NEXT IAS

anubhav-2025

(To be filled by candidate)

TEST CODE : ANV2503

Name of Candidate: Harsh Lodha Mobile N[redacted]

Roll No. : MT25FLTRA012 Start Time ..... End Time.....

Date of Examination: 08/08/25 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, 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, 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: .....

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FOR OFFICE USE ONLY

Student Concerns / Query	Evaluator's Feedback / Response
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.

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IMPORTANT QR CODES

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

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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

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Q19.

Introduction	Body	Conclusion

Q20.

Introduction	Body	Conclusion


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DAS

Candidates must not write on this margin

1. आपके विचार में भारत के कर ढाँचे में सुधार के हालिया प्रस्ताव भारत के कर उत्प्लावकता और कर आधार को बेहतर बनाने में किस सीमा तक सहायक होंगे? (उत्तर 150 शब्दों में दीजिए) 10 अंक

How far do you think the recent proposals to reform India's tax structure will help in improving India's tax buoyancy and base? (Answer in 150 words) 10 marks

As per Economic Survey 24-25, tax to GDP ratio of India was very low as compared to other OECD countries

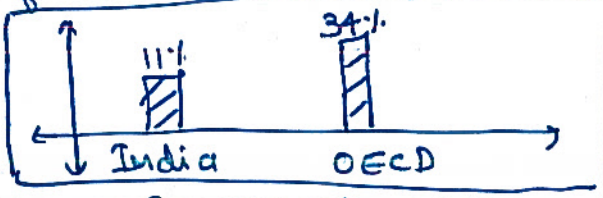


Fig. Tax to GDP

Recent reforms in tax structure

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① New tax regime: "zero" tax upto 12 lakhs income.

② Changes in capital gains: 12.5% tax on LTCG with 1,25,000 exemption for shares

③ Construction property: indexation allowed upto cut-off date of July 2025.

Improve tax buoyancy

Tax buoyancy = % change in tax revenue with 1% increase in GDP

① GST has already raised buoyancy from 0.74 to 1.25

Candidates must not write on this margin

(2) Direct tax buoyancy will increase increase from 1.04 to 1.12 as per ES 24-25

(3) GDP growth may outpower tax growth due to exclusion of agriculture (EY report)

(4) Tax expenditure of 1.32 lakh crore as per Hon. Finance Minister can hamper tax buoyancy.

Improve tax base

(1) Reduce or zero tax can encourage more tax filings.

(2) Vivad se Vishwas 2.0 can also enhance tax base.

(3) Abolition of Angel investor tax can reduce tax base

(4) Removal of Equalisation levy too may affect it.

Recn of Kelkar committee on Direct Tax Code to include agri income in tax be revisited.

Candidates must not write on this margin

2. आर्थिक राष्ट्रवाद और संरक्षणवाद की बढ़ती प्रवृत्तियाँ भारत की वैश्विक व्यापार प्रतिस्पर्धात्मकता को कैसे प्रभावित करती हैं? इन चुनौतियों से निपटने के लिए भारत ने हाल ही में क्या उपाय किए हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

How do the rising trends of economic nationalism and protectionism affect India's global trade competitiveness? What recent measures has India taken to navigate these challenges? (Answer in 150 words) 10 marks

Recent tariffs of 25% by USA on India highlight increasing economic nationalism and its effect on India.

Effect on India's global trade competition

① Non tariff barrier: SPS & TBT used by west against Alphonso exports

② Tariff barriers: recent decision of Trump admin.

③ Protectionism affecting service export: H1B visa issue, UK visa issue, etc.

④ Lost competitiveness: High import cost of energy resources leading to imported inflation

⑤ Restrictions on technology transfer
ex: I-CeT slowdown

Candidates must not write on this margin

Positives → India also propounding Atmanirbhar Bharat

→ Moving away from traditional partners to new market (Africa & Middle East)

→ Help avoid dependency and focus on self-sufficiency (Indigenous industry)

Measures to navigate these challenges

1. Bilateral talks with countries imposing tariff and NTB.
2. Signing of free trade agreements
   - Ex: Recent with UK.
3. Renewal of trade agreements.
   - Ex: ASEAN FTA 2.0 talks
4. Domestic measures
   - Make in India & Make for world in India
   - Ease of doing business (Tesla showroom)
   - Self-sufficiency focus through PLI, etc

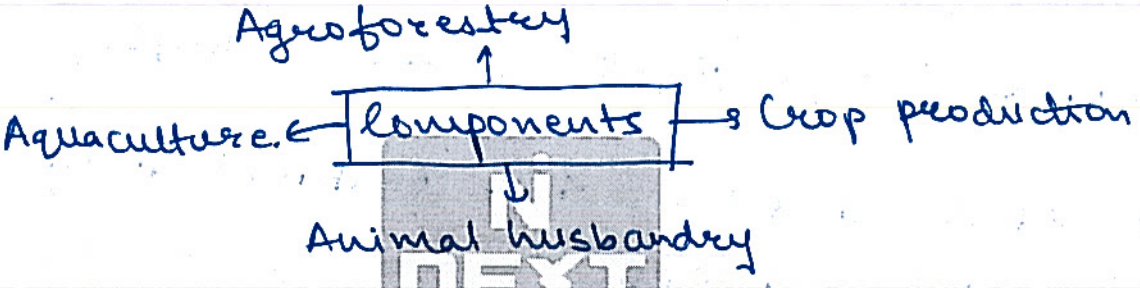
To ensure Viksit Bharat @'47 need of the hour is to balance protectionism & liberalisation.

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3. कृषि उत्पादकता में सुधार लाने और कृषि के पर्यावरणीय प्रभाव को न्यूनतम करने में एकीकृत कृषि प्रणाली (IFM) की भूमिका का परीक्षण कीजिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

Examine the role of Integrated Farming System (IFM) in improving agricultural productivity and minimizing the environmental impact of agriculture. (Answer in 150 words) 10 marks

Integrated farming system is type where all forms of agriculture are clubbed together for synergy and economies of scale

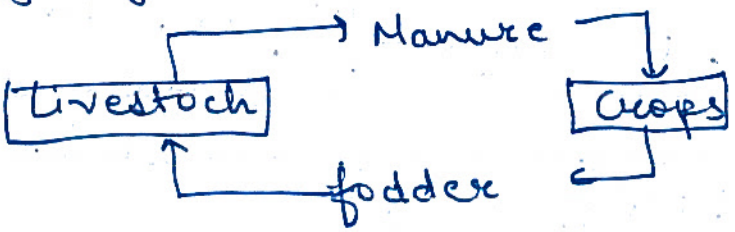


Improve agriculture productivity

(1) Better efficiency as low inputs needed

Ex Aquaculture + Agriculture ⇒ Aquaponics

(2) Synergy effect benefited.



(3) Support organic & natural farming for better and sustainable yield.

Ex ZBNF use "gaumutra", etc.

Minimise environmental impact

Candidates must not write on this margin

(1) Use of organic fertilisers like manure, etc. and thus soil fertile

(2) Risk of crop loss affecting income security reduced as "diversification" of activities.

(3) Agroforestry not highly affected by floods or drought.

Challenges in IFM

(1) High cost for farmers : 86% small and marginal farmers

(2) Awareness among farmers about IFM and agri-education low.

(3) Govt. support and price volatility in market discourage farmers.

(4) Poor support infra like cold storage, e-NAM slow down, etc.

Govt. Initiatives for IFM

(1) Limit for KCC increased to 5 lakh

(2) IFM policy for awareness and support.

Candidates must not write on this margin

4. हाल ही के वर्षों में, भारतीय कृषि बेहतर उत्पादकता और किसानों की आय में सुधार की दिशा में एक परिवर्तन का साक्षी रही है। कृषि को अधिक लाभकारी और संधारणीय बनाने के लिए सरकार द्वारा कौन-से संस्थागत और संरचनात्मक सुधार किए गए हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

In recent years, Indian agriculture has been witnessing a transformation towards better productivity and improved farmer incomes. What institutional and structural reforms have been undertaken by the Government to make agriculture more rewarding and sustainable? (Answer in 150 words) 10 marks

The average growth rate in agriculture sector in last 5 years has been 5.2% (ES-24) which highlights reform.

- Better productivity
  - Largest rice producer
  - Highest foodgrain yield in 24.
  - Double & triple cropping ↑ net sown area.
- This led to increased farmers income with average from 1,20,000 ₹ to 1,86,000 ₹ as per ES 24.

Institutional reforms by govt

1. e-NAM: for national agri market.
2. World's largest grain storage initiative with PACS
3. Krishi Vikas Kendras for agri research
4. More funding to ICAR, ICRIER, etc

Candidates must not write on this margin

(5) Krishi mitra and Kisan Call Centres in all Sch. languages for better dissemination.

(6) IMD & INCOIS support for weather updates.

Structural reforms by Govt.

(1) Mega food parks for better backward and forward linkages

(2) SATHI portal for better seeds.

(3) Amendments in PPVFR Act for research encouragement to farmers.

(4) Contract farming model act in 2017 for better agri mechanisation.

(5) Empowering rental heavy mlc infra for better yield & income

Although challenges after take back of 3 farm laws, 86% farmers being small & marginal must be removed to ensure the goal of "Jai Kisan"

Candidates must not write on this margin

5. वायु रक्षा प्रणालियाँ कैसे कार्य करती हैं? भारत के पास वर्तमान में कौन-कौन-सी विभिन्न वायु रक्षा प्रणालियाँ हैं?
(उत्तर 150 शब्दों में दीजिए) 10 अंक

How do Air Defence systems work? What are the various air-defense systems that India currently possesses?
(Answer in 150 words) 10 marks

Recent use of [S-400] by India during skirmishes after Pahalgam attack highlight role of Air defence system in national security.

How do air defence system work?

(1) Use of [sensors] to sense incoming missile from far location.

(2) [Precision-guided] system to locate the movt. of missile on real time basis.

(3) [Missile lock system] to ensure that incoming missile brought down despite direction change.

(4) [Heat sensors] to pursue incoming missile until its destroyed.

(5) Use of [AI], [ML] for predictive analysis of missile orbit.

Candidates must not write on this margin

(6) Use of Radars to detect an incoming missile when it comes in range of air defence system.

Various air defence system possessed by India currently

(1) Surface to air (Air defence system)

Ex S-400 from russia ; Iron Dome

(2) Air to air defense system

Ex ~~Indigenously~~ Arrow from Israel ~~taken~~.

(3) water to air defence system

Ex INS Arighat with water to air defence system.

(4) Mission 'Rohini' of India to build indigenous air defence system by 2029.

Recent talks of India to buy S500 from Russia can add to efficiency of air defence system of India

Candidates must not write on this margin

6. आनुवंशिक विकारों के उपचार में आरएनए संपादन (एडिटिंग) की क्षमता पर चर्चा कीजिए। डीएनए संपादन की तुलना में इसके क्या लाभ हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the potential of RNA editing in treating genetic disorders. What are its advantages over DNA editing? (Answer in 150 words) 10 marks

RNA editing is the process of gene editing where the RNA rather than DNA of cell is edited for tackling genetic disorders.

Premise: Being unstable in nature, RNA was earlier not used in gene editing, although various benefits have been researched of RNA editing.

Potential of RNA editing in treating genetic disorder

(1) Can be used to identify & locate them better (Diagnosis)

Ex Use RNA identifier to track 'Down's Syndrome'

(2) Can be used to alter RNA thus silencing discordant gene.

Ex Possibility of curing "cancer" by using "holistic genes" through RNA.

Candidates must not write on this margin

(3) Better approach over DNA editing as more specific treatment.

Research of Lymphoma through RNA editing

Advantages over DNA editing

(1) Temporary in nature against permanent nature of DNA editing.

(2) Less side effects by RNA editing due to specific treatment.

(3) No need for cold storage

(4) More production possible so economies of scale.

Challenges

- Unstable nature of RNA
- Still in trial stages
- Empirical evidences low

"Genetic engineering" holds huge significance in future and RNA editing can contribute immensely in genetic disorder.

Candidates must not write on this margin

7. अनियोजित विकास और बुनियादी ढाँचे के ढहने के कारण नगरीय क्षेत्र आपदाओं के प्रति अधिक सुभेद्य होते हैं। चर्चा कीजिए। ऐसी आपदाओं के प्रति नगरीय समुत्थानशीलता बढ़ाने के लिए आप कौन-सी रणनीतियाँ प्रस्तावित करते हैं?

(उत्तर 150 शब्दों में दीजिए) 10 अंक

Urban areas are more vulnerable to disasters due to unplanned growth and infrastructure collapses. Discuss. What strategies do you recommend to enhance urban resilience to such disasters?

(Answer in 150 words) 10 marks

Recent case of stampede in Bengaluru at 'RCB Victory Parade' highlight role of unplanned urbanisation in disaster vulnerability.

Unplanned growth leading to urban disaster

① Slums in flood-prone low lying areas

Ex: Dharavi in Mumbai affected by sea level rise.

② Urban fires due to poor real estate & housing plans.

③ Floods due to poor sewage system

Ex: Urban floods in Delhi.

④ Deforestation and urban drought as low water holding capacity & green spaces.

Infrastructure collapse leading to disasters

① Poor quality infrastructure

Candidates must not write on this margin

Ex: Samriddhi highway in MH in 1st year of inauguration damaged by water

(2) Bridge collapses

Ex: Morbi incident in Gujarat.

(3) Renewal & ops and maintenance lagging Ex: Elphinstone bridge case

Strategies for urban resilience against disasters

(1) Urban planning: learn from Pune Model of urban forestry

(2) Disaster preparedness: to reduce impact of disaster Ex: Floods Mumbai, for floods.

(3) Green Building Codes Ex: Eco-Construction

(4) Green spaces in residential areas

Ex: Delhi Model.

Urban population in India to reach 50% by 2050 so need to ensure that urban planning help mitigate disaster as 1₹ spent on DM save 4₹

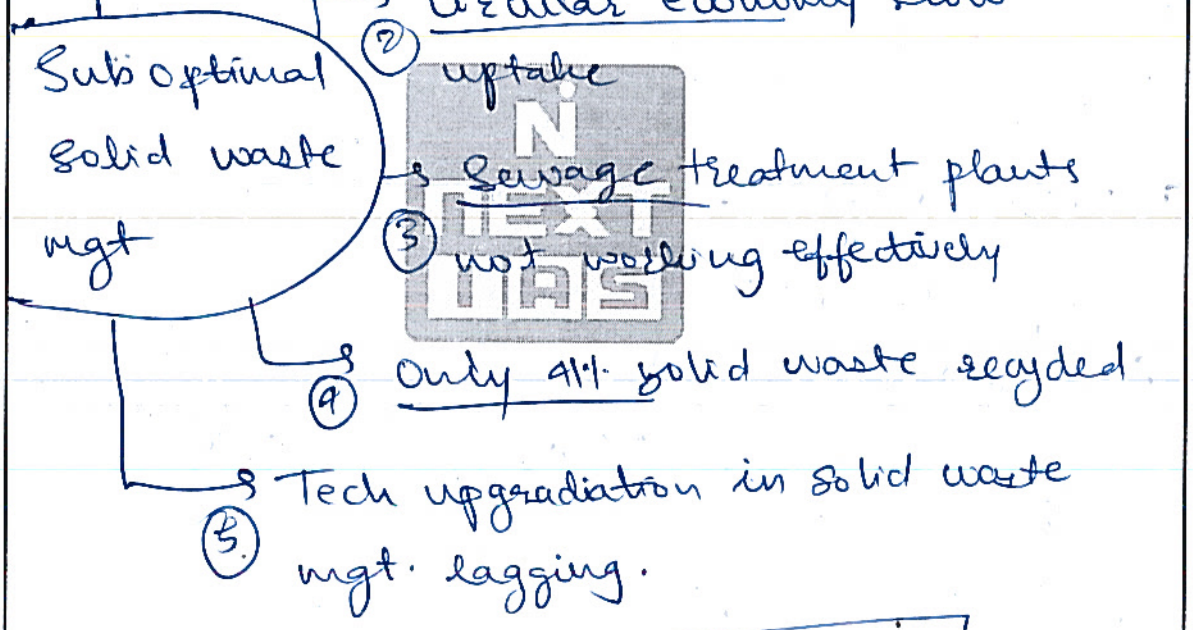
Candidates must not write on this margin

8. स्वच्छ भारत मिशन की सफलता के लिए इसकी महत्ता के बावजूद, भारत में ठोस अपशिष्ट प्रबंधन अब भी उपेष्टतम (Sub-optimal) स्तर पर है। इस संदर्भ में, प्रभावी ठोस अपशिष्ट प्रबंधन हेतु दीर्घकालिक प्रौद्योगिकीय और संस्थागत समाधान सुझाइए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

Despite its criticality for the success of the Swachha Bharat Mission, solid waste management in India remains at a sub-optimal level. In this context, suggest long-term technological and institutional solutions towards effective solid-waste management.

(Answer in 150 words) 10 marks

Swacch Bharat Mission 2.0 was launched recently.



Technological solutions for SWM

1. Tech transfer from **Israel** for SWM (90% recycling)
2. Waste to Energy plants encourage with **capex subsidy**

Candidates must not write on this margin

(3) Startups for innovation in solid waste mgt be incubated under Atal Innovation Mission.

(4) Sewage treatment plants on PPP model can be setup.

Institutional solutions for SWM

(1) Airtight legislation to ensure 'Polluter Pay Responsibility'

(2) 'Extended Producer Responsibility' be strictly followed.

(3) Create body for ensuring thrift to circular economy.

Solid waste Mgt in India can truly help us achieve goal of (Swacchta se Samriddhi) as per Hon. PM.

Candidates must not write on this margin

9. "सोशल मीडिया आधुनिक युद्ध में एक नए आयाम के रूप में उभरा है, जो अभिभाष्यों को आकार दे रहा है, धारणाओं को प्रभावित कर रहा है तथा राष्ट्रीय सुरक्षा को प्रभावित कर रहा है।" इस संदर्भ में, समकालीन संघर्षों में सोशल मीडिया की भूमिका का विश्लेषण कीजिए। (उत्तर 150 शब्दों में दीजिए) 10 अंक

"Social media has emerged as a new frontier in modern warfare, shaping narratives, influencing perceptions, and impacting national security". In this context, analyse the role of social media in contemporary conflicts. (Answer in 150 words) 10 marks

Recent instance of narrative and propaganda war along with "Operation Sindoor" highlighted role of social media in contemporary conflicts.

Role of social media

(A) Tool of modern warfare

(i) Spreading fake and malicius news

(ii) Use for cyber attack on other countries

(iii) "Wars won and lost" on social media → VK Saraswat

(B) Shape narratives and influence perception

(i) By hammering misinformation in public minds and create perceptual distortions

Candidates must not write on this margin

(ii) Recent case of Pakistani media flaunting a win despite huge losses.

(iii) Used as tool to spread sectarian & jingoistic propaganda.

Ex: Recent case of deepfake in BNG temple desecration.

(c) Impact on national security

(i) Used as tool for radicalisation

Ex: Recent case of Kerala engineer indoctrinated by ISIS.

(ii) Used to anonymously communicate with over-ground workers

Ex: Use of Youtube comments

Steps for govt. to tackle it

(1) Implementing Tallinn Manual for better social media mgt.

(2) Multi-agency centres for social media monitoring.

(3) Strict implementation of IT Act

(4) Social Media regulation guidelines for companies.

Candidates must not write on this margin

10. सीमा सुरक्षा बल (BSF) ने अपने क्षेत्राधिकार और रणनीतिक महत्त्व, दोनों में ही सीमा प्रबंधन और आंतरिक सुरक्षा ढाँचे के संदर्भ में उल्लेखनीय विकास किया है। BSF की भूमिका और अधिदेश की व्याख्या कीजिए। सीमावर्ती राज्यों में कार्य करते समय बीएसएफ को किन समस्याओं का सामना करना पड़ता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक

The Border Security Force (BSF) has evolved significantly in its jurisdiction as well as its strategic importance in border management and the internal security framework. Explain the role and mandate of BSF. What are the issues BSF faces while operating in the border States? (Answer in 150 words) 10 marks

The recent move of BSF jurisdiction extension to 50 km from border area was supported by the rationale of national security.

Role and mandate of BSF

1. To ensure border area security
2. Cooperate with local police to avert insurgency on border.
3. Avoid illegal migration of people on borders.
4. Nap drug, women, arms trafficking in border areas.
5. Work with army to maintain sovereignty & integrity of India.

Issues faced by BSF in border states

1. Lack of enough personnel to man

Candidates must not write on this margin

border areas

Key As per Shekhatkar committee 33% vacancy in BSF

(2) Turf wars with local police forces due to lack of synergy in ops.

(3) Political interference in activities of BSF affect independence and autonomy.

(4) Lack of funds and advanced equipments to effectively work as per mandate.

(5) Armed forces see them as 'secondary' which lead to 'ego-clashes'.

(6) Lack of cooperation & behavioural synergy with locals (seen as threat)

Way forward

(1) Integrated training and simulations for better synergy in ops.

(2) clear mandate to avoid turf wars.

(3) Consensus with states (opposed by WB) for better role objectivity.

Candidates must not write on this margin

11. भारत की संवृद्धि गाथा असमानता और मध्यम आय-जाल की दीर्घस्थायी चुनौतियों से प्रभावित है। चर्चा कीजिए। मध्यम आय के जाल से बाहर निकलने और समावेशी एवं सतत् आर्थिक संवृद्धि सुनिश्चित करने के लिए भारत को किन उपायों का पालन करना चाहिए, इस पर प्रकाश डालिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

India's growth story is marred by persistent challenges of inequality and the middle-income -trap. Discuss. Highlight the approaches India should follow to escape the middle-income trap and ensure inclusive and sustainable economic growth.

(Answer in 250 words) 15 marks

Recently, World Bank highlighted that India is possibly facing "middle income trap" in future due to inequalities and human regression.

growth story of India marred by:

(A) **Inequality**:

(1) Gini coefficient ranking of India constantly below 100.

(2) **Gender** inequality seen from low FLFPR (42.7% vis 69% global)

(3) **Caste** inequality as 16.6% SC popn hold only 9% enterprise.

(4) **Rural - Urban** inequality: seen from 29% contr of rural India to GDP despite 70% population.

(5) **Disabled** population made redundant

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(B) **Middle Income trap:**

(1) Lack economies of scale (MSME based economy)

(2) Spend only 0.65% on R&D and thus no innovation

(3) Skilling in India very low @ 4.4% as per India Skills report. (low skill workers)

(4) Mfg. sector gap as per Lewis Model of development.

Approaches to be followed by India

(1) World Bank in its report suggested 3I strategy to move out of middle income trap.

Investment → Infusion → Innovation

(2) Need to reform manufacturing sector to enjoy fair share in value chain (only 2% currently)

(3) Branding of Indian product for better global competitiveness (Use of

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GI tags, ODOP, etc.)

④ Skilling of youth to enjoy the short window of "demographic dividend"

For inclusive and sustainable growth

⑤ Women participation in economy can be recognised by **monetisation** of **care work**.

⑥ Encourage more women FLFPR by expanding **gig economy**

⑦ Secularisation of economic activities as propounded by **Amartya Sen** for inclusive growth.

⑧ Depth in **Silver Economy** be relooked for elderly contribution.

Govt. steps like Anusandhan National Research Foundation, Design linked Incentive, Bhakti Mission would go long way in "Sabka Sath, Sabka Vikas".

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12. MSMEs (सूक्ष्म, लघु एवं मध्यम उद्यम) "मेक इन इंडिया" पहल की सफलता के केंद्र में हैं, फिर भी उन्हें आमाप वर्धन और औपचारिक आपूर्ति शृंखलाओं में एकीकरण में चुनौतियों का सामना करना पड़ रहा है। चर्चा कीजिए। MSMEs (सूक्ष्म, लघु एवं मध्यम उद्यमों) को अधिक समुत्थानशील और प्रतिस्पर्धी बनाने के लिए आवश्यक संरचनात्मक सुधार प्रस्तावित कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

MSMEs are central to the success of the Make in India initiative, yet they face challenges in scaling up and integrating into formal supply chains. Discuss. Suggest structural reforms needed to make MSMEs more resilient and competitive. (Answer in 250 words) 15 marks

Recent Budget 25-26 expanded the **definition** of MSMEs by turnover and investment criteria for extended benefits to them.

Central to success of Make in India
- → 40% of GDP contribution
- → 35% of employment
- → 45% of export contribution
- → Small but efficient production facility.
- → Cascading effect on ancillary industries.

Challenges faced by MSME's

(1) 'Protectionism Syndrome' leads to MSME's not encouraged enough to scale up.

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② Voluntary dwarfism by MSMEs to enjoy government benefits.

③ Lack of funds or credit support to scale up (only 70% get instn credit)

④ Poor viability gap funding mechanism thus stalling capex expansion.

⑤ Lack of innovation and R&D thus no product differentiation in exports.

Also, lack of integration in formal supply chain

① Policy paralysis: "45 day repayment rule" seen as barrier (MSMED, 2006)

② Formal credit mechanism poor.

③ Informalisation benefits so voluntary as well (tax evasion, cash economy)

④ Excessive govt. regulations and filing approvals hamper the steps for formal integration.

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Structural reforms for MSME

1. Connect them with Atal Incubation Centres for innovation & commercialising ideas to revenue models
2. Seperate fund for MSME credit like NABARD for agriculture.
3. Expose them to foreign competition to bring out 'survival instinct'
4. Support in form of Industry-Academia linkage to be aware of newer trends and technology.
5. Technology Development Fund for support to MSME competitiveness.
6. support infra like better human resources, less logistics cost for cost competitiveness.

Schemes like UDYAM Portal, CHAMPIONS PORTAL, e-TReDS step in right direction.

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13. "प्रधानमंत्री कृषि सिंचाई योजना (PMKSY) का लक्ष्य 'प्रति बूँद अधिक फ़सल' प्राप्त करना है, फिर भी भारत में सिंचाई दक्षता अभी भी उपेष्टतम् बना हुआ है।" आलोचनात्मक विश्लेषण कीजिए। इसके कार्यान्वयन को सुदृढ़ बनाने के लिए किन सुधारों की आवश्यकता है? (उत्तर 250 शब्दों में दीजिए) 15 अंक

"The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) aims to achieve 'more crop per drop' yet irrigation efficiency in India remains suboptimal." Critically analyse. What reforms are needed to strengthen its implementation? (Answer in 250 words) 15 marks

Crop irrigation insurance in India has not been optimal despite the schemes like PMKSY with water use efficiency at only 34% compared to global average of 59%.

PMKSY
- Irrigation efficiency be increased
- Cropped area under irrigation be increased
- "Per Drop More Crop" principle
- Goal of "Har Khet ko Pani"

Irrigation efficiency in India suboptimal

1. Use of flood irrigation in India which is not efficient
2. Well irrigation efficiency only at 32% in India.

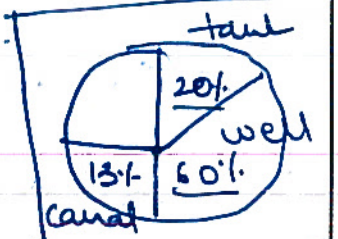


Fig. Irrigation pattern.

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(3) Canal irrigation encouraged like Indira Canal project

(4) Poor uptake of micro-irrigation techniques like drip irrigation, etc.

(5) Poor policy: DDUGJY provides free power and thus 'no value' for water.

(6) Poor agri practices like low uptake of Direct seeding of rice which take 40% less water

(7) Low uptakes of advanced agri practises like hydroponics where 90% less water needed.

Reforms needed to strengthen PMKSY

(1) Awareness about benefits of irrigation efficiency. (soil fertility maintained else run-off)

(2) Training of farmers for better usage of well & canal irrigation

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(3) Better policy making by capping free units under DDUGJY.

(4) Credit support for farmers to afford advanced tech like drip irrigation, etc.

(5) Micro-Irrigation policy to ensure its ground implementation.

(6) Targeting beneficiaries for better fiscal mgt (Exclusion error in PMKSY highlighted by CAG)

(7) Use of GIS, AI, IoT for better agri productivity especially for irrigation. (Digital maps, sensors for overflow, etc.)

"Water is key for agriculture" and with high speed of groundwater depletion need is to enhance agri & irrigation efficiency to ensure 20% agri share in GDP.

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14. तिलहन और दलहन के बढ़ते आयात ने इनकी कृषि को अलाभकारी बना दिया है। इस कथन के आलोक में, भारत में तिलहन और दलहन के उत्पादन और उपभोग को बढ़ावा देने के लिए आवश्यक कदमों का विशदीकरण कीजिए।

(उत्तर 250 शब्दों में दीजिए) 15 अंक

The rising import of oilseeds and pulses has made their cultivation unremunerative. In the light of this statement, elucidate the steps needed to promote the production and consumption of oilseeds and pulses in India.

(Answer in 250 words) 15 marks

India imports around 55% of its oilseed needs and "pulse crisis" of 2019 was wake up call for policy makers about excessive focus on foodgrain cropping in India.

Cultivation of oilseeds & pulses unremunerative.

- Land to yield ratio of oilseeds very high.
- Deforestation on large scale needed for oilseeds
- Import of pulses at lower cost than domestic discourage local cultivators
- Shift in pulse production over easier sugarcane, etc challenging.

Steps to promote production of oilseeds and pulses in India

(1) MSP guarantee to encourage production

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(PM-AASHA of govt.).

(2) Capex subsidy for cultivation of oilseeds and pulses

Ex: PM-OOP for oil palm.

(3) Seed availability for better backward linkages for farmers.

Ex: Inclusion of pulse seeds on SAATHI portal

(4) Support and extension services.

Ex: Expert support through Kisan Call Centres

(5) Import duty on pulses and oilseeds to encourage domestic procurement.

Steps to promote consumption

(1) Inclusion of pulses in PDS for behavioural changes

(2) Use of pulses in Midday Meals for operant conditioning of children.

(3) Brand pulses for health benefits

Ex: Protein "enhancer" so use of sprouts increasing.

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④ Forward integration by creating demand for healthy food options

eg Moong Chilla by IDEE, etc.

With increased production locally and demand for consumption the economic cycle of oilseeds and pulses can be rejuvinated to become Atmanirbhar and ensure food security as per SDG 2 "Zero Hunger"

NEXT

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15. मेघ बीजन के पीछे के वैज्ञानिक सिद्धांतों की व्याख्या कीजिए। वायु प्रदूषण और वैश्विक तापन के उपशमन में इसकी भूमिका पर प्रकाश डालते हुए, इसकी संभावित सीमाओं पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

Explain the scientific principles behind cloud seeding. Highlighting its role in alleviating air pollution and global warming, discuss its potential limitations.

(Answer in 250 words) 15 marks

Recent cloud seeding done in Delhi to tackle effect of low monsoon rain in the region.

Scientific principles behind cloud seeding :

(1) Vertical cloud seeding from top to ensure that clouds "coalesce" and shower rain

Eg: Use of Potassium and Silver Iodide

(2) Use of integrators within cloud to create charge within clouds so that they create 'covalent bond' leading to rain

Eg: Use of dry ice for the same.

(3) Injection of aerosols in the atmosphere to ensure that moisture

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in the atmosphere used to form clouds and give temporary rain.

Eg: Use of (common salts) for aerosols.

Role of cloud seeding

1. Alleviate air pollution
   - (i) Rainfall helps in settling the PM 2.5 & 10 particles.
   - (ii) Reduce dust pollution which is part of air pollution.
2. Reduce global warming
   - (i) Cooling effect of water
   - (ii) Albedo of clouds high so sunrays reflected back.

Potential limitations of cloud seeding

1. Very costly technology

   Eg: One event in Delhi costed 50 Cr rupees.

Candidates must not write on this margin

(2) Aerosol injection in air can in long term exacerbate global warming.

(3) Shallow ecologism which can make us ignore working on real problems.

Thus, cloud seeding can be used as complementary solution, although need of the hour is Deep Ecologism in line with principle of 'LIFE'.

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16. भारत के त्रि-चरणीय परमाणु ऊर्जा कार्यक्रम के क्रमिक विकास का विवरण दीजिए। थोरियम-आधारित तृतीय चरण को साकार करने के क्या लाभ और रणनीतिक अनिवार्यताएँ हैं? (उत्तर 250 शब्दों में दीजिए) 15 अंक

Give an account of the evolution of India's 3-Stage Nuclear Power Programme. What are the advantages and strategic imperatives of realising the thorium-based third stage?

(Answer in 250 words) 15 marks

Dr. Homi Bhabha was the one who gave the 3 stage Nuclear power programme for India.

Account of 3 stage prg

(A) **Pressurised heavy water reactor**

↳ Uses **U-238** which is fissile and leads to formation of **Plutonium-239** after continuous reaction.

↳ Use heavy water as moderator.

Evolution → Plants in India at Rawatbhatta, etc

→ Import of Uranium from Australia, etc

(B) **Fast breeder reactor**

↳ Aim to breed Plutonium-239

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in large number for future usage.

↳ No moderator as want to breed more plutonium.

↳ Further this plutonium is coated with Th232 to form U233

Evolution → 1st Fast Breeder Plant at Kalpakkam

→ Ongoing at Kundankulam power plant for.

(c) Thorium based reactor

↳ Uses U233 with coating of Th-232 to give U233

↳ It is a continuous reaction which can solve energy issues of India.

Evolution → As U233 very less in nature difficult.

→ No plant at this stage as of now.

Candidates must not write on this margin

Advantages of Thorium reactor
- Continuous energy supply
- Achieve renewable energy targets
- Potential of 500GW energy
- Self sufficiency as Thorium reserves high (27% of world)
- low cost energy availability

Strategic imperatives
- Quickly start fast breeder reactor at Kudankulam
- Technology transfer from Russia be done agility
- Red tape and enviro issues as in Jaitapur P.P. case be resolved

To ensure Efficiency, Accessible and Affordable energy access role of Thorium based power plant key. Recent 1200cr allocation for Kakrapar plant step in right direction.

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17. हाल ही के अध्ययनों से संकेत मिलता है कि 2014-2024 का दशक अब तक का सबसे गर्म दशक और 2024 अब तक का सबसे गर्म वर्ष रहा है। तेज़ी से बढ़ते वैश्विक तापन के आलोक में, जलवायु परिवर्तन का जैव-विविधता पर क्या प्रभाव पड़ेगा? पारिस्थितिक समुत्थानशीलता और प्रजाति विविधता के संरक्षण को सुनिश्चित करने के लिए आवश्यक उपायों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

Recent studies indicate that the 2014-2024 decade is the warmest decade and 2024 is the warmest year on record. In the light of rapid global warming, what are the impacts of climate change on biodiversity? Discuss the measures needed to ensure ecological resilience and conservation of species diversity. (Answer in 250 words) 15 marks

Impacts of climate change on biodiversity

(1) Impact on habitats

Ex: Ocean acidification affecting fishes.

(2) Impact on symbiosis

Ex: Coral bleaching due to rising ocean temperature

(3) Forest losses due to ↑ instances of wildfires

Ex: Amazon, Australia, etc.

(4) Breeding seasons affected.

Ex: Siberian crane reduction in Sambhar lake.

(5) Extinction threat for some species

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(Eg) Polar bears, Sumatran Rhinos

(6) Bacterial pests and new disease affecting crops, etc

(Eg) Arctic melting associated with new viruses, etc

Measures for ecological resilience & specie conservation

NEXT IAS

(1) Renewable energy transition

(2) Green economy focus

(3) Avoid deforestation

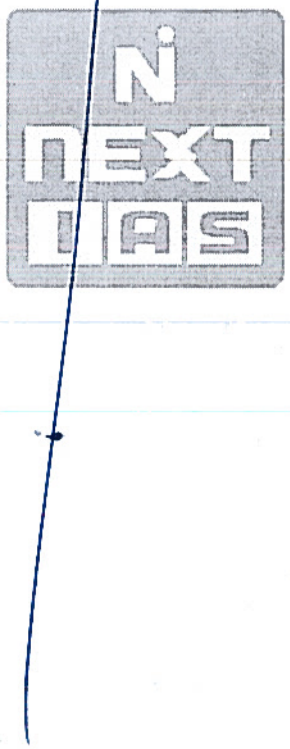
(4) Afforestation programmes.

(5) Seed banks.

(6) More power & funds to IUCN, CBD, etc.

(7) Strict implementation of UNCBD protocols, etc

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18. भारत में वनाग्नि की आवृत्ति और तीव्रता में वृद्धि हो रही है, जिससे गंभीर पारिस्थितिक और आर्थिक चुनौतियाँ उत्पन्न हो रही हैं। वनाग्नि के विभिन्न कारणों का वर्णन कीजिए। भारत में वनाग्नि की रोकथाम और प्रबंधन के लिए क्या उपाय किए जाते हैं? (उत्तर 250 शब्दों में दीजिए) 15 अंक

Forest fires in India are increasing in frequency and intensity, posing severe ecological and economic challenges. Describe the various causes of forest fires. What measures are followed to prevent and manage forest fires in India? (Answer in 250 words) 15 marks

Recent forest fire in Amazon affected 2bn species as per UN Forum on forests.

Causes

1. Drought
2. Zombie fires.
3. Jhum cultivation (Slash & burn)
4. Natural (fires as controller in grasslands).
5. Thunderstorm or lightning.

Measures to prevent

1. Systematic cutting of trees in spaces to avoid spread.

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(2) Cloud seeding in forest areas.

(3) Forest mgt. rules for sustainable agriculture.

UNEP gave 'Fire Ready Formula' for managing forest fires.



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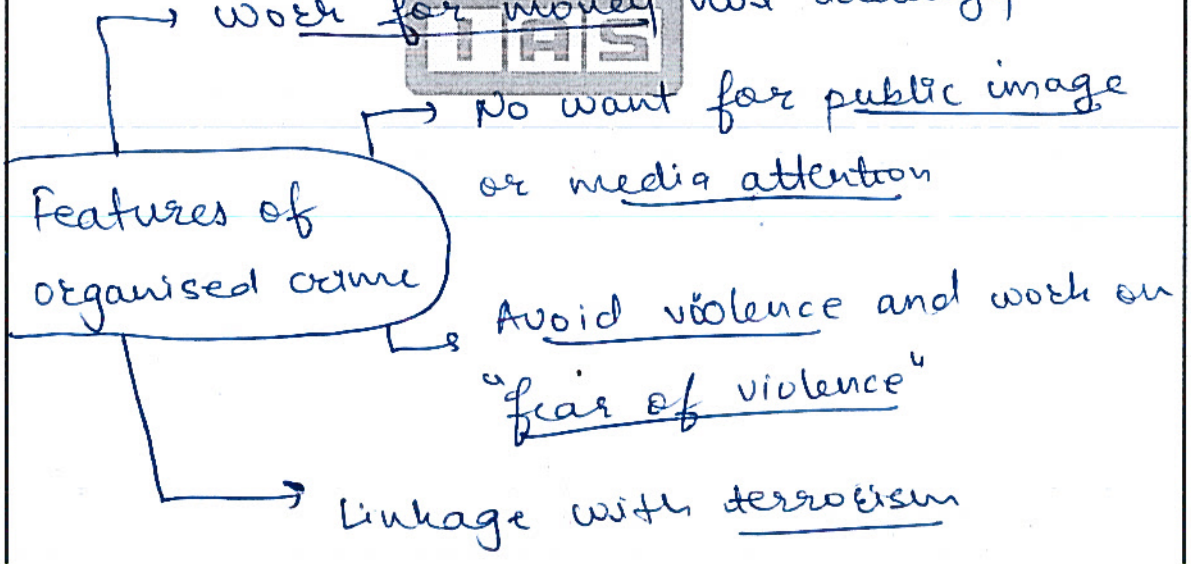
19. संगठित अपराध क्या हैं? संगठित अपराध और आतंकवाद के बीच संबंधों पर चर्चा कीजिए। ये संबंध भारत के लिए आंतरिक सुरक्षा संबंधी चुनौतियाँ कैसे उत्पन्न करते हैं? (उत्तर 250 शब्दों में दीजिए) 15 अंक

What are organized crimes? Discuss the linkages between organized crime and terrorism. How do such linkages pose internal security challenges to India?

(Answer in 250 words) 15 marks

Organised crime is a systematic setup of criminal activities like extortion, kidnapping, hawala working like smooth organisation with goal of 'money'.

Ex: **D-gang** of Dawood Ibrahim



Linkages of organised crime & terrorism

① Terror orgn involved in organised crime

Ex: Jamaat handles 30% of drug trafficking in **Golden Crescent**

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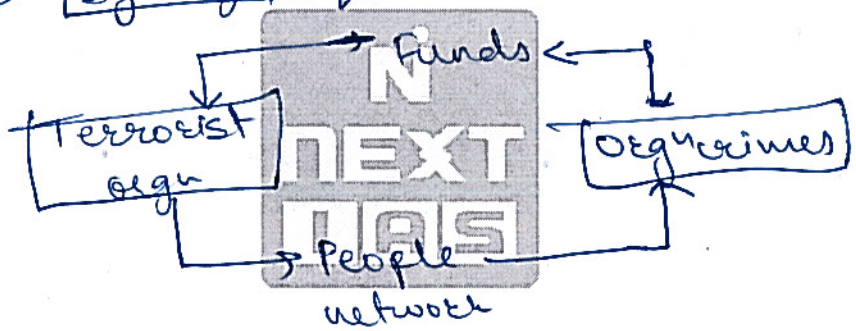
(2) Organised criminal groups resorting to terrorism.

Ex: 1992 Bombay blast → D-company

(3) Routes of organised crimes used by terror org^n

Ex: Pathankot terrorists used routes of drug traffickers.

(4) Synergy effect of their linkage.



(5) Common goal of using fear & violence to destabilise rule of law.

(6) Blurred lines in modern warfare with organised terrorism in form of ISIS.

Threat to internal security of India

(1) Hamper domestic security in India.

Ex: Cases of Kidnapping, extortion, etc.

(2) Border security issues due to

Candidates must not write on this margin

insurgency through hidden routes.

Ex: Recent Pahalgam attack.

(3) "Drug capital of world" due to location between Crescent & Triangle and huge presence of organised crime here.

(4) Combine with Left Wing Extremists to forward policy of 'cutting India with thousand cuts'

(5) Difficult to nip due to synergy of org crimes & terrorism.

(6) Cyber warfare usage by OC & terrorists with blockchain transaction make it more difficult.

Govt. steps

(1) MCOCA by Maharashtra against organised crime first such step.

(2) NCIPC & NATGRID for integrated intelligence.

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20. भारत का उत्तर-पूर्वी क्षेत्र विवादास्पद मुद्दों और सुरक्षा चुनौतियों से परिपूर्ण है। इस क्षेत्र में वर्तमान में व्याप्त विभिन्न सुरक्षा चुनौतियों का परीक्षण कीजिए। इन चुनौतियों से निपटने हेतु किए जाने वाले उपायों पर चर्चा कीजिए।

(उत्तर 250 शब्दों में दीजिए) 15 अंक

India's north-eastern region is fraught with contentious issues and security challenges. Examine the various security challenges currently prevailing in the region. Discuss the steps to counter these challenges. (Answer in 250 words) 15 marks

Recent case of Manipur has highlighted the sensitive situation persisting in North East region of India.

Various security challenges in North East

1. **Drug trafficking** in the region.
2. **Arms trafficking** to support insurgent outfits like **ULFA**.

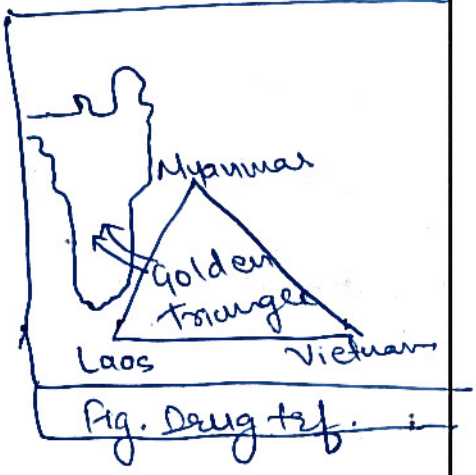


Fig. Drug trf. :

3. **Ethnic conflicts** between Nagas - Mizos, Kuki - Meitei, etc
4. **Border issues**: Nagaland demand for "greater nagalim"
5. **Illegal migration**: Rohingyas from Myanmar affecting local demography.
6. **Army attacked**: recent van of army attacked where 13 killed in Nagaland.

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(7) State sponsored insurgency : role of China in NSCN-K uprising

(8) Chinese dominance and aggression in North East region especially Arunachal Pradesh region

(9) Bangladesh pressure on Chicken Neck Siliguri corridor.

(10) Breakdown of Naga Peace Talks over flag issue.

NEXT IAS

Steps taken by govt. to counter challenges

(1) Comprehensive integrated border mgt system (CIBMS) for Bangladesh border.

(2) Use of BOLD-QIT, fencing, etc

(3) Operation Sunrise against insurgents in Myanmar.

(4) Assam Accords, Naga Peace Talks, Mizo Accords successful.

(5) Govt. schemes like PM-DEVINE

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for infra development in NER.

(6) National Sports University in Manipur for Youth Engagement.

(7) AFSPA in 3 states of NER for controlling situation.

(8) Bilateral talks for deescalation China ongoing.

(9) Projects like IMT, BBIN for reduce threat of "CHICKEN NECK" Choke

(10) Operation NARCOS against drug trafficking and "Nasha Mukt Bharat" campaign.

Need of the hour is to empower, encourage and enlighten North East region. Steps like MODONER with 10% budget allocation and further rec^{n} of Barbaruah committee can be looked upon.

Space for Rough Work

Space for Rough Work

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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.

SPECIAL REQUEST FOR CANDIDATE AVAILING ONLINE FACILITY

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.

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 SCANER) 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।