



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. : 011 58734

अभ्यर्थी का नाम/Name of Student : Simrandeep Kaur

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

24/08/2024.

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

केंद्र
Centre

Chandigarh.

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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Time Allowed: **Three Hours**

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

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

उम्मीदवारों को
इस हार्शिय में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

Food Processing is the sunrise
industry in India which employs almost
10 million of population (ASSOCHAM)

Food safety challenges due to Food Processing.

1. Informal sector:-

- Almost 80% of food processing under non-standard conditions
- Violation of food safety norms
e.g. Codex Alimentarius of WHO.

2. Lack of advanced technology.

- only 15% of MSMEs in food processing use advanced tech.
- Poor value addition
e.g. need of Iron in Rice fortification.

3. Poor administration

- Adulteration in food e.g. highest in Milk products.

4. Lack of Awareness on nutritional security in consumers as well as producers.

5. Problems in backward linkages.
e.g. Quality relaxation in procurement by FCI
Market distortions from exporters & food processors.

Measures Needed.

1. Dedicated Food processing policy with Nutritional security mission.
e.g. FSSAI norms on food fortification
2. Tech. & Infrastructure upgradation in PM Kisan Sampada Yojana.
3. Completing all Mega Food Parks (only 14/70 are functional for now).

Food processing is powerful tool for empowering Farmers, addressing rural unemployment & Nutritional-security of A1.

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

उम्मीदवारों को
इस हिसाब में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

Fair Price Shops under Public
(FPSs)
Distribution System (PDS) are nodes
to ensure legal right of beneficiaries
under National Food Security Act.

Challenges in FPS for now.

1. Hubs for corruption & diversion of
foodgrains to non-beneficiaries.
2. Dominance of Rice & wheat foodgrains,
neglect of other food & needs.
3. Exclusion & Inclusion errors due to
poor revision of data.
4. less empowerment of poor people
due to charity based measures.
5. less integration for migrants.
need of One Nation, One Ration
Card.

Transformation of FPs.

1. Digital interventions -

e.g. e-Ration cards & computerisation of records.

2. Account Aggregations to address exclusion - inclusion errors.

e.g. MGNREGA, @ Swamitva, etc.

3. Citizen Charter to provide quality services.

4. Food fortification & diversification for all round security.

e.g. pulses, millets, etc.

5. New developments

e.g. e-Rupi person specific & purpose specific welfare.

Fair Price shops are important pillar of providing social justice to 70% rural population & 50% urban population.

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

उम्मीदवारों को इस हाथिए में नहीं लिखना चाहिए
Candidates must not write on this margin

Agri-tech startups are building links to agriculture and industries to empower farmers. There was \$1.2 bn investment in FY22 in Agri-tech (McKinsey Report) in India.

Agri-tech startups in Enhancing Farm productivity

1. End-to End precision services.

e.g. Soil testing, seeds delivery, modern machines, such as potato seed drillers.

2. Irrigation efficiency through drip technology, R&D in new methods, Agmet advisory

3. R&D in new varieties
e.g. 126 for Rice.

4. Innovative solution:-

- ~~SSI~~ SSI in sugarcane.
- Aquaculture Recirculatory method
- e.g. - Tilapia fishing in Karnataka.

In Market Access.

1. Standardization
e.g. Pramaan exchange for
AI Quality gauging in horticulture.
2. Food processing units.
e.g. Jammu Oriental fresh in
packaging & marketing foods.
3. Empowering marginalized through marketing
e.g. Tribal Palis in Custard Apples.

There is scope of transforming
poor Indian peasants ~~to~~ to
Entrepreneural farmers through
Agtech (Ashok Dhallawa
Committee). 11

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

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
Candidates must not write on this margin

Digitization of land records

are often regarded as step towards land reforms 2.0.

Role of Digitization of Land Records.

1. Empowerment to farmers against any exploitation
e.g. SWAMTIVA app.
2. Consensus reducing land disputes in rural India.
3. Collaboral basis for accessing to ~~the~~ agriculture credits.
4. Rural development Plans of govt. based on data.
e.g. PM Kisan Sampada

5. Formations of supply chains
e.g. FPOs, Cooperatives

Challenges to address.

1. Coverage of All Farmers & Land.
2. Digital Exclusivity = e.g. only 39%
Internet Penetration in Bihar
compared to 70% in Odisha.
3. Promotion of Vernacular land records for including all
4. Land rights recognition of
women farmers.
(Only 12.56% land registration on women).

Digitized land ~~records~~ records
are still incomplete venture of
empowering Indian farmers.

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

India is blessed with a median age of 28 years (on average) & 65% of its population comes in (15-64) age bracket

Manufacturing led growth model

Need

1. For increasing Purchasing power of economy & aggregate demand to push more development.
e.g. 60% of GDP = Private Consumption expenditure

2. Export oriented growth
→ 44% growth in FY23 through FDI including manufacturing sector.

3. Investment multiplier.

Rs 1 spent on Capex ⇒ Rs 2.28 multiplier in same year
Rs 4.80 for life time.

4. Regional growth models.

e.g. Ag based in North-West
Mineral rich in ~~North~~ East

5. Tech. modification

e.g. 3D Printing, organoids, chip
manufacturing for IR 4.0.

Challenges in this model.

1. low skill set → only 75% of workforce in India have market ready skills (CII)
2. Poor social security → only 25% of workers with social security net (ILO).
3. Resource curse ⇒ underdevelopment of mineral rich industrial East India.

Measures.

- Make-in India, PLI (for incentivizing investments)
- PMKVY with new age skills.
- Baba Kalayani committee suggestion of bringing MSME to SEZs
- Inclusive & resilient model required for shared knowledge based manufacturing driven economy.

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)

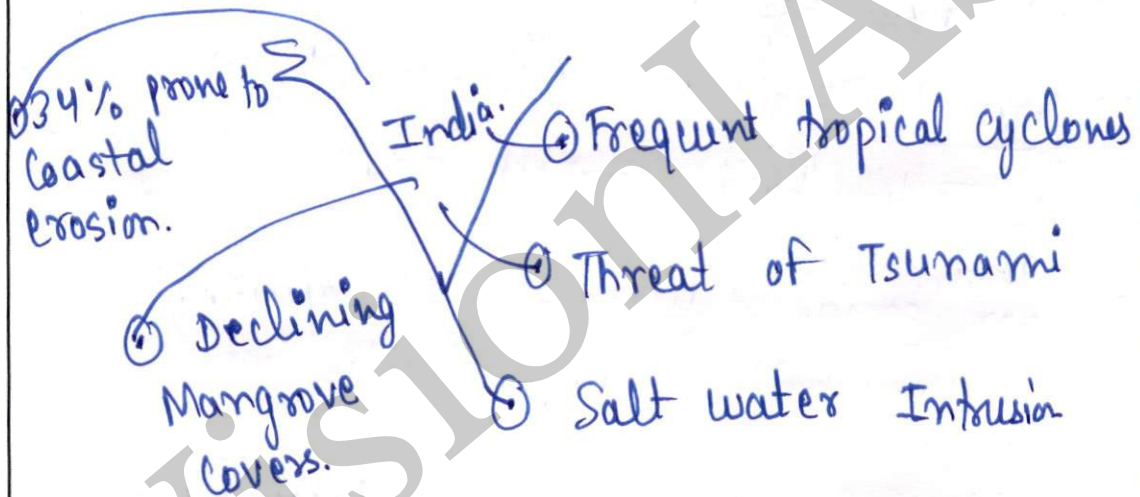
How can the resilience of Indian coastal communities be strengthened to tackle the growing natural hazards resulting from climate change? (Answer in 150 words)

10

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
Candidates must not write on this margin

India have vast coastline (7517 km) on its two - western & eastern coast. These are vulnerable to Climate Change.

Growing Natural Hazards on Coasts.



Strengthening Indian Coastal Communities.

1. Preparedness & Mitigation

- ~~Common~~ stakeholder drilling & capacity building

→ e.g. Apada Mitraas ; declaration of :-

UNESCO ⇒ Venkatraipur Village - Tsunami Ready
(Odisha).

2. Capacity building of shock absorbing structures.

- Natural ⇒ e.g. Mangroves under MISHTI programme.
- Artificial ⇒ e.g. cyclone shelters.

3. Early warning & Prediction

- ⇒ Digital inclusion of all for quick communication
- Apps R&D e.g. Google earthquake detector on phones.

4. Response & Rehabilitation

- priority to rescue of elders, children & females.
- Implementation of Community Plans.
- use of modern tech. e.g. 3D Printing, Robotics.

In this way, Coastal Communities can fulfill Disaster Risk Reduction target of Sendai Framework.

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)

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
Candidates must not write on this margin

10

Green Credit Programme is the financial arm of larger goals of becoming Net zero by 2070 (Panchamrit)

Carbon management through
Green credit.

- Investments in carbon capture, storage & sequester technologies.
e.g. Green Hydrogen.
- RBI becoming part of NGFS system of green finance.
- Sovereign green bonds (20,000 crore investments in Oct-Dec, 2023).
- Business CSR for climate resilience technology.

Sustainable environment

- Renewable energy generation with DISCOMS green credit swaps.
- Reduction of GHG emissions. (3rd largest)
- less fiscal burden on govt.
- ~~New Tech.~~ Green agriculture:-
e.g. PM KUSUM.

Concerns in Implementation

1. Monitoring lapses in green credit diversions.
2. less economic solutions, but require community participation
e.g. Amrit Darohar, Rooftop Solar energy.
3. Sectoral imbalances:- More focus on solar, wind; less on other alternatives such as Biofuel etc.

There is need of constant monitoring & improvements in it

8.

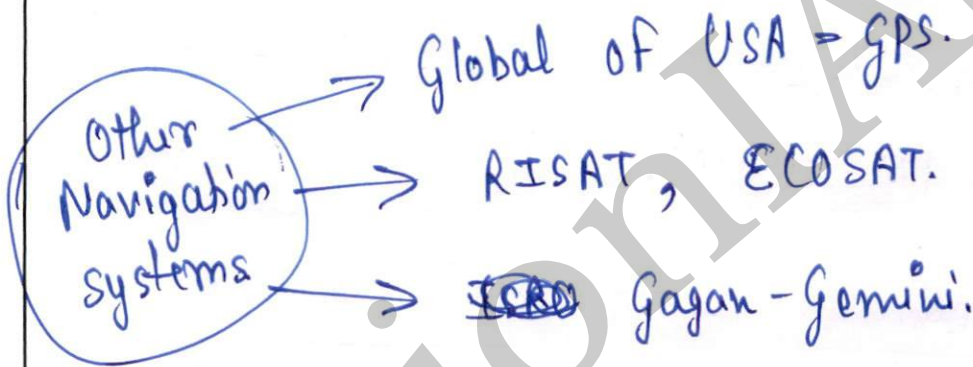
जब पहले से ही अन्य उपग्रह नेविगेशन सिस्टम उपलब्ध हैं, तो NavIC की आवश्यकता क्यों है? (उत्तर 150 शब्दों में दीजिए)

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

10

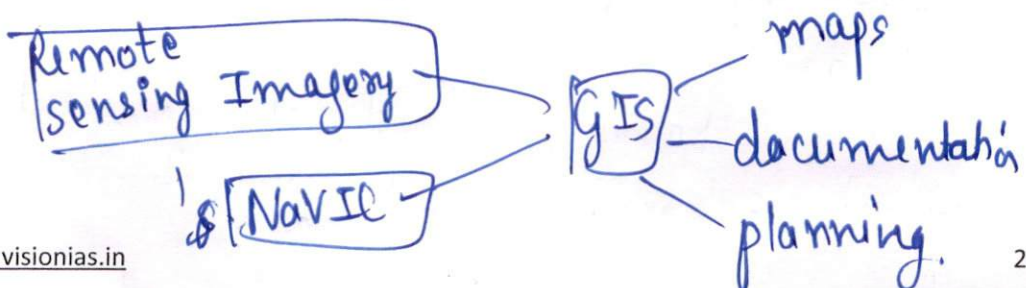
उम्मीदवारों को इस कक्ष में नहीं लिखना चाहिए
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NAVIC is an Indian regional navigation system comprising of 7 satellites - 4 geosynchronous & 3 geostationary.

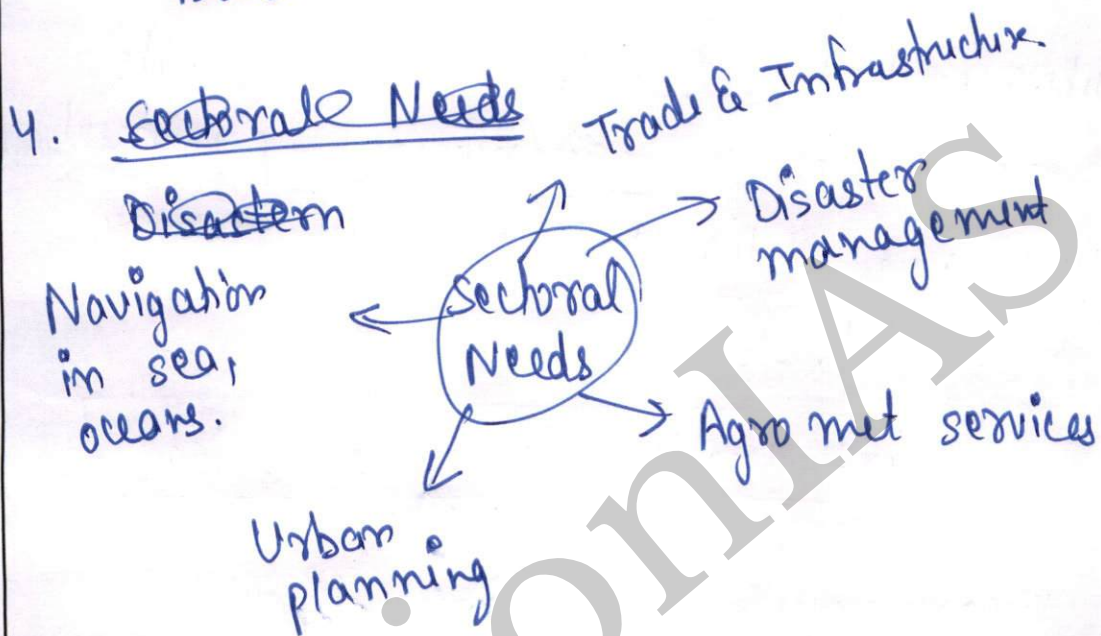


Need for NAVIC.

1. Regional Navigation in low earth orbit for detailed use.
2. Use of GIS in various fields



3. Security purposes! -
specific system for Defence forces.



5. For Industrial Revolution 4.0.

- satellite based networking.
- IoT, AI, Robotics, etc.

NavIC is specialised for new needs of new India for its Amritkaal preparations.

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

उम्मीदवारों को इस शीट में नहीं लिखना चाहिए। Candidates must not write on this margin

globally money-laundering cause loss of 2-3% to global GDP (IMF)
Cyber-enabled financial crimes create more scopes of anonymous placement, layering & integration of black money into market.

Cyber-enabled Money Laundering.

1. Anonymous transactions through cryptocurrency.
2. Identity thefts for initiating series of layering.
3. Dark Web - hub of unregulated crimes.
4. Nexus with fintech startups.
e.g. Paytm case of Money laundering.
5. Financial frauds.
e.g. - loss of Rs 177 crore due to Phishing in FY24.

Government measures needed.

1. Skilled Personnel - Cyber Swatchta Kendras.

2. Rajesh Panth Committee Recommendations

↓
security in
initial stages
e.g. Samadhaan
for MSMEs

↓
insurance
against integrated
chip route

↓
SCADA
security
for
critical
infrastructure

3. Empowering of NIA, ED to check
money laundering.
e.g. Fake currency cells

4. Global Initiatives for best practices

→ FATF & Interpol FIRE to seize
assets

→ extradition policies

→ global Minimum tax (15%) to check
tax havens.

FATF has given status of
'Regular Follow up' to India for its ~~good~~
strengthened measures. Its necessary to
follow the chain & uncover the
syndicates of Money laundering.

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

Defence sector requires technology absorption for External, Internal as well as Human security with rise of unconventional threats.

Need of Tech. absorption in Defence.

1. Ensuring Deterrence to conventional enemies. (Nuclear weapon enabled neighbours).
→ e.g. Dnyastra with MIRV technology.
2. Rise of unconventional security challenges

e.g. - Tactical Nuclear Weapons

- Terrorism (socio-economic warfare)

- Climate Change (e.g. Rejupave tech. in Arunachal Pradesh for Road building)

- Disasters (e.g. Oxygen medicine created by DRDO during COVID).

3. Safeguarding Human Security.

e.g. - Win Hearts & Minds Strategy
in D&K (can't use unregulated
force)

⊙

Challenges in this Initiative

- Import dependency (11% of world
imports - SIPRI)
- less private participation (risk averse
attitude).
- Cyber security -
e.g. Operation Side by Pakistani
Aster on Indian Military in 2016.
- Budgetary constraints.

Measures
taken

→ index for Private Participation
→ ICEI Indo-US defence tech.
collaboration

Technology is the new oil of 21st
century. Hence, tech. modernization
of Indian defence is the need of hours.

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-Eastern Region (NER) is economically underdeveloped, geographically distant and socially diverse region of India.

Issues in trade & industrialization in NER.

1. Geographical Issues

→ Diverse topography (e.g. Purvanchal, Brahmaputra plains & Plateau (vulnerability of floods, landslides)).

→ Chicken neck corridor dilemma of Indian mainstream reach.

2. Security Issues

→ Armed groups (militants e.g. ULFA, NSCN) with disrupted law & order

→ Vicinity to Golden Triangle



② → Ethnic disputes (civil wars)

Insider-Outsider
e.g. Assam vs Illegal Immigrants.

within region
e.g. Meis & Kukis in Myanmar.

3. Economic Issues.

→ Primitive living of tribes with low skill set.

→ Fragile ecology hampering economic goals.

e.g. - palm oil vs Monoculture fears.

- Mining vs Kopilli River crisis.

4. Administrative Issues

→ Assymetrical Federalism with Autonomous Councils (difficulty in implementation of National or state development Plans.

→ less outreach of Education & Health measures to this region

Measures taken.

1. Policies for development → PM DevINE
- NMOP Palm oil.
 - Niti Aayog's North East Council.

2. Security measures to contain unrest.
- AFSPA in disturbed regions
 - Negotiations e.g. Naga Peace talks.
 - Operation Sunrise with Myanmar.

3. International Programmes for connectivity
- Kaladaam Multi model Project with Myanmar
 - IMT Trilateral Highway.
 - Land Boundary Agreement with Bangladesh, 2015.

The measures taken are based on comprehensive & multistakeholder approach. The essence is to preserve autonomy (5th & 6th schedule) while ensuring shared growth of all.

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

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
Candidates must not write on this margin

Irrigation efficiency in India is a serious issue with just 30% efficiency of surface water & 50% of groundwater. Moreover, there is increasing water scarcity (~1570 bcm water availability)

Issues in Indian Irrigation Systems

→ Depleting Groundwater
 ⦿ 69% of groundwater extraction than replenishment on National Average (Dynamic Groundwater Report of Parliamentary Committee)

→ Increasing land desertification
 more than 40% of Indian net cropped land is drought sensitive.

→ Less coverage of Irrigation
 ⦿ only 49% of Net cropped area is covered under Irrigation


Sustainable ~~to~~ Agriculture through Micro-Irrigation.

1. More efficiency & less water wastage.

→ Through drip irrigation, 30-70% of water loss is reduced.

2. Per drop, more crop.

Irrigation water efficiency in

→ Drip Irrigation → 

→ Sprinkler Irrigation → 

3. Efficient utilization of Nutrients.

→ scope of Fertilization & Nutrient management.

4. Farmer's Income. (Reduced Input Cost)

less water ~~&~~ needs as compared to flood irrigation → more evaporation
max ↓ frequency)

5. Transforming Agriculture with more intercropping & integrated farming

→ Only 39% of area sees second crop growing at present.

Challenges which must be addressed

1. Need of addressing initial cost burden on Infrastructure. (PM Kisan Sampada)
2. skill development of small farmers to efficient uses (Krishi Vigyan Kendras).
3. Threats of Animal harms to crops.
4. Not suitable for all fertilizers, e.g. Rock phosphate (can't be fertiligated)

Mihir Shah Committee recommended for bringing 'Irrigation reforms' in India. Indian Farmers can become entrepreneurs if along with other measures, there is more focus on irrigation productivity rather than land productivity

13.

भारतीय रेलवे में माल परिवहन से संबंधित समस्याओं का समाधान करने तथा घरेलू माल ढुलाई 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

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
Candidates must not write on this margin

Indian Railways is second largest freight transportation method in India.

Issues pertaining in Indian Railways.

1. Over utilization (above 100%) causing Congestion & negative externalities.
2. Poor safety mechanism
e.g. CAG reported 7/10 Rail accidents caused by derailments.
3. Outdated technologies & methods
old coaches
4. Cross-subsidized fares (fiscal burdens)
5. Under utilized than roads.

Railways



Roadways

though cheaper
Rs 2.5 km/h on road
Rs 1.5 km/h on rail

Measures taken.

1. Target of Net zero emission by 2050.
2. Operation Hungary for cargo transportation
3. Operation Raftaar for efficiency.
4. FDI e.g. Japan in Metro.
5. New models e.g. Vande Bharat, Namo, etc.

Strategies can be adopted.

1. Updation to LHB German coaches.
(Kakodkar Committee recommendation)
2. Best practices of station development
e.g. Khudra (Odisha) model of
Amrit Bharat Station
3. Private sector participation for efficiency & innovation. (Bibek Debroy Committee)

4. Fiscal Prudence with tax buoyancy in Railway sector.

5. Fool proof security development.

(Lessons from Balasore tragedy)

e.g. 'advanced Kavach'

6. Dedicated :- e.g. Kisan Trains

Indian Railways are nerves of Indian freight transportation. There should be 'transit oriented development' around stations for win-win urban planning.

14.

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)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
Candidates must not write on this margin

15

India has emerged as climate leader of the world with its ambitious Renewable energy transition in domestic sphere.

Factors aiding Impressive Strides in Renewable energy sector.

1. Panchamsat Goals.

→ Vision of ~~becoming~~ net zero ^{mission} emission target by 2070.

→ 50% target to produce energy from Renewable energy.

→ Already achieved earlier INDC targets (40% solar + wind sector).

2. Viability Gap Funding through policies.

- National Green Hydrogen (H₂) mission to produce 5MMT by 2030.
- PLI scheme for Advanced battery cells (Energy storage).

3. Geographical leverages.

- Solar energy generation from tropical climate
 - Wind Farms in Jaisalmer, Brahamwell
 - Tidal Energy (Kandla).
 - Monazite sands (2% Nuclear energy)

4. Financial strides

- Green credit programme
- RBI in NGFS
- Sovereign Green funds.
- Renewable purchasing Obligations to DISCOMS.

5. Community Participation

- e.g. - Modhera with Rooftop solar village
- Odantapuri Panchayat generating Wind Energy.

6. Sector specific development

- PM KUSUM for Agriculture
- PM Suryodaya for Households
- Carbon trading for Business
(e.g. Plastic Pact of CII with Govt)

7. International Collaborations

- ISA for One World, One Sun, One Grid
- Paris agreement

India is ~~the~~ frontrunner
in the global renewable energy
transition with its determination

to ~~reach~~ gain twin solutions:-

Viksit Bharat + ~~the~~ sustainable
development by 2047.

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

Agricultural runoff containing fertilizers & pesticides is a wake-up call to curb negative externalities. Indian Agriculture employs ~ 59% of population & contributed 17.7% to GVA of FY24.

Environmental Pollution from Agricultural Runoff.

1. Eutrophication:- Algal blooms caused by excessive nutrients → Increase in Biological Oxygen Demand → Depletion of Biodiversity.

2. Water pollution with bacterial contamination. e.g. e-coli.

3. Soil Degradation

Soil Erosion cum leaching of essential nutrients \rightarrow lower productivity.

4. Overdose of Fertilizers & Pesticides to compensate losses.

e.g. Instead of 8:4:1 — 10:6:1
N:P:K N:P:K.

5. Loss of water

- poor irrigation efficiency
- groundwater pollution (due to seepage).

Measures required.

(A) To prevent run-off by adaptation

\rightarrow Scientific use of chemicals
post soil testing.

\rightarrow Incentives to reduce use.
e.g. PM PRANAM scheme.

- Nutrient
→ Soil based Fertilizer subsidy
to check overdose & pilferage.
→ Digital Solutions. e.g. QR codes,
precision tech, fertigation, etc.

(B) Mitigating the problem

- Opting for zero Budget Natural farming (ZBNF) to use soil based inputs.
→ Rampargat Krishi Yojana for organic farming. (e.g. stipend for best practices).
→ MYV varieties with less need of fertilizers & pesticides.
→ Growing millets, etc. which require less fertilizers.

"As said by Swaminathan, If Agriculture is not right in this Country, nothing is right."

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)

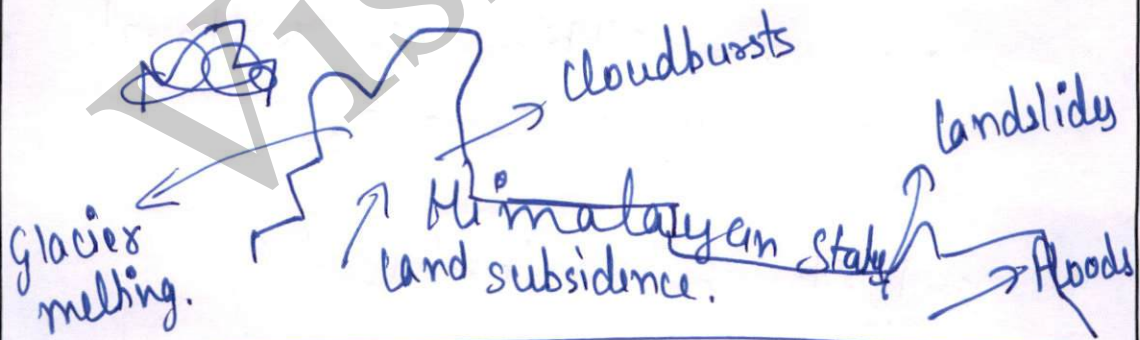
The growing influx of tourists in Himalayan states has breached their ecological carrying capacity, leading to significant man-made disasters. What measures can be implemented to prevent such disasters while promoting sustainable tourism? Discuss with relevant examples. (Answer in 250 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
Candidates must not write on this margin

15

Himalayan states ecological carrying capacity refers to recouping ability in face of exploitation or increased burdens. Alpine young mountains have fragile eco-carrying capacity.

Man-made disasters in Himalayas.



1. Global warming triggering glacier melting

→ CWC observed rise in glacier lakes.

→ Retreated glaciers make moraine dammed glacier
e.g. Rampurna glacier in Nepal.

2. Cloudbursts

→ Orographic lift of Moisture laden winds causing sudden + heavy downpour.

e.g. Chamoli flash floods in 2018 (Uttarakhand).

3. Glacial lake outbursts:

→ e.g. In Sikkim - South Lhonak lake outburst in 2023.

4. landslides & Avalanches.

→ ~~mass~~ sudden mass movements under the influence of gravity.

Tourism as trigger :-

- Joshimath subsidence due to overdevelopment (M. C. Mishra Committee warnings).
- Pollution & wastes disturbing natural flow of rivers \Rightarrow causing landslides
- Global warming.
- Unsustainable tourism to Pilgrimage sites.

Measures to be implemented.

1. Sustainable tourism development of Char Dham Yatra.
2. shifting cultivation to Terrace based Farming.
3. Biodegradable waste
4. No human interference in eco-fragile zones.
5. Safety protocols.

Himalayas are known as Adobe of Gods. As a crown of Indian geography, we must preserve this adobe with Intergenerational responsibility

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

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Superconductors are materials with high conductivity & are useful in electronic industry.

Superconductors as fuel of Innovation

1. Quantum developments.

- high level computing capability.
- powers of electron mobility without any friction.

2. Superconductivity at low temperatures
e.g. Mercury

3. Discoveries of Novel elements & phenomenon.
e.g. Carbon Nanotubes

4. Empowering innovations

e.g. Automatic sensors to detect possible car accidents in advance

5. Various fields

Health :- Scanning & Diagnosing diseases.

e.g. advancements in MRI

Agriculture :- Precision tools ~~and~~ such as crop diseases diagnosis.

Space Science :- Space based technologies.

Superconductors are super devices in modern electronic revolutions.

उम्मीदवारों को
इस हार्शिए में
नहीं लिखना
चाहिए
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VisionIAS

18.

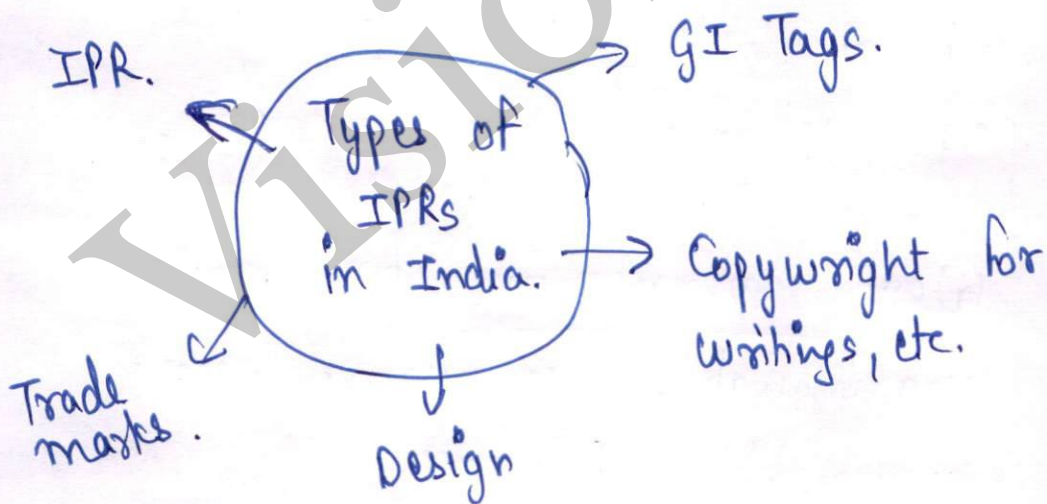
यद्यपि भारत में लगभग सभी प्रकार के बौद्धिक संपदा अधिकारों को कवर करने वाले कानून मौजूद हैं, फिर भी अनेक प्रवर्तन संबंधी, विनियामक और प्रशासनिक चुनौतियां भारत में बौद्धिक संपदा अधिकारों के व्यावसायीकरण में बाधा उत्पन्न करती हैं। सविस्तार वर्णन कीजिए। (उत्तर 250 शब्दों में दीजिए)

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)

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
Candidates must not write on this margin

15

India belongs to top 50 Countries group in Global Innovation Index of WIPO. IPRs are rights of creators to incentivize their innovations. Article 27 of UDHR considers it as a Human Rights.



Various laws:- - Patent Policy, 2014.

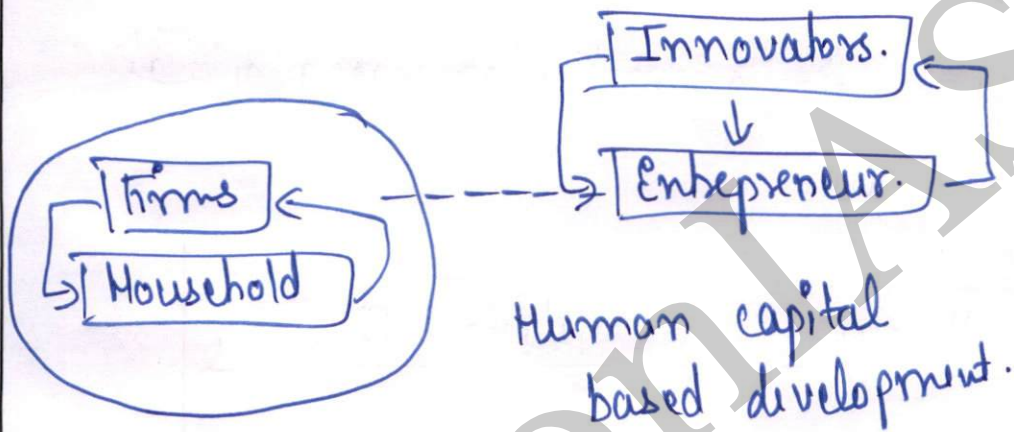
- The Protection of Plant Varieties & Farmers Rights.

Limitation in Commercialization of IPRs.

1. Compulsory licensing for generic medicines.
e.g. Johnson & Johnson Diabetes case.
2. Lack of Awareness of patents amongst youths.
→ more rich patent culture in US & China.
3. ~~lack of~~ Global Biopiracy.
e.g. US patents on Turmeric.
4. Patent evergreening for profit maximization encourage more government interference.
5. Long process of getting recognition of patent.
6. Only 0.7% GDP invested on R&D.

Measures required.

1. IPR awareness through NIPAM to youths. for knowledge based economy.



2. Investments on RE&D through NIRF matching Global Average
3. Transparency in mediating farmers v/s Patent companies; local producers v/s foreign patents.

If China has rare earth, middle east has oil, strong IPR ecosystem can make India says "I have knowledge" by 2047

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

(ITCs) refers to single command of tri-services under common authority (e.g. CDS) for a particular geographical area (theater).

Challenges in creating ITCs.

1. Multifunctional Role in ITCs will require special training of services.
2. Issues to address on division of assets
3. Nomenclature of commands & dilution of power of chiefs are conflicting issues.
4. US and Chinese ITCs function in large geography. India needs to work on deciding Theatre areas.

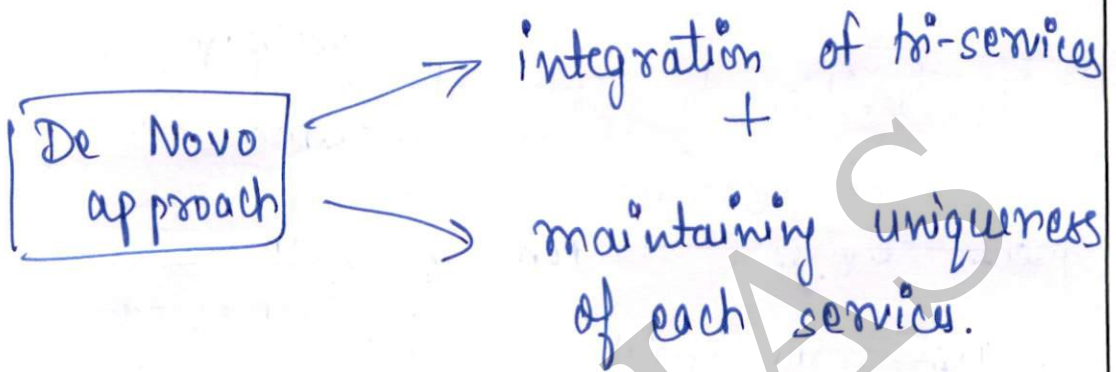
5. Centralization of power may create disruption.

e.g. sudden death of former COS Bipin Rawat.

Opportunities to Integrate & Rationalize three services through ITCs.

1. ~~Common~~ Single military advice to government.
e.g. on Nuclear Command.
2. Resolution between tri-services through regular dialogues.
e.g. Chief of Staff Committees.
3. Resource use efficiency for unconventional challenges.
e.g. Balakot strikes
Anti-maritime terrorism operations.
4. Best practices sharing.
Common military drills.

CDS Anil Chauhan argue for
'De Novo' approach for ITCs



Other measures

→ Integrated Functional Commands
e.g. cyber security, anti-terrorism,
etc. based on functions

Nevertheless, with De-Nova
approach ITC is a future of
Indian defence which will strengthen
Indian defensive security.

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)

Security is not just a military problem. Border villages security & development is 'comprehensive security' which includes - ~~Human~~ Human welfare, shared development & resilience against any threat.

Border Villages as First Villages.

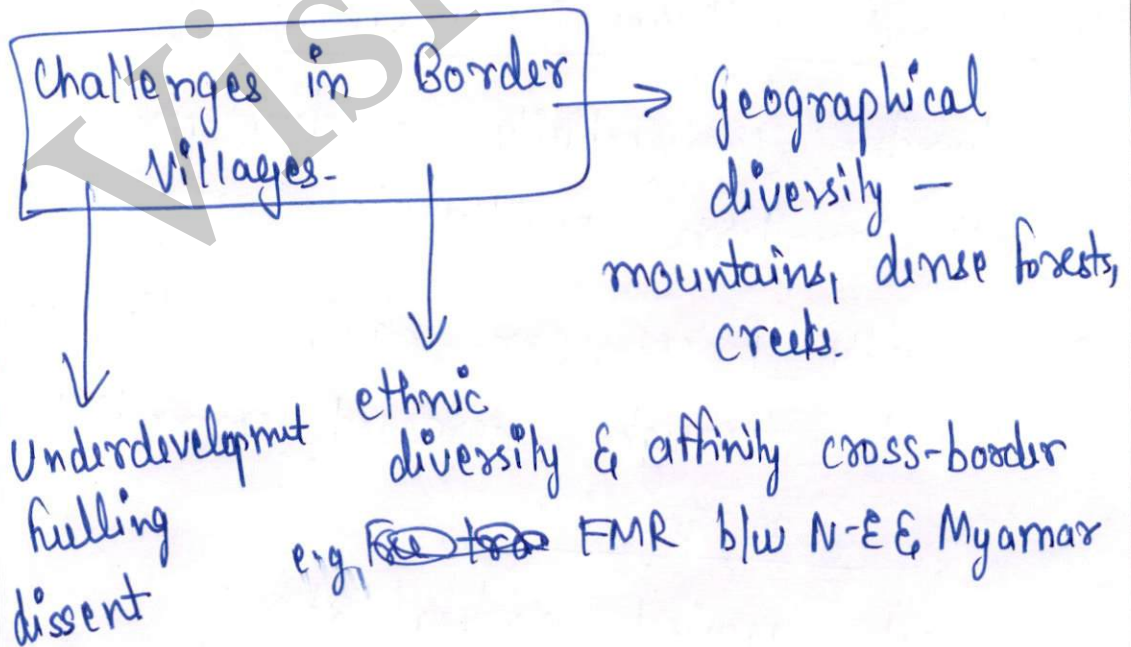
1. Vibrant Villages Programme for border connectivity & development with modern facilities.
2. Security forces can navigate difficult terrain through increased connectivity. e.g. Sela Tunnel
3. Check against radicalization e.g. Operation Sadhvabhana in Pir Paryal Valley.

4. Winning Hearts & Minds Strategy

- check to OGW stone pelters.
- deep security to check terrorist infiltration.
- Confidence building measure.

5. First line of defence → Capacity building.

e.g. successful seizing of illegal drones on Punjab side International border by Village Defence Communities (VDCs)



Other measures by government

1. Udan scheme to connect entrepreneurs of border villages of J&K to mainstream economy.
2. Himayat mission for comprehensive development.
3. Village Defence communities (VDCs)
4. Operation Sadhvabhan.
5. Infrastructural Development by BRO.

Border Villages should be developed comprehensively to build human security in the region.

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