



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 उपरान्त 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. : 00111387

अभ्यर्थी का नाम/Name of Student : SOUMYA SHARMA

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

ENGLISH

तारीख
Date

25.08.2024

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

केंद्र
Centre

Noida

निरीक्षक के हस्ताक्षर
Invigilator's Signature

	महत्वपूर्ण अनुदेश 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।	Important Instructions 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.
1	(क) अपना पंजीकरण सं. एवं अन्य विवरण केवल प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) में उम्मीदवार के लिए निर्धारित स्थान पर ही लिखें। (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।	(a) Write your Registration Number and other details only in the space provided in the Question-Cum-Answer (QCA) Booklet for candidates. (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
2	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।	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.
3	परीक्षक को प्रत्यक्ष/अप्रत्यक्ष रूप से कोई भी प्रार्थना/धमकी भरी बातें न लिखें।	Do not make any direct/indirect appeal/threat to the examiner.
4	उत्तर अस्पष्ट अथवा गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।	Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.
5	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।	Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.
6	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।	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.
7	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।	Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.
8	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।	If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.

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

Food processing industry contributes to 10% of Agriculture GDP and has more than 10% growth rate.

Rapid growth of food processing Industry

due to

→ Large Urban population
(Census: 35%
2011)

→ Changing dietary preferences

→ Rising Agriculture exports

→ Higher shelf life

→ Better remuneration

Food processing and Food Safety Challenges

① Presence of Contaminants

Ex → MDH Masala

② Lack of High Standards in Quality Control

③ Lack of awareness among processing Industries :-

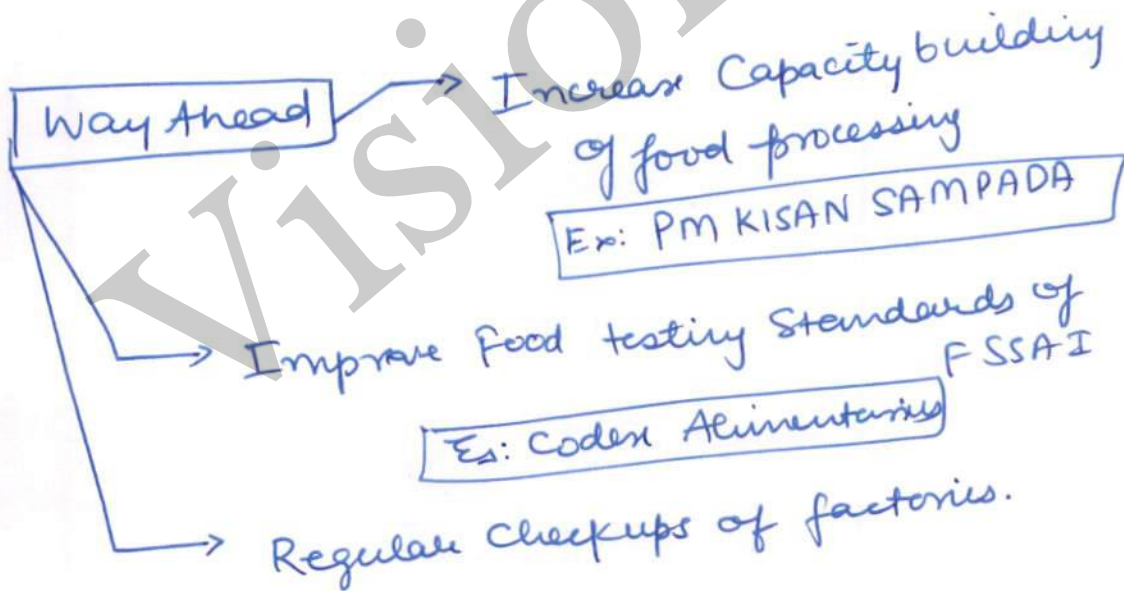
- ↳ mostly are MSMEs
- ↳ Substandard technology

④ Health crisis due to Preservatives
(Ex) → Artificial Sweetner

⑤ Diabetes and other lifestyle diseases

⑥ Higher Content of Sodium, Oil

⑦ Unsafe for children (Ex) → Recent Nestle Controversy.



In future, India will have 60% urban population by 2050 and want to achieve 2T\$ exports by 2030. For this, food processing Industries have to be empowered.

2.

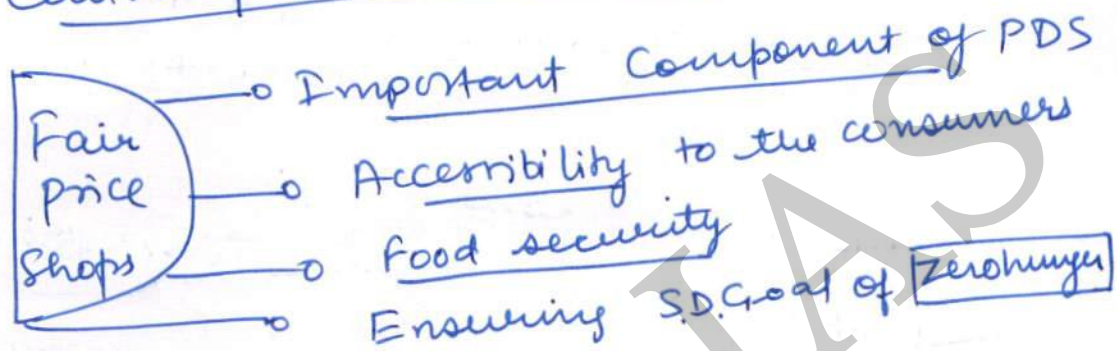
भारत की सार्वजनिक वितरण प्रणाली के अंतर्गत उचित मूल्य की दुकान (FPS) का प्रारंभ एक विकासशील प्रक्रिया है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

Public Distribution System is Govt's policy to provide essential grains at Centrally Formed Price (CFP).



Transformation of fair price shops (FPS)

- ① Evolved from no digitisation to almost 100% digitisation
- ② Aadhar enabled POS to ensure reduced leakages.
- ③ Accessibility & Reach has been increased to rural areas
- ④ Max involvement of local govt. and accountability of fair price shops
- ⑤ Automatic dispensers (Ex - Rice ATM) at some FPS.

Improvement Still Needed

- ↳ Presence of Ghost beneficiaries
- ↳ High Cost of food subsidy — 1% of GDP
- ↳ Diversion to Black marketing of grains
Ex:- Hoarding
- ↳ Issues with FCI warehouse & Storage
↳ 15-20% less than needed
- ↳ Misinclusion & exclusion
- ↳ Lack of digital awareness among beneficiaries
digital knowledge → 37% of population only

Way Ahead

- Digital inclusion through Community Service Centres
- Local ombudsmen for grievance redressal
- Checks on Black marketing or diversion
- One Nation One ration card universal implementation
- Shanta Kumar Committee recommendation
↳ NFSA → 66% → 40% Beneficiary

FPS are an essential component of idea of ~~an~~ Viksit Bharat @ 2047

3.

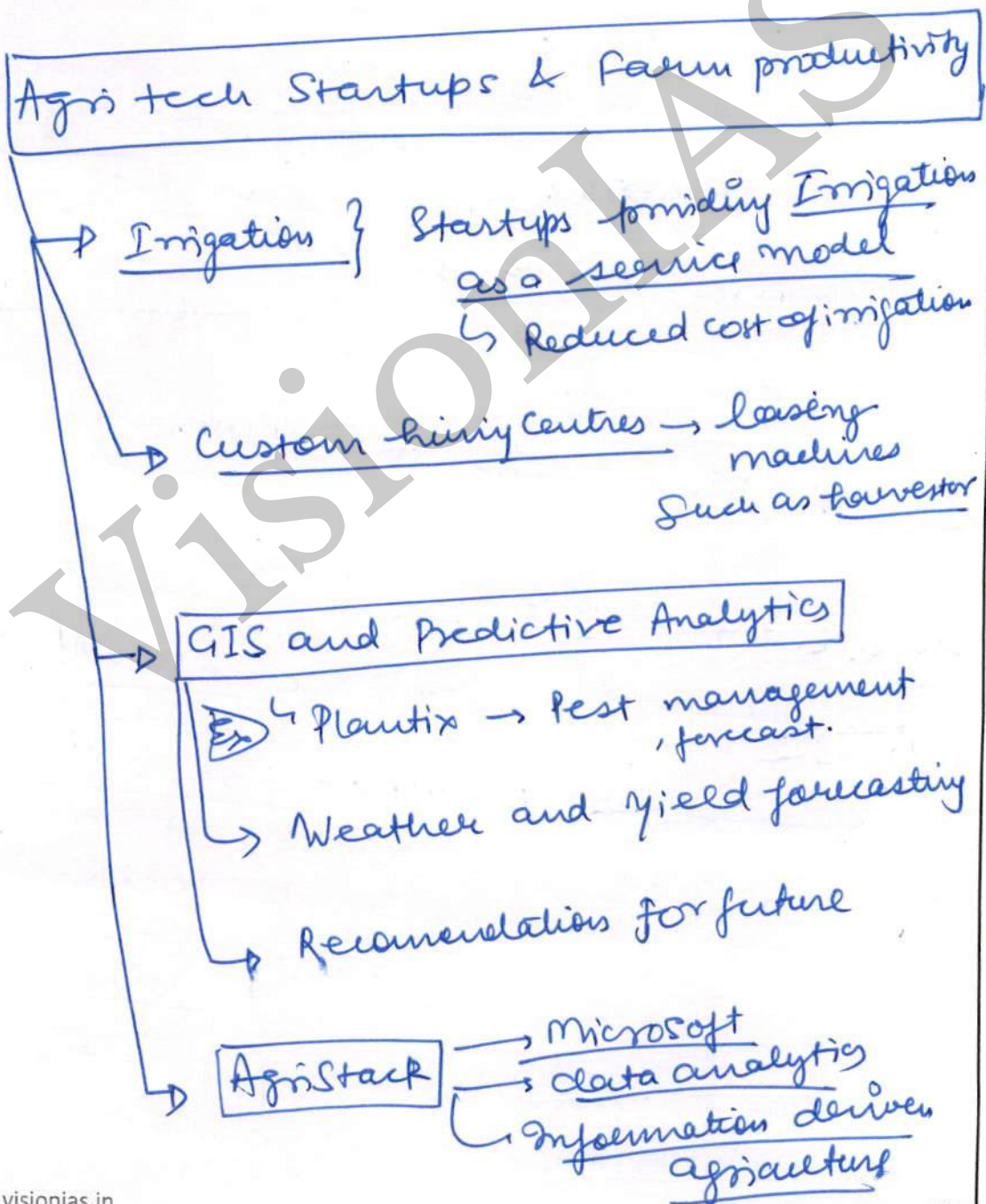
भारत में एग्रीटेक स्टार्ट-अप्स किसानों की कृषि उत्पादकता एवं बाजार पहुंच बढ़ाने में किस प्रकार मदद कर रहे हैं? (उत्तर 150 शब्दों में दीजिए)

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

10

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

Agri tech Startups have gained in prominence through rising startup culture and Govt. Digital push.



Market Access through Agri tech Startup

Marketing Channels

↳ e-commerce

Ex. Otipyapp

Development of Marketing awareness

↳ Diffusion of information

Knowledge Sharing & Technology Transfer

Ex. Country Delight and Dairymen's.

Other Contribution by Agri tech

- Alternative employment
- Technology in grading, sorting, branding
- Enhancing farmer income.

To achieve Doubling farmer income,

Ashok Dalwai Committee recommendation

It is essential to support such Agri tech Startups.

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

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

उम्मीदवादी को इस दृष्टि में नहीं लिखना चाहिए
Candidates must not write on this margin

India is a primarily Agricultural society and 65% of its population lives in rural areas but still it has issues around land records management.

Issues of land reforms

- Inefficient land reforms.
only successful in certain states
- High land fragmentation
- High proportion of Small & Marginal farmer (Ex) 85% small & marginal less than 1 hectare
- 50% of rural population Landless
 - ↳ larger proportion in SC/ST community
 - ↳ women operational landholdings
↳ 13% of total
- High land disputes → 25% of cases in courts

Digitisation of Land Records → Land Reforms

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

→ Scientific land records management

→ Reducing ownership disputes

→ Improving credit to Agriculture sector
Ex: currently 30% non institutional credit

→ Surplus land can be granted to landless
→ land acquisition ease by Govt.

Govt. steps

→ DILRMP → Digitisation of land records.
Ex: 95% completed

→ SUAMITVA Scheme → Aerial surveys and land records.
→ Record Rights.

→ e-governance → Ex: BHoomi portal of Karnataka.

Way Ahead → ADR mechanisms for land settlement
→ Reduce pendency at courts
→ Enhance digital awareness.

Go I want to develop a Digital Bharat
through development of digital land records

5.

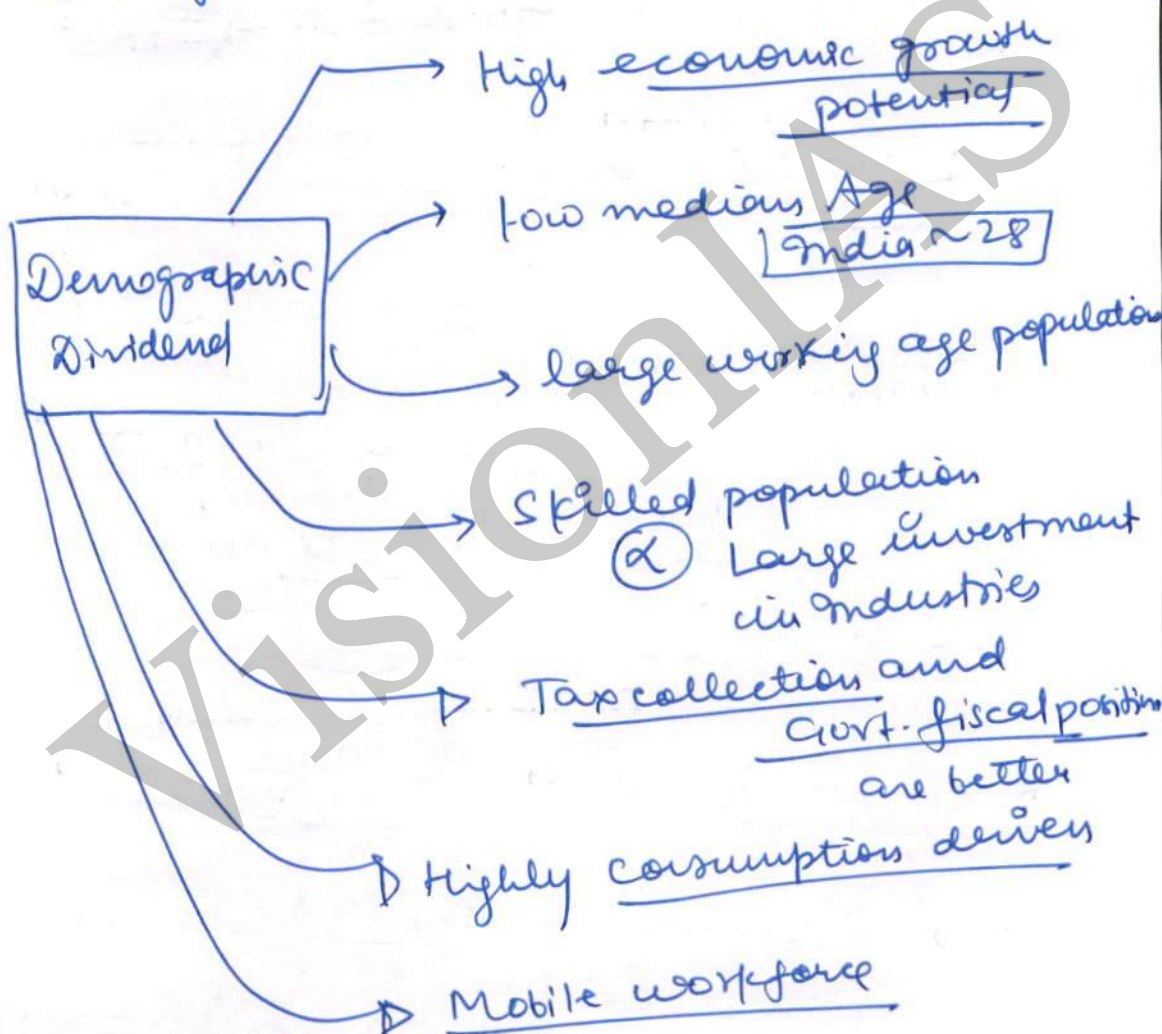
भारत को अपने जनसांख्यिकीय लाभान्श का पूर्ण उपयोग करने और आर्थिक विकास में तेजी लाने के लिए एक विनिर्माण-केंद्रित विकास मॉडल को अपनाने की आवश्यकता है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

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

India is said to have Demographic Dividend from 2018-2055. This is (C.D.D.) therefore a crucial time for its development.



Challenges in India

- ① Lack of Manufacturing sector growth
↳ hovering around 16-18% of GDP

② Lack of skilled population

Only 5% China > 25%

③ Challenges around Infrastructure

World Bank data → India need 1B \$ per day to fill its infrastructure gap

④ Issue around High Logistics cost

↳ 13-14% of GDP

⑤ Regional divide

North
↳ less industrialised

South & West
↳ more industrialised

Manufacturing sector as a tool to tap D.D.

↳ Largest ability to absorb surplus Agriculture labour

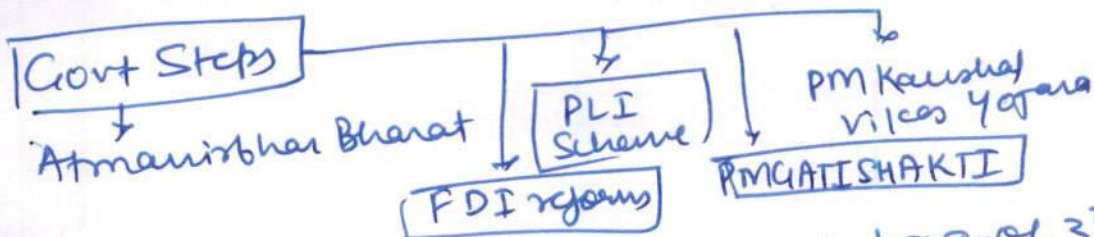
↳ large potential of investment

↳ large share in Exports

↳ Ex China & ASEAN: Export driven growth

↳ Regional growth & development

↳ spread effect



To attain 2T \$ exports and tag of 3rd largest economy, Manufacturing sector growth will be key.

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)

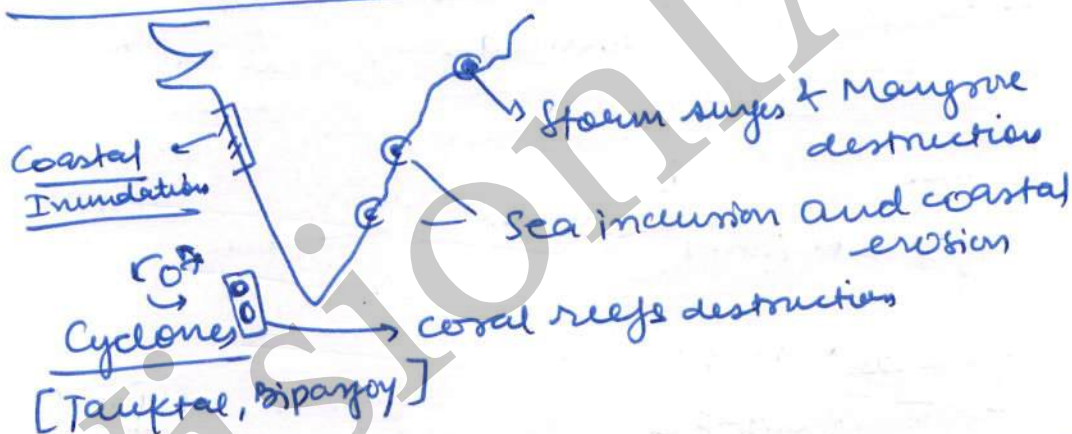
How can the resilience of Indian coastal communities be strengthened to tackle the growing natural hazards resulting from climate change? (Answer in 150 words)

10

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

Indian Coastal Communities have become more vulnerable to extreme hydrometeorological events due to climate change and rise in sea surface temperature

Growing Natural Hazards



① Rising cyclones

↳ 300% increase in Arabian Sea

② Storm surges & coastal erosion

(Ex) Kendrapara

③ Coral reefs destruction

Cyclones

16-17% ↑

Rising Mean Sea Temperature

32-34°C ↑

Ocean acidification

CO₂ absorb

Resilience of Coastal Communities

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

Alternative Employment

①

Seagrass farming
(Ex) → Ramshuaram

Sea algae cultivation
(Ex) → Chilika lake

②

Coastal Integrated Management

Engineering solution

↳ Ex) Seawalls, dyons

Aquaculture

↳ Technology support
↳ GIS based fishing

Nature based solutions

↳ Mangrove replantation

↳ Coral reef protection

(Ex) → 70-80% energy of cyclone absorbed

③

Green Shipping

↳ Harit Shipping guidelines

④

Traditional farming techniques

(Ex) → Kuttanad below sea level farming

⑤

Early warning system

⑥

Local govt & people - Capacity building

India's SAGARMALA project is mindful of this fact and looks for a comprehensive coastal development

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

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

Green Credit programme recently brought by Govt. provides credit to reduce, remove CO_2 or add CO_2 Carbon sinks activities.

Extension beyond carbon management

- ↳ ① Behavioural change
 - ↳ (Life) → approach
- ↳ ② Credits can be sold / bought
 - ↳ Sustainable Employment
- ↳ ③ Development of forests
 - ↳ National forest policy
- ↳ ④ Innovation to reduce CO_2 emissions
 - ↳ Nudge effect
- ↳ ⑤ Enforcement by Govt.
- ↳ ⑥ Environment sustainable activities
 - ↳ Ex) Planting trees.

Concerns about its implementation

↳ Promote Technocentric solution
↳ not ecologically driven.

↳ Commodification of Environment protection

↳ Lack of safeguards and mechanisms
to ensure long term sustainability
of green activities.

↳ Industries might not reduce CO₂
emissions as they can buy Green Credit

Way ahead.

- ↳ Green Industries development
- ↳ Adherence to Ecologically sensitive zones
- ↳ Energy transition
- ↳ Support just & Industry decarbonisation
- (Ex) Lead IT program

Green Credit is a step in the right
direction to improve Green GDP
of India

8.

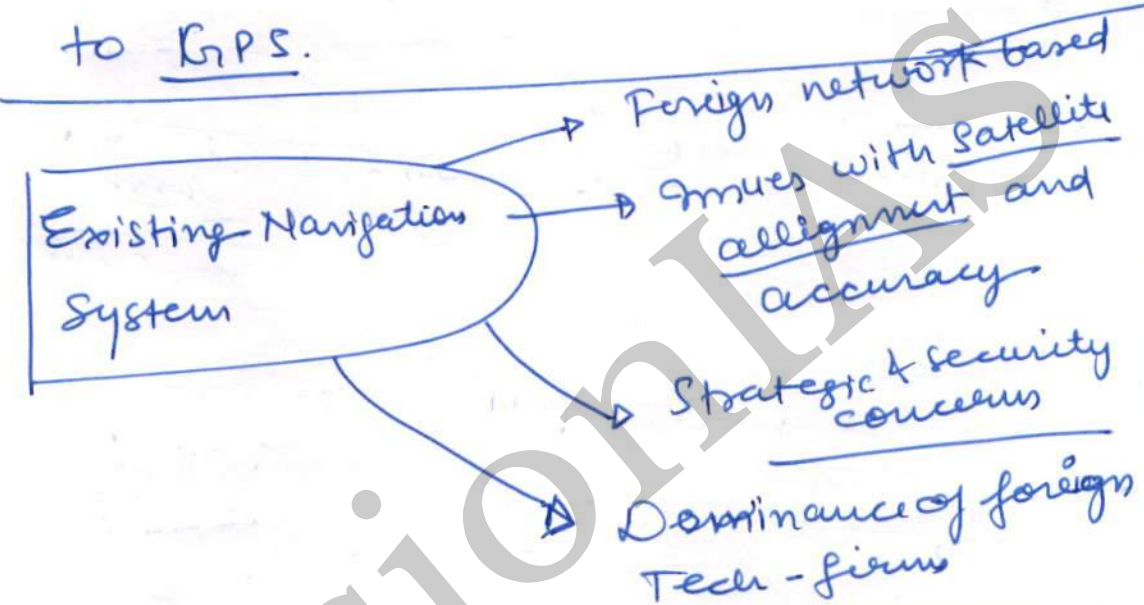
जब पहले से ही अन्य उपग्रह नेविगेशन सिस्टम उपलब्ध हैं, तो NavIC की आवश्यकता क्यों है? (उत्तर 150 शब्दों में दीजिए)

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

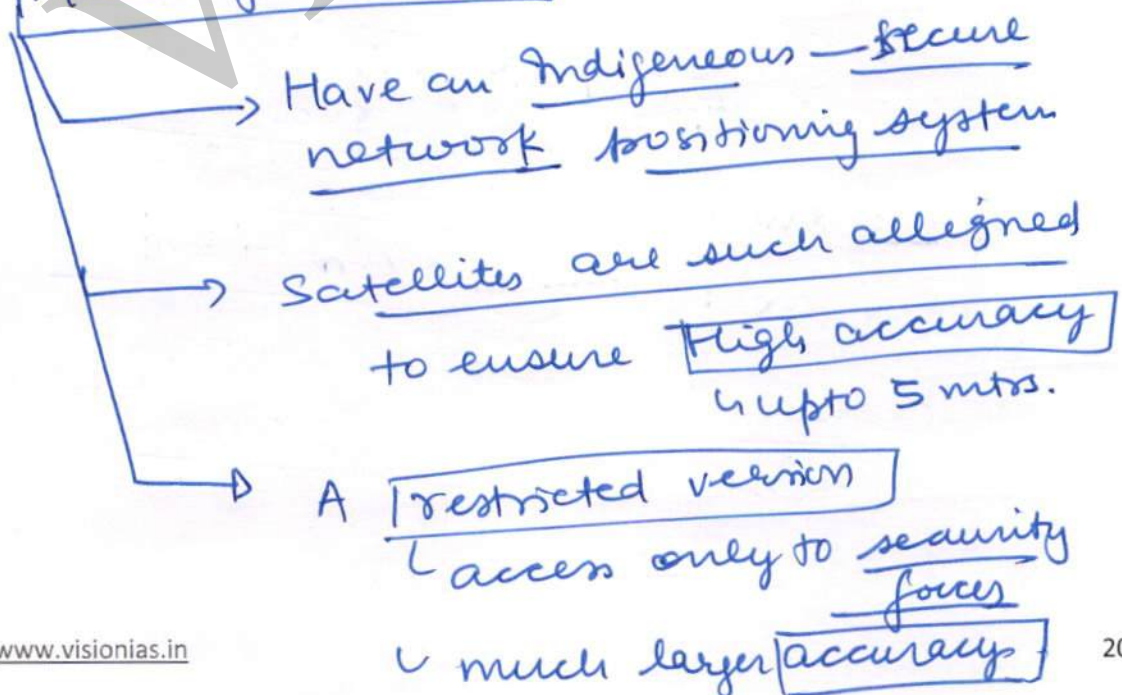
10

उम्मीदवारों को इस कटिब में नहीं लिखना चाहिए
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NavIC is the India's navigation system based on IRNSS satellite and is seen as an indigenous alternative to GPS.



Need for NavIC



- Development of Indigenous Industries around it.
- Traffic management & improve urban liveability
- One Version → GAGAN
↳ TO help Fishermen and sea vessels
- Ensuring → Income generation
↳ Competition to foreign firm
monopoly

Govt of India has put in effort to develop the Navic system and now it is being integrated into Smartphone and other devices.

TO achieve ATMANIRBHARTA in all the sector and ensure holistic economic growth, NavIC is a must.

9.

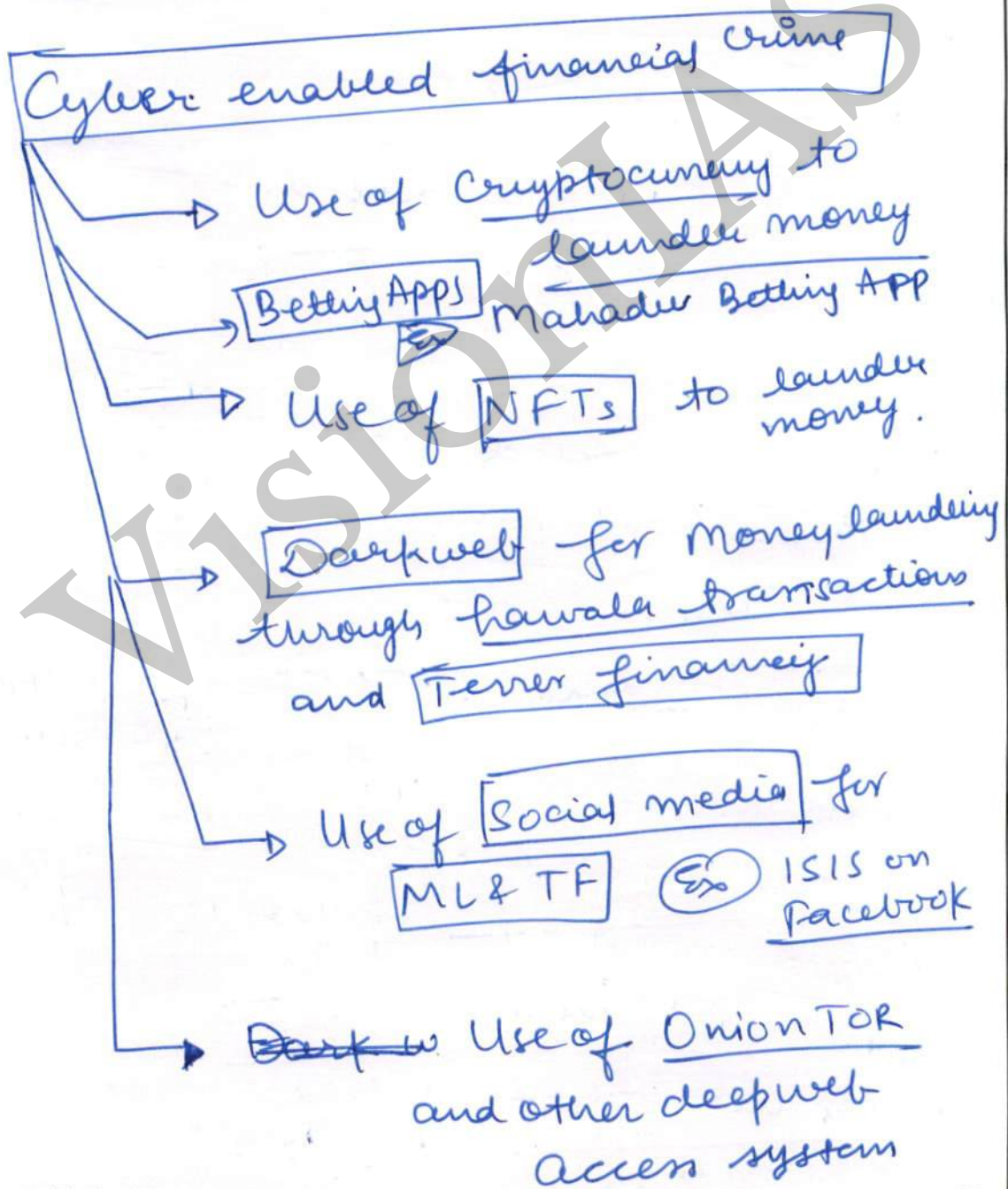
साइबर-सक्षम वित्तीय अपराध वैश्विक धन शोधन (मनी लॉन्ड्रिंग) के नए क्षेत्र के रूप में उभरा है। चर्चा कीजिए। सरकार इस मुद्दे का समाधान किस प्रकार कर सकती है? (उत्तर 150 शब्दों में दीजिए)

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 कक्ष में नहीं लिखना चाहिए।
Candidates must not write on this margin

Global Money Laundering has only increased through introduction of Cyber enabled financial systems.



Govt. steps

→ discourage Cryptocurrency

30% Taxes
on transaction
& earnings

1% TDS for each
transaction

→ Crypto exchanges → brought into Reporting
Entities under
PMLA.

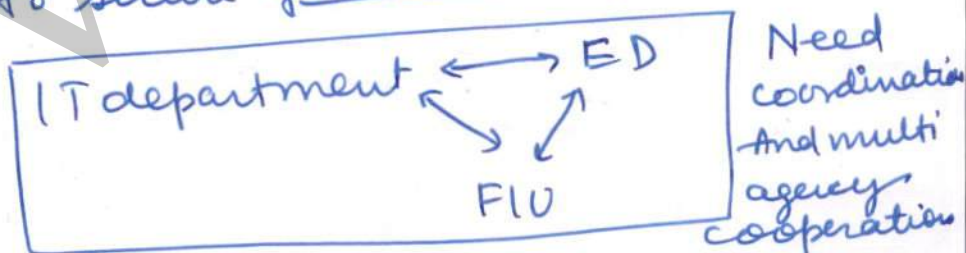
Global Cooperation

OECD framework
FATF cooperation
→ G20 framework

Way Ahead

→ specialised Cyber financial crime agency

→ increase funding & capacity building
to secure financial systems.



To ensure sanctity of India's financial
system and regulation of volatility,
India needs to ensure regulation of
Cyber-financial system

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)

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

10

Indian Army is having a flip to technology adoption and make Army - modern and future ready

Need of technology Adoption

→ Grey zone warfare

war ↔ peace

use of cyber, digital, UAVs, GIS systems for warfare

→ Obsolete technology in Army

↳ more than 60% into pensions and payments

→ Space as a new frontier

→ Belligerent Neighbors

Proxy war by Pakistan

China's Salami Slicing

- ↳ large import bill in defence
 - ↳ one of the largest importers (SIPRI report)
- ↳ Security issue related to imports
- ↳ Atmanirbharta in Defence production
- ↳ Share in Defence exports → very low compared to China.

Challenges in this initiative →

- ↳ lack of Technology transfer.
- ↳ lack of indigenous manufacturing capabilities
- ↳ Years of Regulation in the sector
 - ↳ only PSUs
 - ↳ delay in development (Ex) LCA Tejas, Kaveri jet engine
- ↳ lack of funding → 2.1% of GDP → one of the lowest in major economies

Way Ahead

- ↳ Innovation push (Ex) IDEX platform
- ↳ Corporatisation of Defence PSUs (Ex) Ordnance factory board
- ↳ Promote FDI in the sector.

India through initiatives like Def Expo tries to empower industry - Academia engage in Defence R&D

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)

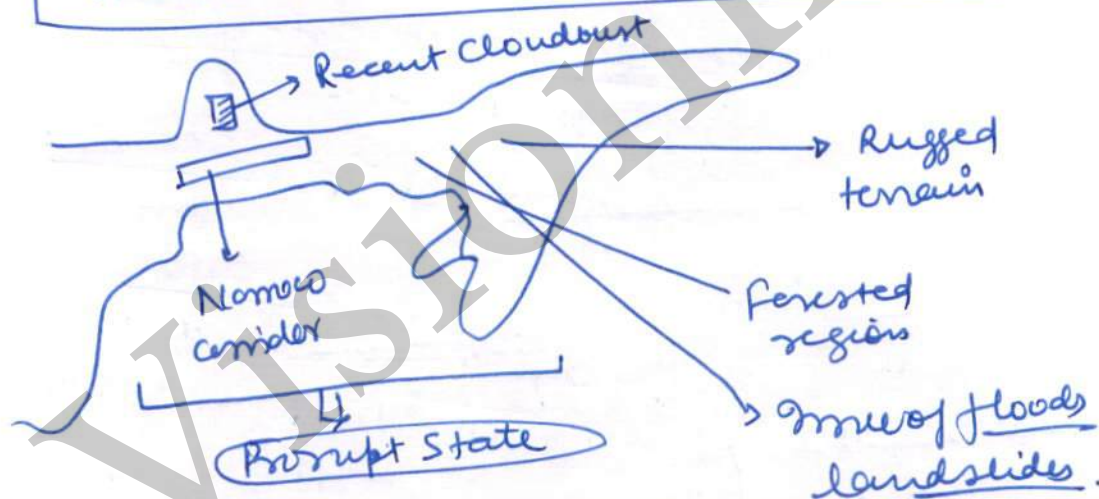
What are the issues faced in the development of trade and industries in the North-Eastern Region (NER) of India? Comment on the measures that have been taken to tackle these issues. (Answer in 250 words)

15

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

North East Region ~~and~~ termed as "Ashtadevi" by Prime minister of India owing to the importance of the region.

North East Region & Challenges in Industry and trade development



① Rugged terrain - Lack of transportation development

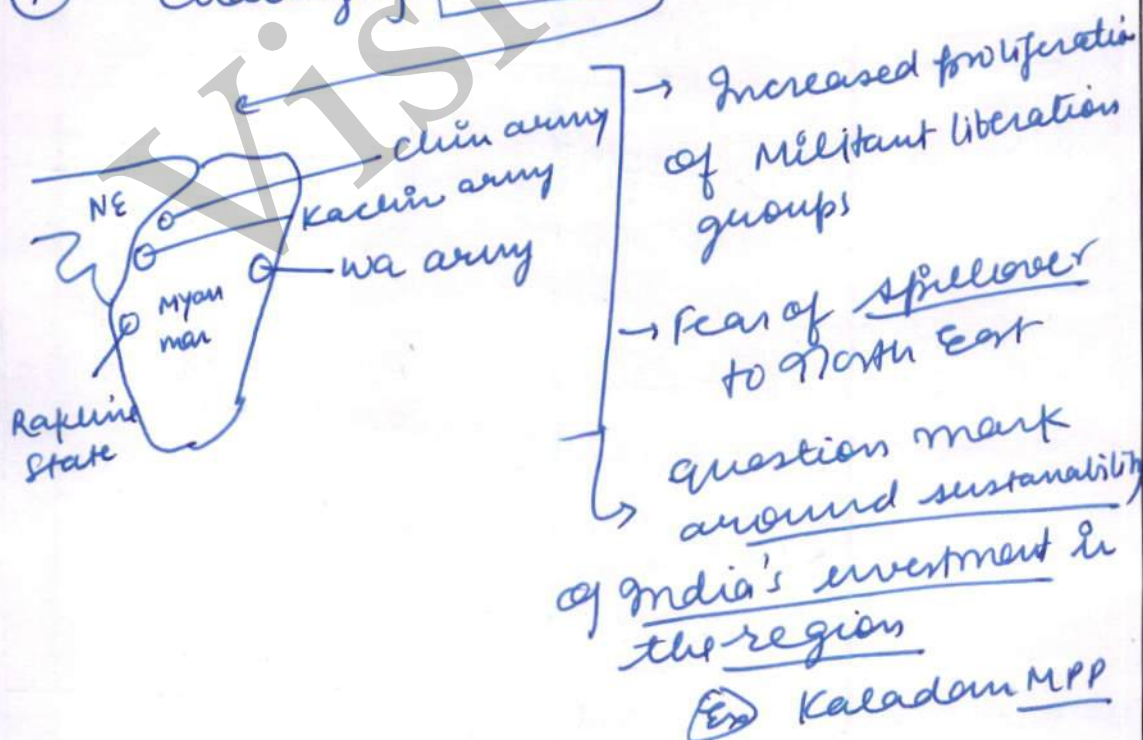
② Prorupt State → "Frontier culture"

→ not assimilated in Indian mainstream

→ have cultural connection across border.

→ high centrifugal tendencies

- ③ Issues of Emergency and security
 - ↳ Not ideal for trade & Industries.
- ④ Presence of local gunrunning gangs, extortion, lack of governance etc.
- ⑤ Tribal "topophilia"
 - ↳ love to the place
 - ↳ delays infrastructure development
- ⑥ Chinese Claims to Arunachal
 - ↳ Multilateral development banks such as (AIB) does not provide finance for the region.
- ⑦ Challenging Neighbourhood situation



Steps taken by Govt

- ① Free movement Regime to promote Goods border trade — Now scrapped for security reasons
- ② PIWTF agreement with Bangladesh
↳ Inland water transport through Moula and Chittagong port
- ③ Kaladan Multipurpose project
↳ enhance regional connectivity
- ④ IMT trilateral highway

Economic development

- PM-Devine Scheme
- RCS-UDAN 4.0 scheme
- Mega Food park — Meghalaya Horticulture Hub
↳ Hub & spoke model
- Multimodal connectivity hub at Dhubri Asoan
- Nation mission for Oil palm
- Bamboo Mission

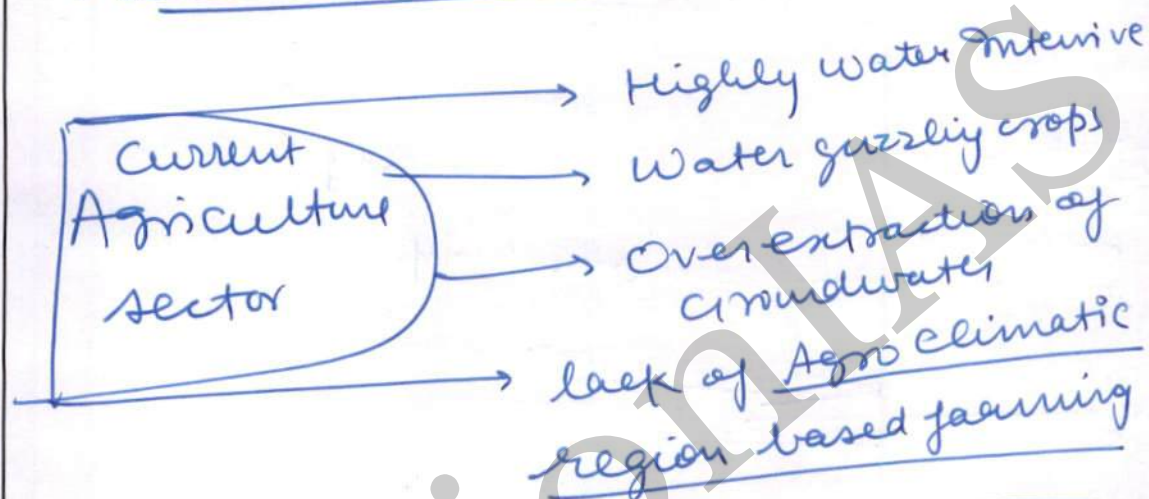
Enhancing connectivity and food processing and MFP processing will be key to region's development

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 हाशिए में नहीं लिखना चाहिए
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Agriculture sector amounts to more than 87% use of water resources in India.

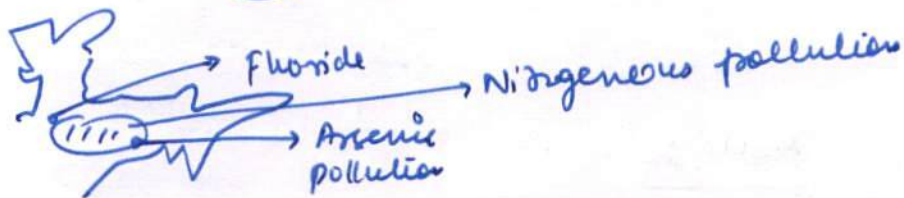


Micro Irrigation Systems and Sustainable Agriculture

- ↳ Climate Smart Agriculture
 - ① Drip irrigation (60% of less water than current practice)
 - ② Efficient water mgmt.
 - ↳ Direct to stem and roots
 - ③ Reduce Capillary action
 - ↳ Due to flood irrigation — Soil Salinisation

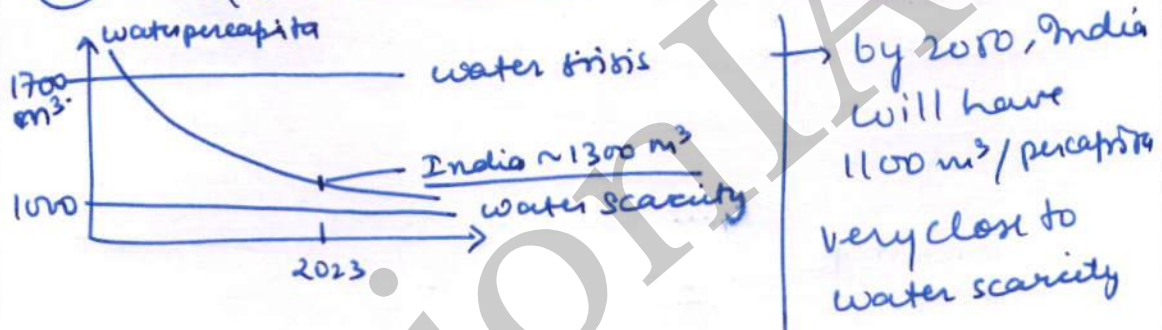
④ Decrease fertiliser and nutrient runoff by excess water.

Ex - Pollution of surface & ground water.



⑤ Reduce cost of irrigation in layman

⑥ Reduce water scarcity crisis



⑦ Reduce Groundwater overextraction

↳ has increased contaminant concentration
 ↳ leading to disease
 Ex - Cancer in Malwa region (Chuyab).

Steps taken by Govt.

↳ PM Krishi Sinehayi Yojana

↳ "Per drop more crop"

↳ Custom hiring centres micro-irrigation

systems at lease - nominal prices.

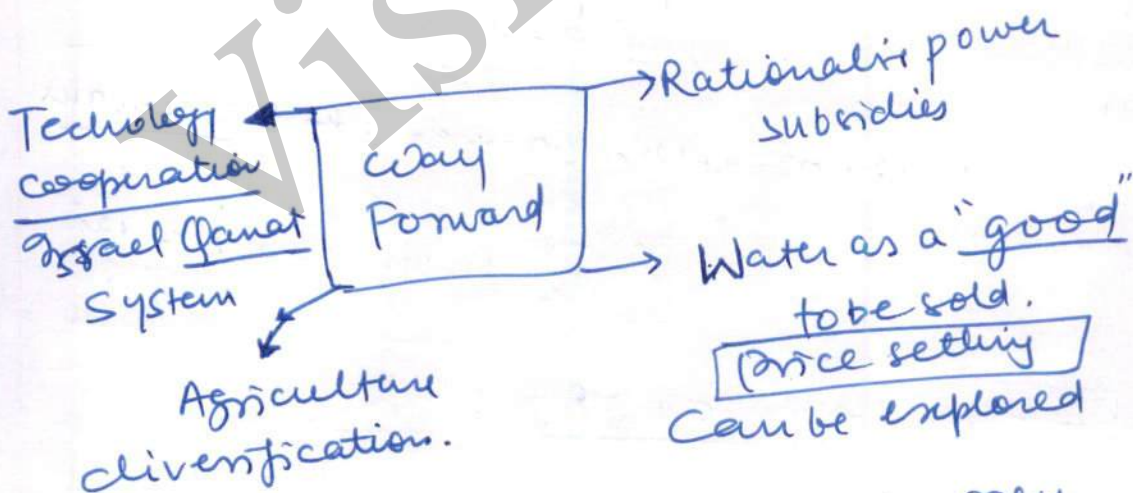
↳ Paripatayat Krishi Yojana (PKVY)
↳ to enhance natural farming
practices

↳ Registration & certification.

↳ PM KUSUM — Solar energy water pump

↳ Gujarat's Gram Jyoti Yojana
↳ Reduce water supply to
tubewells.
↳ better manage water.

↳ Dryland farming promotion
(Ex) — Sorghum - Millets
minim



Wheat rice monoculture with open
ended procurement have to be modified
to promote other more sustainable
cropping combination

13.

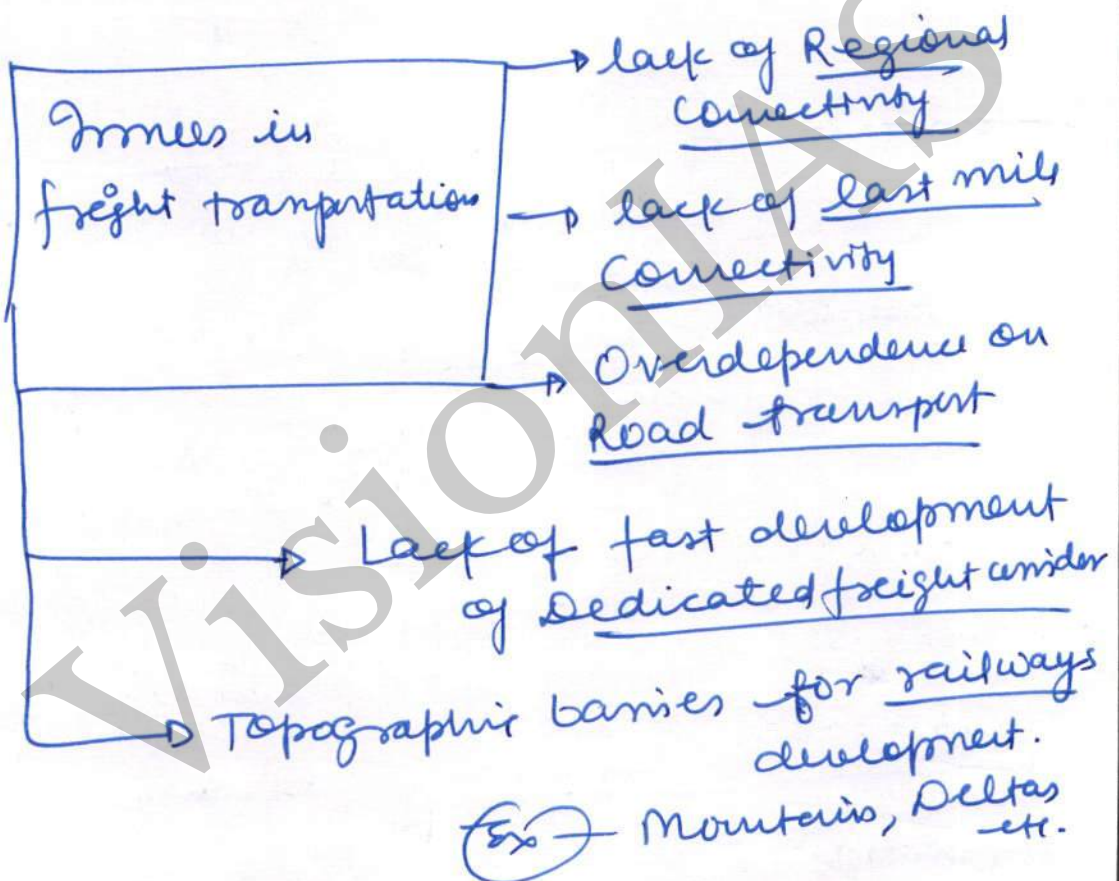
भारतीय रेलवे में माल परिवहन से संबंधित समस्याओं का समाधान करने तथा घरेलू माल दुलाई में इसकी हिस्सेदारी बढ़ाने के लिए कौन-सी रणनीतियां अपनाई जा सकती हैं? (उत्तर 250 शब्दों में दीजिए)

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

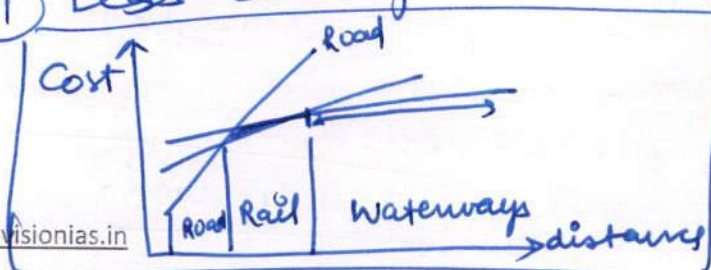
उम्मीदवारों को इस खण्ड में नही लिखना चाहिए
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In India, Rail freight transportation is mixed with slow speed, delays and high logistics cost.



Advantages of Rail freight

① Less costly than Road Transport



② less GHG emissions than road transport

③ Easier Bulk transportation

④ Lesser checkpoints & bottlenecks

Ex → Road → Toll plazas etc.

⑤ Large network in India.

Strategies can be adopted

↳ ① Increase Dedicated freight corridor routes

↳ Early completion of tracks

↳ ② Increase Funding and Grants support

Ex → Japan ODA



↳ ③ Improved timelines

↳ Geotagging &

regular monitoring Ex → PM Gati Shakti

↳ ④ Multimodal connectivity

↳ Ensure last mile coverage

↳ Mix of Road, Rail, waterways

↳ Ensure Complimentarity in Transportation

↳ Enhance track quality

↳ Currently can't support high speeds.

↳ Enhance port connectivity

↳ Bharatmala Pariyojana.

↳ Increase Rail freight penetration into rural areas — Agricultural freights

↳ KISAN Rail.

↳ Connect North East Region

Through mainland India

Through ASEAN countries.

Development of Rail transportation can enhance regional development, development of industrial clusters and reduce regional inequality.

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 हाशिए में नहीं लिखना चाहिए
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15

India has been able to enhance its Renewable energy capacity to 182 GW (Apr 2023).

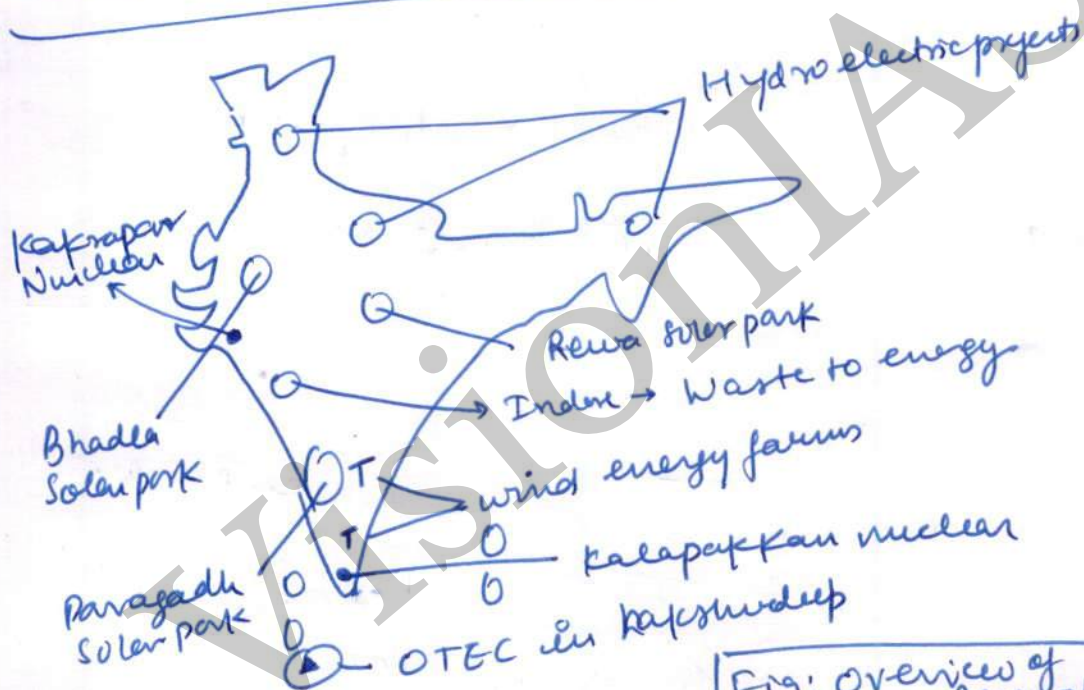


Fig: Overview of Renewable

Factors aiding in Renewable energy development

(A) Geography

- ↳ 7400+ km coastline
- ↳ Wave, Tidal energy.

↳ Offshore wind & solar energy, wave energy & Oceanic Thermal Energy (COTEC)

India - large EEZ

↳ Plateau highlands

↳ provide potential of wind energy

~ 1800 - 2000 MW

↳ Solar energy potential

↳ due to being a Subtropical country

↳ presence of Geothermal vents

↳ Geothermal energy - Puga Valley

(B)

Political acumen

↳ Increased emphasis on Renewables

National Solar mission

National plan for storage batteries - AEC

National Green hydrogen mission - 5 MMT by 2030

↳ International level cooperation

Paris Climate NDCs

↳ ISA & OSOWOG - Solar energy

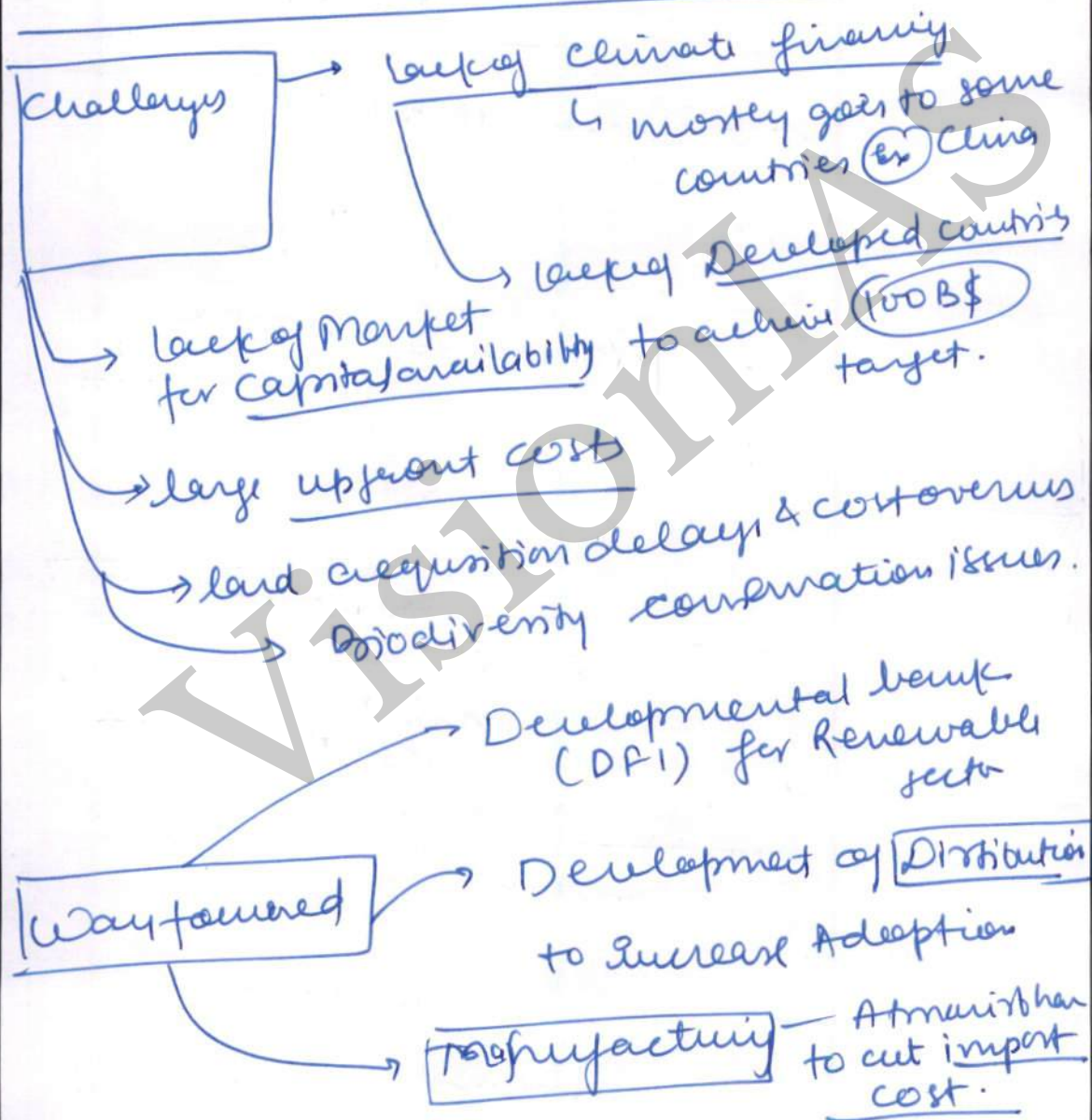
↳ Global Biofuels Alliance - G20

↳ Mineral Security Partnership

↳ critical mineral access

Schemes to support Renewable

- ↳ PM Surya Ahar Must Bojli Yojana
↳ decentralized solar power.
- ↳ PM KUSUM Yojana - solar power pumps.
- ↳ NAPCC → vision to increase renewable.
- ↳ Solar-wind hybrid policy.



उम्मीदवारों को इस खंड में नहीं लिखना चाहिए
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India to achieve its PANCHAMRUT target, is on right path and will be achieving its NDCs under Paris Climate Agreement

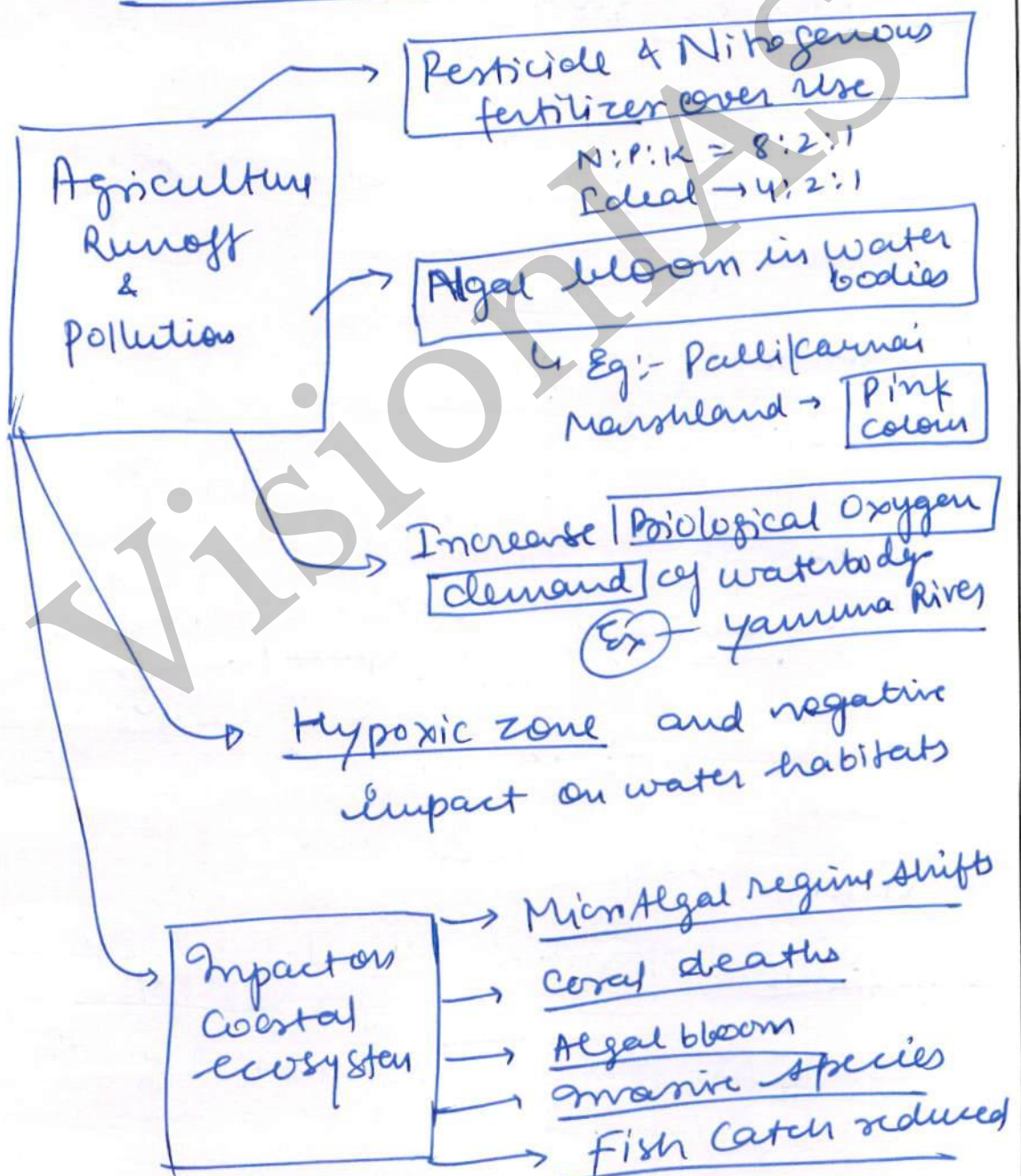
15.

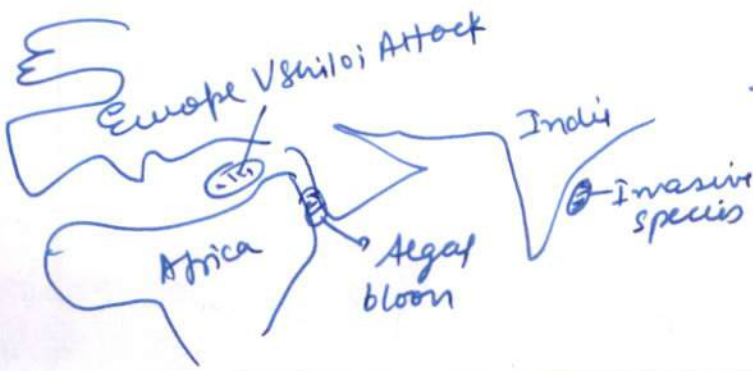
उर्वरकों और कीटनाशकों से युक्त कृषि अपवाह पर्यावरण प्रदूषण में किस प्रकार योगदान देता है? कृषि अपवाह के प्रभाव को कम करने के लिए क्या उपाय अपनाए जा सकते हैं? (उत्तर 250 शब्दों में दीजिए)

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

Agriculture runoff is considered as one of most potent source of environmental pollution.





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

Measures taken by Govt.

- Nutrient based subsidy for potash and phosphate fertilizers
- Soil health card
 - ↳ according awareness of fertilizer management
- Promotion of green/organic farming
 - Ex: NPOP
- Paramparagat Krishi Vikas Yojana
 - ↳ Regenerative farming
 - ↳ organic manure
 - ↳ Renewable resources.

What more measures can be taken

- ↳ Rationalise fertilizers subsidy.
- ↳ Niti Aayog → Coupons / DBT in place of subsidy

↳ NBS scheme to nitrogenous urea fertilizer too

↳ Aadhar - Land record linkage

↳ Fertilizer subsidy to farmers based on land size, fertility etc

↳ Check Black marketing of fertilizers.
↳ 60% Non Agricultural use

↳ Ensure Micro irrigation adoption to reduce fertilizer runoff

↳ Awareness Campaigns → Jam Bhagidari of Farmers.

To ensure the priority of KISAN
UTTHAAN → Farmer empowerment
and achievement of Sustainable development
Goal - (14), Sustainable fertilizer
management & water resource
preservation is a sine qua non

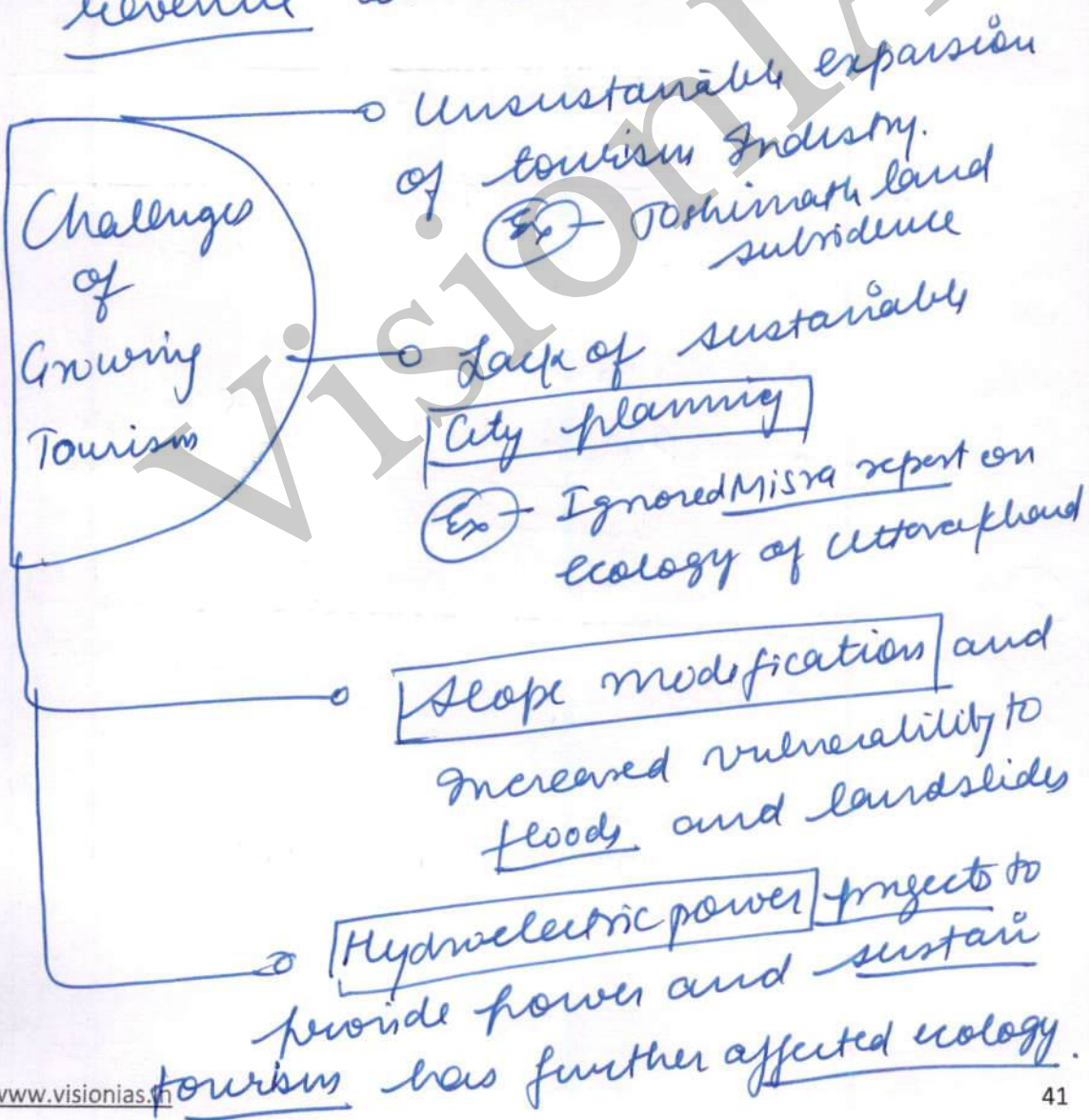
हिमालयी राज्यों में पर्यटकों की बढ़ती संख्या ने उनके पारिस्थितिकीय समावेशन क्षमता को पार कर लिया है, जिसके कारण बड़े पैमाने पर मानव-जनित आपदाएं उत्पन्न हुई हैं। संधारणीय पर्यटन को बढ़ावा देते हुए ऐसी आपदाओं को रोकने के लिए क्या उपाय किए जा सकते हैं? प्रासंगिक उदाहरणों के साथ चर्चा कीजिए। (उत्तर 250 शब्दों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

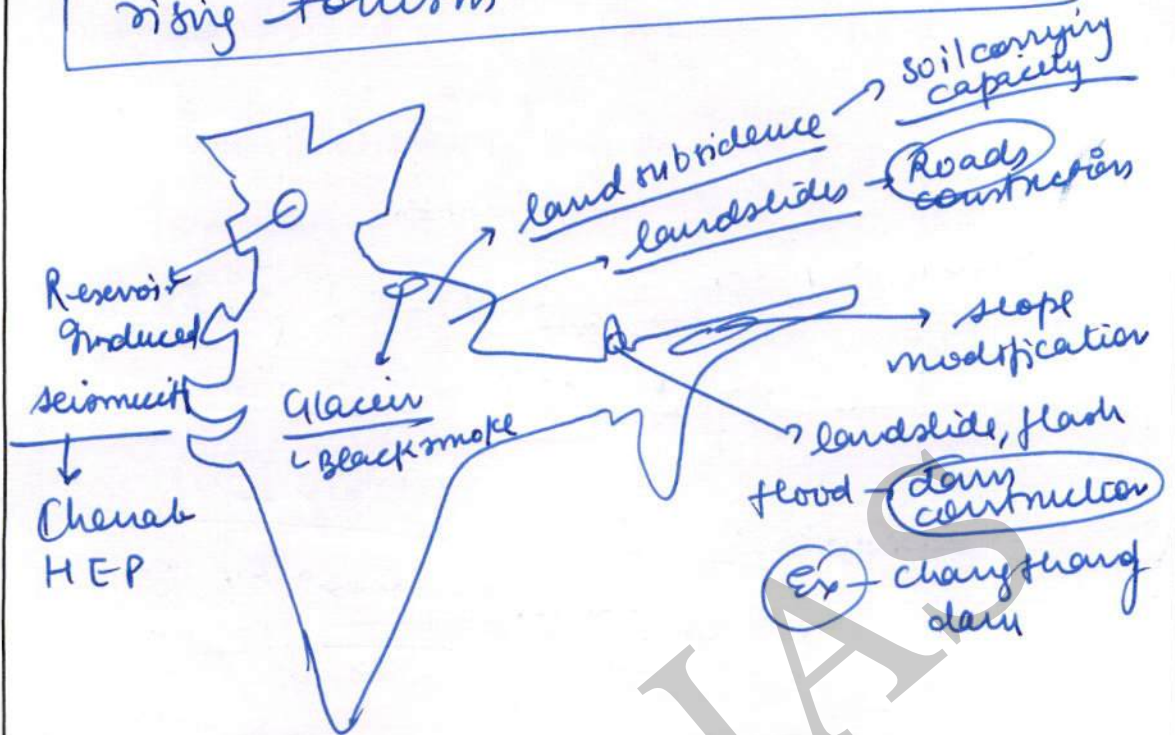
उम्मीदवारों को इस दृष्टि में नहीं लिखना चाहिए
Candidates must not write on this margin

15

Himalayan States owing to their beauty are hugely dependent on Tourism as major source of employment, revenue and investment.



Man-Made disasters due to rising tourism



Measures to be Adopted —

① Regulation on tourism

↳ limited daily tourists

↳ Use of Public transport ^{or} promoted

② Restriction on outside vehicles

↳ GHG & pollutants → exacerbate glacier melting

③ Follow / Adhere to **EIA** and **NAT** guidelines

↳ (Ex) Recent **Chardham project** and **EIA** issues

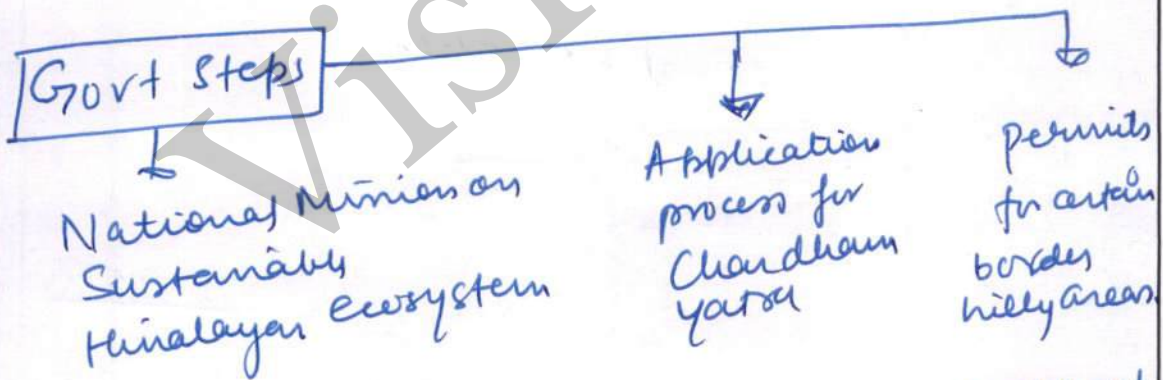
④ Scientific expansion of Hilly
urban areas, tourist sites

⑤ Integrated regional planning

⑧ Micro Hydropower projects
↳ decentralised power systems.
↳ more ecologically sustainable.

⑥ Ecotourism promotion
↳ House / Hostels instead of large hotels.

⑦ Tectonic vulnerability and
landslide susceptibility zonation.



To ensure sustainable tourism development
and growth of hilly states, Idea of
Green financing can be explored.

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 are materials having superconductivity and next to zero resistance to electric current.

Superconductor and Science & Technology

① Material Science

- ↳ development of superconductivity elements for manufacturing
- ↳ Research & development into material properties.

② Transmission lines

- ↳ Zero resistance - long range efficient power transmission

③ Healthcare

- ↳ improved diagnostics and disease identification

↳ Improve Healthcare technologies
↳ Treatment - surgery. etc.

④ Robotics field

↳ efficient Robotic manufacturing
↳ cost cutting.

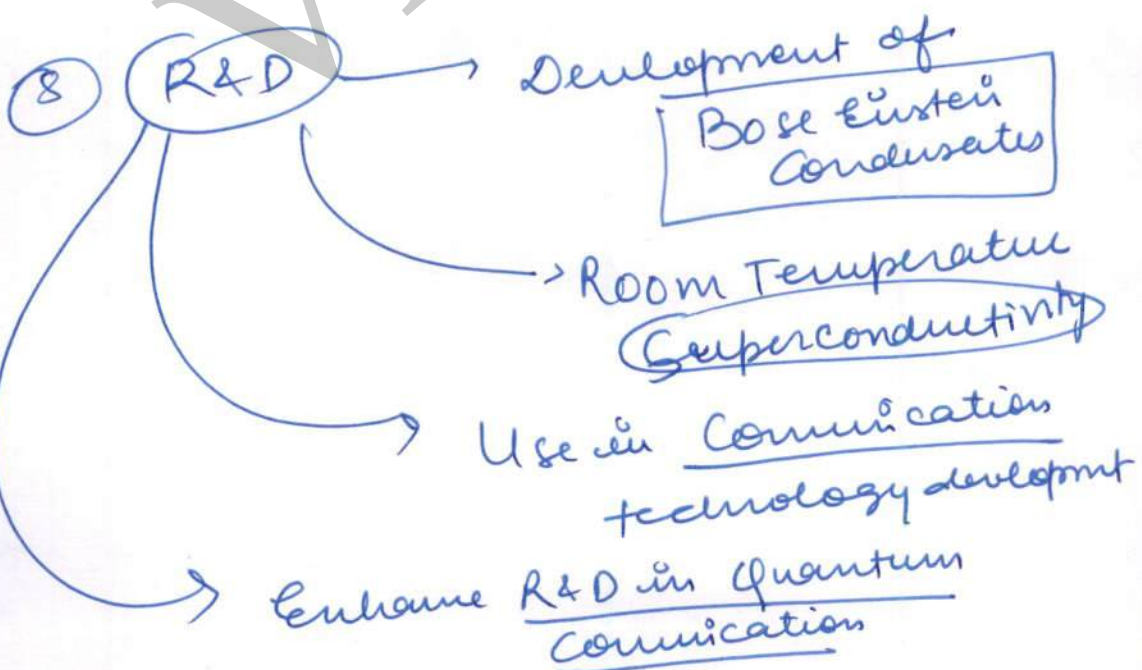
⑤ Power supply to industries

⑥ Electroplating & other electronic industries → reduced cost.

⑦ Space Sector

↳ Development of efficient Energy transmitters

↳ increased lifespan of space missions



- India → ① Superconductivity like entire world has not been achieved in India
- ② limited R&D in the field.

India to achieve efficient industrial development and Reduce ATC losses in next decade to satisfy growing energy demand, need to invest in superconductivity R&D.

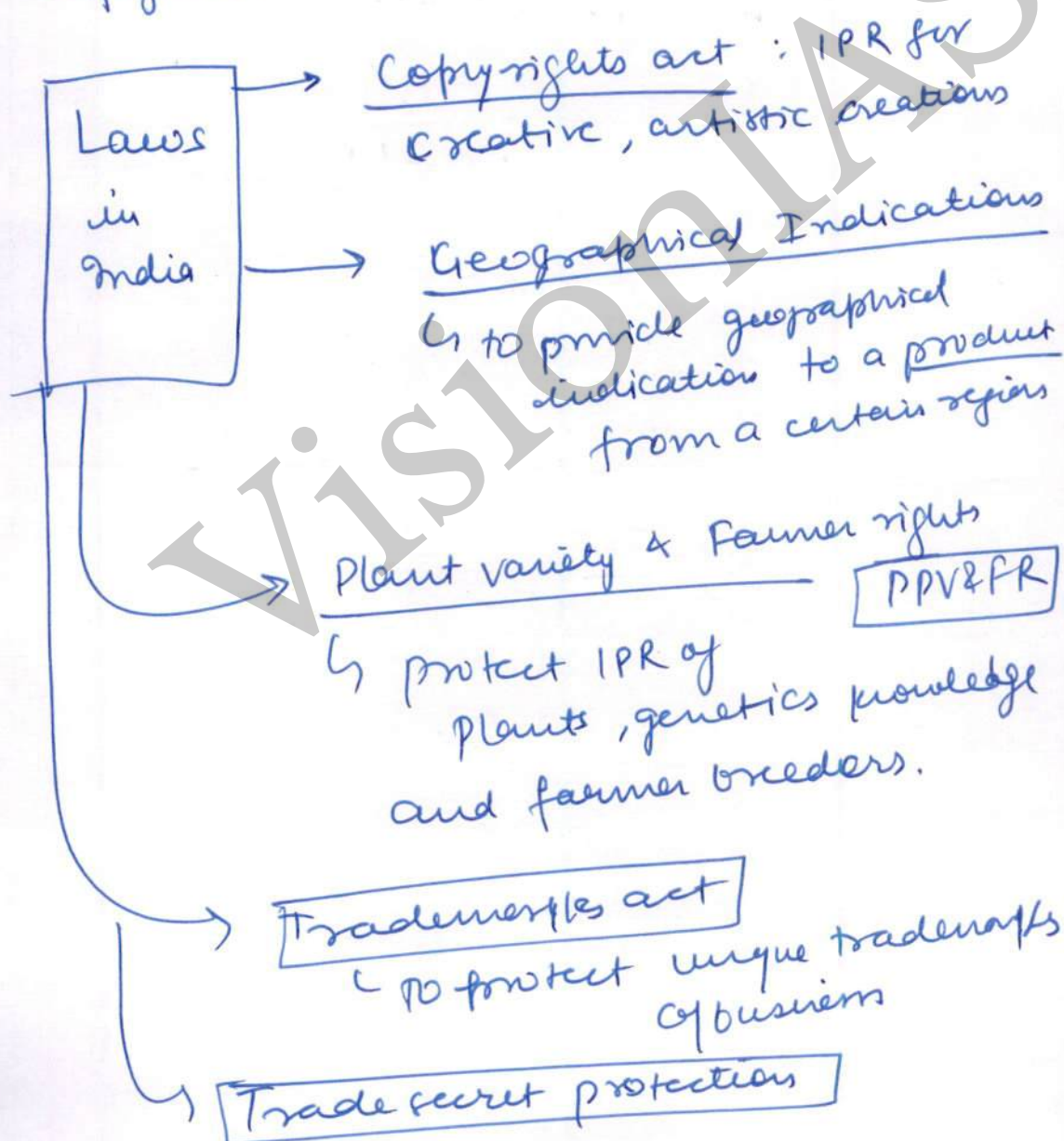
यद्यपि भारत में लगभग सभी प्रकार के बौद्धिक संपदा अधिकारों को कवर करने वाले कानून मौजूद हैं, फिर भी अनेक प्रवर्तन संबंधी, विनियामक और प्रशासनिक चुनौतियां भारत में बौद्धिक संपदा अधिकारों के व्यावसायीकरण में बाधा उत्पन्न करती हैं। सविस्तर वर्णन कीजिए। (उत्तर 250 शब्दों में दीजिए)

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 दृष्टि में नहीं लिखना चाहिए
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15

India is a member of WIPO and has also developed domestic IPR safeguards according to TRIPS mechanism



Challenges

① Numerous enforcement

↳ DIPP - nodal agency.

↳ Ministry of Agriculture Interferes in PPV & FR

↳ Ministry of Env, Forest & Climate Change

↳ Biodiversity Act (2002) - Access & Benefit Sharing

Traditional knowledge conservation

② Regulatory Challenges

↳ Delays in granting IPR

↳ Lack of protection
↳ Piracy of IPR

↳ Several regulatory steps

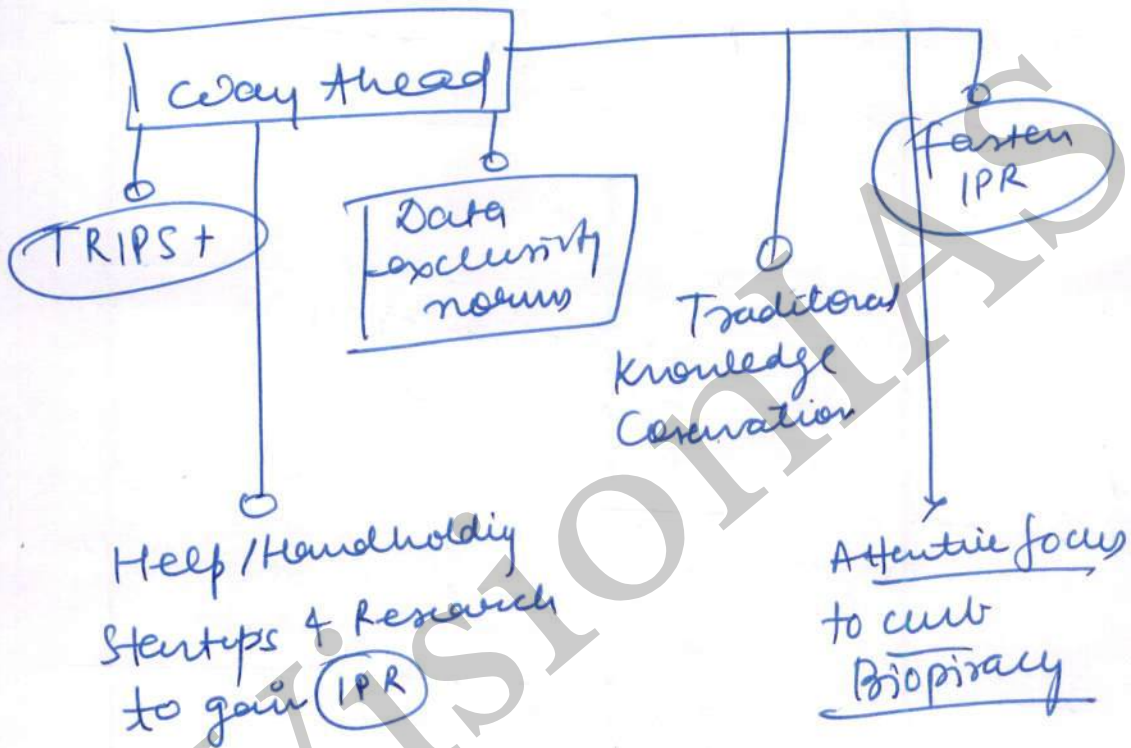
↓
permission Application etc.

③ Administration Challenges

↳ loss of Traditional knowledge
→ Biopiracy by
Business.

↳ lack of Access & Benefit Sharing with original community.

↳ lack of efficient maintenance of Traditional knowledge.



India owing to geographical and cultural diversity home to variety of Traditional knowledge.

India has recently signed WIPO treaty to ensure greater IP protection to its Traditional knowledge.

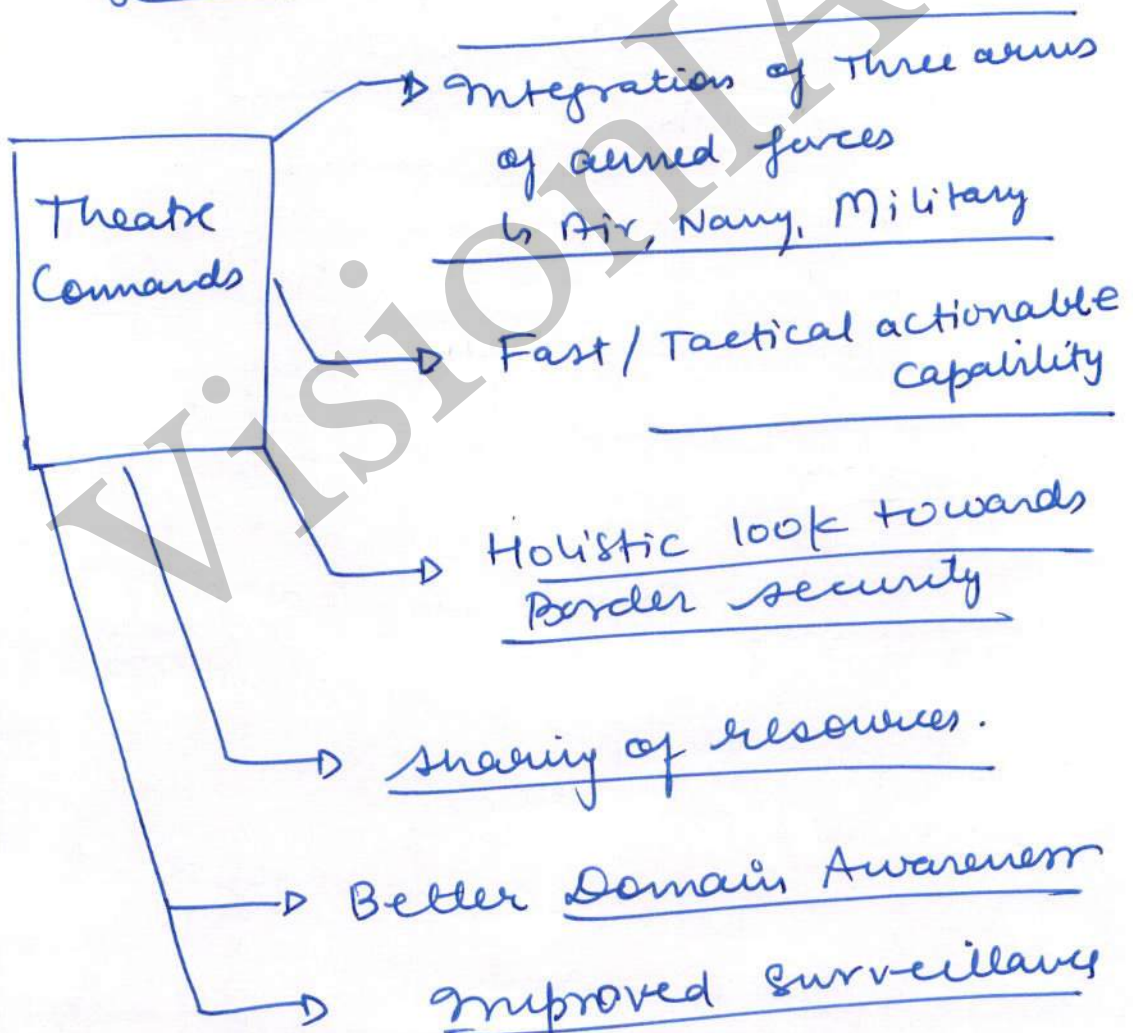
19.

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 (ITC) have been mull over to ensure greater integration of armed resources and actionable capability of armed forces.



Challenges

- differences in culture of Armed forces
- Lack of integrated Systems to Support Theatre commands.
- lack of enough fighter jets to ensure sustainability of Theatre commands.
- IT mindfulness — Technology can't be used by All army men.
- Lack of Integrated training and exercises
- lack of exposure of all the armed forces of each other's environment.

Way Forward

- ↳ Enhance Integrated training
- ↳ Increase Funding into R&D and

Capacity enhancement of Armed forces — especially deficit in Navy & Air force

↳ Ensure modern technology integration
[era of Hybrid & Grey zone warfare]

↳ Empower women participation
different perspective in operational planning.

↳ Sensitisation and trust building
between Armed forces.

↳ Enhance cooperation and collaboration
between all the arms.

To ensure Modern Border protection
ITC are a step in right direction.

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

Border Villages are considered not as Last villages but first villages to ensure their sustainable development on priority basis.

Treating as First Villages

↳ Border Management

↳ Enhancing Border Villagers - security forces cooperation - Shekatkar Committee

↳ Socio economic Developmt

↳ To ensure their Centripetal attraction towards India.

↳ Reduce development disparity

↳ Reduce influence of cross border or extra state actors.

- Madhukar Gupta Committee

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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③ Enhance Connectivity, trade and economy of the border region.

↳ Vibrant Villages program.

④ Enhance movement of security personnel

⑤ Safety and security of border villages

⑥ Civic Action program by security forces

⇕
Trust Building.

Measure by Govt. of India

① Vibrant Villages Program

'Flagship Border development program

② BRO's road development program

③ Civic Action program - Minion Sadbhavans

④ Border Fencing

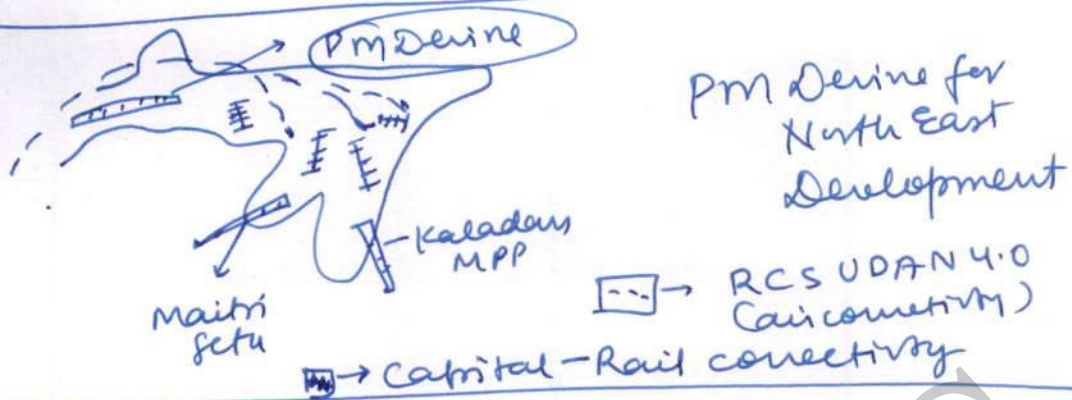
↳ Indo-Bangladesh.

⑤ FMR regions - Trade development

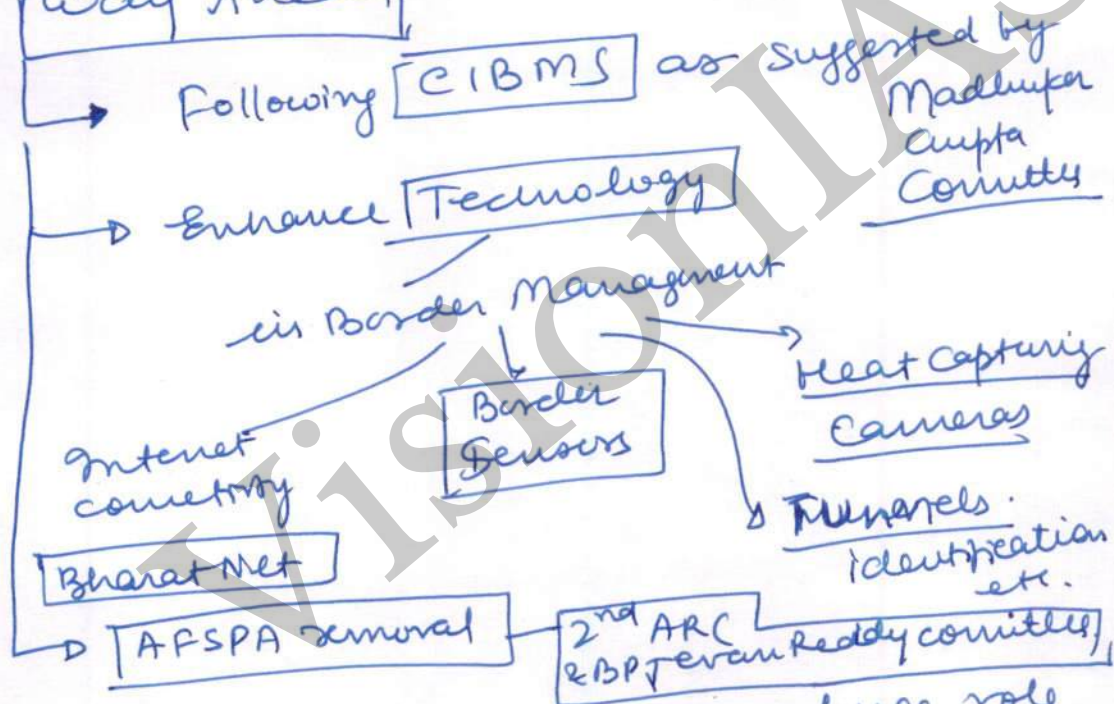
⑥ Multimodal Connectivity

Ex → Kaladani Multimodal project
4 Border villages of North East

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Way Ahead



Border villages play a huge role in Territorial Domain Awareness and gathering Actionable Intelligence for data driven decision making in Border security.

SPACE FOR ROUGH WORK

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VisionIAS