



VISIONIAS
INSPIRING INNOVATION
ABHYAAS MAINS

सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2930)

निर्धारित समय: तीन घंटे
Time Allowed: **Three Hours**

अधिकतम अंक: 250
Maximum Marks: 250

सामान्य अनुदेश

इस प्रश्न-सह-उत्तर (क्यू.सी.ए.) पुस्तिका में 55+1 पृष्ठ हैं। प्रश्न-पत्र, क्यू.सी.ए. पुस्तिका के अंत में संलग्न है, जो अलग (वियोज्य) किया जा सकता है और उम्मीदवार परीक्षा के उपरांत अपने साथ ले जा सकते हैं।

रफ कार्य के लिए, इस पुस्तिका के अंत में खाली पृष्ठ दिया गया है।

पुस्तिका प्राप्त होने पर, कृपया यह जांच कर लें कि इस क्यू.सी.ए. पुस्तिका में कोई कमी न हो, फटा हुआ पृष्ठ न हो अथवा कोई पृष्ठ गायब न हो इत्यादि। यदि ऐसा हो, तो इसके बदले नई क्यू.सी.ए. पुस्तिका प्राप्त कर लें।

General Instructions

This Question-Cum-Answer (QCA) Booklet contains 55+1 pages. Question Paper in detachable form is available at the end of the QCA Booklet which can be taken away by the candidate after examination.

For rough work, blank page has been provided at the end of this Booklet.

On receipt of the Booklet, please check that this QCA Booklet does not have any shortcomings, torn or missing pages etc. If, so, get it replaced with a fresh QCA Booklet.

(उम्मीदवार द्वारा भरा जाएगा/To be filled by the Candidate)

पंजीकरण सं./Registration No. : 277076

अभ्यर्थी का नाम/Name of Student : ASHUTOSH MISHRA

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

25-8-24

**सामान्य अध्ययन (प्रश्न पत्र-III)
GENERAL STUDIES (Paper III)**

केंद्र
Centre

CHHATARPUR (MP)

निरीक्षक के हस्ताक्षर
Invigilator's Signature

	<p style="text-align: center;">महत्वपूर्ण अनुदेश</p> <p>उम्मीदवारों को नीचे उल्लिखित निर्देश सावधानी से पढ़ लेने चाहिए। किसी भी निर्देश का उल्लंघन करने पर उम्मीदवारों को मिलने वाले अंकों में कटौती, उम्मीदवारी रद्द या आयोग के परवर्ती परीक्षाओं के लिए वर्जित करने इत्यादि के रूप में दण्डित किया जा सकता है।</p>	<p style="text-align: center;">Important Instructions</p> <p>Candidates should read the undermentioned instructions carefully. Violation of any of the following instructions may entail penalty in the form of deduction of marks, cancellation of candidature, debarment from further Examination of the Commission etc.</p>
1	<p>(क) अपना पंजीकरण सं. एवं अन्य विवरण केवल प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) में उम्मीदवार के लिए निर्धारित स्थान पर ही लिखें।</p> <p>(ख) इस पुस्तिका में अन्यत्र कहीं भी अपना नाम, पंजीकरण सं., मोबाइल नं., पता अथवा प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) संख्या न लिखें जिससे आपकी पहचान का खुलासा हो।</p>	<p>(a) Write your Registration Number and other details only in the space provided in the Question-Cum-Answer (QCA) Booklet for candidates.</p> <p>(b) Do not disclose your identity in any manner such as, by writing your Name, Registration number, Mobile number, Address, Question-Cum-Answer (QCA) Booklet No. etc. elsewhere in the Booklet</p>
2	<p>अपनी प्रश्न-सह-उत्तर पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तर के अतिरिक्त कुछ न लिखें जैसे कि कोई कविता/दोहा, अभद्र या अपमानजनक अभिव्यक्ति इत्यादि और न ही कोई ऐसा चिन्ह/निशान बनाएं जिसका उत्तर से सम्बन्ध न हो।</p>	<p>Do not write in the QCA Booklet anything other than the actual answer such as couplet, obscene, abusive expression etc., nor put any sign/mark having no relevance to the answer.</p>
3	<p>परीक्षक को प्रत्यक्ष/अप्रत्यक्ष रूप से कोई भी प्रार्थना/धमकी भरी बातें न लिखें।</p>	<p>Do not make any direct/indirect appeal/threat to the examiner.</p>
4	<p>उत्तर अस्पष्ट अथवा गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।</p>	<p>Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.</p>
5	<p>उत्तर स्याही में ही लिखें। उत्तर लिखने के लिए पेंसिल का उपयोग न करें, हालांकि आरेख, चित्र इत्यादि बनाने के लिए पेंसिल का उपयोग किया जा सकता है।</p>	<p>Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.</p>
6	<p>प्रवेश पत्र में उल्लेख किए गए माध्यम के अलावा अन्य किसी माध्यम में उत्तर न लिखें। अधिकृत और अनधिकृत की मिली जुली भाषा का भी उपयोग न करें।</p>	<p>Do not write answers in medium other than the authorized medium in the Admission Certificate. Do not use mixed language either i.e. authorize and unauthorized media together for writing answers.</p>
7	<p>प्रश्नों के उत्तर ठीक उसके नीचे दिए गए निर्धारित स्थान पर ही लिखें। निर्धारित स्थान के अलावा किसी अन्य स्थान पर लिखे गए उत्तर का मूल्यांकन नहीं किया जाएगा।</p>	<p>Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.</p>
8	<p>यदि आप अपने किसी उत्तर को रद्द करना चाहते हैं तो उसे पेन से काट दें तथा उस पर "रद्द" लिख दें, अन्यथा उसका मूल्यांकन किया जा सकता है।</p>	<p>If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.</p>

कार्यालय के प्रयोग हेतु For Official Use	कार्यालय के प्रयोग हेतु For Official Use
<p>परीक्षक के हस्ताक्षर Signature of Examiner(s)</p>	

प्राप्तांक के विवरण (परीक्षक द्वारा भरा जाए)/ Marks Details (To be filled by the Examiner(s))

प्रश्न सं. Q. No.	अंक Marks		प्रश्न सं. Q. No.	अंक Marks	
1			11		
2			12		
3			13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		
उप-योग (A) Subtotal (A)			उप-योग (B) Subtotal (B)		
सकल योग (A+B) / GRAND TOTAL (A+B)					



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अधिकतम अंक: 250
Maximum Marks: 250

प्रश्न-पत्र संबंधी विशेष अनुदेश

कृपया प्रश्नों के उत्तर देने से पूर्व निम्नलिखित प्रत्येक अनुदेश को ध्यानपूर्वक पढ़ें:

कुल बीस प्रश्न दिए गए हैं जो हिंदी और अंग्रेजी दोनों में छपे हैं।

सभी प्रश्न अनिवार्य हैं।

प्रत्येक प्रश्न/भाग के लिए नियत अंक उसके सामने दिए गए हैं।

प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए, जिसका उल्लेख आपके प्रवेश-पत्र में किया गया है, और इस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यू.सी.ए.) पुस्तिका के मुख-पृष्ठ पर निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिखे गए उत्तर पर कोई अंक नहीं मिलेंगे।

प्रश्न संख्या 1 से 10 तक का उत्तर 150 शब्दों में तथा प्रश्न संख्या 11 से 20 तक का उत्तर 250 शब्दों में दीजिए।

प्रश्नों में इंगित शब्द सीमा को ध्यान में रखिए।

प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गए कोई पृष्ठ अथवा पृष्ठ भाग को पूर्णतः काट दीजिए।

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are TWENTY questions printed both in HINDI and in ENGLISH.

All questions are compulsory.

The number of marks carried by a question/part is indicated against it.

Answers must be written in the medium authorized in the Admission Certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in a medium other than the authorized one.

Answers to Questions No. 1 to 10 should be in 150 words, whereas answers to Questions No. 11 to 20 should be in 250 words.

Keep the word limit indicated in the questions in mind.

Any page or portion of the page left blank in the Questions-cum-Answer Booklet must be clearly struck off.

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

उम्मीदवारों को इस कश्चि में नही लिखना चाहिए
Candidates must not write on this margin

1.

खाद्य प्रसंस्करण उद्योग का तीव्र विकास किस प्रकार भारत में खाद्य सुरक्षा संबंधी चुनौतियां उत्पन्न कर रहा है?
(उत्तर 150 शब्दों में दीजिए)
How is the rapid growth of the food processing industry leading to food safety challenges in India? (Answer in 150 words) 10

Food processing industry contributes more than 8% of GDP. Within 5 year, it can expect \$33 billion investment as per CII.

However, Rapid growth is creating food safety challenges

- 1) Absence of sufficient food testing labs
- 2) Due to poor regulation, rise of adulterated foods.
- 3) No proper grading, standardisation after its production, at farm house level.
- 4) To capture rural markets → Need cheaper products
Thus, bypassing of regulation.
- 5) Lack of manpower like food inspectors, testing kits, capacity to enforce rules.
- 6) Even big MNCs are not ensuring food safety
eg → FSSAI → 12% Contamination in MDH and Event spices.
- 7) Poor ethics in corporate food processing industries
eg → Mixing of honey with other product by Dabur

- ⑧ Due to use of excessive fertilisers
↳ contamination in raw material agri
crops
- ⑨ Animal Husbandary → use of growth hormones
for higher production → compromise with
food safety

Implication

- 1) Rejection of India's product at export market
- 2) Against right to health of people.
- 3) Competitive industries bypassing norms
rejoin and again

Way forward

- 1) Strict laws → Reform in FSSAI act 2006
- 2) Establishing food testing lab
- 3) Tracing of rejected exported product
and ensuring correction
- 4) Building awareness among citizen for
safe product.

Food safety industry should not become
victim of adulterated food. Otherwise, it will

2.

भारत की सार्वजनिक वितरण प्रणाली के अंतर्गत उचित मूल्य की दुकान (FPS) का प्रारंभ एक विकासशील प्रक्रिया है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)
Under the Public Distribution System of India, the Fair Price Shop (FPS) transformation is an evolving process. Discuss. (Answer in 150 words)

10

Public distribution system are government shops which distribute grain, salt, oil to poor and needy people.

The transformation of FPS - Evolving process

① During 1990s → FPS was limited in urban areas, very low presence in towns.

② Increased reach → presence of FPS shops with 3-4 km

③ Distribution of poor women grains → present
Distribution of rice, wheat, pulses with good quality

④ Issue of corruption, nexus → leakage of PDS grains ⇒ Starting of social audit
→ Effective monitoring

⑤ Digitalisation of ration card

↳ Addressing exclusion & inclusion error

⑥ linkage with aadhar card → removing ghost beneficiary

⑦ Giving PDS governance to self help groups,
cooperatives ⇒ increased accountability

⑧ \$MS tracking → citizens will get info. about
grain availability, distribution

⑨ e-POS and aadhar verification →
Availability of data of distribution through
"Annavitran portal"

⑩ one nation, one ration → Solving problems of
migrants

However,
More reforms are needed

Shanta Kumar committee

1) Involvement of private sector in distribution

2) DBT transfer project like Chandigarh

3) Toll free helpline, enhanced social audit

4) Computerisation of shops and regular
data declaration

5) Focus on state like UP, Bihar → where more
corruption

These reforms will ensure that PDS become
successful in achieving zero hunger (SDG).

3.

भारत में एग्रीटेक स्टार्ट-अप्स किसानों की कृषि उत्पादकता एवं बाजार पहुंच बढ़ाने में किस प्रकार मदद कर रहे हैं? (उत्तर 150 शब्दों में दीजिए)

How are agri-tech startups in India helping farmers in enhancing farm productivity and market access? (Answer in 150 words)

10

Agritech startups are those startup which are utilising technology for increasing growth in agriculture

(currently more than 500 big agri's startup)

Enhancing Farmer productivity

1) Farm precision → (working in Ahmadnagar - MH)

↳ give detailed weather advice → increased productivity

2) Irrigation → Startup promoting microirrigation through "Pay Later" model

↳ MP → "Water Farm" startup

3) Mechanisation → Giving tractors, other equipment - for rent - at cheaper price

Bhopal → "Farm Machine"

4) Credit availability → Giving digital lending to farmers.

5) Promoting extension service → Tamil Nadu

Solution by a company ←

Upload photo of crop leaves

↓
AI based solution for disease

⑥ Fertilisers → Many startups are testing soil
and suggesting fertilisers ⇒ Reducing
input-cost

eg 'Farm Mech' → Indore → Soil health card
expense

Enhancing market access

1) Agri startup → giving daily market price
↳ edge to farmers

2) Contract farming → purchasing raw crops and
selling in different parts.

3) Startup like 'Agriculture Indore' →
Building cooperatives of farmers → selling
product with collective bargaining

4) 'Namaste India' → Building capacity to
export farm product outside country
(Dehradun based)

however,

we must create ease of doing business,

regulatory facilities to enhance growth of
agritech startups.

4.

भारत में भूमि सुधारों के प्रभावी कार्यान्वयन में भूमि अभिलेखों के डिजिटलीकरण की भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए)
Discuss the role of digitization of land records in the effective implementation of land reforms in India. (Answer in 150 words)

10

National Rural Land Digitalisation Programme 2007 is promoting digitalisation of land records.

Role of digitalisation - Effective implementation of land reforms

- 1) Resolving legal disputes with digital data
- 2) Creating land ownership records for exclusion of rich farmers from govt. services.
- 3) Ease of doing for corporates → They can promote collective, cooperative farming
↳ addressing land fragmentation issues
- 4) linkage of land data with irrigation data, soil properties data will help in policy formulation and increased agri' productivity.
- 5) Availability of data of public community land

which can be distributed for
poor landless labourers.

- ⑥ Help in enhancing ownership of land to
women by making regulatory frameworks
- ⑦ Help government for land acquisition for
infrastructure projects.
- ⑧ planning watershed project as per land
data.
- ⑨ increasing investment in land based
industries.

however, issues → Digital literacy - low in farmers
→ Absence of IT infrastructure
eg → server breakdown
↓
Need larger investment to
secure data from breach,

The recent "swamitva" schemes aim to
promote digitalisation through Drone
based service is an effective step

5.

भारत को अपने जनसांख्यिकीय लाभांश का पूर्ण उपयोग करने और आर्थिक विकास में तेजी लाने के लिए एक विनिर्माण-केंद्रित विकास मॉडल को अपनाने की आवश्यकता है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

To fully exploit its demographic dividend and accelerate economic growth, India needs to adopt a manufacturing-led growth model. Discuss. (Answer in 150 words) 10

Nearly 65% population of India has average age of 29 years. To reap above

demographic dividend, India needs to

follow - Manufacturing led growth model -

1) Promote food processing industries,

↳ will absorb raw material of agriculture

↳ large job opportunities

2) Building capacities of MSME industries

↳ addressing issue of Dwarfism

↳ contribute in 25% GDP, 40% Export

3) Promote electronics industries

like mobile based, semiconductor based.

4) More focus on textile, jute based industries

(absorb → 2 crore people for employment)

5) Conversion of mining raw materials

into mining processing industries

(5) Increased focus on 'Network in India' & 'Assemble in India'

Challenges in adopting manufacturing led model

- 1) Lack of foreign investment due to global environment.
- 2) complexities in labour laws
- 3) land acquisition challenges
- 4) limited capacity of Banks to finance industry
- 5) Poor infrastructure → absence of connectivity
→ high logistic cost.
- 6) Poor skilling → low cold storage, warehouses
(50% Educated - Indians → Not employable)

Reforms

- Nohijy labour reform laws
- Increase pace of infrastructure
(11 Lakh crore allocation by Budget 2024)
- Building Mega fuel park
- Apprentice based skilling

We must increase manufacturing industry share from 25% to 40% to absorb our demographic dividend

6.

जलवायु परिवर्तन के परिणामस्वरूप बढ़ते प्राकृतिक खतरों से निपटने के लिए भारतीय तटीय समुदायों की प्रत्यास्थता को किस प्रकार मजबूत किया जा सकता है? (उत्तर 150 शब्दों में दीजिए)

How can the resilience of Indian coastal communities be strengthened to tackle the growing natural hazards resulting from climate change? (Answer in 150 words)

10

उम्मीदवारों को इस कठिनाई में नही लिखना चाहिए
Candidates must not write on this margin

The rise of Cyclone, Tsunami, Floods, Landslides in coastal regions require strong resilience of coastal communities.

Way to strengthen resilience

1) Strong enforcement of Coastal Regulation Zone Rules, Building bye laws

2) Community empowerment

↳ Training of community to prepare for response

↳ Increasing community rescue center, health center in those areas.

3) Building Sustainable Resilient Infrastructure

↳ Breaking walls to reduce effect of Tsunami, Flood

↳ Retaining walls to reduce landslides

↳ Construction of engineered buildings

which are not vulnerable to disaster like health, education, police buildings etc

4) Natural buffer strengthening

1) Mangrove plantation like in West Bengal

2) Promoting Coral growth

↳ Biorock tech in Orissa

3) Regulating Sand mining from coastal region

4) Regulating solid waste dumping in
coastal estuaries, wetlands

⑤ Strengthening Early warning system

↳ Odisha government reduced human loss
from cyclone because of effective EWS system

↳ sensor in oceanic waves

⑥ Strong preparation of NDRF, SDRF,
Focus on mitigation of disaster through
effective funding etc

⑦ Address the social vulnerability of
communities like poverty, lack of literacy,
digital illiteracy etc

⑧ Development in coastal area by taking care of
environment → west to east → united development

⇓
landslide

Therefore, multiple initiative
are necessary to building capacity of
coastal communities to fight against climate
change based hazard.

7.

भारत में अधिक संधारणीय पर्यावरण को बढ़ावा देने के लिए ग्रीन क्रेडिट प्रोग्राम किस प्रकार कार्बन प्रबंधन से कहीं अधिक विस्तृत है? इसके कार्यान्वयन के संबंध में विभिन्न चिंताएं क्या हैं? (उत्तर 150 शब्दों में दीजिए)

How does the Green Credit Programme extend beyond carbon management to promote a more sustainable environment in India? What are the various concerns about its implementation? (Answer in 150 words)

10

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8.

जब पहले से ही अन्य उपग्रह नेविगेशन सिस्टम उपलब्ध हैं, तो NavIC की आवश्यकता क्यों है? (उत्तर 150 शब्दों में दीजिए)

What is the need for NavIC when existing satellite navigation systems are already available? (Answer in 150 words)

10

Navic is Indian satellite navigation based on 3 geostationary & 4 geosynchronous satellite.

Need of NavIC over GPS

- ① Enhanced efficiency
- ② Foreign country can deny use of GPS during strategic time (e.g.) Kargil war
- ③ Indianisation of strategic sector require indian technology
- ④ To promote GIS based system, strategic space mission, strategic defence mission
- ⑤ Continuous monitoring by NavIC over Indian subcontinent & Indian ocean

⑥ integration with other tech like Energy warning system, Baggage for air transport etc

Thus it will enhance india's Capacity

- 1) 90 economic domain - New Startup
- 2) Sophisticated defense mission etc

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9. साइबर-सक्षम वित्तीय अपराध वैश्विक धन शोधन (मनी लॉन्ड्रिंग) के नए क्षेत्र के रूप में उभरा है। चर्चा कीजिए सरकार इस मुद्दे का समाधान किस प्रकार कर सकती है? (उत्तर 150 शब्दों में दीजिए)
- Cyber-enabled financial crime has emerged as the new frontier of global money laundering. Discuss. How can the government address this issue? (Answer in 150 words) 10

Neely 75% cybercrime in 2023 in India were financial in nature.
Cyber financial crime are used for money laundering -

- 1) During demonetisation → use of different Jan dhan account for conversion of Black to white money
- 2) Sending money to foreign shell company through Darknets
- 3) Purchase of Virtual assets like crypto currency and clearing of money through investment in foreign companies.
- 4) Transaction at Virtual platform avoid Taxation laws, No need to share with government.
- 5) Funding of organised crime, Terrorism through funding based on cyber networks

⑥ Roundtripping → Transactions through
proxy account and bringing black money
again in Indian economy.

⑦ Digital lending without restrictions,
gambling on digital platforms, Game
based investment etc are other
Means.

Government initiatives

① Taxation on virtual assets and tracking
↳ Gov. capital gain tax

② promote KYC Norms in every digital
transaction of virtual assets

③ Strengthening PMLA for bringing
early conviction

④ increasing technological capacity
of enforcement agencies

⑤ Regulating unregistered digital apps (gambling
lenders)
Government must build new capacity
to enforce these norms

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10.

इंडियन आर्मी वर्ष 2024 को 'प्रौद्योगिकी समावेशन वर्ष (Year of Technology Absorption)' के रूप में मना रही है। इसके आलोक में, स्पष्ट कीजिए कि भारत के रक्षा क्षेत्रक में प्रौद्योगिकी के समावेशन की आवश्यकता क्यों है। इस पहल में भारत को किन चुनौतियों का सामना करना पड़ सकता है? (उत्तर 150 शब्दों में दीजिए)

The Indian Army is observing the year 2024 as the 'Year of Technology Absorption'. In light of this, explain why there is a need for technology absorption in the defence sector of India. What challenges can India face in this initiative? (Answer in 150 words)

10

This initiative will make India a great tech armed power in post technological era

Need for tech-absorption in defence sector

① Building indigenous defence industries for need of armed forces

② Facing hybrid technological warfare of enemy

↳ Hybrid Drone attacks, Cyber attacks

③ Enhancing capacity of armed forces to neutralise adversary without human loss

④ Enhanced capacity for surveillance and stopping infiltration of terrorists

⑤ Increasing efficiency of artilleries, trucks, bullet proof jackets

⑥ For getting new equipments like Night vision laser helmets
innovative drones, Gun

- ⑦ For development of 8th generation fighter aircraft
- ⑧ For promoting export from armed industries of India (present 20k crore export 2023-24)

Challenges of India

- 1) Poor governance, red tapism in DRDO and other public sector institute
- 2) low support in R&D by private sector
- 3) IPR issues → Most of IPR is acquired by foreign companies
- 4) lack of capital expenditure
- 5) Absence of research ecosystem
- 6) lack of linkages b/w R&D, academia & industry

Way forward

- 1) offset agreement with foreign countries
- 2) govt. initiated tech transfer (CREDIT4) by USA
- 3) Defspac mission

11.

भारत के पूर्वोत्तर क्षेत्र (NER) में व्यापार एवं उद्योगों के विकास में किन समस्याओं का सामना करना पड़ा है? इन समस्याओं से निपटने हेतु किए गए उपायों पर टिप्पणी कीजिए। (उत्तर 250 शब्दों में दीजिए)
 What are the issues faced in the development of trade and industries in the North-Eastern Region (NER) of India? Comment on the measures that have been taken to tackle these issues. (Answer in 250 words)

15

North east account for 7.78% of India's geographical area but it contribute only 3.5% of GDP. It is due to lack of trade and industries.

Issues faced in development of trade & industries

1) lack of connectivity → connectivity with India through chicken corridor → very long route for Tripura, Mizoram based industries

2) limited access to nearby sea port for export ⇒ ethnic products can't be exported easily

3) Bambooindustry → 13% Smuggling of Bamboo to Myanmar, Bangladesh

↳ lack of capacity of NE based bamboo companies

4) issue of law and order, insurgency → reduce the investment by corporate (eg. Manipur crisis)

5) land acquisition laws → very restrictive → Thus, low investment for new industries

⑥ agrification only 2% compare to 40% potential
↳ low agribased & raw material production

⇓
Poor food processing industries

⑦ Tourism industry → lack of connectivity → railway
airports. Boycott by local people
(eg → meghalaya - Harassment of tourists by
Khasi groups for ILP restriction)

⑧ lack of Education, health issues ⇒
Poor skilling of Tribals → can't be employed
in industries.

⑨ Continuation of disasters like flood, landslides
due to mountainous region → restrict
investment for industries.

Measures to tackle these issues

① Building infrastructure → enhance roadways,
railways, airport connectivities

② Export of ethnic product through
airplane model → "Havaiyatra"

③ Katadhara connectivity, Transit-hub

through Bangladesh.

④ Linkage of North east - through ASEAN economy

↳ eg → Act east through look east -

↳ BIMSTEC process

↳ IMT highways connectivity

↳ Japan → building infrastructure

⑤ Ease of laws by state like Assam,
incentives for industries of North east
in east

⑥ Promoting Cooperative Firms, Tea plantation,
Bamboo startup through govt funding

Suggestions

1) Economic survey 2021 → Build educational
institution → Engineering colleges

2) Promote BPO industries, software park

3) improved train connectivity to every corner
(like one in Uttarakhand)

4) Building Capacities of tribals for value addition
(eg - van dham)

North east can be new growth engine
for India .. Or must be promoted

12.

जलवायु परिवर्तन और बढ़ते जल संकट के युग में, सूक्ष्म सिंचाई प्रणालियां भारत में संधारणीय कृषि पद्धतियों में किस प्रकार योगदान दे सकती हैं? (उत्तर 250 शब्दों में दीजिए)

In the era of climate change and growing water scarcity, how can micro-irrigation systems contribute to sustainable agricultural practices in India? (Answer in 250 words) 15

India has nearly 4% of water resources despite 17% of population of world. Agriculture consume nearly 85% water resources.

Thus, Microirrigation can address many issue in present climate crisis era

Role of microirrigation

- 1) Drip irrigation, Sprinkle irrigation can increase productivity in water distressed regions.
- 2) Microirrigation along with Fertigation can reduce consumption of fertilisers.
- 3) Microirrigation reduces the chances of salinity as seen in Punjab-HN Kalyan.
- 4) It will reduce virtual water export (India export - 13 billion tonne water - largest)
- 5) It will provide waters in rainfed region or region where climate pattern is changing rainfall timings.
- 6) Ensuring sufficient availability for cities, urban consumption → Bengaluru crisis

⑦ It will address issue of low ground water level as seen in Punjab-HN region.

⑧ Moreover, practices like mulching, deficit irrigation will enhance productivity at low cost.

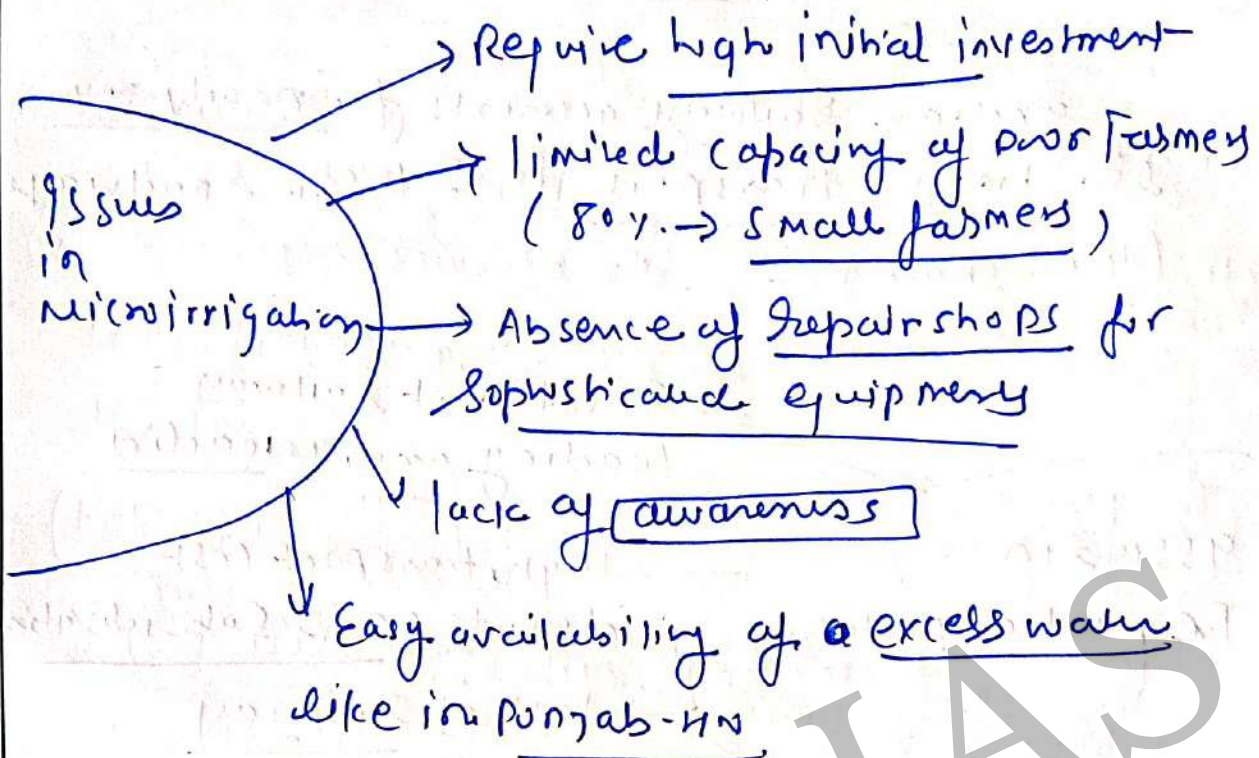
⑨ Flood irrigation gives result into flowing fertilisers, microorganism. Thus, microirrigation is better solution.

⑩ Reducing input cost in long term → useful for small and marginal farming.

⑪ Microirrigation can promote integrated farming as "saved water resources" can be used for animal husbandary.

⑫ Proper microirrigation channel can promote "Permaculture" based agriculture.
↳ Maintaining ecological biodiversity.

⑬ Through watershed and microirrigation → even limited amount of water can be utilised.



Government efforts

- 1) PM Kishu Sinchai Yojna → Per Drop More crop.
- 2) NABARD has 25k crore fund for Micro irrigation.
- 3) MP government subsidy to purchase micro irrigation equipments

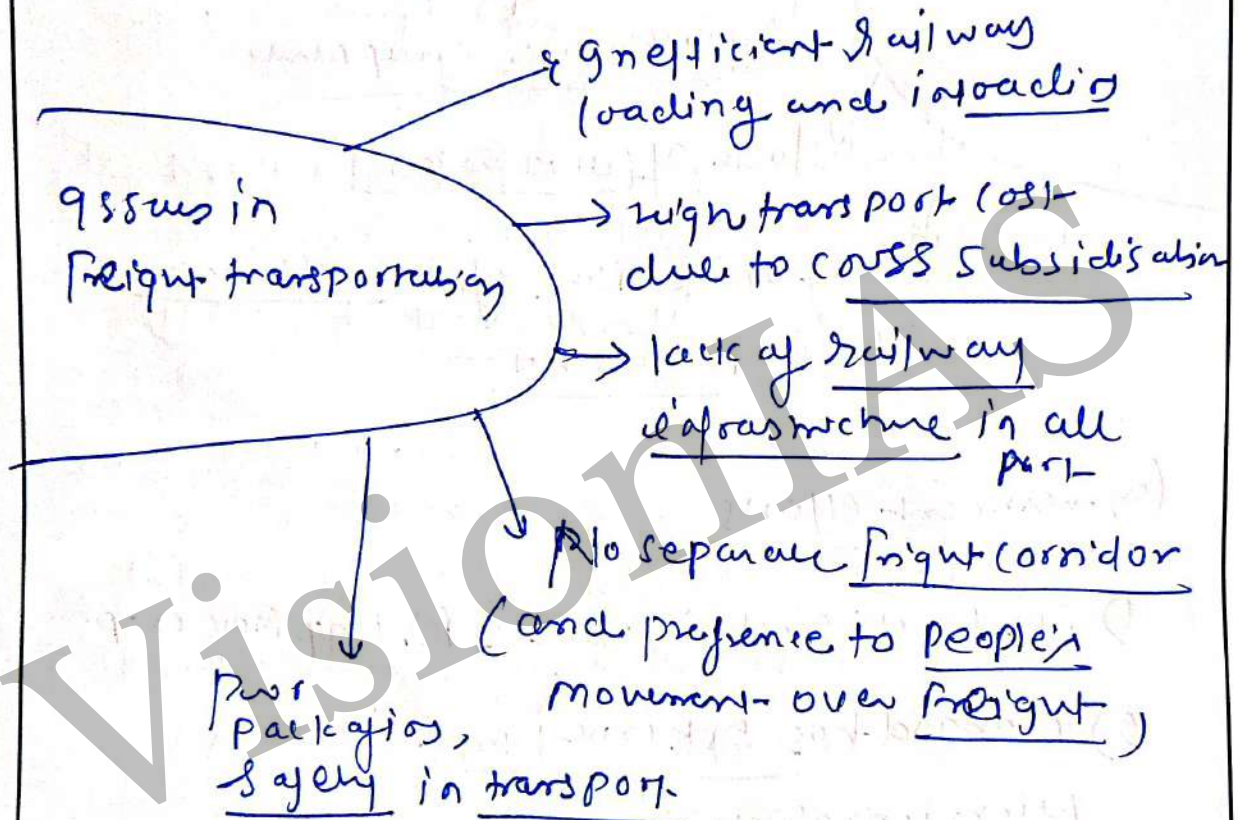
Along with microirrigation, participatory irrigation can be promoted which will increase reach of micro irrigation

13.

भारतीय रेलवे में माल परिवहन से संबंधित समस्याओं का समाधान करने तथा घरेलू माल दुलाई में इसकी हिस्सेदारी बढ़ाने के लिए कौन-सी रणनीतियां अपनाई जा सकती हैं? (उत्तर 250 शब्दों में दीजिए)
 What strategies can be adopted to overcome the issues pertaining to freight transportation in the Indian Railways and increase its share in the domestic freight? (Answer in 250 words) 15

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Indian Railway accounts for nearly 30% of freight-transport less than roadways (44% share)



Strategies to overcome issues

- 1) Separate freight corridor
 eg → Dedicated freight corridor
- 2) Inclusion of private sector in loading and unloading → NITIGAYAT
- 3) Use of Machines, AI based portal for

efficient packaging, interaction, spare management
etc

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4) Address issue of 'cross subsidisation' →
making railway freights cheaper than
roadways.

5) inclusion of private sector in running
night-based trains

6) Separate regulatory body to look concerns
of freight industries.

7) Building of infrastructure at railway stations

eg) → Ranikamplapali → world class freight
loading infra.

8) inclusion of foreign ideas, technology
for reducing cost and increasing efficiency

9) large investment by government to
bring more trains, more railway network

eg) More than 2 lakh crore railway budget

- ⑩ Building separate large warehouse along the track, different from people based transport-
- ⑪ Special attention to agriculture based product → Kisan Rail.
- ⑫ Monitoring performance of different regions and launching a competitive indep to increase efficiency.

Government initiatives

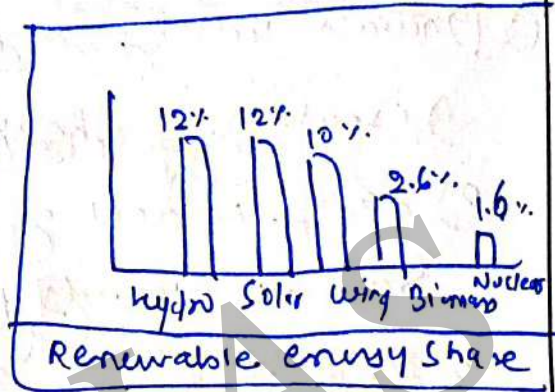
- 1) National railway transformation plan
- 2) Building separate Railway corridor
(Announced in present budget in eastern part of India)
- 3) Building new railway stations of New Delhi
- 4) Promoting multimodal connectivity
(Uttishakti plan)
- 5) Investment through National infrastructure pipeline

उन कारकों पर चर्चा कीजिए जिन्होंने नवीकरणीय ऊर्जा क्षेत्र में प्रभावशाली प्रगति करने और वैश्विक नवीकरणीय ऊर्जा परिवर्तन में अग्रणी के रूप में स्थापित होने में भारत की सहायता की है। (उत्तर 250 शब्दों में दीजिए)

Discuss the factors that have aided India in making impressive strides in the renewable energy sector and establishing itself as a frontrunner in the global renewable energy transition. (Answer in 250 words)

India is producing nearly 192 GW Renewable energy at present. It is 4th largest producer in Solar and 5th largest in wind.

Factors → Making impressive strides



1) Political atmosphere

↳ Renewed attention by government

↳ Initiatives like

- ↳ Earlier 175 GW target
- ↳ International solar alliance
- ↳ OSWON initiative
- ↳ launching multiple solar parks eg - Rewa - largest
- ↳ Suryodaya Schemes → for Grid connectivity

② Natural potential

↳ for wind energy → large no. of coastal states

↳ for solar energy → india's location in tropical region

↳ for Hydro → india's expertise in small hydro power plant

③ Issues of nonrenewable energy

- 1) Rising cost-prices of imported fuel \rightarrow 80% import
- 2) Climate change issues
- 3) Coal based pollution (India \rightarrow large no. of polluted cities)

④ India's growing renewable industries

- 1) Creation of cheaper solar panels
- 2) Easy import of renewable industries raw materials from China
- 3) Skilled youth \rightarrow training through programme like ANR.

⑤ India's institutional capacity

- ↳ National wind energy institute,
- ↳ National solar energy institute

\downarrow
Continuation of research and exploration

⑥ Global cooperation and commitment

- 1) Cooperation with France in sharing technologies
- 2) Cooperation with Nordic countries for sharing wind based, hydro based technologies

9) Rise of Renewable Startups

↳ "Bhopal solar" → funding Grid band solar
in houses.

- Global MNC support to local startup
and sharing of technology.

9) Earlier big infrastructure and expertise

↳ like efforts for setting up of hydro power
plant and related experience.

10) Government incentives, subsidy, ease of doing business for renewable industries

- ↳ Internalisation of climate cost
- ↳ Renewable purchase obligation,
Renewable generation obligation etc.

However,

more needs to be done

- 1) Further reduce cost of solar panels
- 2) Increase indigenous manufacturing
- 3) Address issue of environmental impact -
through wind power plan ↳ WIP in Rajasthan
- 4) Protect only on wasteland, rivers, ponds etc.
(solar)

Energy security is primary to achieve sustainable
developmental goals.

15.

उर्वरकों और कीटनाशकों से युक्त कृषि अपवाह पर्यावरण प्रदूषण में किस प्रकार योगदान देता है? कृषि अपवाह के प्रभाव को कम करने के लिए क्या उपाय अपनाए जा सकते हैं? (उत्तर 250 शब्दों में दीजिए)

How does agricultural runoff containing fertilizers and pesticides contribute to environmental pollution? What measures can be taken to mitigate the impact of agricultural runoff? (Answer in 250 words)

15

In India the ratio of fertilizers like N:P:K is in 8:3:1. This excessive fertilizers, pesticides impact environment through runoff

- ① Issue of Eutrophication → killing of biodiversity of oceans/rivers
- ② Soil erosion and reducing soil health
- ③ River water pollution → impacting health of River ecology
- ④ impacting food chain as these runoff gets bioaccumulated through different means.
- ⑤ Enhanced Carbon emission → vulnerable for pollution
- ⑥ water gets absorbed and seached in groundwater → groundwater pollution
- ⑦ Air pollution → Transportation of gases in air during hot temperature
- ⑧ Affecting the health of microorganism which

are necessary for good nutritional
Capacity of food \Rightarrow Thus, food pollution.

Measures to mitigate impact of runoff

- ① Fertigation and micro irrigation
 \hookrightarrow Reduce runoff.
- ② Buffer against runoff from natural water bodies
- ③ creation of filtering pipelines which will restrict fertilizer movement.
- ④ Promote organic, ZBNF farming
- ⑤ Mulching, Transverse farming to Reduce runoff water
- ⑥ Permaculture \rightarrow ecological landscape based farming.
- ⑦ Mixing of neutralized components from fertilizer polluted waters
- ⑧ cleaning of water through absorption, pond cleaning method, mixing with surplus clean water

Government initiatives

- 1) Parasharati-Krishi Vikas Yojna
- 2) Promotion of microirrigation
- 3) Subsidy for zero based natural farming,
organic farming
- 4) Revival of wetlands → which
promote recycling of polluted
water

In this way, we can ensure clean
water, clean air which is basic

Requirement - for prosperous biodiversity

16.

हिमालयी राज्यों में पर्यटकों की बढ़ती संख्या ने उनके पारिस्थितिकीय समावेशन क्षमता को पार कर लिया है, जिसके कारण बड़े पैमाने पर मानव-जनित आपदाएं उत्पन्न हुई हैं। संधारणीय पर्यटन को बढ़ावा देते हुए ऐसी आपदाओं को रोकने के लिए क्या उपाय किए जा सकते हैं? प्रासंगिक उदाहरणों के साथ चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

The growing influx of tourists in Himalayan states has breached their ecological carrying capacity, leading to significant man-made disasters. What measures can be implemented to prevent such disasters while promoting sustainable tourism? Discuss with relevant examples. (Answer in 250 words)

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15

The cracks in Jushimath in 2023 reminded us about excessive influx of tourists in Himalayan states

Rise of tourists → Resulting - Man Made disasters

- ① Plastic pollution → large amount of plastic is discharged by tourists.
 - ② issue of poor availability of drinking water due to higher demands ⇒ Shimla in 2021.
 - ③ Rising issues of landslides due to developmental activities for tourists ⇒ Char Dham project
 - ④ issue of glacier flood (GLOF) due to melting of ice ⇒ Because of increased emission through tourists activities.
 - ⑤ Construction activities leading to earthquake, avalanches ⇒ Uttaranchal - Jushimath
- < Due to tourism growing industries - Hotels >

④ Deposition of debris, Mountains →
Issue of landslides, Soil erosion

⑦ Increasing Man-wildlife conflict -
as seen in Assam, Arnachal Himalaya
region

⑧ Destruction of unique ecological high mountain
hotspot due to tourist-led industry interactions

⑨ Decline of local small lakes of
Himalaya (e.g. Sikkim, Kashmir) → Narrow down
of lakes due to encroachment by hotels

Measures

① Promote community-led ecotourism

(e.g. Arnachal Apatani tribes) →
Stay home, guides, local food
(No outsiders interaction)

② Enforcing Disaster related guideline in
Construction activities, zoning by laws

③ Banning of plastics (e.g. Uttarakhand)

↳ Also giving money for students, if deposit of
waste plastic

- 4) Regulation of cutting of mountains in Assam → only with proper environment assessment.
- 5) Regulating the no. of tourist falls
 - 1) Registration mode in Char dhams tourists network
- 6) Banning of transport mode which emit high pollutions
- 7) Creating Natural Stay home instead of big buildings
- 8) waterhead management, sloof drainage network to absorb water, avoid deforestation
- 9) Regulate big powerplant project in Uttaranchal, himachal for energy
 - 1) Go for small renewable mode

We must adopt a sustainable way which conserve environment and promote ecological based tourism approach

17.

सुपरकंडक्टर्स विज्ञान एवं प्रौद्योगिकी के विभिन्न क्षेत्रों में नवाचार को किस प्रकार बढ़ावा देते हैं? उदाहरण सहित स्पष्ट कीजिए। (उत्तर 250 शब्दों में दीजिए)
How do superconductors fuel innovation in diverse fields of science and technology? Illustrate with examples. (Answer in 250 words)

15

Superconductors can play multiple role
in innovations

① Acting as brain of electronic devices.

(e) Mobile phone.

② linkages with AI based technologies,

Big data analytics, Blockchain etc

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यद्यपि भारत में लगभग सभी प्रकार के बौद्धिक संपदा अधिकारों को कवर करने वाले कानून मौजूद हैं, फिर भी अनेक प्रवर्तन संबंधी, विनियामक और प्रशासनिक चुनौतियां भारत में बौद्धिक संपदा अधिकारों के व्यावसायीकरण में बाधा उत्पन्न करती हैं। सविस्तार वर्णन कीजिए। (उत्तर 250 शब्दों में दीजिए)

While India has laws covering almost all types of intellectual property rights, numerous enforcement, regulatory and administrative challenges hamper the commercialisation of IPRs in India. Elaborate. (Answer in 250 words)

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India has multiple laws, bodies for protection of IPR. They are following

1) Intellectual property right body under Ministry of commerce

2) Biodiversity act-2002 → (NBA, SBA)

3) Patents act-1970

4) Copyrights act-1957

5) Protection of farmers intellectual rights 2002

6) Semiconductor and design protection

7) Geographical indicator act 1999

Numerous challenges → hamper commercialisation of IPR

① Increased and rigid criteria for registration of IPR

② Sensitive and right approach in IPR related agriculture, Biodiversity

③ Raid, nexus → violation of IPR rights

④ leakage of movies through AM recording

④ ~~lack~~ lack of investment by Indian industries for bringing lab to land

⑤ limited trust over india indigenous Startup in public procurement system

⑥ Absence of ecosystem which promote ease of doing

⑦ corruption, Bribe culture → prohibit investment

⑧ Instead of research, focus on filigree patents

⑨ lack of data, proper architecture which monitors for commercialisation

⑩ limited support by government for new, weaks startups to commercialise

⑪ Rejection of credit facilities by banks based on IPR rights

Way Forward

- ① Create positive ecosystems → Business led.
- ② liberalise agriculture sector.
- ③ Support by government for weaker startups
- ④ collaboration b/w MNCs and startup
for commercialisation.
- ⑤ liberalise norms for restriction of
patents.
- ⑥ Build single, autonomous institution
which will commercialise IPR of
government bodies - NITI aayog
- ⑦ ⑧ provide flexibilities in laws,
regulatory bodies
- ⑨ promote ease of doing business,
foreign investment in commercialisation

This will help in promote ~~more~~ innovation
led growth in Indian economy

उम्मीदवारों को इस कृति में नहीं लिखना चाहिए
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19.

एकीकृत थियेटर कमान का निर्माण करने में सामना की जाने वाली चुनौतियों को ध्यान में रखते हुए, परीक्षण कीजिए कि कमानों का थिएटराइजेशन किस प्रकार तीनों सेनाओं के बीच जनशक्ति और संसाधनों के बेहतर एकीकरण और युक्तिकरण को बढ़ावा दे सकता है। (उत्तर 250 शब्दों में दीजिए)
Keeping in view the challenges in creating integrated theatre commands, examine how the theaterisation of commands can lead to greater integration and rationalisation of manpower and resources among the three services. (Answer in 250 words)

15

integrated theatre commands demote formation of armed forces command based on geographical approach → Northern Command - against China
- West - Pakistan

Challenges in creation of theatre commands

- 1) Resistance from navy, airforce → They feel theaterisation may lead to domination of armed forces
- 2) management of resources between different theatre commands.
- 3) Passing of laws to create a proper hierarchical system in theatre command different from traditional.
- 4) limited experience and expertise to allocate resources, solid base in theatre command need.

Role of theatre is also → greater integration

(Rationalisation)

उम्मीदवारों को
इस कक्ष में
नहीं लिखना
चाहिए
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this margin

- ① Efficient use of resources as per need of threat of different fusion
- ② Coordination b/w all 3 branches of armed forces for strong response against enemy
- ③ No competition b/w different branches for defense acquisition as it will be command based.
- ④ Helping government in easy formulation of policies based on inputs of theatre framework
- ⑤ Strong response for chinese salami slicing (China already had theatre command)
- ⑥ Reduce financial burden on government as limited manpower can be used efficiently.
- ⑦ limited weapons, fighters jets can be used based upon threat-based approach

⑧ Reducing the domination of one force

↳ Theatre command can be led by any
officer of any branch

⑨ Balancing Continental and Maritime
Security based upon specific

Maritime command

⑩ Addressing the complexities in
Coordination, Management during war
times.

Government efforts

1) Passed laws for theatre command
to create framework for hierarchy

2) CDS post for coordinating with
different branches

More faster pace is needed to
achieve vision of theatre command

सीमावर्ती गांवों को न केवल भौगोलिक दृष्टि से बल्कि सुविधाओं के मामले में भी प्रथम गांव मानना, सीमा सुरक्षा बढ़ाने की एक प्रमुख रणनीति हो सकती है। विवेचना कीजिए। साथ ही, इस संबंध में सरकार द्वारा किए जा रहे उपायों पर भी प्रकाश डालिए। (उत्तर 250 शब्दों में दीजिए)

Treating border villages as first villages not just geographically but also in terms of facilities can be a key strategy for enhancing border security. Discuss. Also, highlight the measures being taken by the government in this regard. (Answer in 250 words)

15

The vibrant vibrant village programme treats border village as 1st village, launched by government in 2023

Now, a key strategy for enhancing border security

- ① Building border infrastructure for mobility of armed forces.
- ② Facility like school, health will ensure that people will not relocate to urban sphere, (leaving border village vacants)
↳ (insured by china for expansion)
- ③ creating (perception of development) in alienated population of borders.
- ④ Growing population in border's villages can become a (natural resistance) force against enemy forces.
↳ Becoming (eye and ear) for indian armed forces.

⑤ Infrastructure will promote tourism in border village ⇒ Thus, increasing reach of mainland people to border region.

⑥ Growing economy of border region → Enhanced prosperity among people ⇒ consolidation of nationhood

⑦ increased vigil will stop smuggling, trafficking, insurgency and other crimes

⑧ helps in Building Border checking infrastructure like Patrol Nakas, Border posts

⑨ Psychological → Treating border as 1st village → integration of people with mainland society, polity

Government Measures

- ① vibrant village programme
- ② Border village development programme of Home Ministry (BADP)
- ③ Construction of roadways, railways, tunnel, bridges
- ④ promoting ecotourism (e.g.) Annachal → 1st village (Near china border) → 2000 monthly tourists just fall
- ⑤ Development activities by armed forces in border villages
 - ↳ Maintaining schools, health
- ⑥ North east (Devine Mission)
 - ↳ Development of border village in North east.

on this way, India's border security will get enhanced through effective border management.

SPACE FOR ROUGH WORK



VisionIAS