्षेपण वाहनों के विकास की दिशा में भारत की क्या पहल है? (उत्तर 250 शब्दों में दीजिए) 15 अंक  
 Discuss the potential of reusable launch vehicles in future space operations and missions. What are India's initiatives towards the development of reusable launch vehicles? (Answer in 250 words) 15 Marks

Reusable launch Vehicles are defined as launch vehicles that can be partially or fully reused after launch.

Eg SpaceX "dragon" spacecraft.

Potential of RLVs

① Reuse: of launch vehicles for future missions.

② Lower Cost: due to such reuse of partial or full rocket.

③ Higher Number of Launches: due to lower interval b/w launches

④ Higher Access: to space for nations

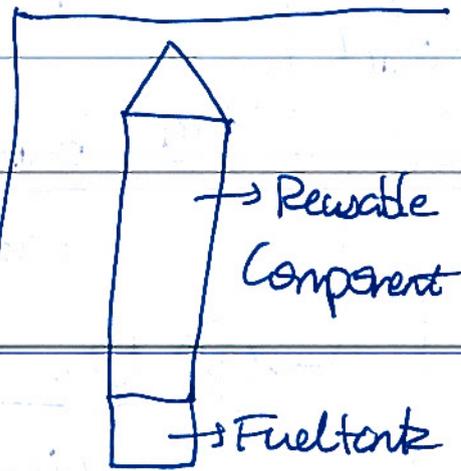


Fig: Reusable Launch Vehicle (RLV)

⑤ Facilitate inter-planetary missiles.

Ⓔg Venus, Mars with lower fuel needs

India's Initiatives

① Building Reusable launch Vehicles: to

power future Indian space missions.

Ⓔg RLV 

② Pushpak Rocket: as reusable rocket

③ Facilitate Private Investment: via Indian

Space Policy, 2023 to crowd in private expertise. Ⓔg Skyroot aerospace

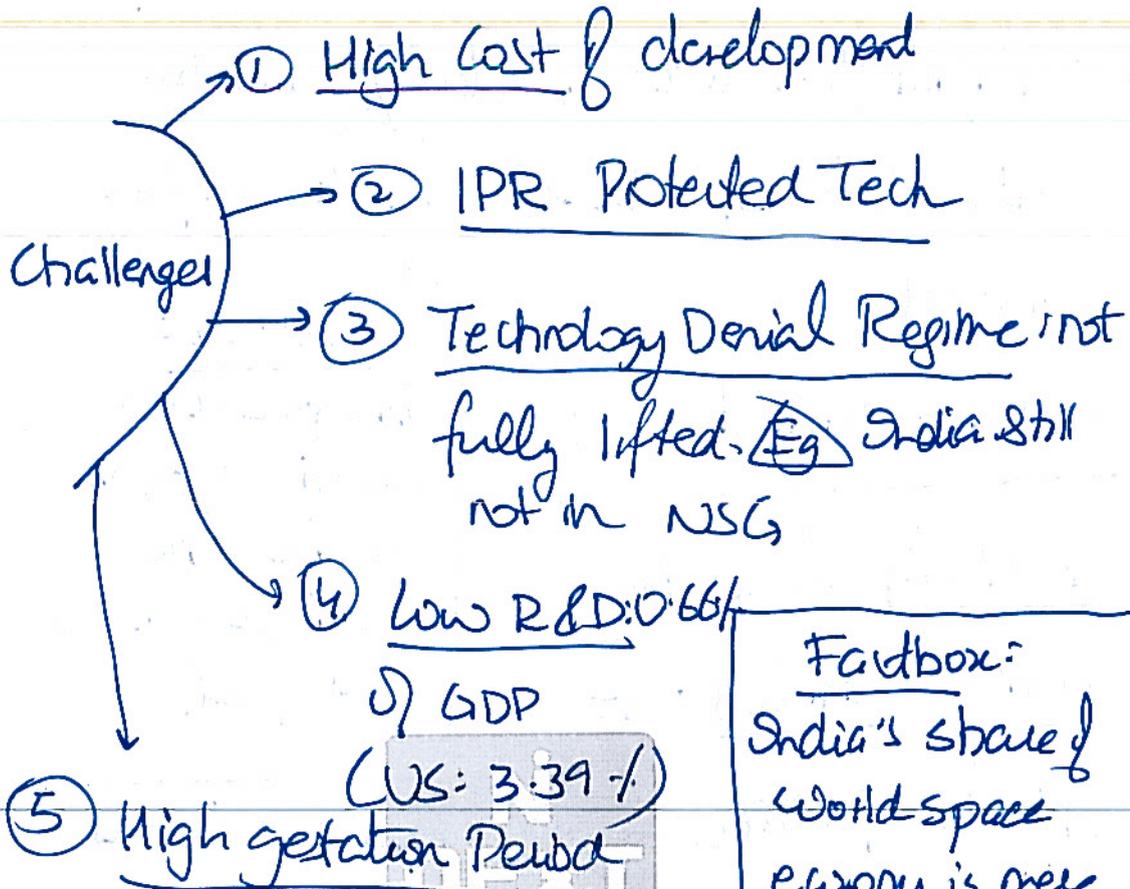
④ Joined Artemis Accords: to benefit

from collaboration between space agencies. Ⓔg ISRO-JAXA (Japan)

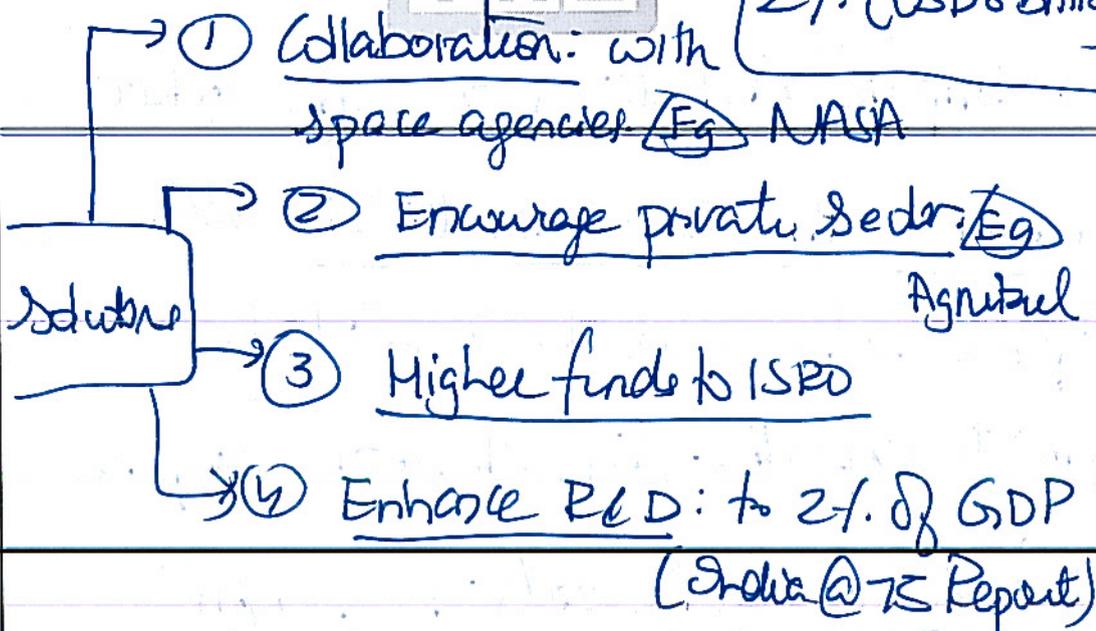
⑤ Liberal FDI limits: ~~49%~~ 49% to build rockets

Factbox:

Dragon uses semi-liquid engine with refined kerosene as fuel



Factbox:  
 India's share of world space economy is mere 2%. (USD 8 billion)

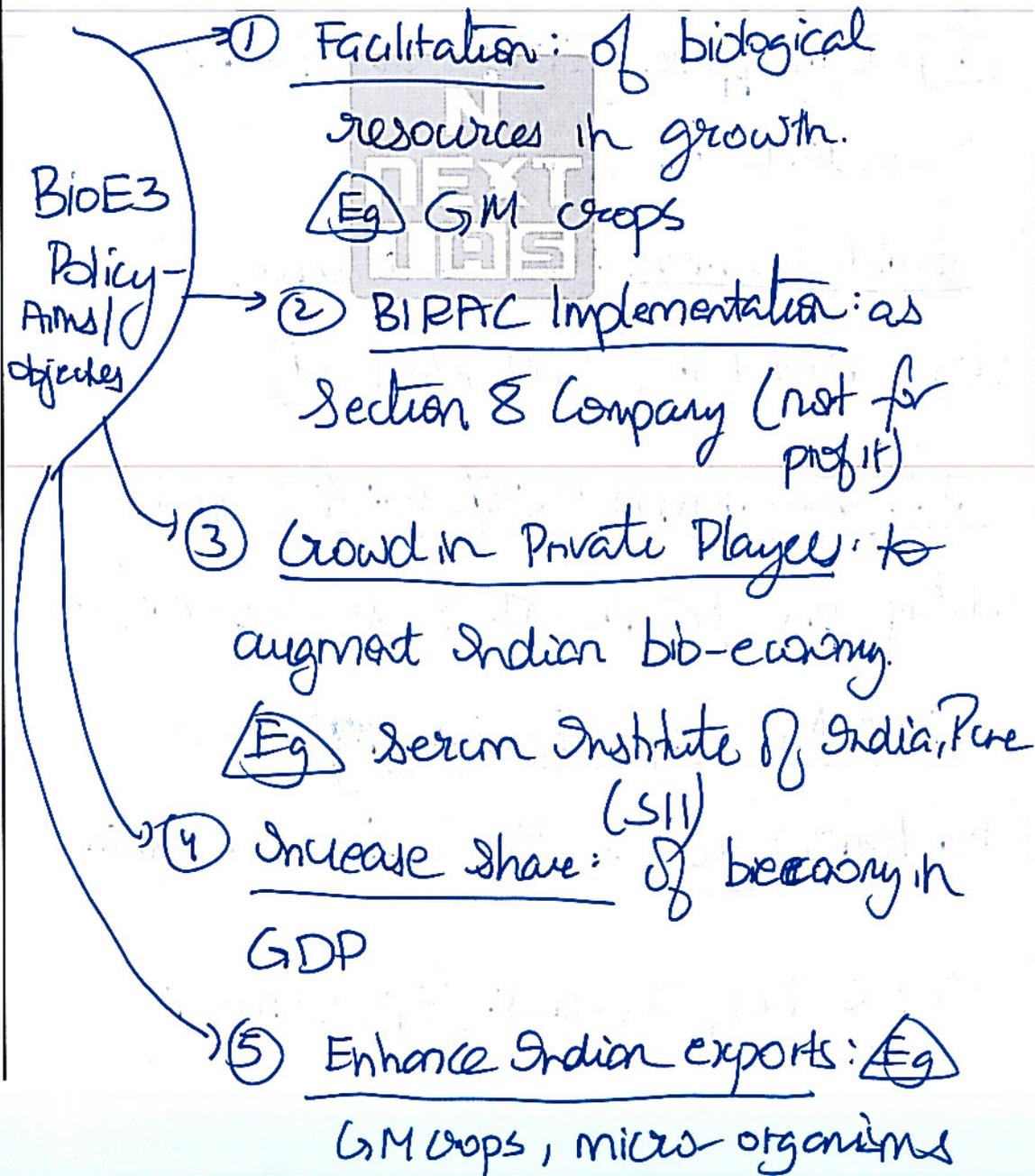


Bharat must build PLU to become key player of space economy & ensure "space autonomy" (ISRO ex chairman K. Sivan)

16. हाल ही में शुरू की गई BioE3 नीति के लक्ष्यों और उद्देश्यों की व्याख्या कीजिए। यह नीति, अर्थव्यवस्था के "हरित विकास" को सुनिश्चित करने में किस प्रकार सहायक हो सकती है? (उत्तर 250 शब्दों में दीजिए) 15 अंक  
 Explain the aims and objectives of the recently launched BioE3 policy. How can the policy help in ensuring "green growth" of the economy? (Answer in 250 words) 15 Marks



Bio-economy is defined as the use of biological and biotechnology resources to promote growth in a modern economy. Eg Gene editing

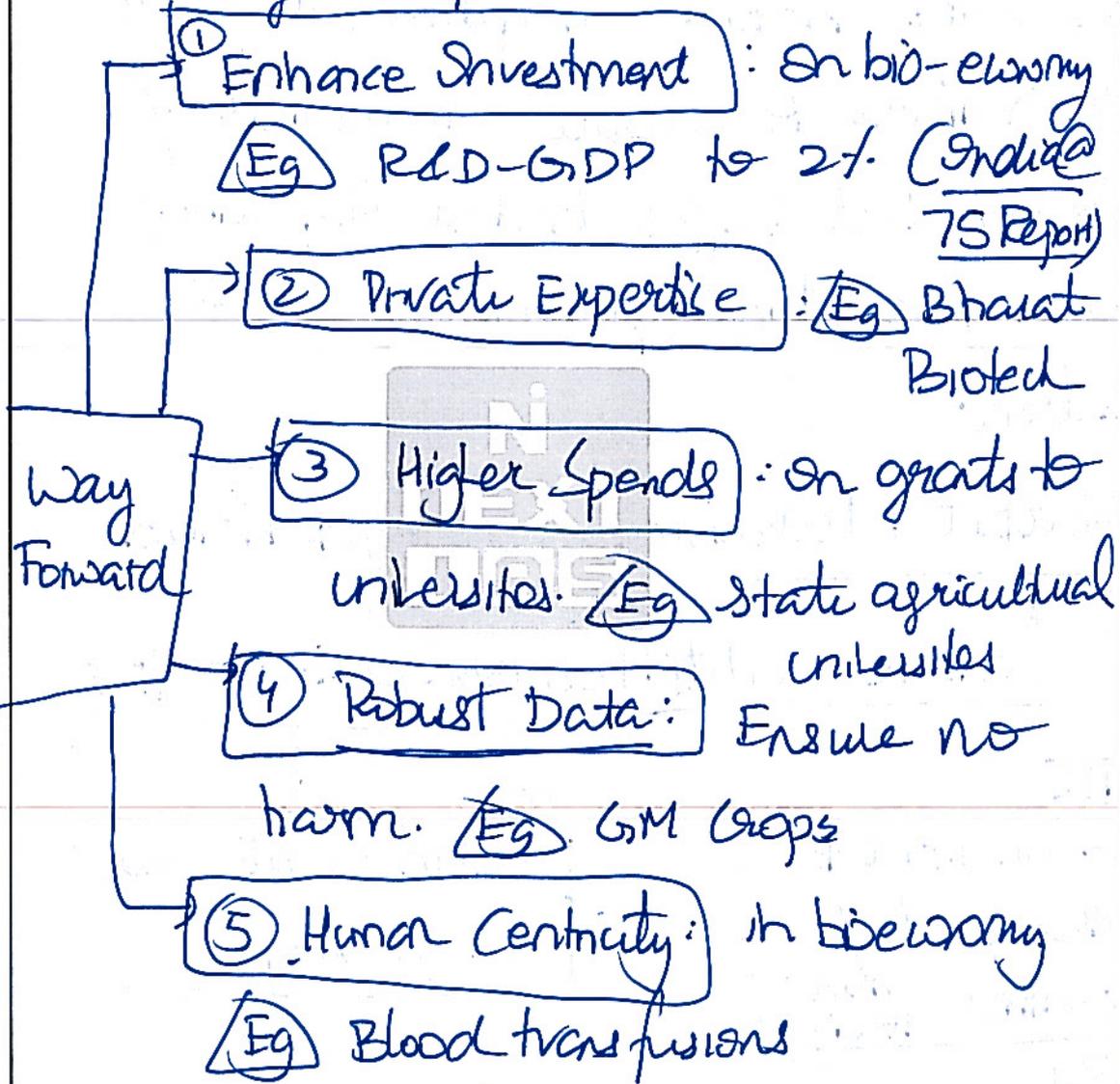


## BioE3 Policy and Green Growth

- ① Environment friendly Report: due to sustainable use of resources. (Eg) Gene editing to create resilient crops
- ② Use of biological Resources: Optimally. (Eg) Oilzapper (TERI made) to bio-remediate oil spills
- ③ Build Resilience: in agriculture. (Eg) DMH-11 (GM Mustard)
- ④ Enhance human welfare: (Eg) Gene editing pig for heart Xenotransplantation
- ⑤ Fight New Age Diseases: (Eg) New bacteriophage to kill resistant bacteria
- ⑥ New Drug Therapies: (Eg) CAR-T

Cells to fight certain concerns

⑦ Lower Carbon Emissions: (Eg) Use ethanol blending in fuels.



New BioE3 Policy can be a game changer & stimulate Indian economy in line with Jai Jawan, Jai Kisan and Jai Anusandhan (Innovation)

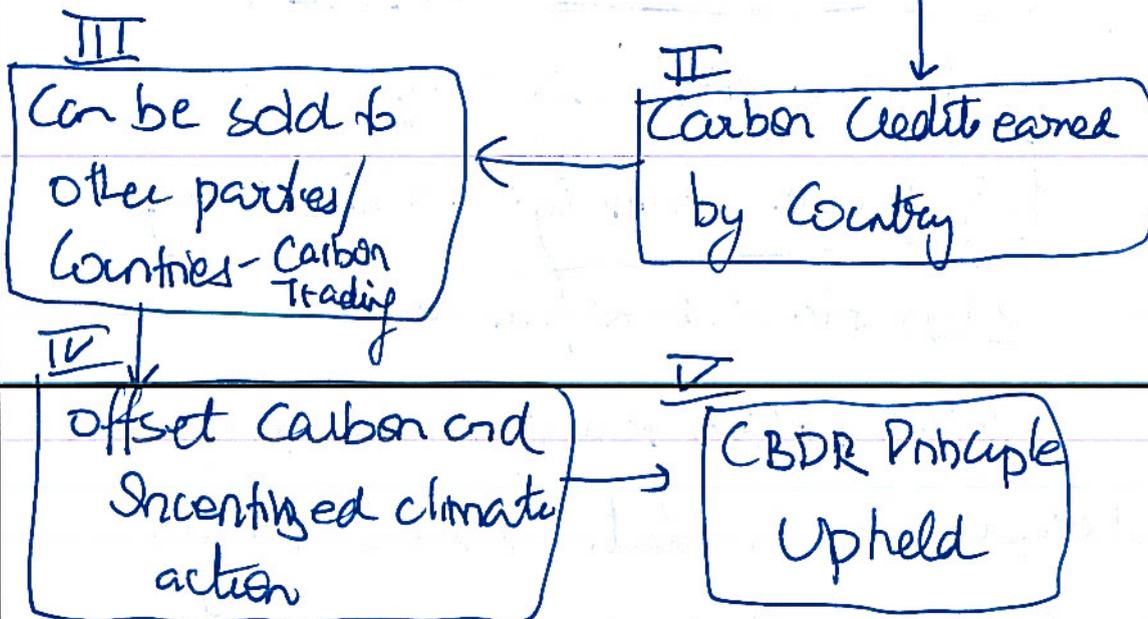


17. क्योटो प्रोटोकॉल के अंतर्गत विभिन्न बाजार तंत्र क्या थे? पेरिस जलवायु परिवर्तन समझौते का अनुच्छेद 6 क्या है? नेट-शून्य लक्ष्यों को प्राप्त करने में वैश्विक कार्बन बाजार के महत्व की व्याख्या कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक  
 What were the various market mechanisms under the Kyoto Protocol? What is Article 6 of the Paris Climate Change Agreement? Explain the significance of the global carbon market in achieving net-zero targets. (Answer in 250 words) 15 Marks

International environment initiatives like Kyoto Protocol conceptualized market mechanisms to ensure advancement of Common but Differentiated Responsibility as a fundamental principle of climate action.

Market Mechanisms Under Kyoto Protocol

① Carbon Credits: Carbon emissions offset



② Annex 2 Countries: Must undertake

Carbon emission reduction norm.

(Eg) US, Germany

Article 6, Paris Agreement

① Carbon Credit Trades: as per Carbon Credits earned residual carried over of Kyoto Protocol

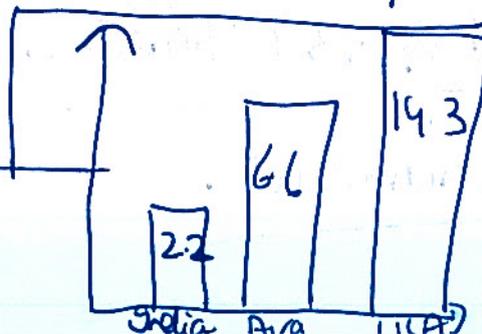
Factbox:  
World on path to 1.8-2.5°C increase in temperature  
(Emissions Gap Report)

② National Trade: of CC as per domestic law. (Eg) CCTS scheme in India under Energy Conservation Act, 2001

③ International trade: as per Paris Rulebook (finalised in COP-28)

④ Flexible Approach: to advance global commitments to climate action as per CBDR

Fig: Average per capita emission



## Significance of Global Carbon Market

- ① Concerted Action: to climate action  
Eg Carbon reductions in India in  
Steel sector
- ② Flexible Mechanism: ensure trading &  
management of Carbon Credits
- ③ Climate funds: Transfer as per CC  
trading.
- ④ Advance Climate Targets: of less than  
 $2^{\circ}\text{C}$  &  $1.5^{\circ}\text{C}$  preferably (Paris Agreement  
2015)

The world must operationalize  
Carbon Market & Art 6 to ensure

Sustainable development (Brundtland Report)

SDG-13 (Climate action) & meet India's

Panchsheel.



18. जलवायु परिवर्तन और तेजी से हो रहे शहरीकरण ने भारत में गर्मी की लहरों के प्रभाव और आवृत्ति को तीव्र कर दिया है। चर्चा कीजिए। हीट एक्शन प्लान (एचएपी) भारत में हीटवेव प्रबंधन को कैसे बेहतर बना सकते हैं?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

Climate change and rapid urbanization have intensified the impact and frequency of heat waves in India. Discuss. How can Heat Action Plans (HAPs) improve heatwave management in India?

(Answer in 250 words) 15 Marks

World Bank estimates 150-200 million Indians will be affected by heat waves annually with cascading negative consequences. Eg 2023 North India heatwave.

**Heat Wave**: Period of unusually warm temperatures with different criteria for plains, coastal areas & hilly regions.

**Intensified Heat Waves in India**

I. Climate change:

① Rising temperatures: due to global warming.

(Eg) 1.8-2.4°C increase in temp as per current emissions

(Emissions Gap Report)

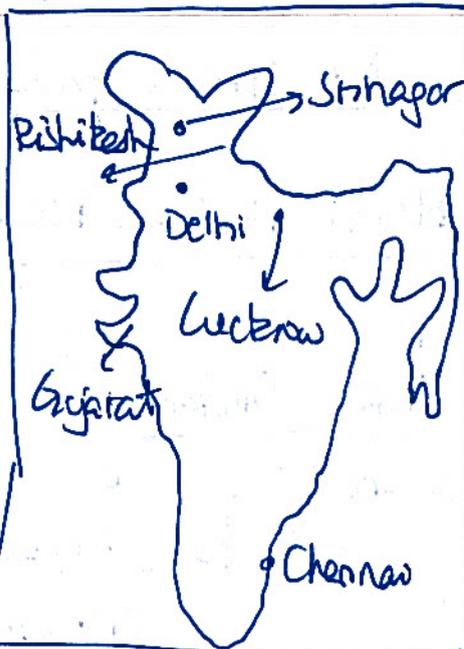
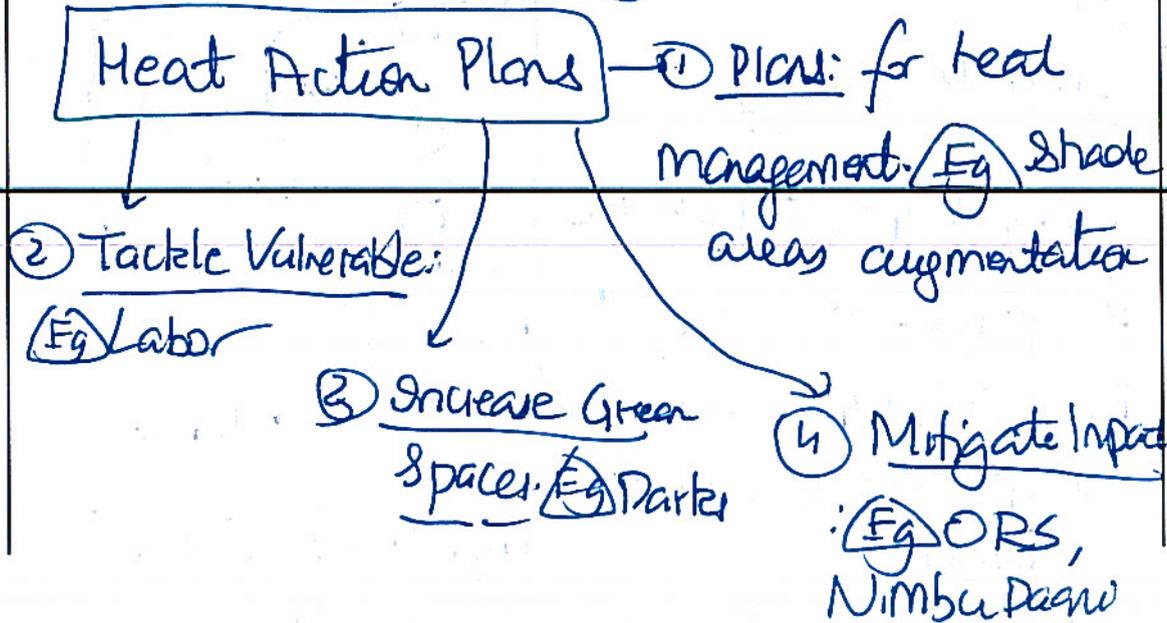


Fig: Heat Waves in India

- ② Variable Monsoon: (Eg) El Niño
- ③ Heat Domes: Area of low pressure of anti-cyclonic conditions persisting over

II. Rapid Urbanization

- ① Heat Island Effect: due to higher emissions. (Eg) Factory, vehicles
- ② Deforestation: Reduces tree controlled climate. (Eg) Reduced transpiration
- ③ Concretization: Traps heat & lowers groundwater filtration
- ④ No Green spaces: (Eg) Outer Delhi Areas



## HAP → Improved Heatwave Management

- ① Mitigation: of heat wave impact.  
 (Eg) Reduce outdoor work (12PM-4PM)
- ② NIDM study: states HAP reduces heat wave economic impact (Eg) Less illness like heat stroke
- ③ Help Vulnerable sections: (Eg) Labor, children
- ④ NDMA Guidelines: Mandate district HAP for all districts
- ⑤ Better targetted Approach: via evidence/data approach: (Eg) HW mapping  
 India must follow proactive approach to tackle heat waves holistically via Sendai Framework as guiding principles.

### Fact box:

India will lose 3-10% GDP annually by 2100 due to climate change

FRBI Study



19.

बाह्य सरकारी एवं गैर-सरकारी तत्वों द्वारा भारत की आंतरिक सुरक्षा के लिए उत्पन्न खतरे क्या हैं? इन खतरों से निपटने के लिए आवश्यक रणनीतियों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

What are the threats posed to India's internal security by external State and non-state actors? Discuss the strategies necessary to tackle these threats. (Answer in 250 words) 15 Marks

Recent terrorist attack in Pahalgam (22 May 2023) killing 26 tourists & 1 local highlighted immense challenges faced by India from state & non-state actors. Eg Terror groups

Threats to India's Security

I. State Actors

① Border Clashes:

Eg Galwan, 2020 (with PRC)

② Cross-border Terror: via

Pakistan Support.

Eg Pulwama, 2019

③ Hostile Neighbor: Eg Bangladesh post ex DM oustee

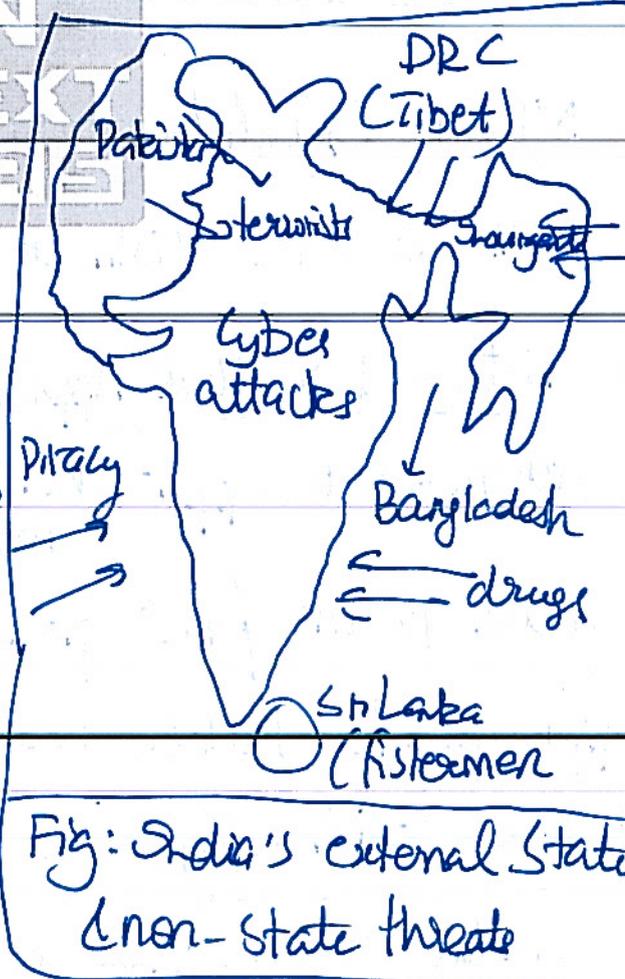


Fig: India's external State & non-state threats

④ Smuggling: of drugs & human trafficking

△ Eg Myanmar border

⑤ Fishermer arrests:

by Sri Lanka

⑥ PRC Closeness: deterring

Indian interests. △ Nepal

Fact box:

1 drug addict enters Singapore  
OPD every 13 mins

Indian Express Investigation

II. Non-State Actors

① Terrorist Infiltration: △ Eg Uru terror attack, 2016

② Piracy: △ Eg Indian merchant ships near gulf of Aden

③ Smugglers: △ Eg NE border

④ Cyber attacks: or cyber slavery

△ Eg Cyber slavery in Cambodia

Strategies Necessary

① Build Comprehensive National Power:

△ Eg Tech advancement, GDP growth

- ② Modernize military: Improve tooth-nail ratio (Shetka Committee) & build integrated theatre Commands (Kargil Review Committee)
- ③ Build deterrence: Eg. of Sindoor as targeted, precise and non-escalatory strikes on terror infra
- ④ Strategic Restraint: with Nepal & Bangladesh for diplomatic solutions
- ⑤ Tackle Piracy: (Eg) Naval patrols, IOB-IFC
- ⑥ Cyber Protection (Gulshan Rai Committee)  
(Eg) Cyber education, Op Chakora
- ⑦ Defensive Offence: with PRC to maintain Indian interests. (Eg) Defence modernization

India must also integrate technology (Rama Rao Committee) to competently detect & eliminate its security challenges.



20.

वामपंथी उग्रवाद (एलडब्ल्यूई) भारत की आंतरिक सुरक्षा के लिए चुनौती बना हुआ है। देश में वामपंथी उग्रवाद के मुद्दे को हल करने के लिए भारत सरकार के दृष्टिकोण पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

Left-wing extremism (LWE) continues to remain a challenge to India's internal security. Discuss the Government of India's approach towards solving the issue of LWE in the country.

(Answer in 250 words) 15 Marks

India has taken a solemn pledge to eliminate left wing extremism (LWE) by 2026, seen recently in killing of Basavaraju (General Secretary of LWE party)

However: LWE continues to remain a challenge for India

① Maoist strongholds: in several states

⊆ Eg Chhattisgarh

② Tactical Retreat: instead of strategic surrender of Maoists.

③ Poor development: of LWE affected areas. ⊆ Eg Bastar (Chhattisgarh)

④ Difficult Terrain:

⊆ Eg Dense forest in Jharkhand



## GoI Approach to Tackle LWE

### I. Development Approach:

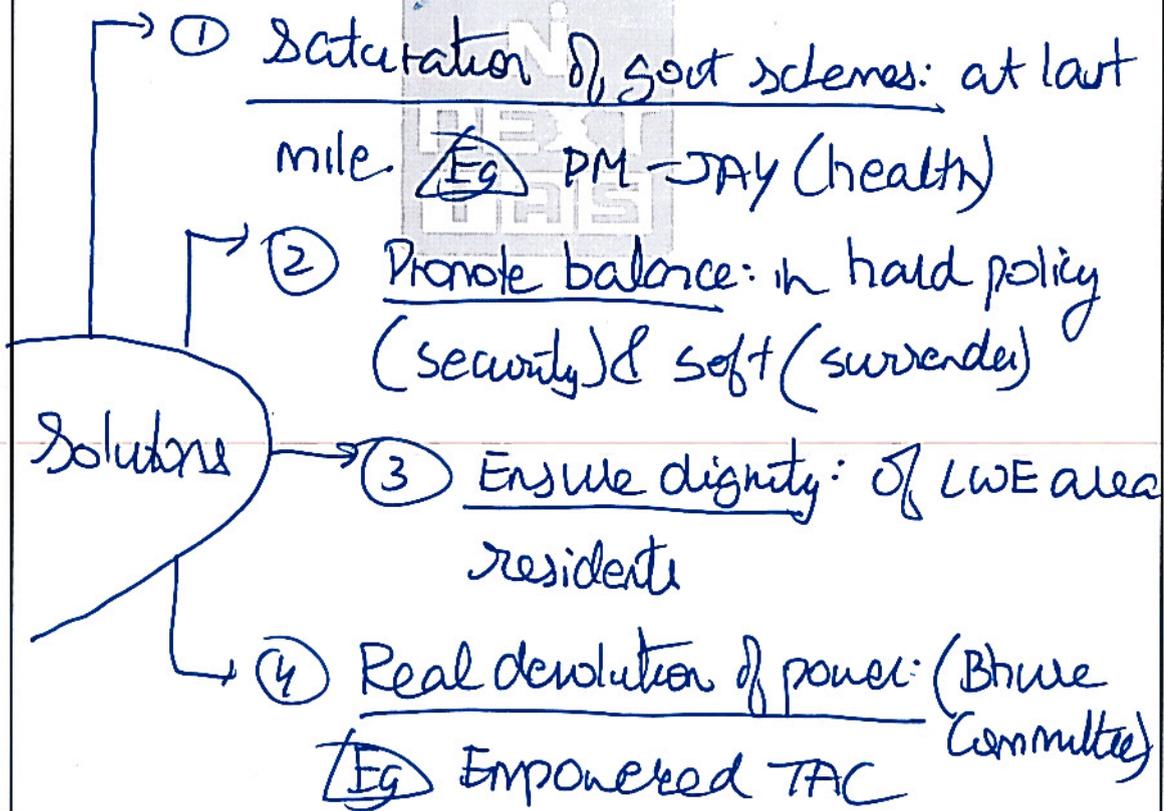
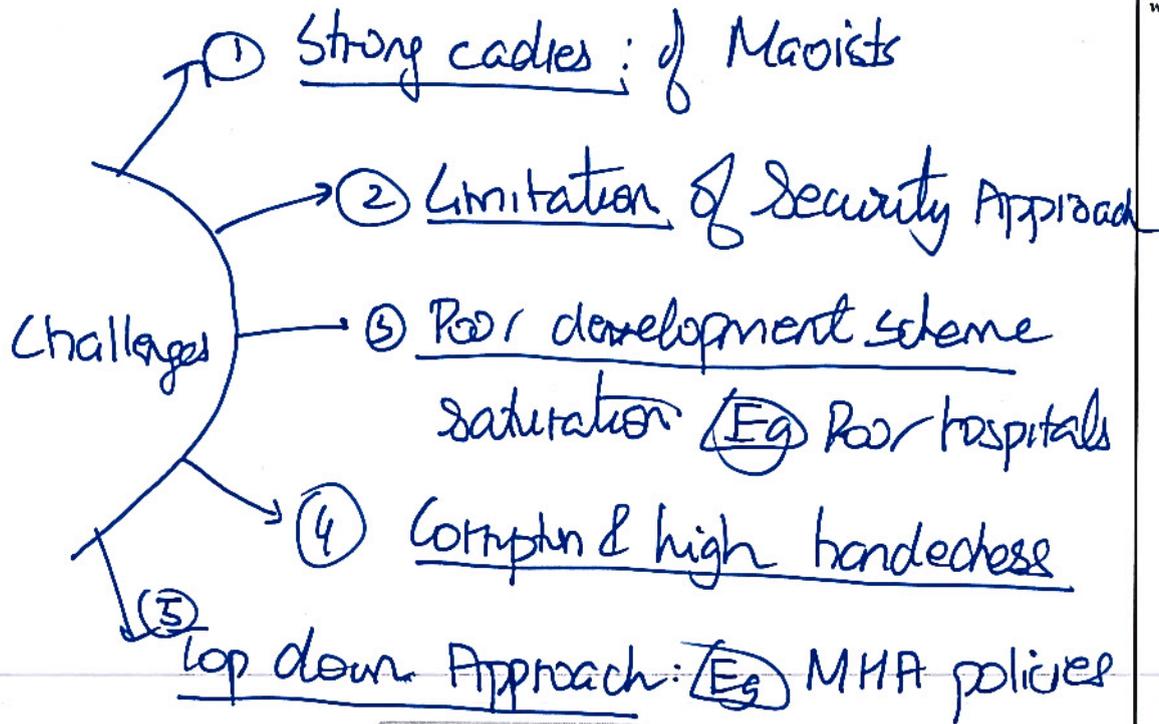
- ① Saturation of govt schemes. (Eg) PDS
- ② Last mile development  
(Eg) Aspirational district program
- ③ Govt services:  
(Eg) Road Connectivity Scheme, Eklaya Schools (Education)
- ④ Real devolution of Power: V Schedule Gram Sabha



Fig: Red Corridor in India

### II. Security Approach

- ① Max Pressure: On LWE people
- ② Special forces: (Eg) Greyhounds (ATP)
- ③ Surrender cum Rehabilitation Scheme:



India must follow SAMADHAN

policy to eliminate LWE by winning hearts & minds of people living in LWE Areas  
(ex-DM Manmohan Singh)

# NEXT IAS

Space for Rough Work

# **NEXT IAS**

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*Space for Rough Work*

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# NEXT IAS

## IMPORTANT INSTRUCTIONS

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

### **DONT'S**

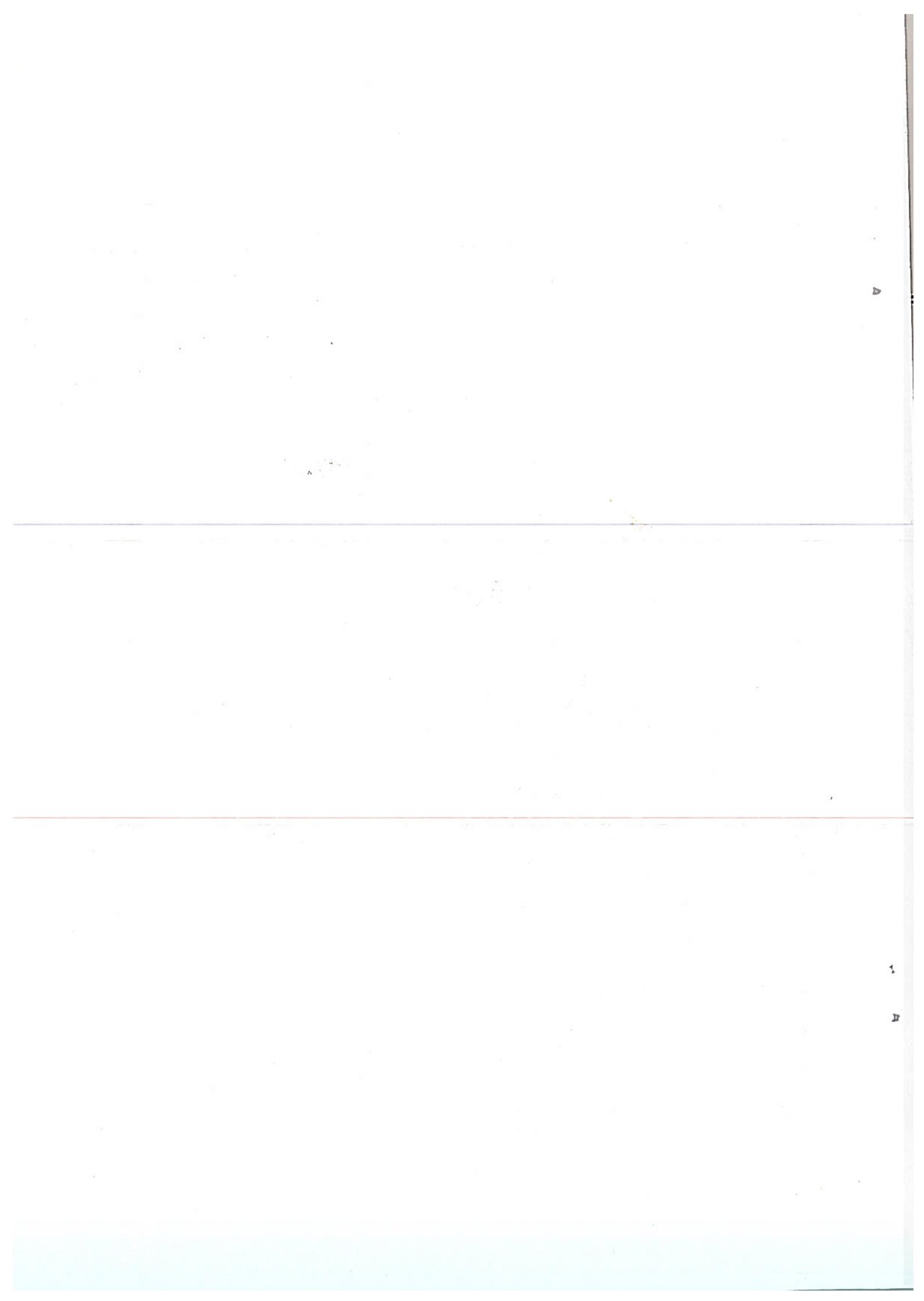
1. Do not write your name or registration no. anywhere inside this Question-cum-Answer Booklet.
2. Do not write anything other than the actual answers to the questions anywhere inside your QCA Booklet.
3. Do not tear off any pages from your QCA Booklet, if you find any page missing do not fail to notify the supervisor/invigilator.
4. Do not leave behind your QCA Booklet on your table unattended, it should be handed over to the invigilator after conclusion of the exam.

### **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.

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1. Scan the QCA booklet properly. We suggest the uses of the app CAM scanner (Scan QR code in page 2) based on our previous experiences.
2. Please scan the QCA booklet in ample light. Copies scanned under moderate light can hamper evaluation quality.
3. Any page/pdf having shadow needs to be rescanned. Please make sure that the pdf that you upload is as clean as possible.
4. **Candidates not using the QCA booklet** must mention their details on the front page. And leave the next page blank for the macro comments. It must be understood that the answer should start from Page no. 3 in of the scanned pdf.
5. Candidates not using the QCA booklet must follow the sequence of the answer as per the question paper.
6. Please check the sequence of the answer and total number of pages in the scanned version. Make sure it is in consonance with the physical version of the same.



## NEXT IAS

<b>महत्वपूर्ण निर्देश</b>	
अभ्यर्थियों को निम्नलिखित निर्देशों को ध्यानपूर्वक पढ़ना चाहिए। किसी भी निर्देश का उल्लंघन करने पर दण्डित किया जा सकता है।	
<b>क्या न करें-</b> <ol style="list-style-type: none"> <li>1. इस प्रश्न-सह-उत्तर पुस्तिका के भीतर कहीं भी अपना नाम या पंजीकरण संख्या न लिखें।</li> <li>2. अपनी QCA पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तरों के अलावा कुछ भी न लिखें।</li> <li>3. अपनी QCA पुस्तिका से कोई भी पृष्ठ न फाड़ें, यदि आपको कोई पृष्ठ गायब लगे, तो पर्यवेक्षक/निरीक्षक को सूचित करना न भूलें।</li> <li>4. अपनी QCA पुस्तिका को अपनी टेबल पर न छोड़ें, परीक्षा समाप्त होने के पश्चात इसे निरीक्षक को सौंप देना चाहिए।</li> </ol>	<b>क्या करें-</b> <ol style="list-style-type: none"> <li>1. कवर पृष्ठ पर दिए गए निर्देशों को ध्यान पूर्वक पढ़ें और उनका सख्ती से पालन करें।</li> <li>2. QCA पुस्तिका के कवर पृष्ठ पर दिए गए स्थान पर अपना पंजीकरण नंबर और अन्य विवरण लिखें।</li> <li>3. स्पष्ट और पठनीय तरीके से लिखें। खराब/अपठनीय लिखावट में न लिखें।</li> <li>4. रफ नोट्स या गणना के लिए, इस पुस्तिका के अंतिम दो खाली पृष्ठों का उपयोग किया जाना चाहिए। रफ नोट्स को बाद में क्रॉस कर देना चाहिए।</li> <li>5. यदि आप किसी कार्य को रद्द करना चाहते हैं, तो उस पर अपना पेन चलाएं या उस पर "रद्द" लिखें, अन्यथा उसका मूल्यांकन किया जा सकता है।</li> <li>6. परीक्षा हॉल छोड़ने से पहले अपनी QCA पुस्तिका व्यक्तिगत रूप से निरीक्षक को सौंप दें।</li> </ol>

### ऑनलाइन सुविधा का लाभ उठाने वाले अभ्यर्थियों के लिए विशेष अनुरोध

1. QCA पुस्तिका को ठीक से स्कैन करें। हम चाहेंगे कि आप स्कैनिंग के लिए कैमस्कैनर ऐप (CAM SCANNER) का प्रयोग करें। (यह कोई प्रमोशन नहीं है)।
2. कृपया QCA पुस्तिका को पर्याप्त रोशनी में स्कैन करें। कम रोशनी में स्कैन की गई पुस्तिकाएं, उनके मूल्यांकन की गुणवत्ता को बाधित कर सकती हैं।
3. स्कैन के दौरान छायी वाले किसी भी पृष्ठ/पीडीएफ को फिर से स्कैन किया जाना चाहिए। कृपया सुनिश्चित करें कि आपके द्वारा अपलोड की गई पीडीएफ यथा संभव स्पष्ट हो ।
4. QCA पुस्तिका का उपयोग नहीं करने वाले उम्मीदवारों को अपना विवरण पहले पृष्ठ पर देना चाहिए और मैक्रो टिप्पणियों के लिए अगला पृष्ठ खाली छोड़ दें। यह समझना चाहिए कि उत्तर स्कैन की गई पीडीएफ में पृष्ठ नंबर 3 से शुरू होना चाहिए।
5. QCA पुस्तिका का उपयोग नहीं करने वाले उम्मीदवारों को प्रश्नपत्र के अनुसार उत्तर के अनुक्रम का पालन करना चाहिए।
6. कृपया स्कैन किए गए संस्करण में उत्तर के अनुक्रम और कुल पृष्ठों की संख्या की जाँच करें। सुनिश्चित करें कि यह उसी के भौतिक संस्करण के अनुरूप है।