

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. : 01505652

अभ्यर्थी का नाम/Name of Student : Abhishek Chaudhary

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

25/08/2024

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

केंद्र

Centre

Bhai Joga Singh
New Delhi

निरीक्षक के हस्ताक्षर
Invigilator's Signature

An

	<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
परीक्षक के हस्ताक्षर Signature of Examiner(s)	

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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निर्धारित समय: तीन घंटे
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.

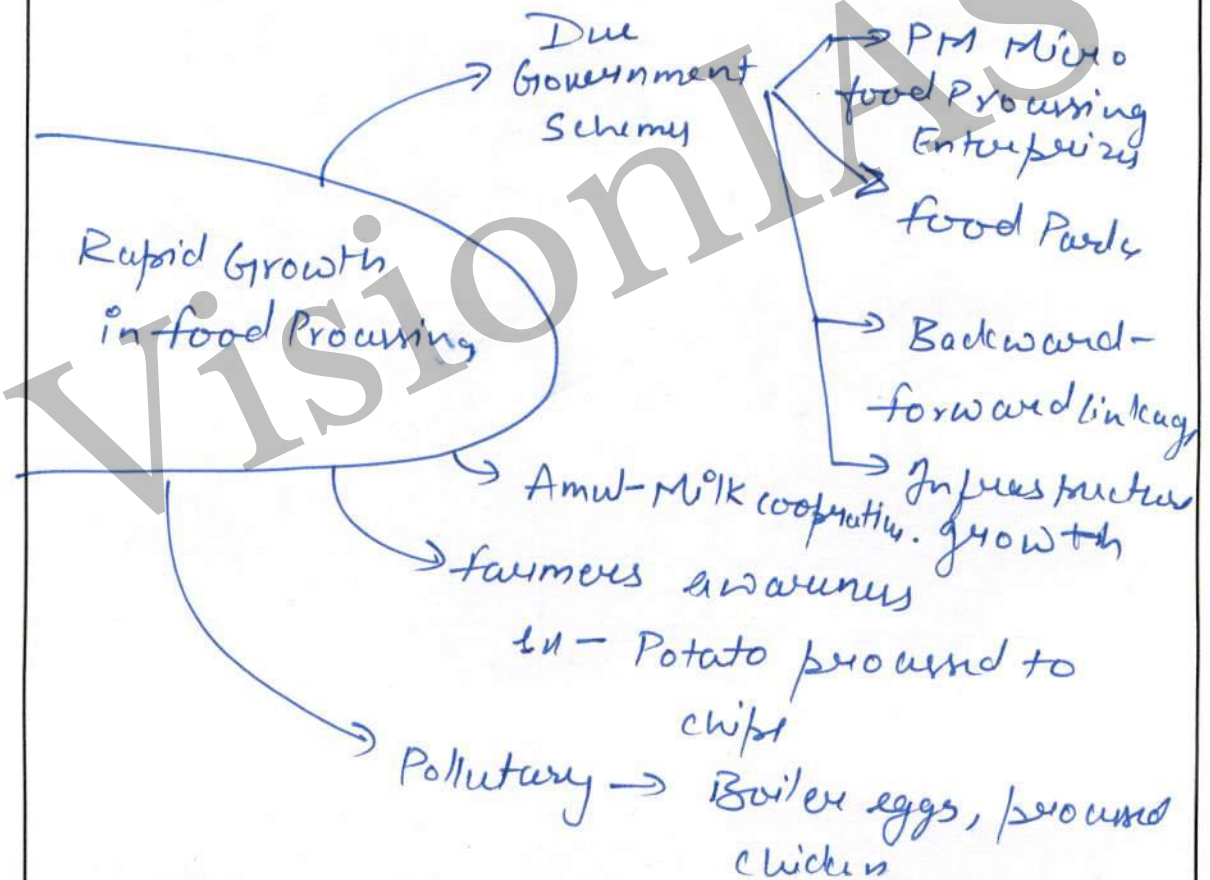
All the Best

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)

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

India is witnessing rapid growth in food processing approximately to range of 8% in last decade. However this growth is accompanied by several food safety challenges.



food safety challenges due to rapid growth of food processing industry

① Non communicable disease on rise.

e.g. India called as diabetes capital of the world

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

② food adulteration

e.g. Harmful chemicals like Azonomoto

③ Artificial sweetener

causing blood sugar spike like fructose etc. → risk of diabetes.

④ Decrease in Nutritional value

e.g. 12th school children fall ill due to consumption of biscuits.

⑤ Expired products sold within the market → poses several health risks.

⑥ Storage of perishable goods is a challenge.

Way forward

→ NFSAI → guidelines to be strictly followed.

→ Penalties on companies not following norms

→ Increasing awareness

We need to provide ^{in Masses} healthy food to

public to meet targets of SDG-2 → Zero Hunger.

2.

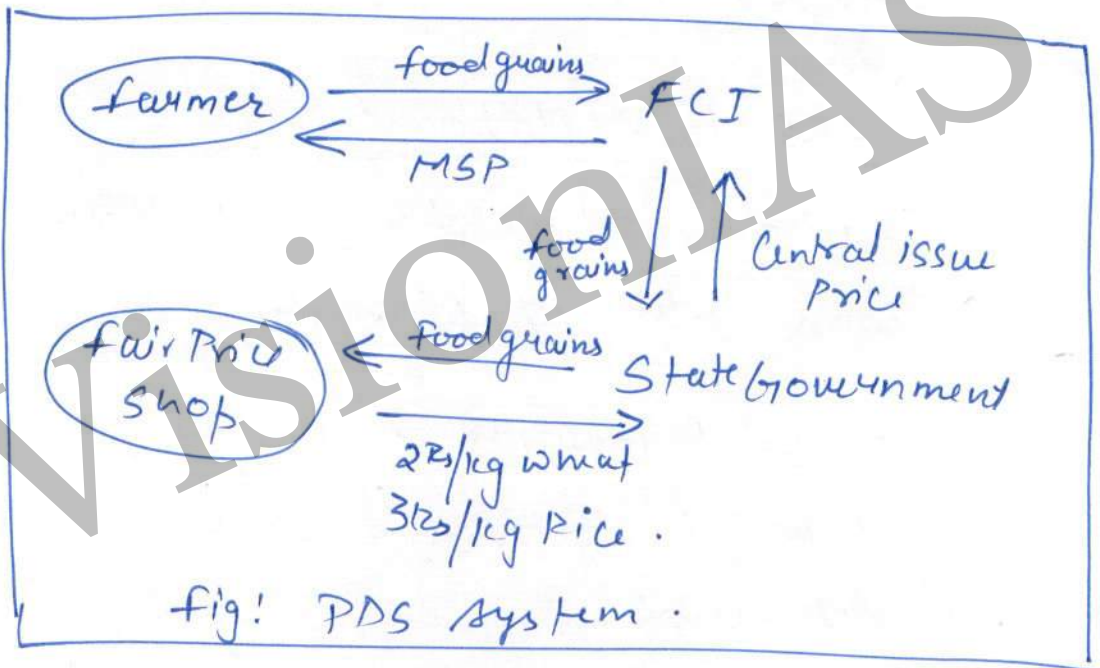
भारत की सार्वजनिक वितरण प्रणाली के अंतर्गत उचित मूल्य की दुकान (FPS) का प्रारंभ एक विकासशील प्रक्रिया है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

Public Distribution system is a social Economic scheme of government to provide food grains to citizen in a affordable, equitable manner.



Fair Price shop are the final node of the Public distribution system.

The FPS has transformed from its initial form in following manner—

① Types of goods delivered → Initially

even kerosene was delined to BPL
card holders at FPS. Now it is
stopped with coming of schemes like
UTTWALA yojana

② Technological transformation

Pen paper \Rightarrow Electronic
Record

↓
Adhaar based
Authentication

↓
DBT (Direct
Benefit transfer)

③ Social Audit of FPS is being
carried out at various states.

④ Infrastructural transformation

The FPS shops are now equipped
with more advance infrastructure
facility like - electronic weight,
& QR code scanners.

⑤ Mode of payment \rightarrow UPI based.

PDS & FPS system are essential to meet

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

Agriculture contributes 19% to Gross value addition of country, and provides employment to 45% of population.

But due to lack of technological integration, its productivity is not comparable to advanced economies.

Agri tech startups in Farm Productivity

① Decision Making

e.g. Startup Agrotech suggest crop to be grown for a particular geography

② Soil health Measurement

e.g. PH, micronutrient of soil measured by various startup produced equipments

③ Green house farming startups

e.g. help in growing exotic crops in off seasons.

④ Land preparation & levelling

e.g. Startups with advance theodolites

& Dumpy level helping farmers to level the land.

⑤ Seed Quality improvement

Startups enhance the quality of

seeds used by farmers.

e.g. Happy seeds for putting seeds in soil.

⑥ Water & irrigation needs

e.g. smart irrigation methods employed by farmers.

Agric Startups in Market Access

① To give access to international market.

e.g. Amazon, Flipkart USA.

② Tie up with big retail chain,

e.g. Walmart, Big bazar, D-Mart.

③ Transportation startups grant access to ^{market}

e.g. Agrowal movers.

Hence, the agric startups are helping in realizing the need to safeguard our agri production & our Annadata

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

Digitization refers to converting of physical land records into electronic form so that it can be accessed from anywhere on internet or offline.

Role of Digitization of land records in effective implementation of land reforms

① Ease in solving land disputes → leading to equitable sharing of land resources
e.g.: NITI → a land dispute take 20 years to get solved.

② Increasing productivity of agriculture via land pooling which has become easier due to land record digitization.

③ Access to land records is easy
e.g.: AgriStack has 60mn farmers's land registry.

④ Exise free Government to enforce land ceiling

⑤ Acquisition for land development can be done early.

e.g. Right of way for highways, railway projects.

⑥ Government schemes benefit can be delivered effectively

e.g. PM Kisan Yojana using Biometric data for ~~show~~ depositing 5K rupees.

However, still there are certain lacunae in land digitization

① Lack of effective technology.

e.g. Blockchain can be used as used in Telangana.

② Lack of manpower with state.

e.g. SVANITVA scheme suffering due to lack of manpower.

③ lack of funds.

④ Coordination between centre & state, because land is a State subject.

for equitable socio-economic development land reforms are sin-quo-non.

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 on cusp of demographic dividend with maximum working age population in the world by 2030. And manufacturing employ 16% of ^{working} population.

Manufactured led growth to exploit demographic dividend

① Create more jobs of youths.

e.g. 1 Manufacturing ^{job} creates 3 additional jobs in services and agriculture.

② Manufacturing growth will absorb the skilled population.

③ It will reduce the poverty & hunger.

④ Skill development of youths -
e.g. only 20% trained through NSDF.

⑤ It will increase the socio-economic indicators of being about inclusive growth.

⑥ Exploit geographical advantages of manufacturing sector.

ex- Pune as automobile hub.

Central India & Rajasthan - Cement industry.

Manufacturing led growth to accelerate economic growth

① India's economic growth is close to 7% (FY23), whereas Manufacturing growth was just 4%.

Therefore a push to manufacturing will take us to double digit growth.

② Manufacturing growth will bring high sustainable growth.

③ Manufacturing will be carried by MSME's

e.g. 6.5 crore industries, out of which 6.3 are MSME's → bring jobs to people.

As Lee Kuan Yew said - "No country in world can be a super power without being an Industrial power, we need to leverage our manufacturing capabilities."

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

India has vast coast line of 7516 km and this coastline is prone to natural hazards.

Need for Resilience

→ Export hubs at coastline

ex - 12 Major Ports

→ 7 Mega Cities → with huge population

→ Biodiversity → Western Ghats, Eastern Ghats.

→ for socio-economic development of the population of these areas.

Strengthening Resilience of Indian Coastal Communities against natural hazards

① Community Participation

taking help of community at the

time of disaster, to enhance the preparedness

② Training the people

e.g. In Odisha NDRF trained local people against cyclone disaster.

③ Using best practices of indigenous people

e.g. Tribal people of Odisha making disaster relief shelters.

④ Mock drills → To ensure people become resilient to climate hazards.

⑤ Adoption of organic farming for disasters like ^{flash} rain.

⑥ Early warning system.

e.g. Doppler radar for cloud burst

Through these measures we can ensure resilience of coastal communities & meet the Goals of SDG-13 i.e. Climate Action.

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

Green Credit programme refers to giving loan for Green projects i.e. environmentally sustainable projects.

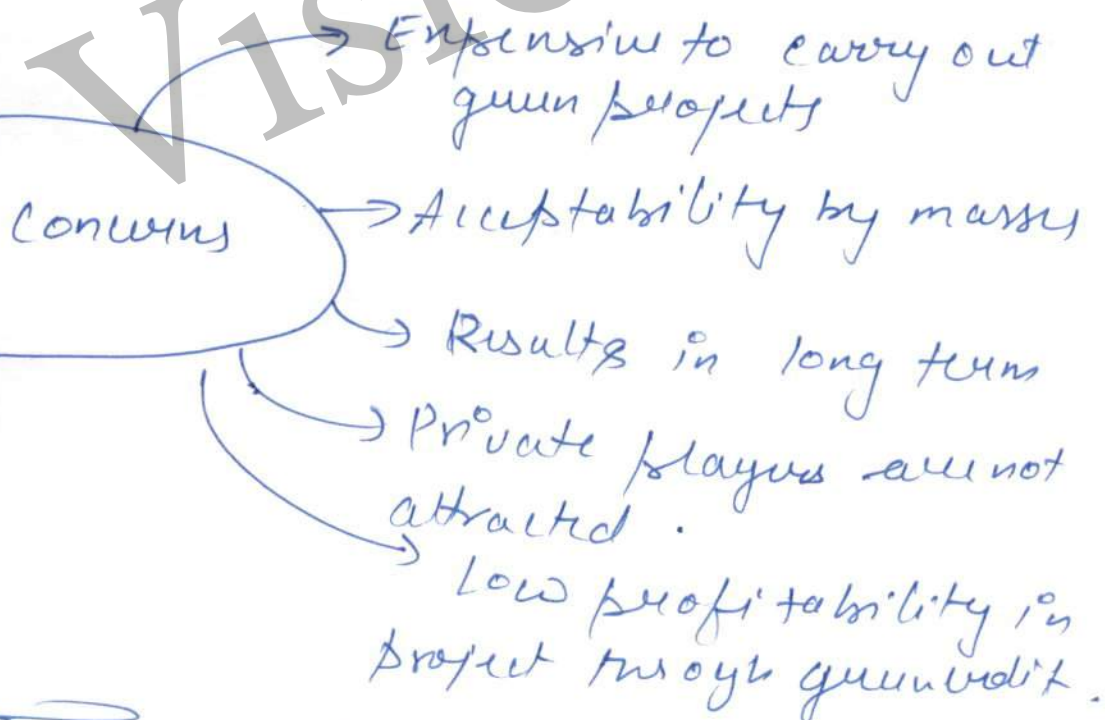
Green Credit Programs beyond Carbon Management

- ① Carbon management is just a adaptation measure.
- ② Carbon management doesn't substantially decrease the emission.
- ③ Carbon management can be bypassed by paying emission charges.
- ④ Carbon management is a symptomatic approach, whereas green credit is sustainable approach for a holistic solution.

Green credit programme promoting sustainable environment

उम्मीदवारों को इस खण्ड में नहीं लिखना चाहिए
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- ① Creation of green infrastructure.
e.g. Electrical highways.
- ② Promotion of renewable energy
e.g. Solar Energy production.
- ③ Promote the growth of environmental friendly development
e.g. Electric buses in cities.



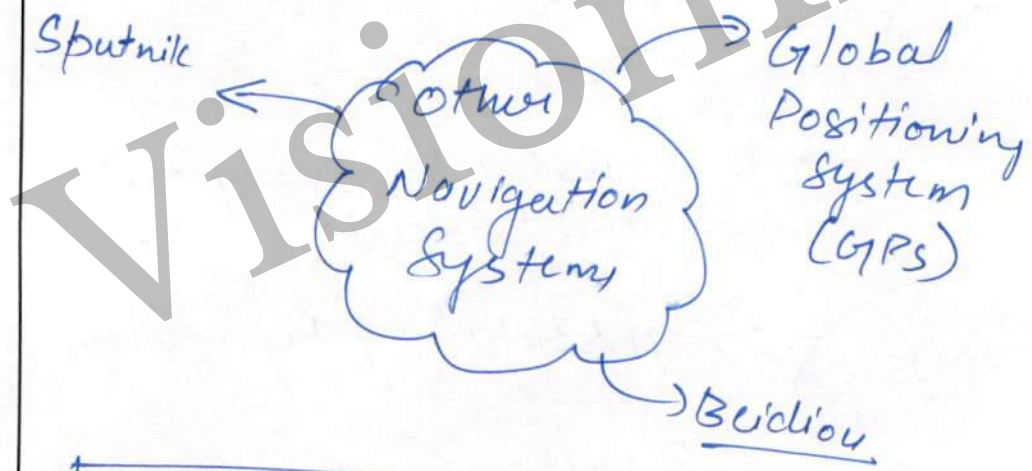
Thus need to promote green credit as a lucrative option than carbon management.

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 हार्शिए में नहीं लिखना चाहिए
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NavIC → Navigation Indian Constellation
 is indigenous navigation system developed by ISRO.

It has 7 satellites → 4 → GTO
 → 3 → GEO



Need for NAVIC

① for Geostratigic strategy
 To keep our borders safe
 Vigil over ~~countries~~ ^{non friendly} nations.

② To be self dependent in an event of denial from other countries for service of GPS.

ex- During Kargil USA denied to share GPS location of Pakistani's position

③ To showcase world of our space & technological capabilities

④ for fastest technological adaptation to indigenous system.

⑤ To aid ~~for~~ in disaster resilience & early warning system.

⑥ To aid our defense forces.

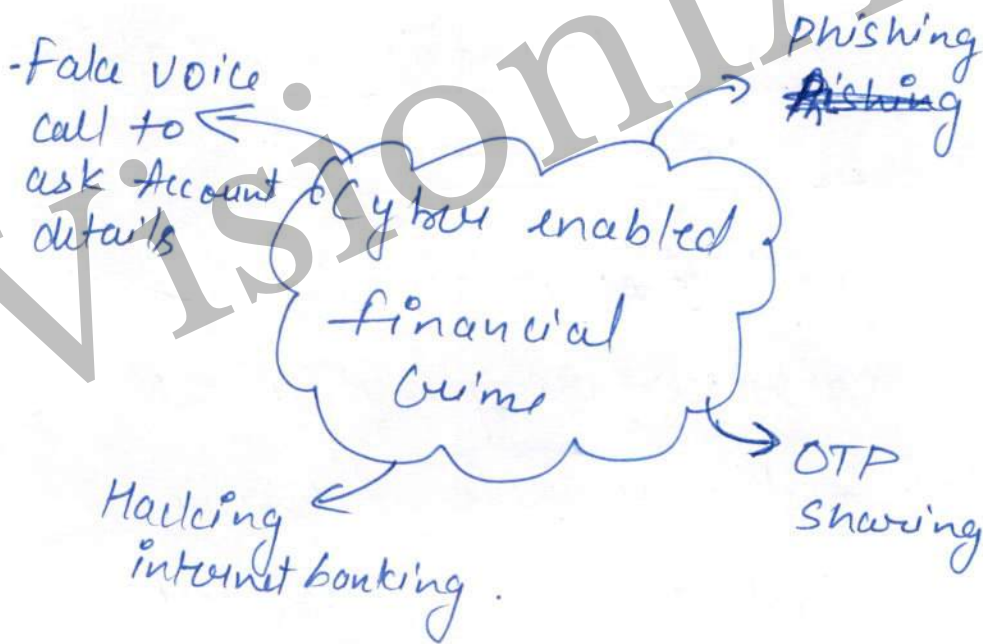
⑦ To aid the allied startups & help the startup ecosystem.

→ IN NavIC GPS is first step to have a satellite based internet service in future.

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 हशिप में
नहीं लिखना
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India has 55% internet penetration with 110 crore active mobile phone users. Making it prone to cyber enabled financial crime.



Cyber financial crime & Money Laundering

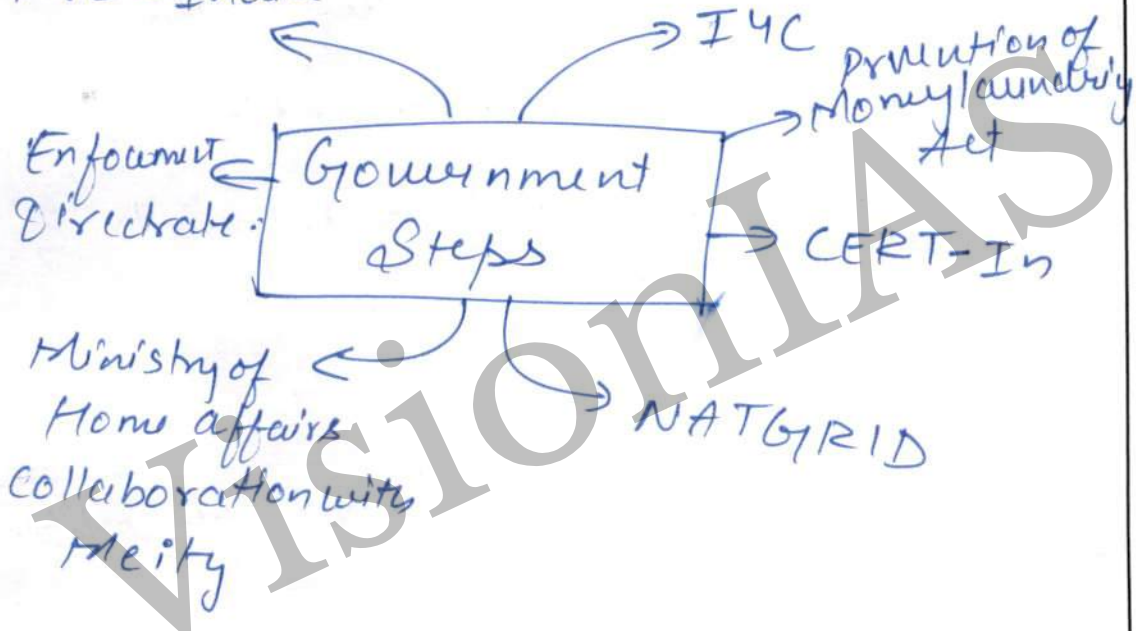
- ① The proceeds of cyber crime are used for laundering the money.

② Criminals operating in different country doing cyber crime in another nation

Ex. Many USA citizen's complained ~~lot~~ of financial fraud from Pakistan

③ Money laundered is placed in economy & used for criminal acts.

FIU - India



International efforts

- G-7
- Financial Action Task force . Grey , Black list
- ~~the~~ Interpol.

Through above collaboration we can ensure that money laundry is contained through financial frauds.

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 क्षेत्र 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

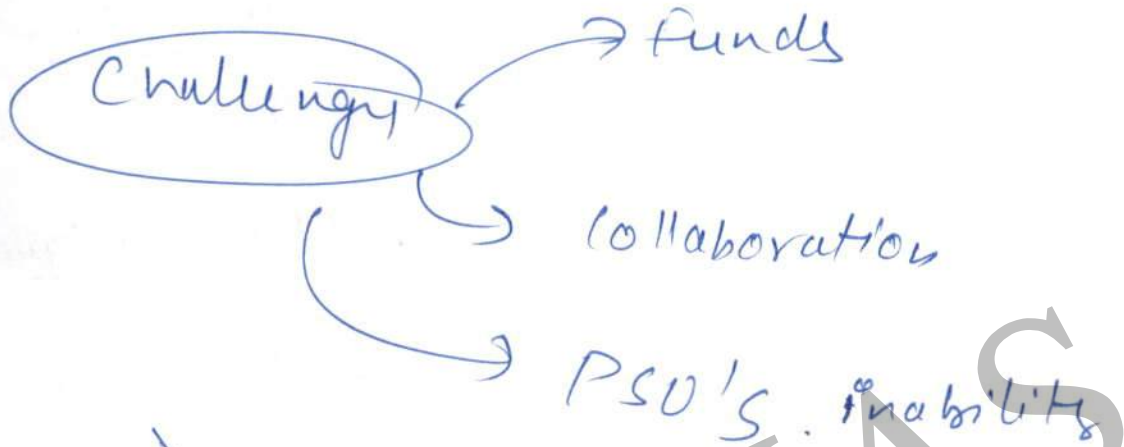
"Year of Technology Absorption" 2024

Signified greater thrust of
India's Army on promotion of
indigenous defense equipments &
technology

Need for technological Absorption.

- ① Self reliance -
- ② Promote startups -
- ③ EV - ~~Idex~~ scheme
Create employment
- ④ for economic growth of
nation

⑤ To transfer technological power into military power.



VisionIAS

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)

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इस हार्शिए में
नहीं लिखना
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15

North Eastern region constitute 8%
 of India's area & is inhabited by
4% of our population. It has unique
paradox of ^{sun's} beauty & insurgency in
some regions.

Issues faced in development of
trade & industries in North Eastern Region

① Complex Terrain

Rugged topography, forest, rivers
 difficult to develop
 infrastructure

② Geographical location

Hostility with china
 & turbulent myanmar
 hindering industrial
 growth.

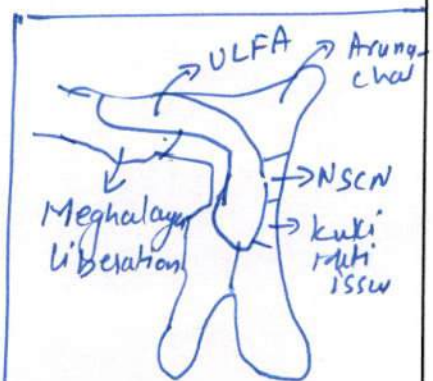


fig Maps NE &
 issues.

③ Insurgency

e.g. Demand for greater Nagalim
by NSCN-IM.

④ Ethnic conflict

e.g. Meitei-Kuki in Manipur.

⑤ Historically backward

e.g. No major industrial complex
except refineries in Assam.

⑥ Tribal inhabitants

e.g. Unique culture, forest based,
geographical isolation.

Tribes such as Mysi, Apor, Miri,
Mishmi of Arunachal.

⑦ Linkages between insurgents, Naxals
& other non state actors.

⑧ Expensive to carry out development
in that kind of terrain.

e.g. Govt. providing viable gapfunding
to companies carrying out infrastruc-
tural projects.

⑨ frequent floods, landslides & volatile region

e.g. flooding of Brahmaputra
in Assam.

Measures Taken

- ① Dedicated ministry → Ministry of Development of NER.
 - ② Vibrant Village Program
Launched to develop frontier villages.
 - ③ End of Free movement Regime with Myanmar → for peace & tranquility of North East.
 - ④ Bharatmala Project for road network in North East.
 - ⑤ Security measures
 - Ops. Sunbird
 - Assam Rifle deployed at Myanmar border
 - BSF safeguarding Bangladesh Border.
 - ⑥ Diplomatic measures with Myanmar & Bangladesh for peace in NE.
 - ⑦ Peace Accords t.g. Assam Accord, NSCN peace accord etc.
- Thus need to carry out more affirmative measures for holistic development of NER.

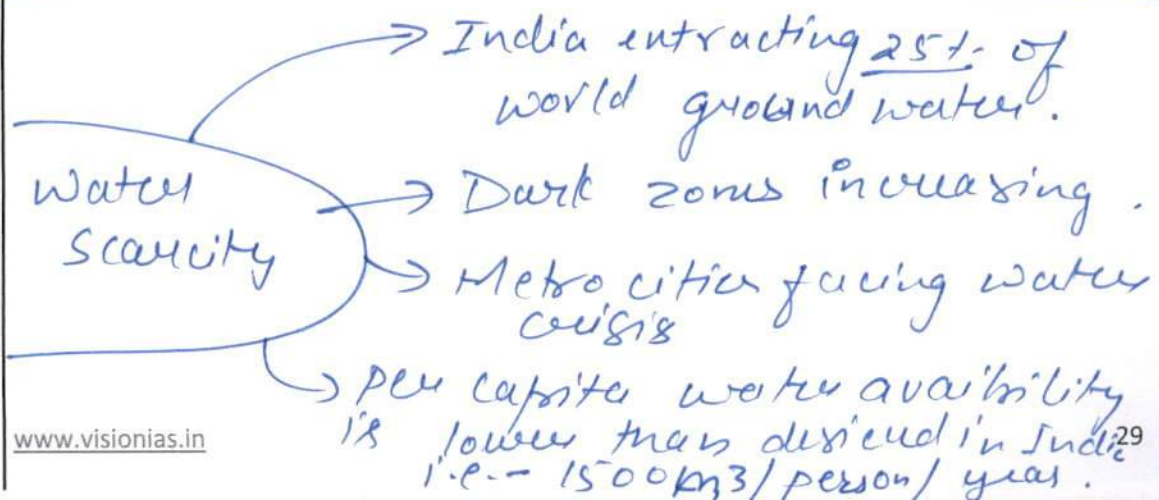
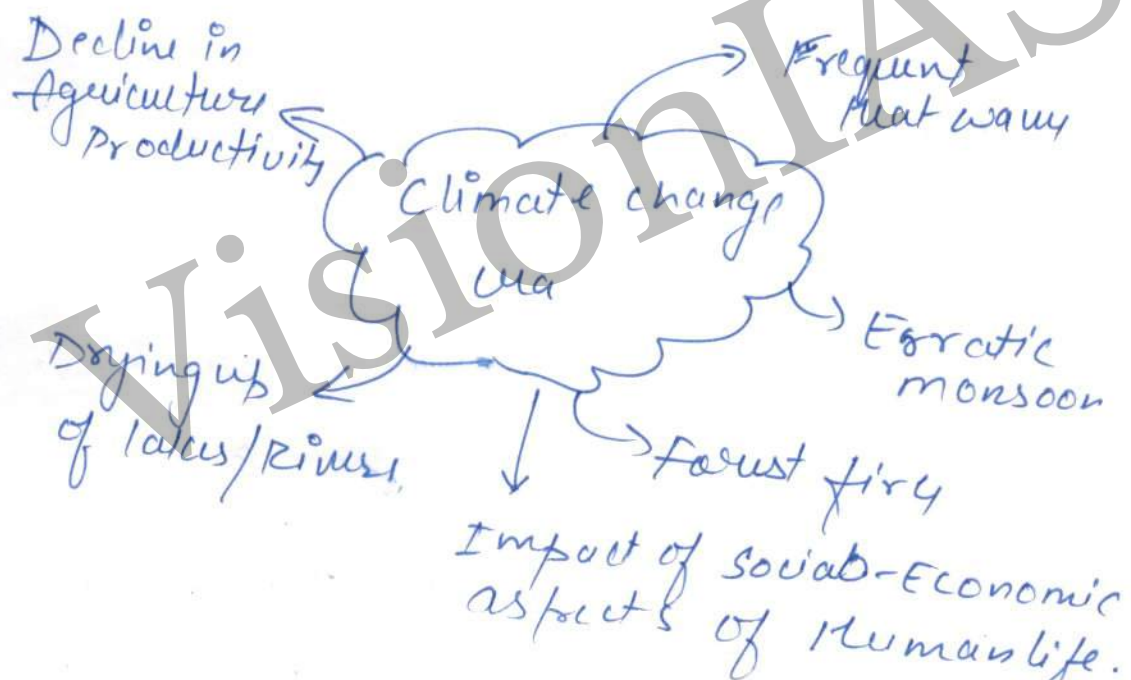
12.

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 हिसाब में नहीं लिखना चाहिए
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As per IPCC, by 2100 the avg temperature will rise by 2.5°C from pre industrial era if climate change continued at this pace.



Microirrigation system contributing to Sustainable agriculture practice

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

- ① Lack of wastage of water.
e.g. Drip irrigation
- ② Decrease in soil salinity
e.g. Sprinkler irrigation
- ③ Can be used in Dry areas also
e.g. Climate smart agriculture
- ④ Low electricity consumption.
- ⑤ Can be run through solar.
e.g. RAJESUM scheme augmenting growth of micro irrigation system.
- ⑥ Lack of ~~evapotranspiration~~ evaporation of soil moisture.
e.g. use of perforated pipes under the soil ensures soil moisture availability to a greater time.

⑦ Increase farmers productivity per hectare.

⑧ Increase in farmers income.

~~eg.~~ As the energy consumption will be low.

Hence, India needs to promote micro irrigation for sustainable life agriculture practices.

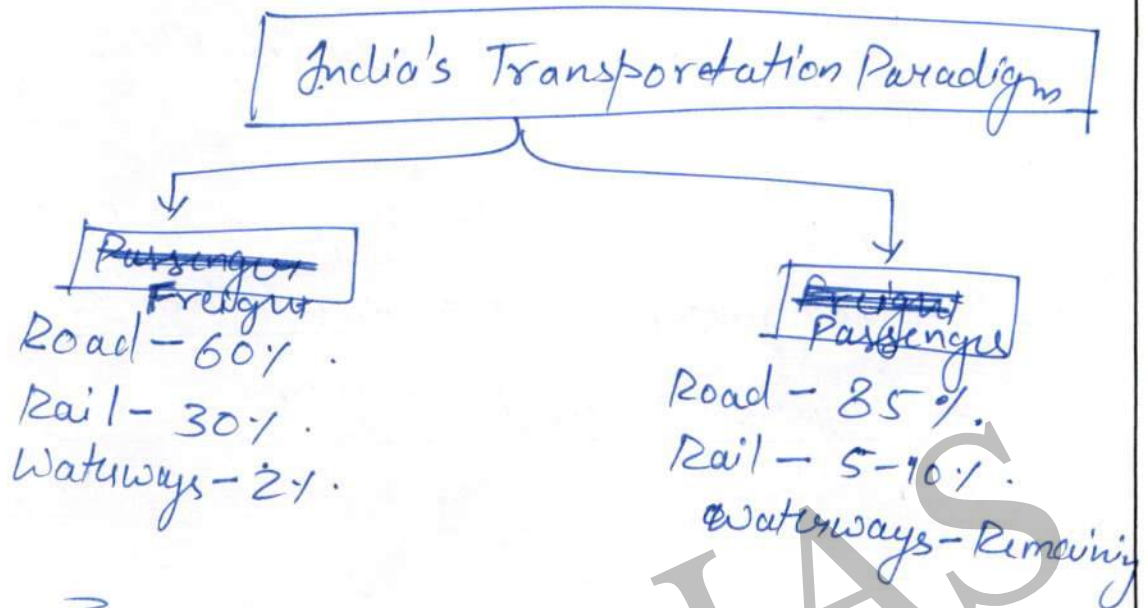
VisionIAS

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 हिसाब से नहीं लिखना चाहिए
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→ The above paradigm shows that our freight is mostly transported by Road

i.e. ~~60%~~ 60%

→ In developed economies Railways carry approximately 50-60% of freight.

Strategies to Adopt to freight transportation by Indian Railway

① Infrastructure development through new developmental projects

like Western Dedicated Freight Corridor.

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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② Allowing private Players for freight transportation

i.e. it will enhance efficiency & profitability of railway.

③ Modernisation of Rail tracks
e.g. Concrete sleepers over basalt rather than wooden sleepers to carry more load.

④ Safety Strengthening

e.g. Kavach system for anti collision

⑤ Rising skilled manpower & Management with proper training.

⑥ Government policy in this line to enhance freight transportation.

⑦ Incentivising corporates, exporters to use Railways in tax benefits.

⑧ Protection of rail tracks via construction of Boundary wall or fencing.

⑨ Learning from international
best practices -

e.g. German freight transportation
system.

⑩ End to End transportation service
through Rail.

e.g. System like mother & daughter
ship of marine transportation.

Through these measures, we can
reduce our logistic cost from

13.5% to 8%. which will
increase our ~~net~~ ^{Exports} by @5% as per

NITI Aayog.

14.

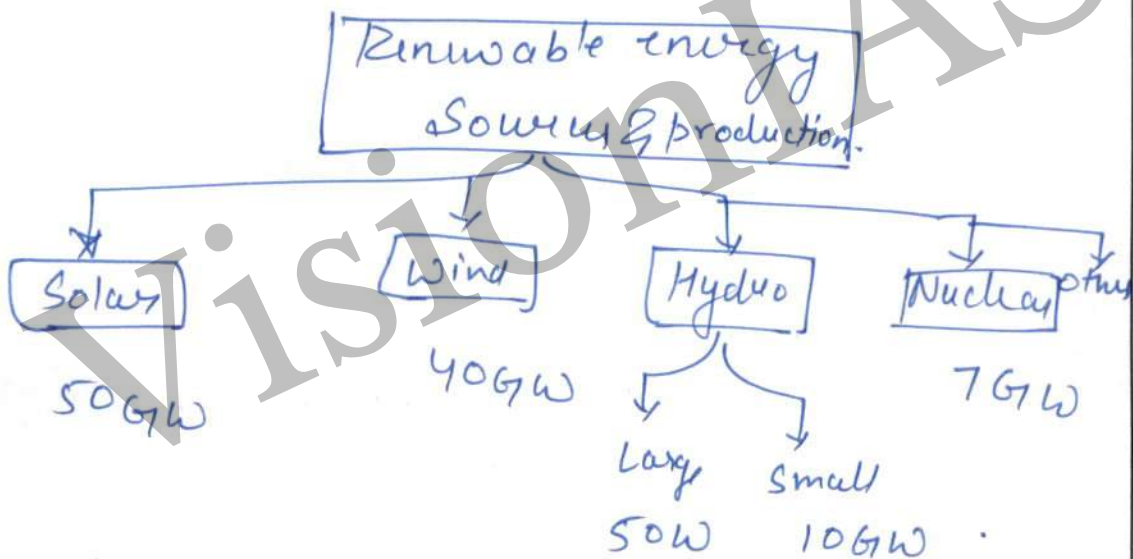
उन कारकों पर चर्चा कीजिए जिन्होंने नवीकरणीय ऊर्जा क्षेत्र में प्रभावशाली प्रगति करने और वैश्विक नवीकरणीय ऊर्जा परिवर्तन में अग्रणी के रूप में स्थापित होने में भारत की सहायता की है। (उत्तर 250 शब्दों में दीजिए)

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 नही लिखना चाहिए
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India's total energy production is 400(GW) out of which 160 GW is through Renewable energy



factors aided in making Impressive Strides in RE sector

① Government Policies

eg. Subsidy on solar Roof top systems

② Contribution of Pvt. Players.

e.g. - Silicon based solar panels produced by startups.

③ Tax incentives to companies involved in Renewable energy production.

④ International collaboration

e.g. International Solar Alliance

⑤ Geographical factors

Wind → TN, Rajasthan

Solar → GT, Rajasthan, MH.

⑥ Close fuel → Nuclear power Program

e.g. fast $\&$ breeder reactor using Pu^{239} produced from U^{235} cycle.

⑦ Availability of water for hydro electricity production.

e.g. Tehri, Hirakund Dam.

⑧ Schemes like Gobardhan for biogas production.

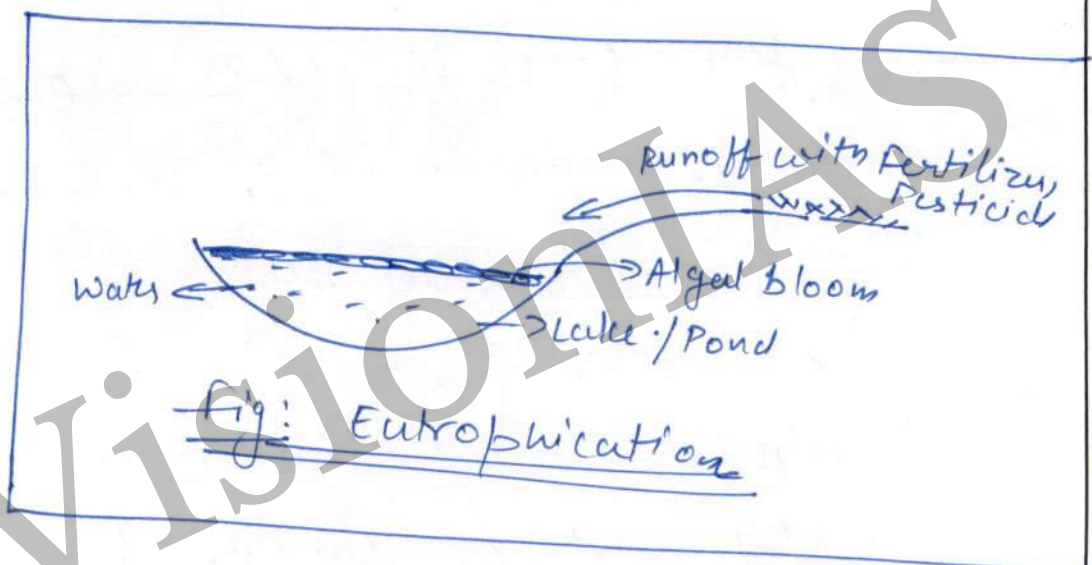
However, there are still certain measures to be adopted to reach the target of Net zero emissions by 2070.

- ① Self sufficiency in production of solar panels.
- ② Harnessing Ocean Thermal energy
e.g.: Vast coast line of 7516 km.
- ③ More international collaboration like Global Biofuel Alliance with USA, Brazil.
- ④ Investment in infrastructure.
- ⑤ Development of energy storage system.
- ⑥ Green Grid.

With these steps we can meet our targets of 50% of Renewable energy production by 2030 & become front runner in global energy transition.

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)

Agriculture runoff with fertilizers & pesticides contaminate soil, water, land & is detrimental to environment & health.



Impact of agriculture runoff

- ① Eutrophication → due to algal bloom.
dying of fishes, ~~and~~ aquatic plants & animals due to lack of O_2 .
- ② Pollution in the Lakes / Ponds making it unfit to usage.

③ Percolation of runoff to Ground water contaminating it.

1.g.: Diseases like fluorosis, Blue baby syndrome

④ Drying of land vegetation

a.g.: Drying up of trees due to absorption of harmful chemicals.

⑤ Impact on human health

e.g.: Mixing of these chemicals with water supplied at home.

⑥ Pollution in the rivers → drying of fishes.

e.g.: Dolphin affected in Ganga.

Measures taken

① Restricted usage of fertilizers & pesticides

② Nem coated urea.

③ farmers encourage to use fertilizers in Ratio 4:2:1, instead of 8:3:1 (N:P:K)

④ Contour Bundling to stop the runoff to outer areas

⑤ Organic Farming

⑥ Using Organic fertilizers & pesticides.

⑦ NAMASTE Scheme for safe fertilizers
Through these measures, we can

ensure safe life on land & under water (SDG 15 & SDG 14) & prevent environmental contamination.

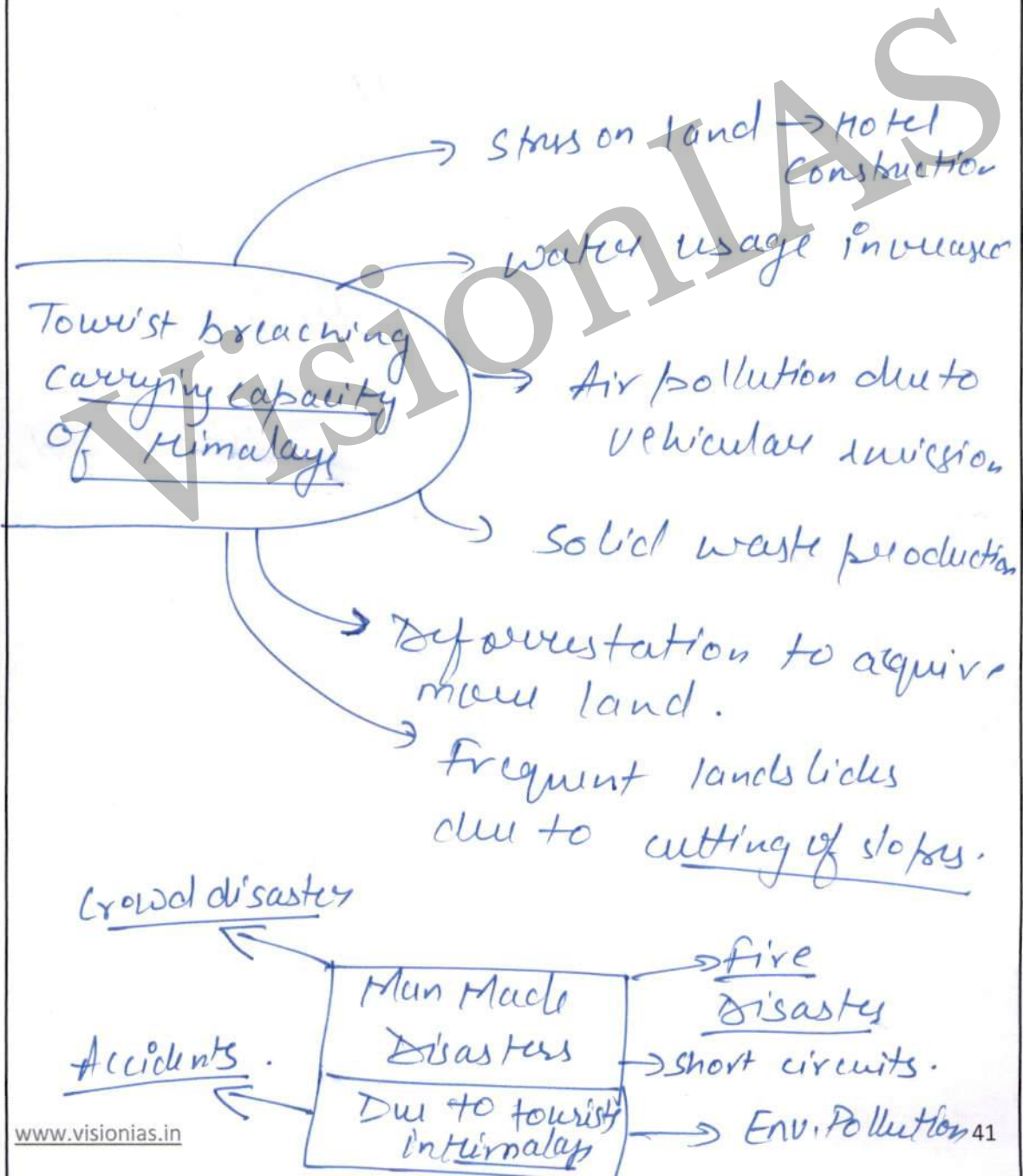
16.

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 हिसाब से नहीं लिखना चाहिए
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The tourists in Himalayan states have increased by 100% in last 1 decade.



Measures implemented

① Permit System

e.g.: online permit for ladaakh visit

② Online Darshan

e.g.: kedarnath temple

③ Enhanced police & civil defense capabilities to handle crowd.

e.g. - Hiring of civil defense in Uttarakhand.

④ Designated Parking station at Hotspots to avoid accidents

⑤ Cliff protections.

⑥ Crowd management system.

e.g. CCTVs

- ⑦ Public Addressing system at crowded places.
- ⑧ fire hydrants at crowded places to safeguard from fire disaster
- ⑨ Strict environmental clearance norms for hotel construction in hilly states.

Way forward

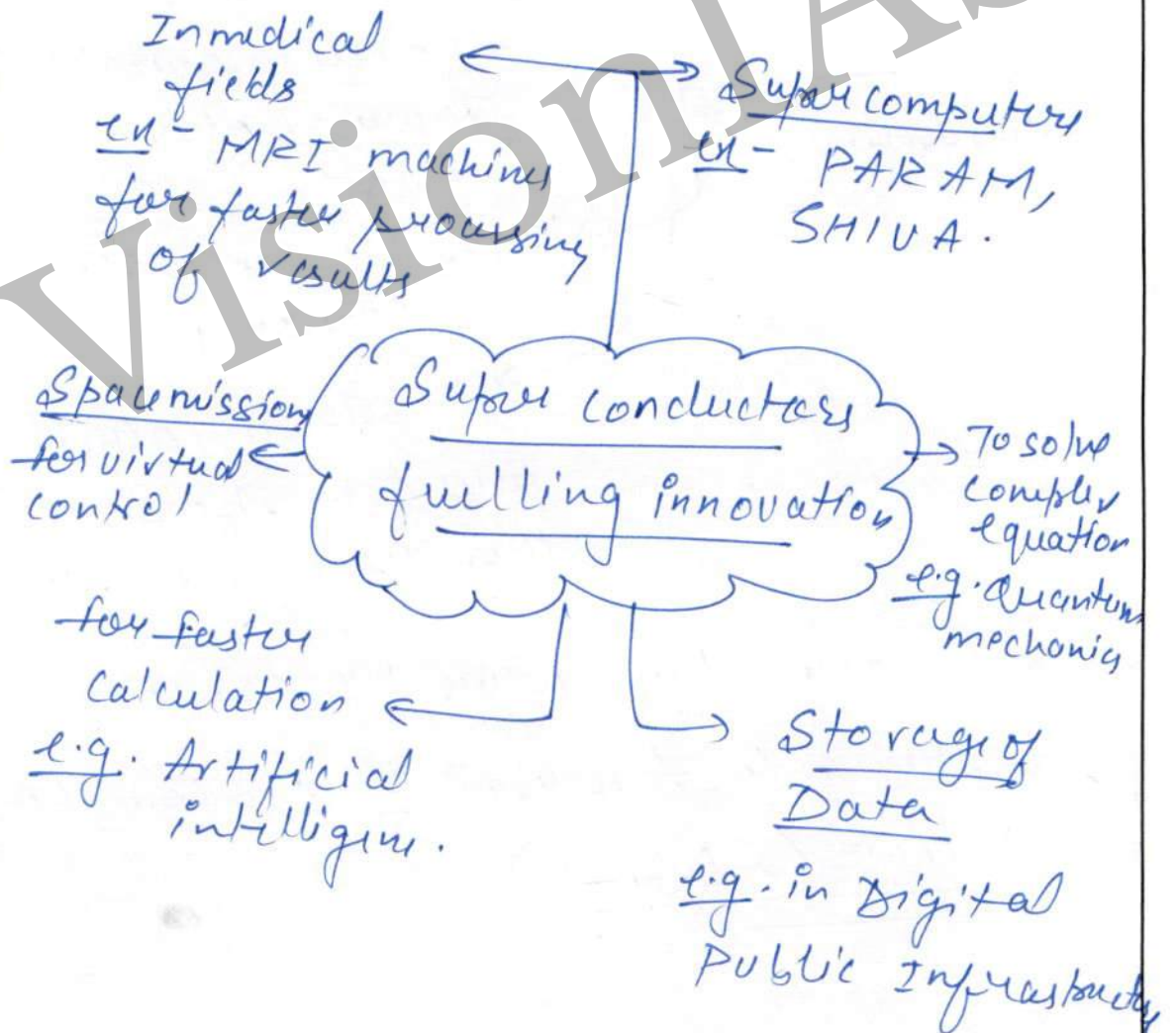
- Policy on sustainable Tourism at Himalayan state
- Promote circular economy
- Developing other tourism spots other than usual cities

Through these ways we can ensure sustainable tourism & sustainable cities (SDG-11)

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-छात्रों में नहीं लिखना चाहिए
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Super conductors are those materials which exhibit super conductivity i.e. allow passage of current without or with limited resistance.



In this m.

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नहीं लिखना
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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)

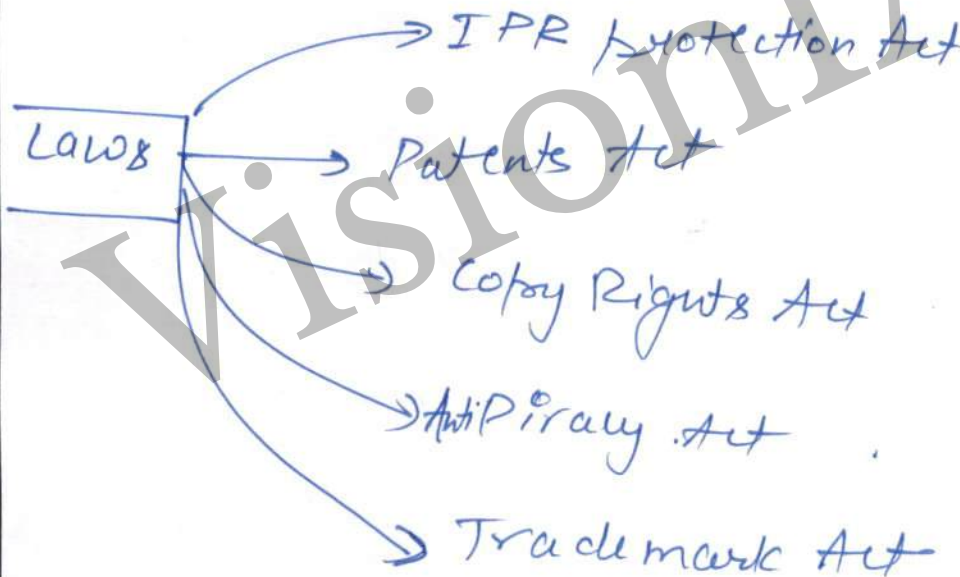
While India has laws covering almost all types of intellectual property rights, numerous enforcement, regulatory and administrative challenges hamper the commercialisation of IPRs in India. Elaborate. (Answer in 250 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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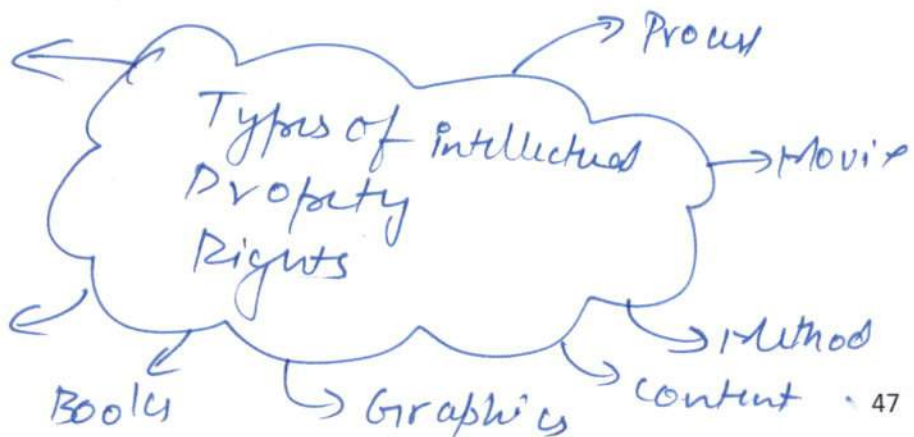
Intellectual property rights

grant protection to one's innovation from being stolen or copied.



Product

Content



Challenges of commercialisation of IPRs

Enforcement → weak enforcement

- Bureaucratic delay
- lack of stringent punishment
- Lack of manpower to track the infringement
- Technological challenges.

Regulatory → Archaic laws

- Regulation not meeting demands of current times
- Cumbrous process for filing IPR.

Administrative challenges

→ Manpower not sufficient to deal with IPR issues

→ Lack of technological integration

→ Product - Market fit

→ lack of funding for IPR's mass production

→ Government support is limited.

Way forward

→ New Policy on promotion of filling of IPR
Startup incubators to be used

→ Atal tinkering lab
Complying to WIPO norms

→ Taking help from Academia

Through these means we can ensure, IPR's are commercialized.

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

Theaterisation of commands refers to pooling of resources from the three services together for a dedicated theatre.

The responsibility to create theatres of commands is on Chief of Defense Staff. Who has suggested 3 theatres -

① Western Theatre Command

- Comprising of officers from Army, Airforce & Navy
- Resources like tanks, Artilleries, Jets, submarine, will be pooled.
- Chief of theatre command will be rotating between Army & Airforce

② Eastern theatre command

③ Southern theatre command.

Chief will be a Naval officer of this command.

Theatrisation leading to greater integration

- ① Quick response to adversary.
- ② Reduced time for chain of command.
- ③ Availability of diverse resources at disposal.
- ④ Better synergy between forces.
- ⑤ Increased deterrence against adversary.

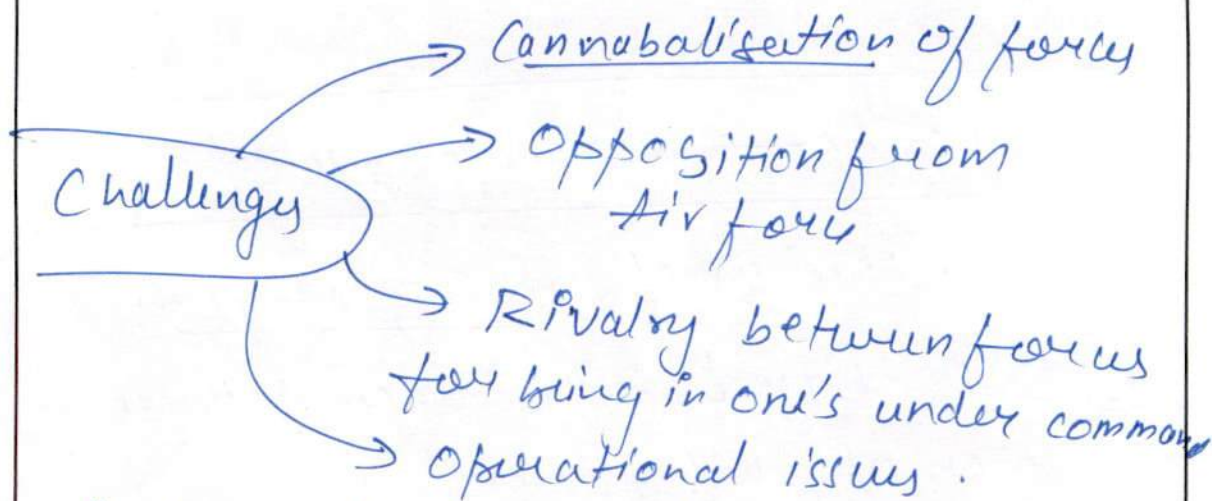
Theatrisation → Rationalisation of manpower

- ① Effective use of man & officers
- ② Skill based collaboration between men of diff forces.
e.g. An aircraft man help in repairing a tank.

- ③ knowledge of each others domain.
 - ④ Reduce the manpower requirement of forces.
- e.g. It will bring down our pension budget.

Theatrisation → Integration & Rationalisation of Resources.

- ① Boost to indigenisation of defence.
- ② Use of multiple distances as resources are readily available.
- ③ Enhance our understanding of each others method of operation.

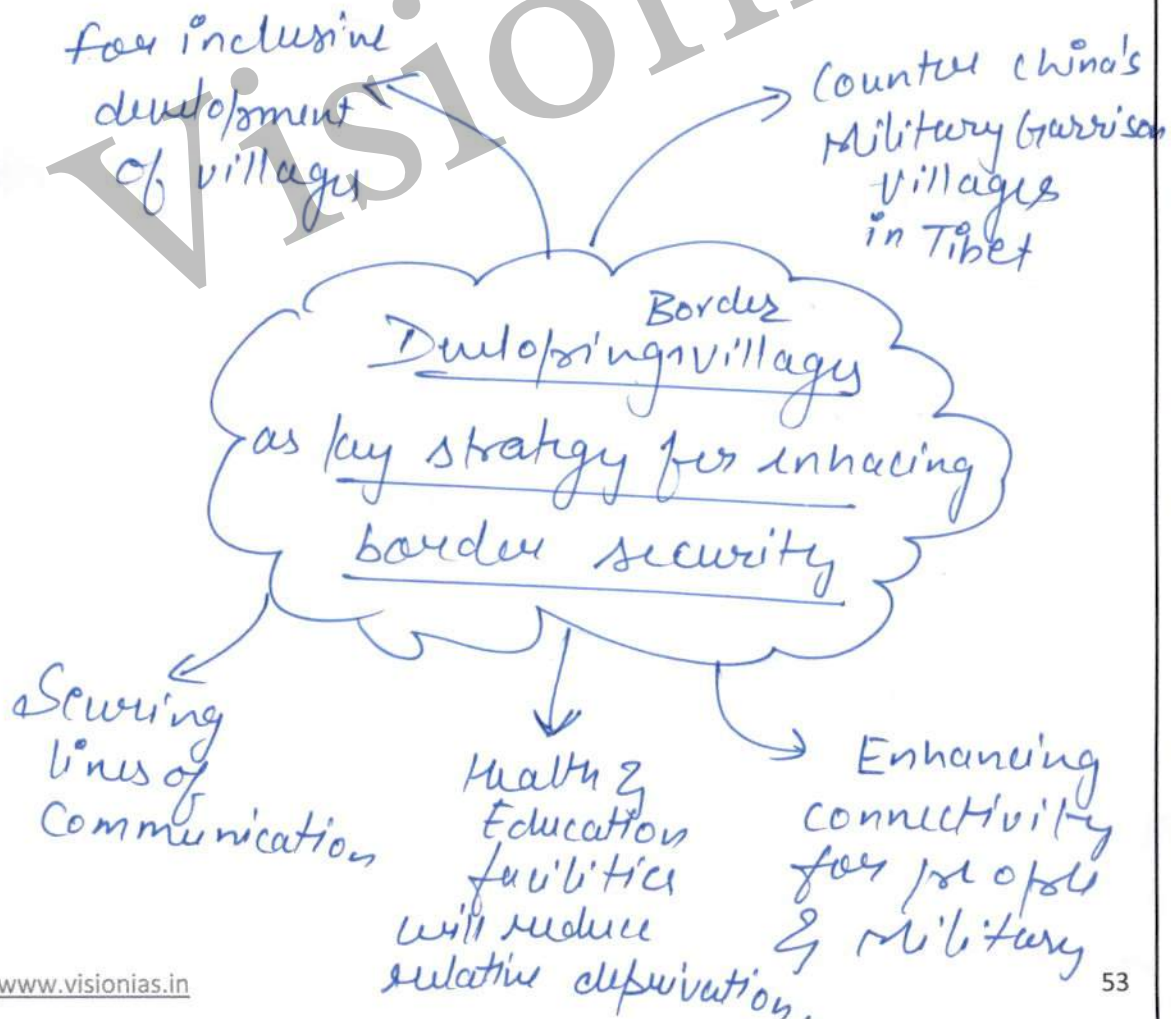


By overcoming these challenges, we can have a robust defense mechanism to safeguard our territorial integrity.

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)

Villages are life blood of Indian society as 66% of population lives there. Therefore their development is quintessential for border security, especially the border villages.



③ Education is not comparable in terms of quality & content as well as infrastructure.

④ Connectivity issue $\begin{cases} \rightarrow \text{Telcom} \\ \rightarrow \text{Physical} \end{cases}$

Measures Taken by Government

① Vibrant Village Program

To develop frontier villages of North East.

② Union Territory of J&K and Ladakh

So that centre can directly oversee development of villages.

③ MODNER \rightarrow dedicated ministry for NER development

④ Public Private Partnership for infrastructure projects at frontier area.

Through the measures we can ensure development of villages & border security.

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