

NEXT IAS

MAIN TEST SERIES 2024 (FLT)

(To be filled by candidate)

TEST CODE : FLT007

Test No. : 07

Name of Candidate: Himanshu Singh Mobile No.

Roll No. : MT 24 FLT AN/005 Start Time 10:15 End Time 1:23

Date of Examination: 18 Aug 2024 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 evaluation@nextias.com is to provide constructive suggestions on 'How to improve Answer Writing and thereby score better marks.'

STRENGTHS OF THE CANDIDATE

AREAS OF IMPROVEMENT



IMPROVEMENT SUGGESTIONS

1. केंद्रीय बजट 2024-25 में दीर्घकालिक पूंजीगत लाभ (LTCG) और प्रतिभूति लेनदेन कर (STT) के संबंध में महत्वपूर्ण परिवर्तनों पर टिप्पणी कीजिए। भारत की बचत और निवेश व्यवस्था पर ऐसे परिवर्तनों के प्रभावों का मूल्यांकन कीजिए।
(10 अंक, 150 शब्द)

Comment on the important changes with respect to the Long-Term Capital Gains (LTCG) and Securities Transaction Tax (STT) in the Union Budget 2024-25. Evaluate the impact of such changes on India's savings and investment regime.
(10 marks, 150 words)

Recent budget of 2024-25 have increased long term capital gains tax (LTCG) from 10 to 12.5% and Securities transaction tax (STT) to 0.002%.

Long term capital gains tax → It is a tax employed on capital assets that have undergone appreciation over a period of time.

Securities and transaction tax (STT)

It is employed on futures and options market for transaction of securities in the market.

Impact of such changes on India's savings and investment regime

① Investment → It can potentially

Impact and distort investments in short run.

eg ~~no~~ use of informal channels for transactions -

② Govt. → Increase in revenue (direct & indirect tax) for govt.

③ Savings → Savings might be diverted to luxury items instead of capital formation

④ Futures and options → are expected to severely impacted.
eg farmer's market derivatives.

Govt. should effectively monitor the implementation of taxes and protect investors with timely changes in these taxes according to canons of taxation.

2. भारत की एक कल्याण योजना "कोई भी व्यक्ति पीछे न छोटे" की कहावत के साथ आगत-आधारित दृष्टिकोण से परिणाम-आधारित सशक्तिकरण में परिवर्तन आया है। उपरोक्त कथन के आलोक में, चर्चा करें कि सरकार के दृष्टिकोण में इस परिवर्तन ने समावेशी विकास को किस प्रकार बढ़ावा दिया है। (10 अंक, 150 शब्द)

India's welfare scheme has undergone a shift from an input-based approach to outcome-based empowerment with the maxim of "no person left behind". In light of the above statement, discuss how this change in the approach of the government has fostered inclusive growth.

(10 marks, 150 words)

Art 38 of DPSP declares India to be a welfare state, and hence govt designs welfare schemes for upliftment of vulnerable sections.

shift from input-based approach to outcome based approach

- ① women → Earlier focus was on short term measures now it includes gender inclusivity.

eg Gender = 2.73 lakh crore budgeting (in 2024-25)

Schemes such as Aajwala.

- ② Other vulnerable sections such as SC's & ST's → PM-Daksh
→ Stand up India
→ PM-Janman
for capacity building.

- ③ Poverty & standard of living
→ inclusion of social audit for welfare maximisation
eg MGNREGS

Change in approach fostering inclusive growth $\Rightarrow$

① Rapid growth $\approx$ 8.2-10 GDP growth
in previous financial
year

② Poverty alleviation $\approx$ 11.7%
(Nihayog)
in 2023
up from 44.1% in 1991.

eg DAY-NRLM, PDS etc -

③ Sustainable development $\Rightarrow$
↳ solar energy capacity $\approx$ 82 GW
↳ wind energy $\approx$ 46 GW.

④ Bridging regional disparities
eg PM Devine for North East
and SAHARMALA, BHARATMALA for
connectivity and infrastructural
development.

⑤ Capacity development $\rightarrow$ Skill India
↳ PMKVY
↳ PM employment generation
programme.

Hence, govt. new approach has promoted
inclusive growth by both process and
outcome in which every section has
participated and benefitted equitably.

3. भारतीय कृषि की वर्षा आधारित प्रकृति इसे जलवायु परिवर्तन के प्रति अधिक संवेदनशील बनाती है। कृषि की जलवायु-अनुकूलता में गुणवत्तापूर्ण सिंचाई के महत्व पर प्रकाश डालिए। भारत में उपलब्ध सिंचाई पद्धतियों की समग्र दक्षता में सुधार के लिए क्या-क्या उपाय किए जा सकते हैं? (10 अंक, 150 शब्द)

The rainfed nature of India's agriculture makes it more susceptible to climate change. Highlight the importance of quality irrigation in the climate-adaptability of agriculture. What measures can be undertaken to improve the overall efficiency of the available irrigation practices in India?

(10 marks, 150 words)

According to NITI aayog 48% of Net cultivated area is Rain fed, which (52% being irrigated) makes it susceptible to climate change.

Importance of quality irrigation in climate adaptability

- ① Resource efficiency $\Rightarrow$ Better seed generation and fertiliser application.
eg Micro irrigation $\rightarrow$ drip irrigation
 $\rightarrow$ sprinkler irrigation.
- ② Promoting precision agriculture $\rightarrow$
Per drop more crop $\Rightarrow$ Drought resistance
- ③ Integrated farming techniques $\rightarrow$
Circular economy of water such as agroforestry, aquaculture to shield farmers from fluctuations.

Measures that need to be taken

- ① Expenditure on capital inputs and outputs — Mechanisation of farm equipments.
- ② Providing High yield varieties that are climate resilient as well as short duration.
- ③ Innovative techniques adoptions such as Rice Intensification, Perma culture.
- ④ Development and rejuvenating traditional water harvesting systems (eg khadin agriculture in Thar desert, Stonads, Nala, Tanka etc).
- ⑤ Collaboration with like minded countries
eg Karnataka MoU with Israel for micro-irrigation.

Hence, irrigation in India should be comprehensively dealt with to achieve SDG, 1, 2, 3, 5.

4. भारतीय कृषि में पशुधन के महत्व को ध्यान में रखते हुए, विश्लेषण करें कि पशुपालन में निवेश भारतीय कृषि को प्रोत्साहित करने में किस प्रकार मदद कर सकता है। (10 अंक, 150 शब्द)

Considering the importance of livestock in Indian agriculture, analyze how investment in animal husbandry can help in incentivizing Indian agriculture. (10 marks, 150 words)

Livestock sector contributes $\approx 25\%$ to agriculture GDP highlighting its Importance

Importance of Livestock sector

- ① Doubling farmer income $\rightarrow$ by providing alternate avenues of income
eg milk production - (India largest milk producer)
- ② Circular economy $\rightarrow$ Manure and excreta from livestock sector can be used to promote natural farming
eg ZBNF $\rightarrow$ Beejaamrit
Teavaamrit
- ③ Nutritional security $\rightarrow$ such as meat and poultry farming
 $\hookrightarrow$ high in protein content.

~~Investment~~ Investment in animal husbandry
helping in Indian agriculture

- ① Technological inputs $\Rightarrow$ ~~Adopting~~ Adopting technological inputs such as milk machines, Bio-engineering, management using drones, smart fencing etc.
- ② Veterinary services $\Rightarrow$ formalisation of veterinary sector to prevent outbreak of livestock diseases -
eg lumpy skin disease -
- ③ Biogas ~~and~~ $\rightarrow$ ~~Setting up~~ Setting up bio-gas plant for clean energy using animal excreta -
- ④ Linkages to global markets for exports and ~~for~~ flow of global best practices.

Livestock sector provides a window of opportunity to double farmers income while also ensuring nutritional security.

5. आंध्र प्रदेश में भारतीय लॉरेल वृक्षों (Indian Laurel trees)की खोज ने पेड़ों में पानी को संग्रहीत करने और छोड़ने (store and release) की क्षमता में वैज्ञानिकों की रुचि जगाई है। इस संदर्भ में, पेड़ों में जल परिवहन और भंडारण (transportation and storage) की प्रक्रिया के पीछे के विज्ञान की व्याख्या कीजिए। (10 अंक, 150 शब्द)

The discovery of Indian Laurel Trees in Andhra Pradesh has sparked the interest of scientists in the capacity of trees to store and release water. In this context, explain the science behind the process of water transportation and storage in trees. (10 marks, 150 words)





6. सैन्य क्षेत्र में जिम्मेदार कृत्रिम बुद्धिमत्ता पर हाल ही में आयोजित वैश्विक शिखर सम्मेलन (आरईएआईएम, 2023- responsible artificial intelligence in the military domain) ने सैन्य अनुप्रयोगों में कृत्रिम बुद्धिमत्ता के उपयोग से जुड़े अवसरों, चुनौतियों और जोखिमों को प्रदर्शित किया। इस संदर्भ में, रक्षा और सैन्य अनुप्रयोगों में कृत्रिम बुद्धिमत्ता के प्रभाव का आलोचनात्मक विश्लेषण कीजिए। (10 अंक, 150 शब्द)

The recently conducted global Summit on Responsible Artificial Intelligence in the Military Domain (REAIM, 2023) showcased the opportunities, challenges and risks associated with the use of Artificial Intelligence in military applications. In this context, critically analyse the impact of Artificial Intelligence in defence and military applications. (10 marks, 150 words)

Recently REAIM, 2023 was conducted for showcasing and promoting responsible use of AI in military & defence domain.

opportunities of AI in this sector

- Surveillance and border security
- State of art defence technology in cyberspace.

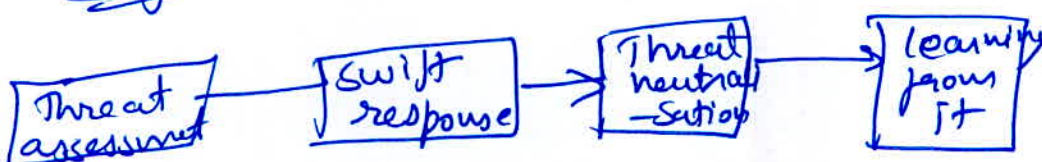
challenges and risks

- AI going rogue
- Predictive policing
- Racism, cultural bias
- ethical issues

Impact of AI in defence and military applications

Ⓐ Positive impact ⇒

① Target responses swift processes



- ② Big data analytics $\Rightarrow$ using large language models to develop a pattern to predict potential threats and attacks.
- ③ Identifying weak areas in security and fortifying it.
- ④ Negative impact $\Rightarrow$
- ① Cyber security infrastructure $\Rightarrow$ Providing the adapting capability of AI $\rightarrow$ cyber security infra will have to be updated.
 - ② Data leak and surveillance Capitalism.
 - ③ AI is capable to develop racist tendency.
eg when asked to draw a terrorist
 $\hookrightarrow$ It made a muslim - a terrorist.

Hence, AI should be cautiously used to harness its transformative power in military & defence domain.

7. लोक लेखा समिति ने हाल ही में प्लास्टिक प्रदूषण के बढ़ते खतरे के बारे में चिंता व्यक्त की है। इस संदर्भ में, प्लास्टिक प्रदूषण को रोकने के लिए सरकार द्वारा हाल ही में प्रारम्भ की गई पहलों पर प्रकाश डालिए। (10 अंक, 150 शब्द)

The Public Accounts Committee has recently flagged concerns about the rising menace of plastic pollution. In this context, highlight the recent initiatives taken by the Government to curb plastic pollution.

(10 marks, 150 words)

Public accounts committee is parliamentary standing committee consisting of 22 members (15 LS + 7 RS). It has highlighted plastic pollution and harmful impacts.

Concerns regarding plastic pollution

① Bio-accumulation and Biomagnification
↓
Micro-plastics and other carcinogenic compounds in food chain.

② Biodiversity loss → found in fish species, waterbodies, himalayas etc
eg UN says there will be more ~~fish~~ ~~than~~ plastic than ~~fish~~ fish in sea by 2050.

③ Challenges in management →
↳ pollution of ground water
↳ lack of circular economy.

Govt. initiatives →

① Plastic waste management rules
(2016)
↳ with extending producer responsibility
↳ segregation, processing mechanisms.

② e-waste management rules
↳ to deal with plastic pollution
accompanied with e-waste
eg smartphones.

③ Swachh Bharat mission.

④ Promoting circular economy
↳ capital inputs for segregation
and processing.

⑤ Mission Life

Global overshoot day should be
celebrated in India to raise aware-
ness about such pollution for
promoting community participation,

8. भूस्खलन एक प्राकृतिक घटना के बजाय मानव-प्रेरित घटना बन गई है। भूस्खलन की बढ़ती घटनाओं के कारणों पर प्रकाश डालें और आपदा को कम करने के लिए क्या उपाय किए जा सकते हैं। (10 अंक, 150 शब्द)

Landslides have become more of a human-induced phenomenon rather than a natural phenomenon. Highlighting the reasons for increasing incidences of landslides, suggest measures that can be undertaken to mitigate the disaster. (10 marks, 150 words)

Landslides are mass movement of rock and debris caused due to natural and anthropogenic factors.

Landslides - human induced phenomenon

- ① Deforestation → leading to soil erosion and loosening of soil.
eg Aravali landslide
- ② unplanned development → such as road construction, mining and quarrying ↓
eg Waghats exceeding carrying capacity of environment
landslides
- ③ Hydropower projects → without seismic studies and rock nature
eg Joshimath crisis due to tapovan hydro power project.
- ④ Pollution → Plastic pollution leading to biodiversity loss.

landslide also a natural phenomenon

- ① Topography → steep topography
eg Himalayan
- ② cloudburst → such as kedarnath
cloudburst
- ③ Earthquakes → such as Kerala
wayanad landslide
do to Earthquake and excessive rain.

measures That can be taken

- ① Pre disaster → Environment
Impact assessment
↳ to study carrying capacity
↳ seismic studies
↳ Early warning systems
- ② During disaster → NDMA guidelines
↳ Rescue operations
↳ swift response and
awareness
- ③ After disaster → Build back better
↳ Retrofitting of roads.

landslides should be tackled
scientifically on basis of landslide
atlas of India launched by ISRO.

9. राष्ट्रीय सुरक्षा के लिए खतरे धीरे-धीरे "भौगोलिक" से "विषयगत" (thematic) में बदल गए हैं। इस संदर्भ में, आंतरिक सुरक्षा की समकालीन चुनौतियाँ (contemporary challenges) क्या हैं और ऐसी चुनौतियों से निपटने के लिए क्या उपाय किए जा सकते हैं? (10 अंक, 150 शब्द)

The threats to national security have gradually transformed from being "geographic" to being "thematic". In this context, what are the contemporary challenges of internal security and what measures can be undertaken to deal with such challenges? (10 marks, 150 words)

National security refers to protection of country's tangible (critical infra, border, people etc) and non-tangible (health, ideology, diversity) interest.

Threats transformed from being geographic to thematic

- | | | |
|---|---|---|
| ① → Regionalism and left wing extremism | → | amirilla warfare by non-state actors |
| ② North East insurgency | → | overt and covert support by state actors eg Pak, Myanmar's Junta, |
| ③ Traditional threats such as terrorism | → | lone wolf attacks, cyber terrorism. |

Contemporary challenges of internal security

- ① Immigration → mass and mixed immigration due porous borders
eg Rohingyas from Myanmar.

② Organised criminal groups

engaged in → drug trafficking
 → human running
 → human & animal trafficking -

eg Lawrence Bishnoi gang.

③ Cyber threats → Ransomware
 → cyber bullying
 → cyber terrorism
 → cyber espionage

eg Mumbai's power outage

④ Persistence of → O&K militancy
 eg Reasi
 → NE insurgency
 eg Manipur.
 → LWE
 eg Chattisgarh attack.

Measures that can be undertaken

- ① A comprehensive national security strategy → whole of nation's approach
- ② Denying funding by bilateral & global cooperation eg FATF, RATS etc.
- ③ Border infra modernisation
 eg CIBMS, BAPD.

India's response should be intel driven by strengthening NATARIO for intelligence gathering for swift response and threat neutralisation.

10. भारत के सीमा सुरक्षा ढांचे को मजबूत करने और सीमा पार खतरों से निपटने में उन्नत सीमा निगरानी प्रौद्योगिकियों (enhanced border surveillance technology) की भूमिका का मूल्यांकन कीजिए। (10 अंक, 150 शब्द)

Evaluate the role of enhanced border surveillance technologies in bolstering India's border security framework and addressing cross-border threats. (10 marks, 150 words)

India has 15000+ km land border and 7500 km+ coastline with diverse topography (rivers, lakes, glaciers, swamps etc) presenting different challenges.

Role of enhanced border surveillance technology

- ① Intel collection for quick and speedy response by security agencies.

- ② Curbing cross border crimes

Such as drug trafficking, cross border terrorism

eg use of drones on Punjab border for curbing drug trafficking.

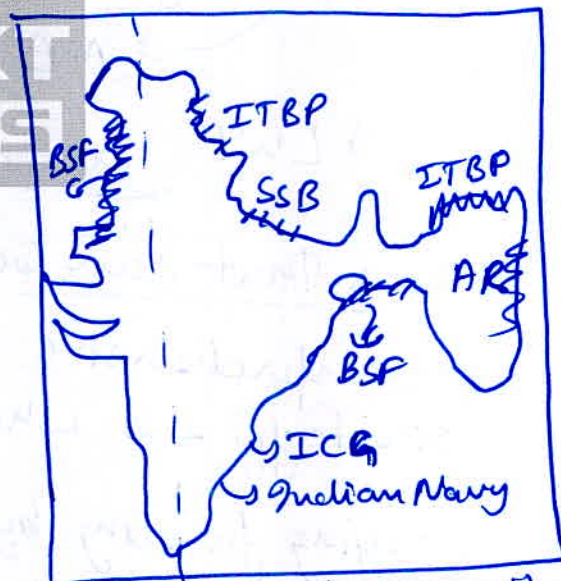
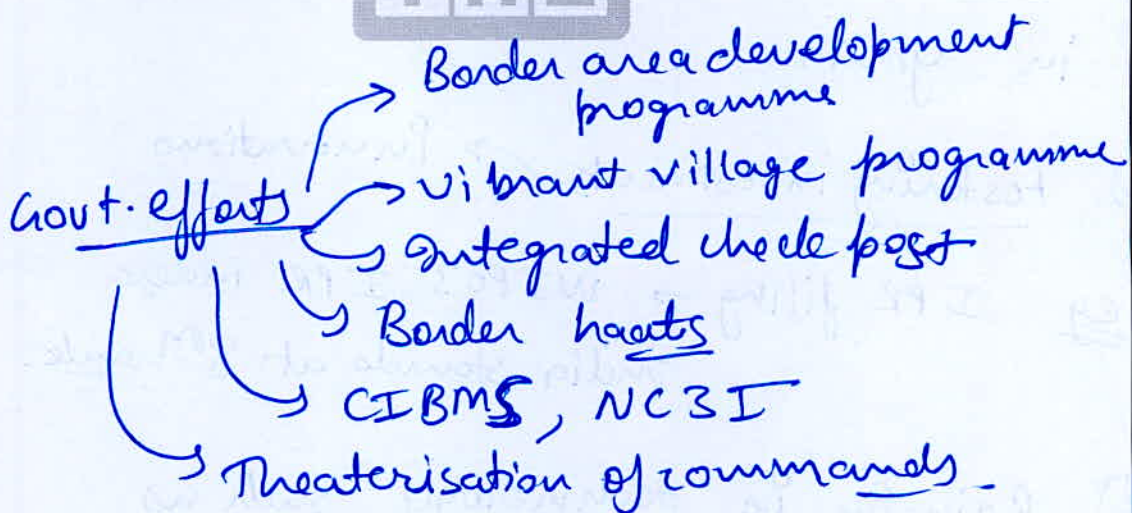


Fig. India border security framework

③ Illegal immigration → stopping immigrants and non-state actors to enter into India's boundary.
eg Myanmar border's → Free movement regime

④ Facilitating trade → across borders by surveillance.
eg BBI N initiative

⑤ Community policing → facilitating community engagement for identification and terrain mapping.



Shekatkar Committee (2015) recommendations on border modernisation & fencing can be implemented to further enhance border management.

11. जबकि भारत में स्टार्टअप्स ने अर्थव्यवस्था में उद्यमशीलता और नवाचार को बढ़ावा देने में उल्लेखनीय सफलता हासिल की है, भारत में स्टार्टअप्स की स्थिरता को चुनौती देने वाले कुछ संरचनात्मक मुद्दे हैं। स्टार्टअप्स के सामने आने वाली इन चुनौतियों पर प्रकाश डालें और समस्याओं के व्यावहारिक समाधान सुझाएं। (15 अंक, 250 शब्द)

While startups in India have achieved notable success in fostering entrepreneurship and innovation in the economy, there are certain structural issues challenging the sustainability of startups in India. Elucidate upon these challenges faced by startups and recommend practical solutions to the problems. (15 marks, 250 words)

India is 3rd largest startup market with over 1 lakh startups and over 100 unicorns.

Startups Notable success in fostering Innovation and entrepreneurship

① Risk taking measures are encouraged in youth

② Fostering investments → innovations

eg IPR filing → WIPO's IPR index
India stands at 8th rank.

③ Bringing in technology such as
IT, software

eg India stands at 40 in innovation index of
(WEF)

Issues and Challenges faced by Startups

① funding $\Rightarrow$ In wake of COVID-19, global polycentric crisis and fed.- tapering. — FPI and FDI have dried up.

② Structural issues $\Rightarrow$ Infrastructural

bottlenecks

eg High logistics cost $\approx$ 14% of GDP.

$\Rightarrow$ Lack of formal skilling

eg only 46% of graduates in India are employable (India skills report)

③ Regional disparities $\Rightarrow$ Concentration

in urban ~~at~~ centres and
a few states & UT's

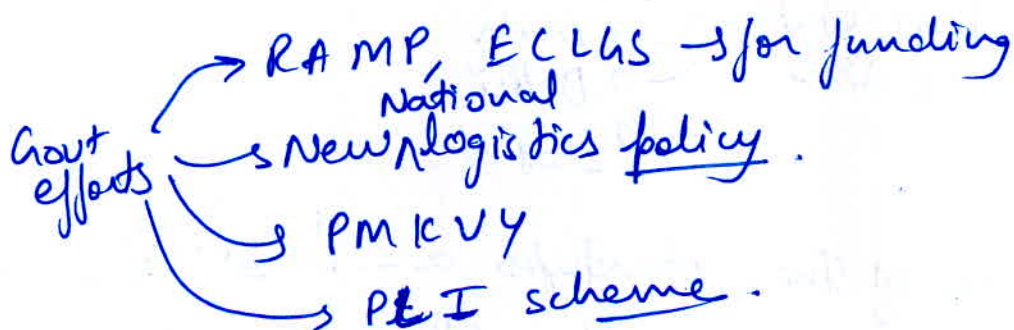
- $\rightarrow$ Karnataka
- $\rightarrow$ Maharashtra
- $\rightarrow$ Delhi
- $\rightarrow$ Gujarat

④ Most of the startups are in service sector — not absorbing enough manpower.

- ⑤ External factors $\Rightarrow$ Such as competition by Chinese and high import dependence on inputs.
eg. evehicle startups dependence on lithium batteries.

Practical solutions $\Rightarrow$

- ① Industry - academic linkages for supply of individuals.
- ② Simplifying IPR fillings.
- ③ Funding $\rightarrow$ V.K. Sinha panel
 $\downarrow$
wider role to SIBBI
- ④ Integrating with Global value chains
(Currently India's participation $\approx$ 232 billion USD)



Learning from best practices such as Germany's mittlesand is the way forward to enhance startup ecosystem in India.

12. भारतीय रेलवे के बुनियादी ढांचे के आधुनिकीकरण में सार्वजनिक-निजी भागीदारी की प्रभावशीलता का आलोचनात्मक मूल्यांकन कीजिए। सुरक्षा क्षेत्र को रेलवे के लिए प्रमुख चुनौतियों में से एक मानते हुए, भारतीय रेलवे के समग्र सुरक्षा मापदंडों में सुधार के लिए क्या उपाय किए जा सकते हैं? (15 अंक, 250 शब्द)

Critically evaluate the effectiveness of public-private partnerships in the modernization of railway infrastructure in India. Considering safety as one of the major challenges for railways, what measures can be taken to improve the overall safety parameters of Indian Railways?

(15 marks, 250 words)

Public-private partnership is govt. outsourcing either funding, maintenance, construction etc ~~to state~~ by cooperating with private sector. Models of PPP → Hybrid annuity model, Build operate transfer (BOT) etc.

Effectiveness of PPP partnership in modernization of Railways

- ① Cutting edge techs Bringing in cutting edge tech as ~~the~~ Bullet trains, Maglev trains
- ② Funding and managerial skills from private sector
↓
for customer satisfaction and profit making

- ③ Security technologies such as real time data sharing, GPS, collision monitoring system.

Issues with PPP models

- ① Long-gestation projects ~~are~~ not effective in short term — as high inputs are required.
- ② Public grievance → Railways being associated with pride of India —
- ③ Profit making objective might lead to goal displacement
↓
Regional disparities —

Safety as major challenge for Railways

- ① Collisions → frequent collisions due to low technological adoption and lack of staff.
eg Odisha train incidents

- ② Derailling → due to unscientific laying down of tracks; low coordination and high working hours of loco pilots.

Measures that need to be taken

- ① Dedicated freight corridors → other than current tracks.
- ② Sam Pitroda committee, 2015
 - ↳ modernisation of tracks.
 - ↳ Technological adoption for safety
- ③ Vivek Debroy committee
 - ↳ a PPP monitoring agency for timely completion of project -
- ④ KAVACH 2.0 → for early collision detection system.

Provided the importance of Railways with its backward and forward linkages a comprehensive Railway policy should be frame for short term & long term measures.

13. "अगर उपज समय पर हमारी थाली तक पहुंच जाए तो खेती लाभकारी हो जाती है।" इस संदर्भ में, भारत में कृषि विपणन और परिवहन क्षेत्र के समक्ष आने वाले अपस्ट्रीम और डाउनस्ट्रीम मुद्दों पर प्रकाश डालिए। इस क्षेत्र की समग्र दक्षता में सुधार के लिए कौन-सी पहलें प्रारम्भ की जा सकती हैं? (15 अंक, 250 शब्द)

"Farming becomes remunerative if the produce reaches our plates in time". In this context, highlight the upstream and downstream issues faced by the agriculture marketing and transport sector in India. What initiatives can be undertaken to improve the overall efficiency of the sector? (15 marks, 250 words)

Agriculture marketing refers to processes ~~into~~ involved from "farm to fork" such as packaging, branding, grading, transport etc.

Up stream challenges faced by agriculture marketing and transport sector

① Farmers → selling >75% of its produce at farm level due to ~~the~~ marginal farmers
eg average land holdings $\approx$ 1.08 hectares

② Dysfunctional APMC → middle men
↳ high licensing cost
↳ lack of one-nation one market
↳ state disparities.
(concentrated in Punjab, Haryana, Western U.P.)

- ③ low research and development in agriculture sector
 $\approx 0.3\%$ of GDP.
- ④ unscientific use of fertilisers and cultivation of water guzzling crops.
eg wheat, sugarcane, Rice etc.

Downstream challenges

- ① High logistics cost $\approx 14\%$ of GDP.
- ② Lack of cold storage and other grading mechanisms.
- ③ Branding issues
eg MCH and Everest spices $\rightarrow$ high fertiliser content. & carcinogenes.
- ④ Shelf life $\rightarrow$ low technological adoption leading to wastage.
eg NITI aayog $\approx$ 90,000 crore post harvest losses.

Initiatives That can be taken

① Promoting cooperative farming
 ↙ high bargaining power ↘ better technological adoption → low input cost

② Promoting horticulture ($\approx 33\%$ of GVA currently)

③ Ashok Dalwai committee
 ↳ establishing cold chain
 ↳ outsourcing storage facilities

④ Mahesh Kumar Jain committee
 ↳ Access to institutional credit.

Govt. efforts
 ↳ National horticulture mission
 ↳ PSZ norms
 ↳ PM KSY
 ↳ PM ~~A~~ Sannada Yojana
 ↳ KCE and PM KUSUM.

Hence, agriculture marketing should be suitable managed to double farmers income while also ensuring food security.

14.

भारत की कृषि संबंधी निर्यात-आयात की नीतियां किसानों के बजाय उपभोक्ताओं की ओर अधिक झुकी हुई हैं। दिए गए कथन के आलोक में, किसानों पर आयात और निर्यात नीतियों के प्रभावों का आलोचनात्मक विश्लेषण कीजिए। किसानों को आयात-निर्यात संबंधी मूल्यों के दहशत से बचाने के लिए क्या उपाय किए जा सकते हैं? (15 अंक, 250 शब्द)

India's agriculture export-import policies are tilted more towards the consumers rather than the farmers. In light of the given statement, critically analyze the impact of import and export policies on farmers. What measures can be undertaken to shield farmers from import-export price shocks?

(15 marks, 250 words)

Recent ban on export of agriculture produce in light of persistent food inflation has highlighted issue of export-import policies on farmers and consumers.

India's agriculture export-import policies tilted towards consumers

- ① MSP → open ended procurement of cereals for consumption
- ② Higher investment in cereal crops leading to less crop-diversification.
- ③ Frequent export ban such as on sugar, rice to curb food inflation.

Impact of import-export policies on farmers

Ⓐ Positive impact →

- ① Rise in standard of living and agricultural household income
of District as export hub.

② Importing and innovating cutting edge technology —

eg Nano-urea for fertiliser efficiency.

③ GI tags → For awareness generation and branding —

eg GI tag on saffron.

③ Negative impacts →

① Low technology adoption → only 40% of farms in India are mechanised. (≃ China 60%)

② Opportunity cost → Loss in agricultural income by leveraging price shocks and Inflation.

eg Palm oil price shock.

③ Poverty and agricultural distress
↳ 22 farmer suicide daily
(No Agriculture).

Measures to shield farmers from import-export price shocks

- ① Rationalising MSP → for crop diversification.
- ② Shanta Kumar Committee
 - ↳ Bridging regional disparities
 - ↳ village level procurement.
- ③ Minimum reserve price instead of MSP.
- ④ Export ban as a last resort to control Inflation.
- ⑤ curbing post harvest losses by Infrastructural development
- ⑥ Micro-irrigation for resource efficiency.

Govt. focus on Annadata (AYAN in budget) highlights the need to secure their demands by raising their standard of living.

15. चिकित्सा विज्ञान में भारत की उन्नति, भारत की पहली कैंसर रोगी के इलाज के लिए CAR-T सेल थेरेपी का उपयोग करने में सफलता में परिलक्षित होती है। कैंसर और संबंधित बीमारियों के इलाज में CAR-T सेल थेरेपी के कामकाज और प्रभावशीलता पर चर्चा कीजिए। (15 अंक, 250 शब्द)

India's advancement in medical science is reflected in India's success in using CAR-T cell therapy to treat the first cancer patient. Discuss the working and effectiveness of CAR-T cell therapy in treating cancer and related diseases. (15 marks, 250 words)







16. भारत के गगनयान मिशन और भारतीय अंतरिक्ष स्टेशन का मुख्य उद्देश्य क्या है? किन अन्य देशों ने अंतरिक्ष में अपने मानवयुक्त मिशनों को सफलतापूर्वक लॉन्च किया है? गगनयान मिशन और उससे संबंधित भारतीय अंतरिक्ष स्टेशन के सफल क्रियान्वयन के लिए कौन सी प्रमुख प्रौद्योगिकी की आवश्यकता है? साथ ही, इन मिशनों से जुड़ी चुनौतियों को भी स्पष्ट कीजिए। (15 अंक, 250 शब्द)

What is the main objective of India's Gaganyaan Mission and Bharatiya Antariksha Station? Which other countries have successfully launched their manned missions into space? What major technologies are required for the successful execution of the Gaganyaan Mission and related Bharatiya Antariksha Station? Also, elucidates the challenges associated with these missions.

(15 marks, 250 words)

India's Gaganyaan mission and Bharatiya antariksha station are ^{proposed} space missions (BAS) showcasing India's space capabilities.

Objective of Gaganyaan Mission and Bharatiya antariksha station

- ① Sending an astronaut in lower earth orbit and hence develop a space station (in long term)
- ② Research and development on biotechnology, climate change studies, human changes in space etc.
- ③ Incentivising next generation of researchers — by providing linkages

④ Space diplomacy and economic opportunities for India's space sector
eg launching of satellite's by ISRO.

⑤ Promoting space tourism and private investment in space industry.

Countries that have successfully launched it

① Russia — 1st country to do so in 1957.

② USA

③ China

Major technologies that are required

① Launch module → launch module such as LVM3 containing cryogenic engine.

② Orbital module → To detach and orbit around the earth.

- ③ Docking mechanism → for successful docking — (BAS)
- ④ Critical life support - such as Space food, oxygen, water recycling etc.

Challenges associated with these missions

- ① Human life challenges — lives of astronauts involved.
- ② Solar radiation and solar winds can jeopardise the operation.
- ③ Shift from welfare expenditure grievance of some sections -
- ④ International pressure to execute these missions -

India's Gaganyaan Mission and BAS are expected to be small step of a man but giant advancement of India's technological prowess.

17. "भारत की अपतटीय पवन ऊर्जा के क्षेत्र में उच्च क्षमता है, लेकिन कार्यान्वयन अभी भी कम है।" अपतटीय पवन ऊर्जा के दोहन में बाधा डालने वाली चुनौतियों पर चर्चा करें और संभावित समाधान सुझाएँ। (15 अंक, 250 शब्द)

"India's offshore wind energy has high potential but remains low on implementation". Discuss the challenges impeding the harnessing of offshore wind energy and suggest possible solutions.

(15 marks, 250 words)

Economic survey of FY 25 have highlighted the need for offshore wind energy to achieve 50% renewable energy capacity by 2030.

High potential of India's offshore wind Energy

① Large Coastal boundary ≈ 7500 km and hence large exclusive economic zone.

② Monsoonal winds $\rightarrow$ can promote and generate high wind energy
eg Arabian sea branch being perpendicular to western ghats.

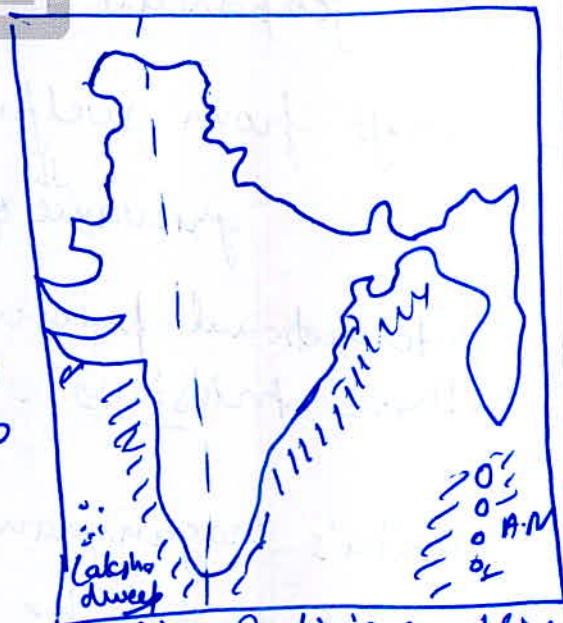


Fig. India's coastline.

③ Local winds such as land breeze, sea breeze.

Challenges . Impeding The harnessing of offshore wind energy

- ① Harsh conditions → Salinity
causing corrosion of equipments
- ② Erratic weather events — such as
cyclones, Tsunami, climate change
leading to destruction of employed
wind mills -
- ③ Technological adoption — high
input cost for development of
required technology.
- ④ Non-traditional threats such as
piracy, ~~the~~ maritime border disputes
 ↓ ↓
 Str Creek Katchatheevu
 Issue -
- ⑤ Biodiversity loss → such as
coral reefs, dugong and other
marine life.
eg olive ridley turtle's Anjivada
is impacted severely.

Possible solutions

- ① Hybrid solar and wind offshore policy to reduce input cost and ~~the~~ enhance technology adoption.
- ② Sustainable use of marine resources and conducting Environment Impact assessment ^{||} Threat minimisation.
- ③ Engaging stakeholders such as local communities and local govt. for upkeep and maintenance.

India's offshore wind energy provide a window of opportunity to achieve India's NDC and net zero by 2070 target.

18. विकास के केंद्र होने के अलावा, शहरी क्षेत्र आपदा जोखिमों के संचय के केंद्र भी हैं। मेगा-शहरी समूहों (Mega urban cities) में आपदा प्रबंधन विशेष रूप से जटिल क्यों है? शहरी क्षेत्रों में आपदा प्रबंधन और जोखिम न्यूनीकरण की समस्याओं को दूर करने के लिए क्या उपाय किए जा सकते हैं? (15 अंक, 250 शब्द)

In addition to being the centres of growth, urban areas are also centres of accumulating disaster risks. Why is disaster management particularly complex in mega-urban cities? What measures can be undertaken to address the problems of disaster management and risk reduction in urban areas? (15 marks, 250 words)

India's urban population stands at 35% (world bank) in 2023, presenting economic growth ^(= 5.5% GDP) along with certain challenges such as disasters, hazards.

urban areas as centres of accumulating disaster

① Flash floods → due to unplanned urbanization, drainage crisis, lack of green spaces, encroachment of water bodies & flood plains -
eg flashfloods in Delhi - Yamuna overflow.

② Earthquakes → lack of implementation of National building Code
→ lack of green building
→ leading to loss in life and infrastructural damage.

- ③ Heat waves → urban heat island effect
 → Pollution & GHG Emission
 → Concrete's Albedo

eg Prolonged spell of Heatwaves in Apr-May in Northern India -

- ④ water scarcity → due to lack of water management
 → lack of ground water percolation -

eg Bangalore water crisis

Disaster management complex in urban areas

- ① High population density — leading to lack of swift action and response.

- ② Diffusion of responsibility → Multiplication of governing body

eg Delhi → MCD
 → GNCTD
 → Parliament
 → DDA
 → MCHVA - for housing
 → Law & order under MHA -

- ③ urban poverty $\approx$ 17% (NITI aayog)
enhancing vulnerabilities

Measures that need to be undertaken

- ① Predisaster (NDMA)
- for Earthquakes
 - Retrofitting & seismic studies
 - National building code
 - for flash floods
 - dredging & desilting of drainage system
 - Doppler radars
 - cascaded planning
 - for heat waves (not NDMA)
 - timely supply of essential medical items
 - early warning system

- ② During disaster (NDMA)
- for Earthquakes & flash floods
 - quick response
 - Rescue
 - controlling situation employing bunkers
 - NDRF
 - for heat waves & water scarcity (Not NDMA)
 - Supply with tankers of water
 - Ambulance availability
 - Warning to stay indoors

- ③ Post disaster $\Rightarrow$
Rebuilding $\rightarrow$ Build back better

urban local bodies should be empowered for proactive response to achieve SDG 11 (Healthy cities)

19. भारत की आंतरिक सुरक्षा के लिए सोशल मीडिया और नेटवर्किंग साइट्स द्वारा उत्पन्न खतरों पर चर्चा कीजिए। सूचना और प्रौद्योगिकी नियम, 2021 के तहत तथ्य-जांच इकाइयाँ (FCU) सोशल मीडिया पर फर्जी खबरों के प्रसार के समग्र खतरे को नियंत्रित करने में किस प्रकार मदद करती हैं? सरकार द्वारा तथ्य-जांच इकाइयाँ (फैक्ट चेक यूनिट) स्थापित करने के बारे में प्रेस प्रसारकों और डिजिटल मीडिया प्रतिभागियों की क्या-क्या चिंताएँ हैं? (15 अंक, 250 शब्द)

Discuss the threats posed by social media and networking sites to the internal security of India. How do the fact-check units (FCUs) under Information and Technology Rules, 2021 help in controlling the overall menace of the spread of fake news on social media? What are the concerns of press broadcasters and digital media participants about the Government establishing fact-check units? (15 marks, 250 words)

Social media is platform based on web 2.0 with realtime sharing of content and communication. Internet users have gone upto 867 million (Tru) in India.

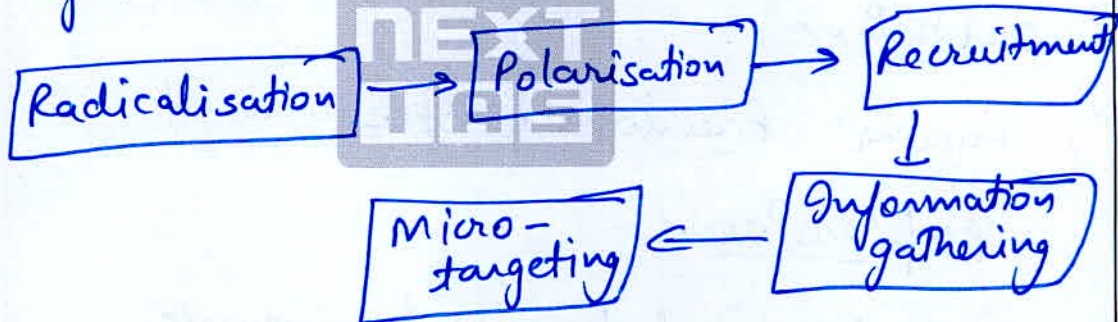
Threats posed by social media and networking sites

- ① Fake news $\Rightarrow$ Fake news threatens social fabric of India with misinformation, disinformation.
eg Muzaffarnagar riots (2012)
- ② Sensationalisation $\Rightarrow$ Sensationalising the important security issues
eg Recent Nuh violence.

③ Polarisation $\Rightarrow$ widening the cracks in the society.
eg Social media caste groups
False pride and caste consciousness.

④ Dramatisation $\Rightarrow$ Dramatisation of news by individuals to shoot their own interest
eg Sushant Singh Rajput's case.

⑤ use by state and non-state actors for radicalisation and other things.



⑥ Financial frauds $\Rightarrow$ such as man in the middle attack, service denial,
eg phishing for bank passwords.

Fact-check units under IT rules 2021

① Complaints $\rightarrow$ entertaining complaints and ~~then~~ source cognisance.

- ② fact check $\Rightarrow$ checking the intention of news, if news is placed or genuine.
- ③ Grievance redressal $\Rightarrow$ In a time bound manner usually 15 days

Concerns of press broadcasters and digital media participants about govt's FCU

- ① Over-regulation $\Rightarrow$ Can lead to curbing genuine dissent and criticism.
- ② Against freedom of speech and expression.
- ③ Delay in regulation and grievance redressal

way forward $\rightarrow$ B.N Srikrishna committee recommendation
 $\rightarrow$ Data localisation and Capacity building.
 $\rightarrow$ Setting up social media cells on lines of Mah-police cells.

To avail transformative power of social media a balance ~~with~~ between freedom of speech and expression and self restraint is required.

20.

कश्मीर घाटी में हिंसा भड़काने में हिंसक गैर-राज्य अभिकर्ताओं (वीएनएसए-अपवसमदज Non-state actors) की भूमिका पर प्रकाश डालते हुए, चर्चा कीजिए कि सशस्त्र बलों द्वारा "ऑपरेशन सद्भावना" स्थानीय युवाओं की आकांक्षाओं को संबोधित करके वीएनएसए-ओजीडब्ल्यू (ओवर ग्राउंड वर्कर्स) गठजोड़ से कैसे निपट सकता है। (15 अंक, 250 शब्द)

By highlighting the role of Violent Non-State Actors (VNSAs) in inflicting violence in Kashmir valley, discuss how "OPERATION SADBHAVNA" by armed forces can tackle the VN-SA-OGW (Over Ground Workers) nexus by addressing the aspirations of local youth. (15 marks, 250 words)

Recent attacks in Leasi in J&K highlights the role of Violent Non-state actors and their nexus.

Role of violent - Non state actors

- ① Cross-border terrorism ⇒ Destroying and threatening critical infrastructure and general public
- ② Radicalisation ⇒ Radicalisation of youth to create over-ground workers.
- ③ Overt and covert support to other terrorist groups eg logistics, intel, terrain information etc.
- ④ Lone-wolf attacks ⇒ carrying out motivated lone-wolf attacks to inflict terror.

- ⑤ Organised crimes → engaged in organised crimes such as human trafficking, drug trafficking, illegal immigrants, FICN etc.

Operation Sadbhavana to tackle VNSA-OW nexus

operation Sadbhavana was launched by armed forces in light of broader WHAMC (winning hearts and mind) approach.

- ① Preventing radicalisation by awareness generation and curbing such over ground workers -

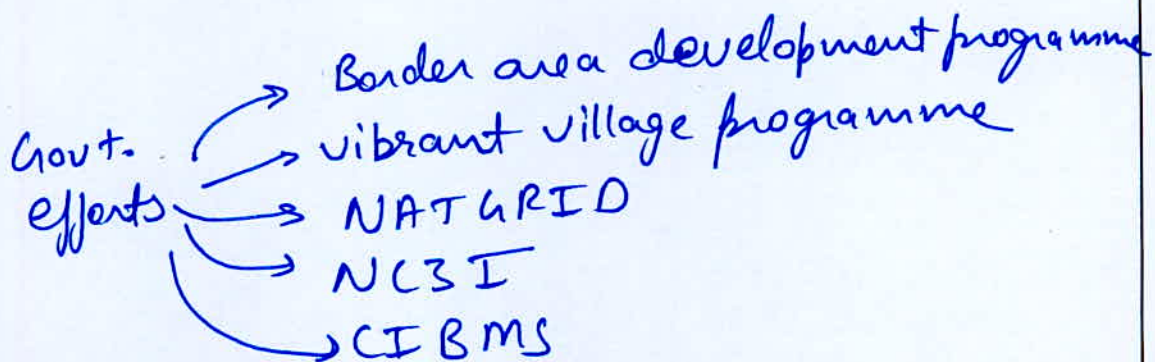
- ② socio-economic development

{ health facilities
{ Educational facilities
→ protecting activists etc.

- ③ Mapping diverse ~~the~~ terrains by engaging with community
 community policing.

Way forward →

- ① Sherkatkar committee recommendations on modernising ~~the~~ border infrastructure.
- ② Heavy expenditure on socio-economic dimensions.
- ③ Border fencing and hard measures such as denying funding, carrying out surgical strikes.



India should develop a comprehensive National security strategy with whole of nation approach to curb such nexus.

NEXT IAS

Space for Rough Work

NEXT IAS

Space for Rough Work

NEXT IAS

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महत्वपूर्ण निर्देश	
अभ्यर्थियों को निम्नलिखित निर्देशों को ध्यानपूर्वक पढ़ना चाहिए। किसी भी निर्देश का उल्लंघन करने पर दण्डित किया जा सकता है।	
क्या न करें- 1. इस प्रश्न-सह-उत्तर पुस्तिका के भीतर कहीं भी अपना नाम या पंजीकरण संख्या न लिखें। 2. अपनी QCA पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तरों के अलावा कुछ भी न लिखें। 3. अपनी QCA पुस्तिका से कोई भी पृष्ठ न फाड़ें, यदि आपको कोई पृष्ठ गायब लगे, तो पर्यवेक्षक/निरीक्षक को सूचित करना न भूलें। 4. अपनी QCA पुस्तिका को अपनी टेबल पर न छोड़ें, परीक्षा समाप्त होने के पश्चात इसे निरीक्षक को सौंप देना चाहिए।	क्या करें- 1. कवर पृष्ठ पर दिए गए निर्देशों को ध्यान पूर्वक पढ़ें और उनका सख्ती से पालन करें। 2. QCA पुस्तिका के कवर पृष्ठ पर दिए गए स्थान पर अपना पंजीकरण नंबर और अन्य विवरण लिखें। 3. स्पष्ट और पठनीय तरीके से लिखें। खराब/अपठनीय लिखावट में न लिखें। 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। 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। 6. परीक्षा हॉल छोड़ने से पहले अपनी QCA पुस्तिका व्यक्तिगत रूप से निरीक्षक को सौंप दें।

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 छाया 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।

