

NEXT IAS

MAINS TEST SERIES 2.0 - 2025 (FLT)

(To be filled by candidate)

TEST CODE : FLT2507Name of Candidate: Muhammed Swahit A Mobile No. [REDACTED]Roll No. : Start Time 12 pm End Time 3 pmDate of Examination: 28-7-25 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**

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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MARKING SCHEME *			
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



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

India's manufacturing Sector still contributes 14-15% of GDP even after Make in India initiative from 2015.

Reasons for its low realisation of potent

① Dwarfism - 70% of MSMEs remain as dwarfs.

② High effective cost of production

✍ Effective cost of production of a 100₹ mobile
China = ₹79
India = ₹92 (Eo. sweep).

③ Regulatory cholesterol (Eo. su)

✍ High entry & exist barriers, Govt Cost

④ Lack of available finance

✍ In 2019, Indian startups raised 14 bn\$
Chinese = 34 bn\$.

⑤ Under utilisation of PLI

70% of PLI funds for Semiconductors remain unutilised.

Measures required

I GDP growth

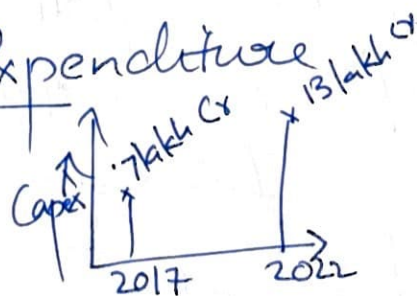
① Focus on network products (Eo.Su)

Make Mobile, Textiles.

② Favourable FTAs

Renegotiate India ASEAN FTA.

③ Promote Capital Expenditure



II Job creation.

① Focus sectors with

Employment elasticity

Textiles & Leather (Eo.Su)

② Skilling initiatives

PMKVY.

Commercialisation of agriculture through FPI should be explored for job creation as well as rural prosperity

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

Candidates must write on this side



India has 2700 unicorns in 2022 marking one of the hotspots of Global Startup growth (Ew/Sur).

Challenges of Lack of innovation.

① Low GIERD to GDP

Eg 0.6-0.7% of GDP in India.
China = 2.1% of GDP.

② Lack of Scalability

Eg Low issue of dwarfism in Indian Startups.

③ Low Academia-Industry connect

Eg India ranks 40th in Global Innovation Index.

④ Dominance of unorganised Sector

Eg 95% dominance in MSME with

42% Exports.

Measures required

I Short term

- ① Capacity building
 ↳ Atal Tinkering Labs
- ② Hand holding of Startups
 ↳ Executive MBAs for Startups entrepreneurs

II Long term

- ① Incentivise Innovation
 ↳ Kravens model.
- ② Infuse Digital public infrastructure
 ↳ India Chain, Open APIs.
- ③ Global Collaboration.
 ↳ India has 1700 Global Capacity Centres.

Despite these issues for 45% of Indian startups utilise Deep AI (NASSCOM) underlying its transformative nature.



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 कमियाँ हैं? प्रणाली में सुधार के लिए उपाय सुझाएँ।

(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 5.2 lakh
PDS shops serving food of worth
1.3 lakh Crores across the
country covering 67% of population.

Deficiencies in the System

I Availability

① Leakages in PDS.

eg 70% leakages in some states
(Shanta Kumar)

② Cereal Centric nature

eg Micro nutrient deficiencies

Stunting - 37%

Wasting - 18% (NFHS-5).

② Accessibility and Affordability

① Skewed distribution.

eg Tribal deaths due to hunger

② Exclusion errors

eg 4adhar failures leading to hunger

③ Quality & Stability

① Low quality food grains

eg 'First in first out' leading to
loss of quality ~~old~~

Suggested measures

① Limit NFSA to bottom 20%.
(Shanta Kumar Comm).

② Diversity PDS baskets

eg Millets, fruits etc..

③ DBT Schemes to replace PDS.
- more choices
- less leakages.

④ Promotion of Citizen audits

eg Gram Sabha to ensure quality

PDS should be made
more targetted based on Census and
JAM Trinity to address leakages
and fiscal squeeze

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

Digital agriculture mission helps to improve the productivity of Indian agriculture by promoting mechanisation & Extension

→ Agriculture extension

eg. Current 48% against 54% in China

Components of Digital agriculture mission.

→ Better market intelligence

eg. KISAN app

→ Climate & weather forecasts

→ Digitisation of agricultural markets

eg. e-Nam

→ Digitalised procurement

eg. e-warehousing.

Benefits in farmer's welfare

① Better price realisation.

eg Connected APMCs.

② Digitisation of records

eg Better Credit

③ Reduced leakages of welfare.

eg JAM trinity for DBT.

④ Reduced Climate Vulnerabilities

eg Early warning measures.

⑤ Agricultural Insurance

eg Doones used under PM FASAL.

⑥ Better fertiliser and pesticide usage

eg Soil health Card Scheme.

As agriculture holds 45% labour, agricultural prosperity is the primary goal to achieve Viksit Bharat, 2047.

5. एक्सिऑम-4 मिशन क्या है? एक्सिऑम-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, India's Subhanshu Shukla, team captain under Human Space mission participated in Axiom-4 mission of NASA.

Axiom-4 mission was a NASA mission through SpaceX rocket to International Space Station, where the astronauts performed zero gravity space & experiments in Low Earth Orbit of 300-400 kms.

Benefits & for Indian human space program

- ① Capacity building in real-time space environments.
- ② Ability to deal with externalities
 eg → Higher influx of radiations.

- ③ Interoperability with NASA
eg Indian Space mission with NASA Collaboration.
- ④ Confidence building eg India's novice mission to be launched by 2026.
- ⑤ Impetus for Indian Space Station by 2035
eg Antariksha as Indian Space Station
- ⑥ Ability to perform zero gravity experiments - Useful for Space mission.
- ⑦ Data to improve efficiency of Gaganyaan mission.
- ⑧ Scientific experiments

Axiom-4 played an important role in boosting the National morale to move the ambitious Gaganyaan mission to completion with confidence.

6.

परिशुद्ध औषधि की अवधारणा का परिचय दीजिए। दुर्लभ एवं विशिष्ट रोगों के उपचार में परिशुद्ध औषधि की भूमिका पर टिप्पणी कीजिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

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

Precision medicine involves medicines that target the specific cause of the disease instead of associated a rainbow of symptoms
 Eg CAR-T Cell therapy for Cancers.

Role of precision medicine for rare & specific diseases

① Address Anti microbial resistance (AMR)

Eg AMR Can cause a loss of 500bn\$ by 2030 (Lancet)

② Reduce associated allergic reaction

Eg No exit wounds for precision therapy

③ Reduced Cost

Eg ~~NO~~ Specific chemical Compositions.

④ Easier to prescribe
 Eg

⑤ Address the issues with Fixed drug Compositions

eg Govt banned 300 FDCs for health reasons.

⑥ Modern technology for drug delivery and diagnostics

eg mRNA and DNA based drug delivery

→ Costly technology

eg CAR-T Cell Costs 380000\$/dose

Challenges

→ Monopoly

eg Dominated by MNCs

→ Limited expertise

Wayforward

① Government investment in precision medicine eg PMBJP.

② Domestic Capacity building.

Precision medicine can play an important role in addressing Non Communicable diseases where India has the highest proportion facing NCDs.

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

Biodiversity Act, 2002 & Biodiversity regulation, 2025 were passed to comply with Nagoya & Cartagena protocols of UN CBD.
→ Access & benefit sharing (ABS)
Objectives → Sustainable use.
→ Protection of traditional knowledge.

Role in promoting ABS

① Creation of Institutions

- ① National Biodiversity Authority
- ② State Biodiversity Authority
- ③ Biodiversity Management Committee (BMC).

② Peoples Biodiversity registers under BMC for traditional knowledge

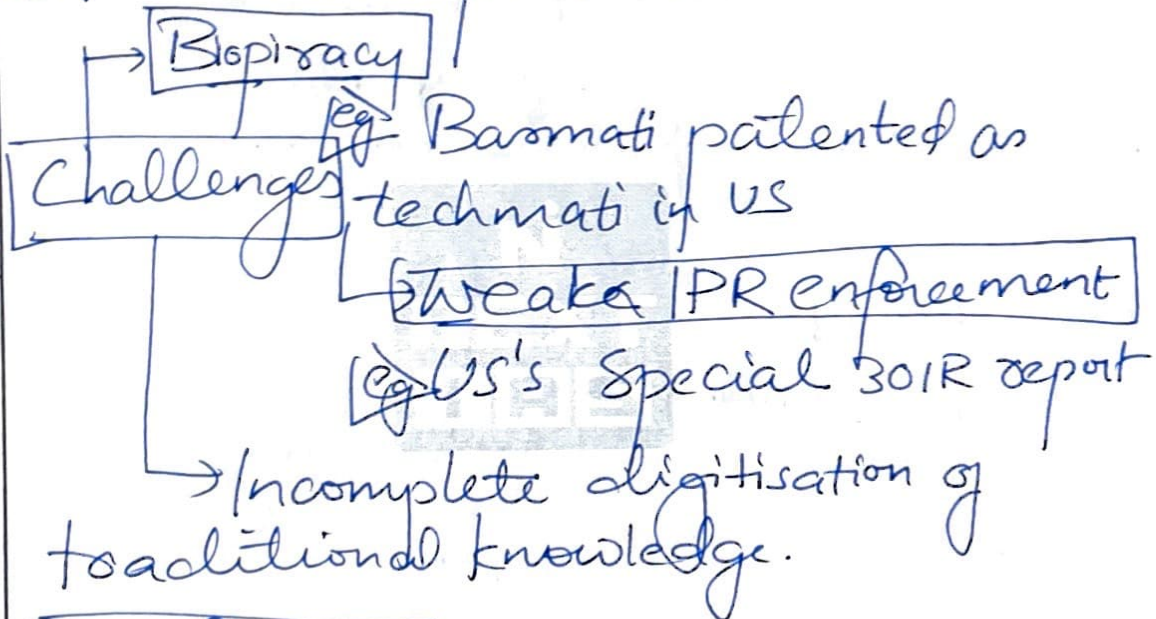
③ Traditional knowledge digital library — to prevent bio piracy.

④ Exceptions to AYUSH practitioners

⑤ Enforceable ABS agreements before commercialisation of products from Indian biodiversity.

⑥ Bilateral treaties for ABS.

⑦ Penalties for various violations.



Way forward

① Completion of Peoples Biodiversity register eg. Kolkata.

② Increased IPR Sanctions.

ABS should be promoted to ensure that traditional knowledge & biodiversity promotes inclusive growth.

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

Sendai framework, 2015
shifted the global focus from
disaster reduction to disaster risk
reduction through Prevention,
mitigation & preparedness.

Role of IMD

- Established under
Ministry of Earth
Sciences.

I Disaster preparedness

① Early Prompt Cyclone
Warnings & Vulnerability analysis

② Advanced prediction infrastructure

eg Supercomputers, etc.



- ③ Climate Change impact analysis.
 eg 52% rise in Cyclones in Arabian Sea.

II Early Warning System

- ① Monsoon rainfall prediction

eg Helps flood management.

- ② Predicts Variability of rainfall
 - La Niña & El Niño updates

eg Drought preparedness.

- ③ Databased Climate modelling

eg Trends in rainfall and Cyclones.

- ④ Interdepartmental Coordination

eg SMS based early warnings of INMA.

IMD also plays important role in Coordinating with Global bodies to preempt the intensity of various weather related events.

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

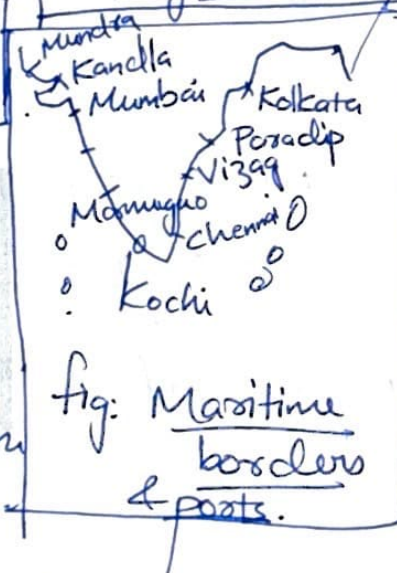
India has 7500 km coastline in mainland with Centrality in Indian Ocean.

Indian Ocean
1 lakh ships/year
12% of Global trade

Security Challenges in maritime sector

① Drug trafficking

eg. Op. Samudragupt
Confiscated ₹15000 crore drugs in Gujarat



② Terrorism and infiltration

eg. LeT terrorists during 26/11 Mumbai attacks.

③ Arms and Counterfeit Currencies & goods

eg. 200 minor ports to transport duty free goods.

④ Piracy - Longitudinal demarcation

of High Risk area close to India.

⑨ High insurance premium & conflicts.

⑤ Regional instabilities → Supply chain disruptions

⑩ Houthi attack on Red sea

Suggested measures

① Increased Interoperability between Coastal police, Coast guard & Navy.

② Cooperation with IOR countries.

⑩ MAHASAGAR initiatives

③ White Shipping agreements

⑩ To address militarisation

④ Increased Surveillance

⑩ Surveillance fleet of Coastguard.

Maritime challenges require Global Cooperation at its core, as & instabilities and rise in crime in neighbourhoods increases vulnerabilities in our Coastal areas.



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

No. of terror initiated incidents reduced from 800 to less than 200 between 2013-14 to 2022-23 where as stone pelting incidents reduced to zero in J&K (Home.Min).

OGWs & Proxy militant groups. as a serious threat

① OGWs can blend with the civilian population while providing a terror launch pad
- last affects traceability

② Proxy New proxy militant groups

eg The resistance front behind Pahalgam

③ Use of modern technology to fund terrorism

eg WazirX exchange block chain Exchange.

④ Rise of lone wolf attacks

eg. Burhan Wani.

⑤ Drug Black hole syndrome

eg. Drug trafficking to fund terror financing.

Strategies required

① Economic growth & employment

eg. 12.7 Core tourists visits in 2023.

② Better border Surveillance

eg. Mission Chakra vyuh of Army.

③ Development of grassroots democracy

eg. Election Restoration of Statehood.

④ Address source of terror finance

eg. FATF Sanctions on Pak.

Our long term measures should ~~in~~ target mode, median & mean of terror finance to address OGWs and Proxy groups disrupting development in Kashmir (Min. Home),

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

Long term multiplier
of Infrastructure to GDP is 2.45
Underlying its role in growth &
development. (RBI).

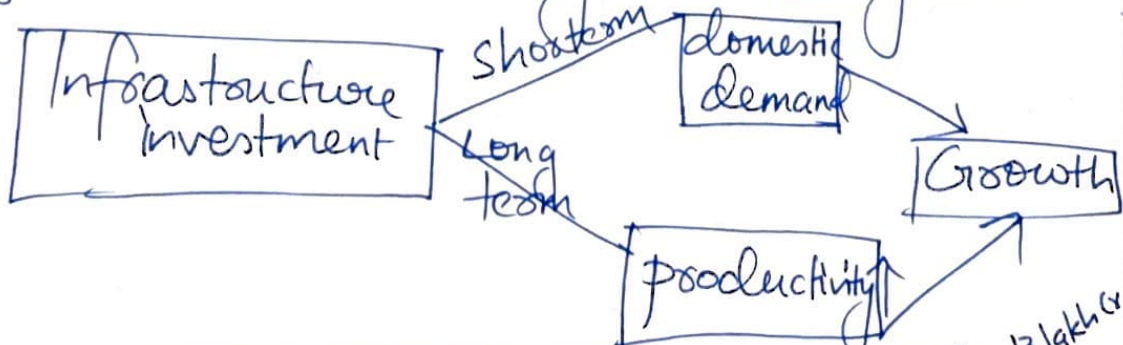
→ Crowd in private investment

eg PPP models.

Role in long term growth.

→ Increase linkages
eg Industrialisation of rural areas.

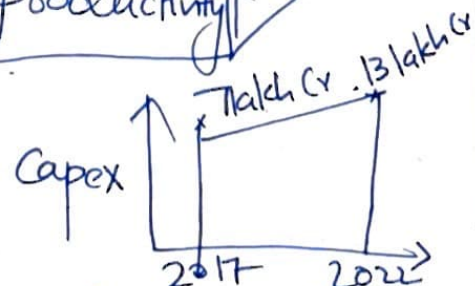
→ Catalyse other growth.



India's performance

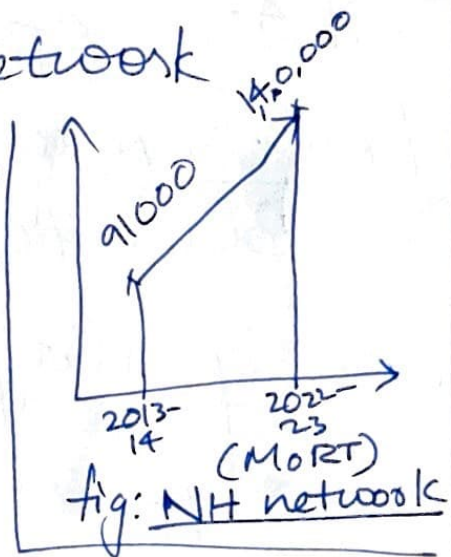
Successes

① Rise in Capital expenditure (Budget 23-24)



② Increased road network

eg 11 km/day in 2013 to
27 km/day in 2022-24.



③ Multimodal Connectivity

eg PM Gati Shakti.

- Increased Competitiveness.

④ Reduced logist. Rise in SEZ investments

eg 1 lakh Crs in 2022-23.

⑤ Global Connectivity initiatives

eg MEEC, INSTC to ensure logistics and supply chain.

Challenges

① Low ~~poor~~ private sector participation.

eg Privatised ₹26,000 Cr against 1 lakh Cr target in 2022-23.

② NBFC failures

- ② IL & FS affecting trust.
- ③ Low Sovereign Credit ratings
④ BBB - by Moody's.
- ④ Low quality infrastructure
⑤ Bridge collapses

Way forward

- ① Innovative Blended finance models
② Public + Private.
- ② Industrialisation of rural areas
③ Pura model of A.P.J Kalam.
- ③ Investments in social infrastructure
④ More AIIMS and IITs.

India's infrastructure should be complemented by strong institutions and increased democratic values.

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



Monetary policy Committee was constituted as a Statutory body in 2015 to ensure sustained growth with inflation targeting.

Responsibilities of MPC

① ~~Ens~~ Target inflation to 4 ± 2

② Ensure Economic growth.

↳ Counter Cyclical fiscal policies

③ Reduce fluctuations in currency values

↳ ~~Deflation and~~ Devaluation & Revaluation.

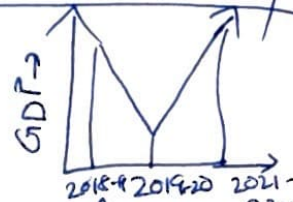
④ Address Current Account deficit

⑤ Target fiscal deficit

⑥ Collaboration between Government & RBI
↳ 6 members with equal participation

Successes of RBI policies in recovery

① V-Shaped recovery.



→ 7.8% GDP growth rate in 2022-23.

② Inflation rate with target

→ 4 ± 2 throughout 5 years.

③ Decrease in unemployment over 5 years

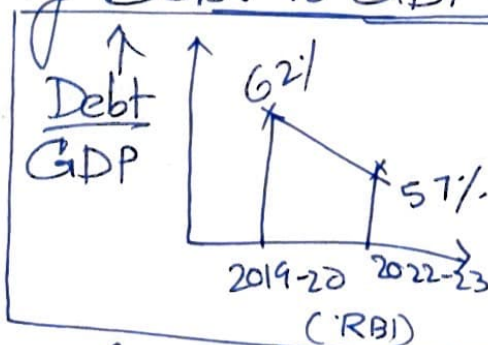
④ Fastest growing economy

→ India's 7.8% growth while China at 3.2%.

⑤ Reduction of Debt to GDP ratio

Challenges

① Higher growth due to agricultural production



→ 50 bn\$ export in 2022.

② ~~High~~ High food inflation

↳ 30% inflation for Onion in 2023.

③ Global Une Polycrises.

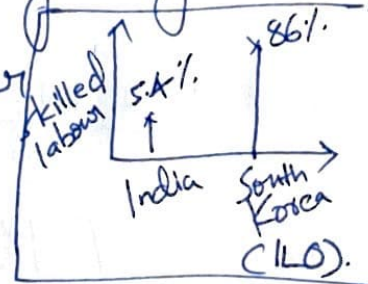
↳ Discriminatory tariffs of US on India.

④ Lack of quality jobs.

↳ 77 lakh employed by Gig economy

⑤ Lack of Skilled Labour

Way forward



① De-risking of Strategic Sectors

↳ Atmanirbhar Abhiyan.

② Supply Chain Resilience.

↳ India UK FTA.

③ Promotion of MSMEs.

↳ Raise credit under PM Mudra. (RBI).

MPC made a phenomenal role in ensuring ~~grow~~ domestic growth while the world was struggling uncertainties.

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

Food processing (FPI)
shows a consistent 8% growth
Contributing more than 12% to
Overall Food basket (NITI).

Opportunities

① Industrialisation of rural areas

→ 67% FPIs are in rural areas.

② Increased shelf life of farm produce
→ Access to Global markets.

③ Promotion of rural employment
→ Absorb excess farm labour.

④ Address distress migration

→ Increased outmigration from Bihar due to agricultural stagnation.

⑤ For women empowerment
→ 44% agri labour are women.

Challenges

① Unorganised Sector dominance
 eg 95% under unorganised sector.

② Low Value addition

eg 95% unorganised sector $\rightarrow$ less than 70% of total output

③ Family Owned enterprises

eg Limited funds and expertise

④ Public Sector dominance in procurement

eg Open ended procurement of FCI.

⑤ MSP Creating artificial inflation

eg Higher Cost of procurement

Measures required

As per Ashok Dalwai committee

① Reduced GST on Onion and Potato pastes - for FPIs.

②

- ② Improve Cold Chain infra
 [eg] ~~2~~ Availability below 25% required
 ③ Transition to High value crops (Min. Agri).
 [eg] 134% growth in honey since 2013 (ECOWS)
 ④ FPOs for FPI expansion.
 [eg] IFFCO.

Other measures

- ⑤ Improvement in Storage infra
 [eg] PM Mega food park Scheme.
 ⑥ Timely Sales of Excess stock of FC
 [eg] Open market Sales Scheme.

To ensure growth,

We should emulate models like 'Amul' and scale them up through Cooperatives for Global Convergence.



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 सुझाएं। (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

Microirrigation can be includes drip irrigation, sprinkler irrigation, partial root drying etc. to ensure efficiency of water use and ensure growth.

Microirrigation for water management

- ① Precision farming → Reduced water usage eg 79% ground water used for irrigation (Min. Agi)
- ② Reduced weed growth.
eg Targetted systems like submerged drip irrigation
- ③ Easier application of fertilizers & herbicides eg Fertigation.

④ Address monsoon variation & Climate induced regions

eg Partial root drying.

⑤ Reduced Land use.

eg Vertical farming models.

⑥ Barriers in adoption

① High upfront cost

eg 53% of farmer households are indebted.

② Suitable for High value crops

eg Paddy cultivation is water intensive

③ Lack of Technical knowhow

eg Need engineering solutions.

④ Higher Cost of maintenance

eg Blocked nozzles, Salinization of source etc..

⑤ Lack of policy support.

eg Power subsidies favouring normal irrigation

Measures required

I Short term

① Promotion of high value crops

eg Horticulture with microirrigation.

② Subsidised adoption

II Long term

① Capacity building

eg ICAR's KVK's for extension

② Promotion through Cooperatives

eg FPOs for microirrigation.

As 'Future belongs to
countries with grains, & not guns!
microirrigation can be a the
way ^{for} ~~is~~ ^{forward} towards doubling
farmers income.

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

Quantum computing involve energy states (Qubits) for Computing & Communication in contrast to normal logic gates of Conventional Computers.

Principles of Quantum Computing.

① Super position - Power of Qubits to exist at different states at same time.

↳ helps in Quantum teleportation.

② Quantum Entanglement - Qubits ~~or~~ have their states connected to each other.

↳ Helps in Communication without physical transfer.

③ Quantum parallelism - Transfer of

different Qubits at Same time.

⚡ Helps in faster Computation.

④ Quantum decoherence - loss of
qubit state with distance & time.

⚡ Prevents eavesdropping.

National Quantum mission

- Established under MeitY with
a 5000 Cr ₹ investment over 5 years

Objectives

① Establishment of Quantum
Communication

⚡ ISRO has done ³⁰⁰ ~~1200~~ km freespace
Quantum Communication.

② Creation of Quantum Computation
infrastructure

③ Capacity building & Research

⚡ Centres of excellence in IITD.

- ④ Multi Sectoral Collaboration.
 Eg Quantum for weather forecasts.
 ⑤ International Collaboration

Challenges

- ① China's 10bn\$ Quantum project
 Eg Micius Satellite for Quantum Communication
 ② Quantum Private sector dominance
 Eg Google's sycamore attained Quantum Supremacy.
 ③ Lack of domestic Capabilities
 Eg AICTE introduced Quantum in Engineering.

Quantum tech is an important addition to utilise the fruits of IR 4.0, and NQM is an important step towards ensuring domestic as well as Security Capabilities in this domain.

16. कार्य सिद्धांत, पहुँच, विस्तार क्षमता और सीमाओं के संदर्भ में फाइबर ऑप्टिक संचार के साथ उपग्रह संचार की तुलना कीजिए एवं अंतर बताइए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

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

(Answer in 250 words) 15 Marks

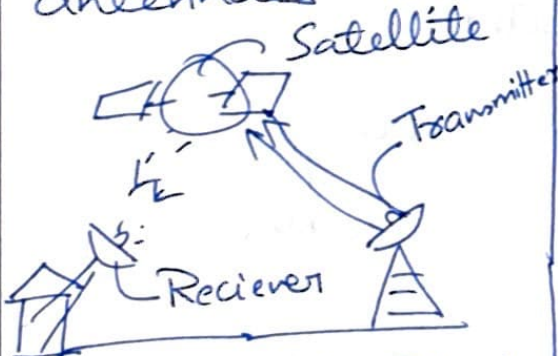
Satellite Communication

like Starlink of Tesla is being introduced along with the 5G network of expansion through optical fiber network in India (OFN).

Working principles

I ~~Star~~ Satellite

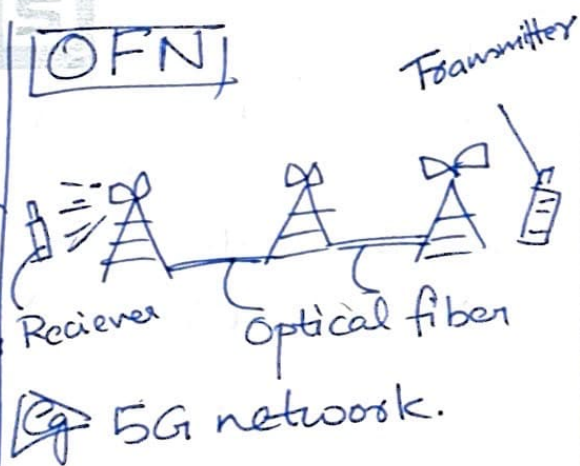
① D2H or through antennas



→ D2H like Tata Sky

→ Based on Infrared Communication

OFN



→ Based on Total internal reflection

Accessibility

Satellite

① Connect remote areas

✍ No domestic lines required

② Cheaper network.

OFN

① Low latency Communication

② All weather Communication.

✍ Free from Climate interference

Scalability

① Global Connectivity.

✍ Starlink with LEO Satellites

② Helps in navigation & remote sensing

✍ Low requirement of ground antennae

① Requires antennae and Optical Cables.

② Suitable for high speed networks

✍ 5G network.

③ Broadband networks.

Limitations

Satellite

- ① Large no. of Satellites required
eg Challenge of Kessler Syndrome
- ② Can be used by insurgents and anti national elements
- eg Starlink antennae in drug trade, Manipur
- ③ High Latency
- ④ Affected by weather fluctuations

OFN

- ① Low fibrisation
eg only 30-35% fibrisation in India
- ② High upfront costs
eg Land acquisition costs.
- ③ Terrain limitation
eg Lack of accessibility in forests, hills etc..

India uses a mix of Optical fibres as well as Satellite Communication to ensure ~~conne~~ digital inclusion & efficient Governance.

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 constitute. deltaes, estuaries, lakes, marshlands, peatlands mangroves etc.. acting as. playing an important role in health of environment.

Role of wetlands.

① Provisional Services

→ Production of food & water in such as fishing in Sunderbans.

② Regulatory services

→ Kayals of Kerala playing an important role in local rainfall

③ Supporting Services

→ Pneumatophores of mangroves

filtering Saltwater & reduce
Soil erosion.

④ Cultural/aesthetic Services

Eg. Bhitarakanika national park as
a famous tourist destination.

Threats

I Anthropogenic

① Unsustainable Urbanisation

Eg. Bellandur Lake in Bangalore.
getting dried up

② Industrial pollution

Eg. Kasadi river in Mumbai due
to effluents.

③ Urban encroachments

Eg. Pallikarai marsh in Chennai
by Real estate

II Climate related

① Sea level rise

Eg. Munroe Island in Kerala as
sinking island.

② Eutrophication

↳ Nutrient enrichment.

Measures taken

- ① Wetland Conservation rules
 - form National Committee.
 - promote wise use.

- ② Addition to montreux
↳ Loktak Lake, Manipur. a record

- ③ Coastal regulation zone
↳ Mangroves under CRZ I.

- ④ Do' Wetlands under protected areas

Wetlands should be further protected by adding rivers, reservoirs etc. under the definition as well as through reclamation of lost wetlands.



18. 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? (उत्तर 250 शब्दों में दीजिए) 15 अंक

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?

(Answer in 250 words) 15 Marks

Recently, more than 200 people died during Hathras Stampede in UP underlying the Challenge of Crowd Management.

Causes of Stampedes

① Lack of structural integrity of barricades

eg Haridwar Stampede, 2025.

② Lack of ^{Staff} crowd management

eg ② Unsustainable

② Unpredictability of Crowd

eg Elphinstone Station Stampede

③ Administrative lapses

eg Lack of proper audit.

- ④ Lack of Manpower
- ~~Eg~~ ~~Limit~~ ~~Low~~ Limited police presence.
- ⑤ ~~the~~ Other issues like fire, snakes etc.. causing panic.
- ~~Eg~~ ~~Stampede~~
- ⑥ ~~R~~ La Space Constraints
- ~~Eg~~ Large public events at congested spaces.

Measures for efficient Crowd Control

I Institutional

- ① Safety audit of venues
- ② Presence of fire brigade during the event
- ③ Sp Standard Operating procedure for each venue
- ~~Eg~~ Mahakumbh model of SOP, 2012

- ④ Separate entry & exit demarcation
- ⑤ Establish Special attention for women & children
- ⑥ Proper accountability measures

II Technological

- ① Drones for crowd monitoring
 [eg] Use of drones in Sabarimala, Kerala.
- ② Prior registration and limited entry
 [eg] Uttarakhand for Charidham Yatra.
- ③ Automated fire alarm

Stampedes can show if not properly managed can turn into a disaster, where vulnerable sections such as women & children will be the first victims.



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

India has 900mn internet users with 77lakh working in Gig economy through digital platforms (IAMAL, NANI).

Major elements of Cyber Security

① Information Security

eg 845mn Verifiable information of 845mn Indians in darknet (SBI research)

② Infrastructure Security

eg Stuxnet attacking Iranian nuclear infrastructure.

③ Network Security

eg Chinese hacker APT10 attacking

Indian Covid-19 Vaccine Companies

④ Personal Security

⚡ Spoofing & ~~Spam~~ Phishing

⑤ Cyber hygiene

⚡ Misinformation as the largest challenge for India (Resecurity).

Measures required

⊗ I Institutional

① Development of Cyber offensive Capacities

⚡ Defence Cyber Agency of DRDO.

② Develop 'Air gapping' of Critical Infrastructure.

⚡ National Critical Infrastructure Information protection Centre.

③ Security audit of Government websites.

eg Hackathons.

④ Centralised response

eg Cest-In as Centralised agency.

II Infrastructure

① Quantum and AI capabilities

eg Shor algorithm of Quantum can decrypt any network.

② Cyber Capacity building

eg India requires 1mn Cyber professionals (NITI).

③ Promotion of Cyber hygiene.

eg Cyber Volunteer Scheme of MoH.

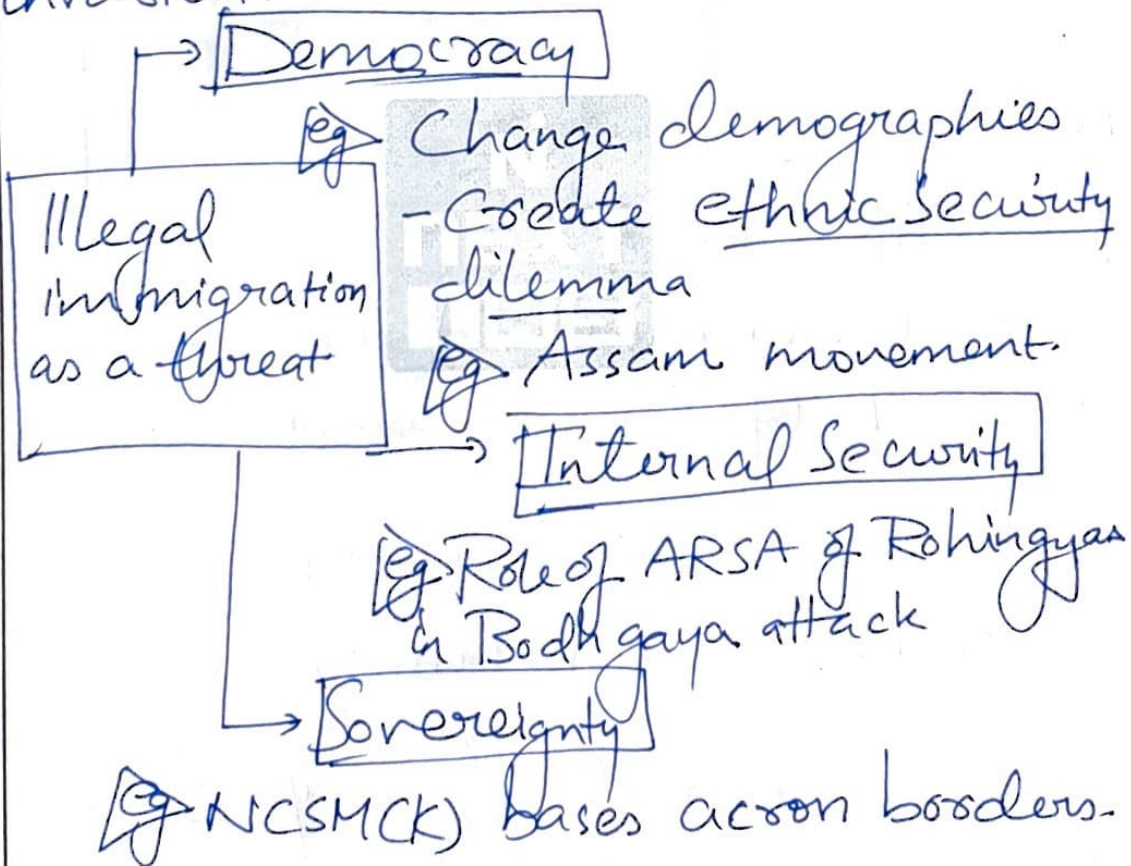
Cyber Cyber Security is integral for National Security & domestic prosperity as the world turns increasingly digital.



20. 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

SC rightly observed
illegal immigration as a form of
invasion.



Immigration & Foreigners Act, 2025

① Provision of 'tribunals' to address
illegal immigration.

- ② Bilateral treaties for repatriation of immigrants.
- ③ Central government to make rules for implementation.
- ④ Provisions to identify & deport illegal immigrants

Challenges

I Constitutional

- ① Can be violative of Article 21 - Right to life & personal liberty.
- ② Can also affect Article 51 - Promotion of International peace.
- ③ Critiqued to violate 'principle of Non refoulement' under UDHR.

II Human right Challenges

- ① Repatriation may lead to

perpetuation of violence.

eg Rohia Myanmar Civil war.

② Difficult to identify illegal immigrants.

eg Continuity of culture across borders.

③ Against the values of 'Vasudaiiv Kutumbakam'

④ Against 'UN Refugee Convention'

⑤ May lead to human rights violation eg Capsize of boats of Rohingyas.

India is the stable ship in an unstable South Asia. While we need to protect from illegal immigrants, It should be with due regard to the Safety and Security of the neighbourhood refugees while upholding the rights of domestic population.