



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. : 0366434

अभ्यर्थी का नाम/Name of Student : Saichaitanya

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

25/1/24

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

केंद्र
Centre

Hyderabad

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 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>	

प्रासांक 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)					



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

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 हिसाब से नहीं लिखना चाहिए
Candidates must not write on this margin

Food processing industry is called sunrise industry

as it contributes to 29% of Agriculture GVA and employs large no. of ~~emp~~ people. NITI Aayog report

@75 specially focused on food processing sector for emerging India.

How rapid growth of food processing industry leading to food safety challenges

① Rise in packaged foods → which leads to more selling beyond shelf life (expiry date)

② Rise in high calorie, high density foods

which leads to the problem of Non-communicable diseases

③ Processing of food which is rotten or destroyed

enabling it to cause disease burden to individual consuming it

④ Lack of fortification of essential micro nutrients → leads to problem of stunting, wasting (GHS = 107/125) ranking

⑤ Enables to sell products without labelling
{ Recent Bournvita case where Supreme Court & FSSAI warned for proper labelling }

Challenges / Measures needed

① Policy & regulatory framework for safety with inclusion of FSSAI & stakeholders

② Reducing post harvest loss - as per Khantia Kumari Committee { 40% post harvest loss }

③ Improve tech integration - Irradiation & fortification as recommended by Swaminathan Committee

Therefore the motto of Fit India can be achieved by proper safety regulations in food processing

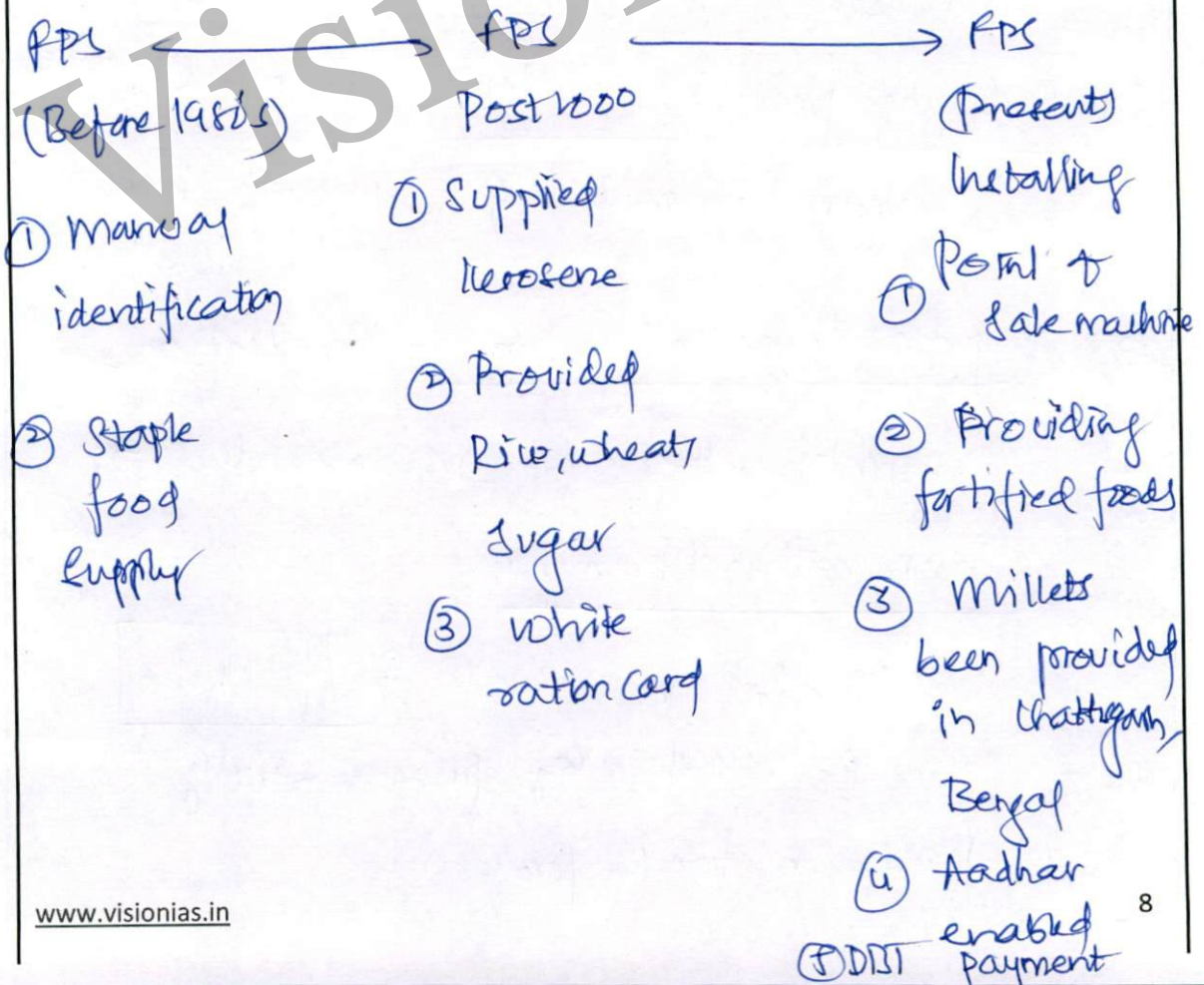
2.

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

Under the Public Distribution System of India, the Fair Price Shop (FPS) transformation is an evolving process. Discuss. (Answer in 150 words) 10

Public Distribution System under National Food Security Act has evolved ~~from~~ to deliver essential food supply to Below poverty line population. Under it, Fair Price Shop are those retail shops that act as first agent to customer

FPS evolving process



Challenges

- ① Lack of essential nutrient food supplied to the public as per Arshad Bakwai

Committee report

- ② Corruption, Blank marketing, Diverted, illegal sale in market are some of the issues found by Shanta Kumari Committee

- ③ Lack of tech integration in various fair price shops - Below 25% as per NITI Aayog (Point of sale machines)

- ④ Bureaucratic apathy, Regional presence (Poor in Northeast)

Measures

- ① Social Audit (Chattogram)
- ② DBT system (Telangana)
- ③ millets supply (Bengal)

Therefore ~~for~~ to achieve SDG goals by 2030 (No poverty, zero hunger) fair price shops need to be developed

3.

भारत में एग्रीटेक स्टार्ट-अप 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

Recent growth of Agriculture led Startup ecosystem is enabling sector to grow at high potential. ~~Some of the~~ Startups in the range from input mechanism to output making agriculture to link backward & forward linkages.

Agri tech Startups helping farmers

① farm productivity

a) Precision Agriculture by installing technologies like Drip & Sprinkler irrigation

b) Targeted seed delivery by Drones at precise location

c) Enabling high yield & productivity by

AI led startups (eg) Agri AI startup of Bangalore

② Market Access

- a) Decision making to farmers by Informed information curately
- b) Price discovery to farmers to reduce the income losses
- c) Linking online market with offline by ONDC, Amazon etc

Challenges

- ① Lack of Awareness to farmers regarding new startups
- ② Urban based startups
- ③ Low R&D funding in Agriculture (1-1% as per NITI Aayog)
- ④ Low land holdings (1-0.8 ha per farmer)

Therefore there needs a regulatory framework on Agri startup as well as awareness mechanism by Agri Universities for ~~the~~ thriving startup ecosystem

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

Present land reforms in India is Stressy on digitisation of land records which has huge benefits for farmers, customer and govt. As only less than 25% of land is recorded digitally as per NITI Aayog.

Role of digitization of land records

① Effectively implementation of land reforms

(eg) Bhu Aadhar card by government of India

② Disposing land titles to the land less

↳ Help wring phenomena of feminisation of Agriculture

③ Ease of land acquisition & compensation

by Govt / companies under concept of eminent Domain

④ Helps in delivery of schemes like PM

Kisan, By the Bharosa directly to land owners

⑤ Frable to land pooling mechanism In event of any project such as Cooperative farming

⑥ Collective identity to farmers, Ease of transactions, Direct benefit transfer etc can be successfully implement

Crout role

① Swamitva Scheme

② Land Atlas by ISRO

③ Project Bhu Aadhar

Way forward

① Digitising by help of ISRO and Geological Survey of India & Maps of India

② Land parcel mechanism as per Swaminathan Committee can be explored

Thus land acts as friendship to the Indians. A effective land reforms is

necessary for Green revolution & Sustainable

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

As per Periodic Labour Force Survey, India's median age is 28 and currently is the phase of

Demographic Dividend. Also Manufacturing GDP

Contribution is mere 25.1. as per Economic Survey.

Demographic Dividend

- Median Age - 28
- 65-1. of population working age

Economic Growth

- IMF - India @ 8.1-growth
- WB - repeated Curbs on Economic Growth

Why manuf led growth need to be adopted

① Demographic dividend

- a) TO transition from Disguised Unemployed Agriculture (51.1 population - PLFs)

b) labour intensive sector like leather, Apparel, fashion, food processing - High employ-ment elasticity

c) Requires population with low & medium skill ^{India} skill report \rightarrow India high
population with low & medium skill

d) Job ^{lets} growth to Job growth

② Economic growth

a) To align with Make in India, PUI scheme

b) Export led growth (target of 100 billion)

Issues

a) Low tech integration

b) Dwarfism of MNCs (MNCs)

c) Employability of people

(India skill report)

d) Low funding

* Poor academic-Industry linkage

Therefore export led growth is need of hour to target our vision of 5 trillion economy where recent budget priority of

Employment linked scheme is goal step

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

India has Coast of length 7500km. It is susceptible to various coastal hazards where around 70-1. coast is cyclone hazardous zone as per MHA data.

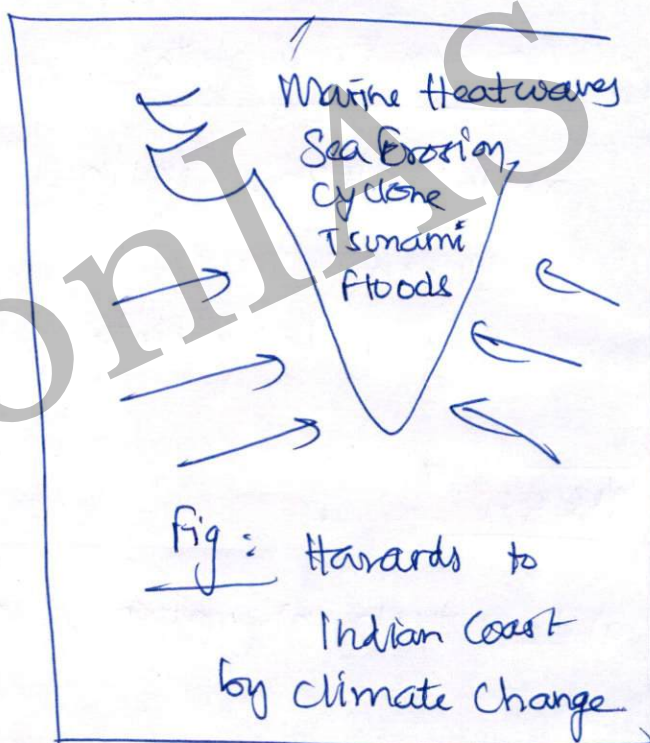
How to improve resilience

① Natural method

a) Mangroves plantation acts as buffer & carbon sequester (natural area as per FSI report)

b) Corals acts as natural disaster wall against the hazard

c) Local natural techniques like Sundarban fish bone technique against cyclone



② Human method

a) Early warning system - Success of Cyclone
in Odisha - Zero fatalities

b) Constructing sea walls, revetments and
groynes

c) Sustainable tourism with Blue flag
beaches tag line

d) Harvard zone mapping to tackle the
area with the proper input mechanism
(Decision making by collaborating with
local people)

However issues such as Agricultural
runoff, Industrial discharge, Unregulated
tourism are some of them.

For this Coastal regulation zone
and empowering local fisherman community is
need of hour to tackle blue economy
potential of India

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

10

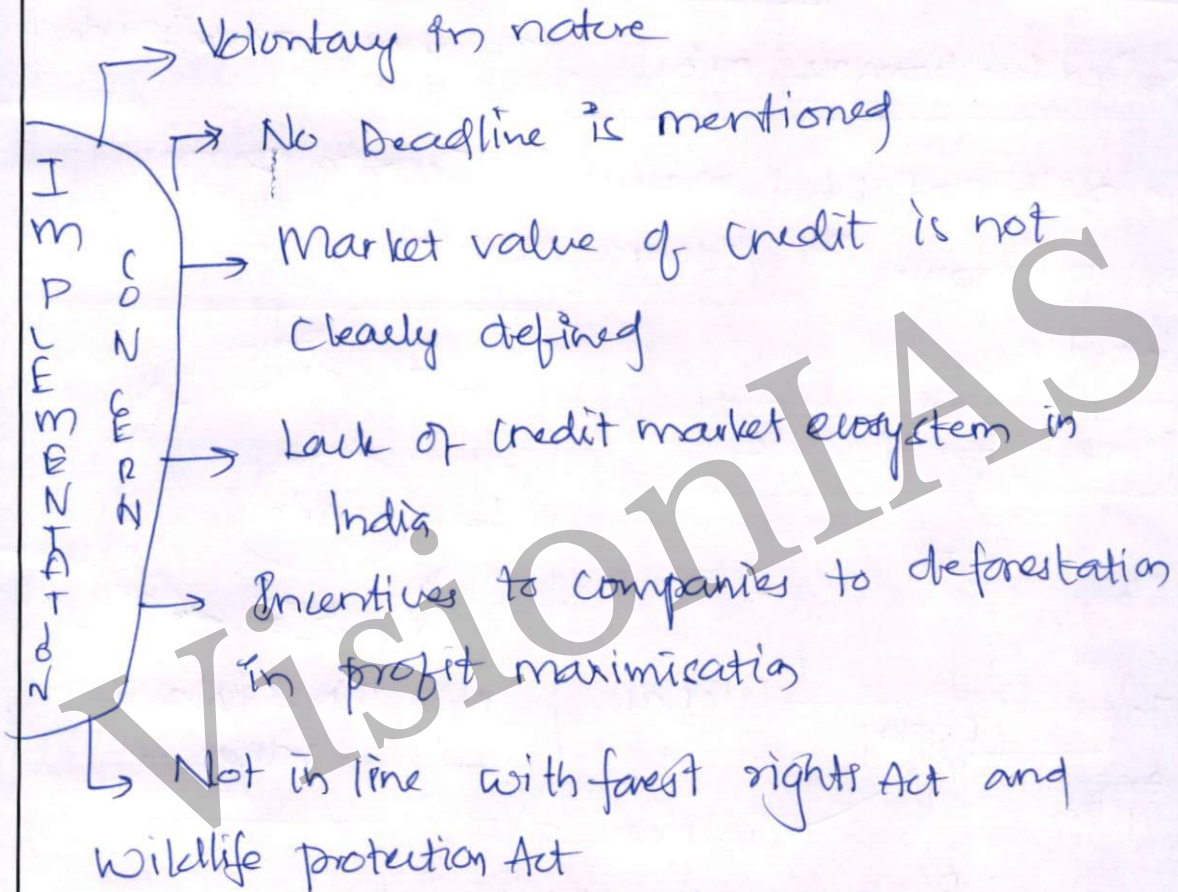
Green Credit programme is an initiative of India in COP18 meeting. It is a voluntary led mechanism that provides ^{green} credit to people/company involved in Afforestation methods.

How it promotes beyond Carbon Management

- ① Individual to be participated — in line with life approach of India
- ② Enable to get incentives — can sell it to companies who are going to cut forest
- ③ Voluntary one — thus no forceful imposition
- ④ Make & produce Role models like Jadhav Pargana, Salmarida Thimakk

⑤ Promote to fulfill the agenda of
Panchamrit & INDC of India

Concerns in implementation



Therefore there is need of

Environment Impact Assessment and

Use of Low emission, low carbon based techno

logical intervention to fulfill goal of SDG

and vision of Prakriti Rakshita Rakshitah
of MoEF

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

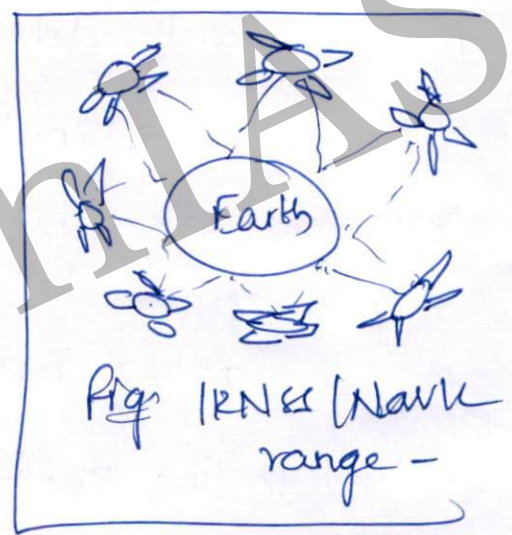
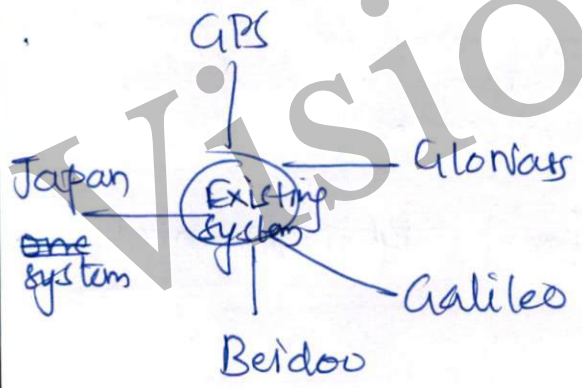
What is the need for NavIC when existing satellite navigation systems are already available? (Answer in 150 words) 10

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

Navic is ^{Indian} Regional Remote Navigation Satellite System with 7 satellites in the Geostationary & Geo synchronous orbit. It was commissioned

in 2016 and used mainly for security purpose as per now. It covers 1500 km from Indian border

Need for Navic



① for Security purpose as GPS enabled system is applicable to enemy states too

② To reduce the scope of Privacy & Cyber Security threats of International navigation system

- ③ To reduce reliance on imported service
- ④ In line with India's, self reliance strategy
Make in India and Atmanirbhar
- ⑤ Enable policy of regional devised strategy
- ⑥ for better adopted to local people,
traffic management, Disaster prepared
-ness etc

Issues

- ① Not yet commissioned bulky (only military)
- ② Need to change / buy new devices
- ③ Does not fully cover beyond 1530km from border
- ④ Lead to Kessler Syndrome in space
(Debris)

Therefore having a own regional navigation system is something to get proud.
It is in line with Jai Vigyan &

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

As per Global Cyber Security Index, India ranks at 10th. It is called 5th generation warfare as per Joseph Nye.

How it emerged as global money laundering frontier

- ① Cyber frauds - to round trip the money from illegal means
- ② Increase in transactions by Cyber means
- ③ Deep web / Dark web strategy to siphon of money by Cyber domain
- ④ Fake currency circulation through means of Cyber espionage and teaching relevant skills to youth in Cyber theft
- ⑤ As Cyber enabled finance crime has no

border it is depositing illegal money to any bank at any location.

Govt ~~steps~~ measures needed

① Collaboration with like minded country
• (eg) USA - Critical & emerging technology Initiatives

② Eye to Eye Strategy - Banning Chinese app by India

③ Gulshan Rai Committee → Cyber forensic Lab, Cyber Hygiene Strategy to public

④ Policy framework linking Prevention of money laundering Act and Cyber security policy (Win Win situation)

It is time to recognize the linkage between Cyber theft & Money laundering for

Cyber protected India and recent Cyber

Swatcheta Pakshada by MHA is good step

10.

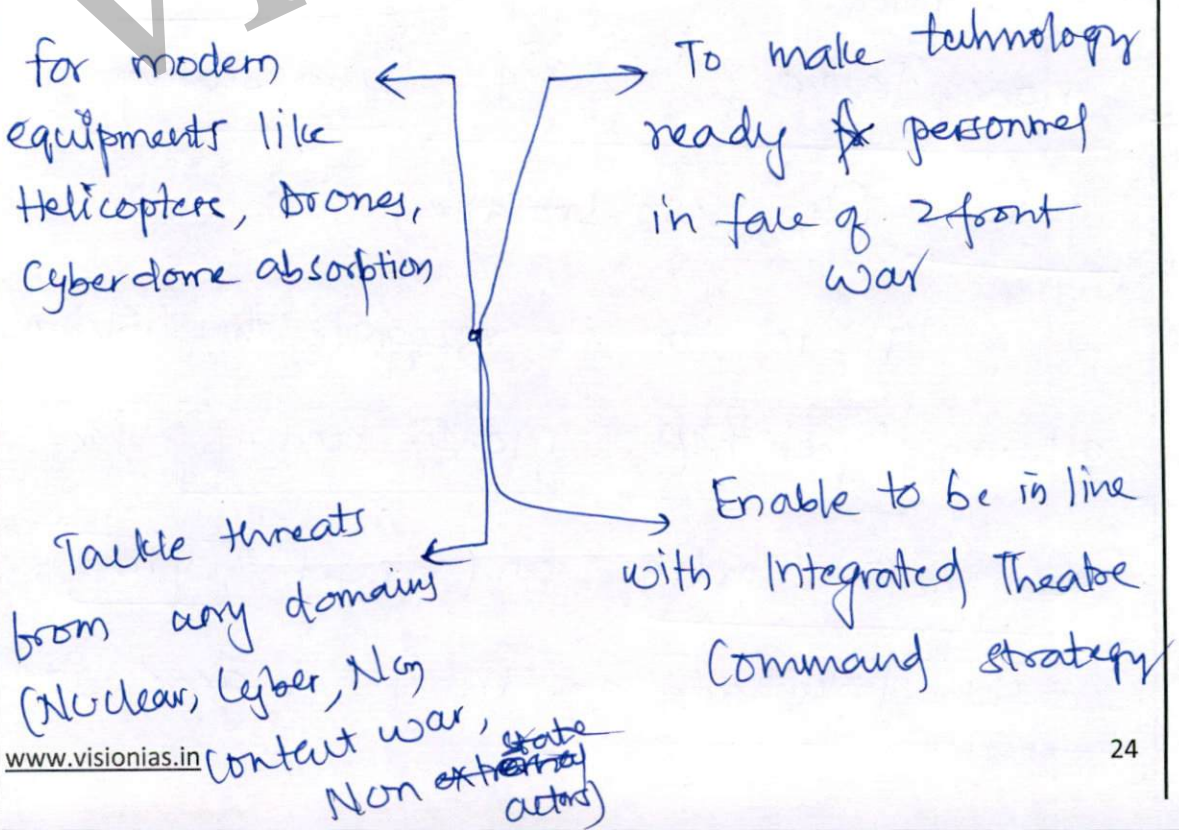
इंडियन आर्मी वर्ष 2024 को 'प्रौद्योगिकी समावेशन वर्ष (Year of Technology Absorption)' के रूप में मना रही है। इसके आलोक में, स्पष्ट कीजिए कि भारत के रक्षा क्षेत्रक में प्रौद्योगिकी के समावेशन की आवश्यकता क्यों है। इस पहल में भारत को किन चुनौतियों का सामना करना पड़ सकता है? (उत्तर 150 शब्दों में दीजिए)

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)

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

As we are venturing into 5th & 6th domain of warfare, warfare without technology is like Chimera. In this backdrop, Indian Army observed year 2024 as Year of Technology Absorption

Why need for technology absorption in defence sector



Challenges India can face

→ Low R&D (only 1.8% as per MoD)

→ Heavy Public Sector Dominance

Challenges → Poor Startup & research ecosystem
In defence sector

→ Heavy import dependence (as per
SIPRI - India fine of the largest)

→ Lack of defence technology policy

→ Poor Industry Academia linkage &
defence research ecosystem

However govt steps like IDEX,

Srijan portal, positive indigenous list, Defence

Cyber strategy is good step. Further steps
are required for thriving ecosystem of defence
technology for national security doctrine

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

Lack of Integration & Connectivity to North

east region is main cause of ^{low} development

trade & industries as per NITI Aayog report

ETS.

Issues faced in development of trade & industries

① Development of trade

a) Govt policies like Schedule 6, PESA ensures autonomy to existing tribes thus hampers development

b) Existence of ethnic communities who ^{aspired for} ~~wanted~~ supra regionalistic tendencies

c) Lack of political will of Northeast states in terms of development

d) Geographical constraints - low ~~air~~ airport connectivity

eg - No ^{civilian} airport in Arunachal Pradesh and ^{from} road to Itanagar by Guwahati

② Development of Industries

- a) Land Acquisition problems due to autonomous regions
- b) Lack of employability of people in industry relevant skills
- c) Aspect of low Ease of doing business ecosystem
- d) Industry requires to clear forest against the principles of tribes

Measures taken.

- ① Ministry of North eastern region - setup to tackle ~~the~~ the issue by specially focusing on their development
- ② Special Category States = Border & hilly states where 90% of funds comes from centre
- ③ UDAN = setting up various airport connectivity in hinterlands of northeast

④ International Collaboration by ASEAN, BIMSTEC led development for knowledge sharing

⑤ Organic farming, Natural plantation is focused in north east region

⑥ PM Kaushik Vikas Yojana 2.0 - specially focused & targetted to north east youths

~~It is time to go~~

What more needed

① Private sector collaboration by North east states to attract investment (eg) Adani, Tata

② Connectivity by Border road Organisation to be promoted at full scale

Therefore it is time to look at recommendation of Bezrboob committee to fully develop Northeast for prosperous & vikeit Bharat

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

As per Agriculture census 2020, less than 40% of agriculture farmers use micro irrigation system in India. This necessitates use of micro irrigation for sustainable practices.

Micro irrigation towards Sustainable Agr practices

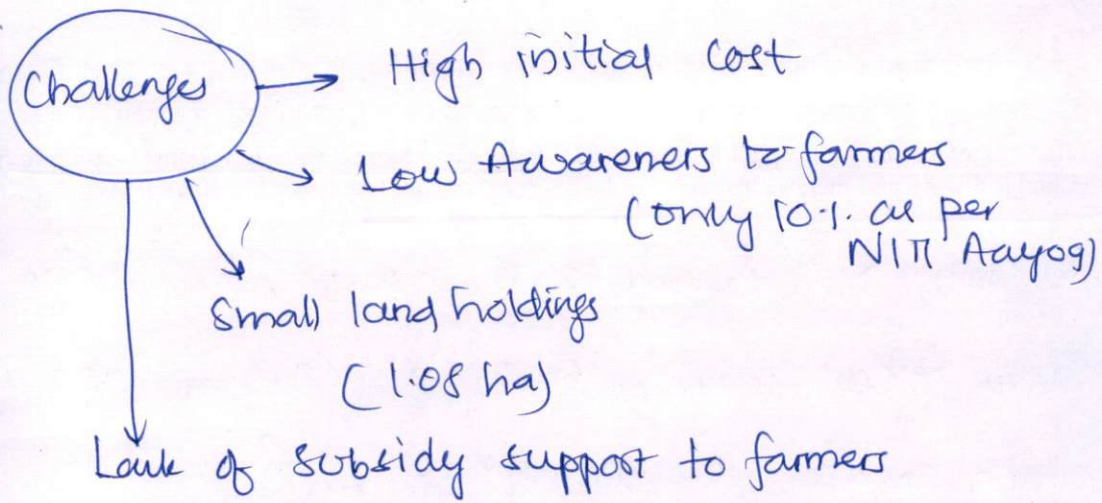
① Dealing with climate change

- ↳ By reduced inputs mechanism
- ↳ Use of water in desired quantity
- ↳ Precision Agriculture (a) Drip system
- ↳ low ^{input} intensive agriculture mode

② Dealing with water scarcity

- ↳ Reduced usage of water by sprinkling on plants site
- ↳ water get dropped at specific site
- ↳ Less pumping of water from groundwater

- ② Ensures crop diversification - as more water guzzling crops are less produced
(eg) - millets
- ④ Ensure rise in yields, productivity due to optimum utilization of resources
- ⑤ Enable to promote rise of income to farmers who are adopting it as seen in case of Berongoda village study by NITI Aayog & its report
- ⑥ Entail to ~~reduce~~ ^{improve} soil fertility & standard without over runoff of water
- ⑦ Reduced soil erosion from agriculture
- ⑧ Reduced ground water contamination due to low percolation of water
- ⑨ It is in line with organic farming ✓
sustainable agricultural practices



Way forward

- ↳ Subsidies to farmers as did by Andhra Pradesh govt
- ↳ Pooling of farmers land - to adopt & integrate system
- ↳ Punjab - Pani Bachao - Paisa kamao scheme - Incentivized to adopt micro irrigation system

Thus to double farmer income as per Ashok Dalwai Committee, micro irrigation is need of hour

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

As per NITI Aayog's report, Railways carry 700% freight than its carrying capacity which makes it monopolistic in its own way. Hence there is need to devise strategy to overcome it.

Issues pertaining to freight transportation in Indian Railways

① Delay in time taken to reach destination as compared to roadways & Airways (Eco Survey stated it)

② Probability of theft, miscreants when travelled in hinterlands like Chambal ravines (e.g. Rail accidents)

③ Monopolistic tendencies in freight transportation

④ Return on Investment ratio is less than one in railways on freight transportation

⑤ leads to quality issue like damage of parcels due to lack of capacity building

In railways ⑥ lack of new technology like LHB coaches

How can domestic freight help

- ① Diversify the transportation sector towards new mode (low burden on railways)
- ② Quick response & delivery
- ③ Railways can focus on human passenger transportation
- ④ Risk sharing mechanism

Strategies to be adopted

- ① PPP mode - where new technology, innovation can be driven into it
(Vijaykumar Committee suggestion)
- ② Multimodal transport (eg) - Kaladan MMT or IME of G20
↳ To reduce burden
- ③ Technologies to reduce the rail accident like Kavach system

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

④ ~~Reduce~~ Geography based / Area based strategy

like high altitude / Topography requires

railways or roads (eg) North east

↓
Airways under
UDAN

⑤ New freight transport policy with stakeholder

consultation of all transport modes is
need of hour

Therefore for efficient Ease of

Doing Business, freight transportation

requires diversification. It ensures India
to cater trillion economy

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)

15

As per IRENA data, 41% of energy basket constitutes of Renewable energy in India. And India goal of producing 500GW by 2030 in Panchamrit goal ensures India a front runner in global renewable energy transition.

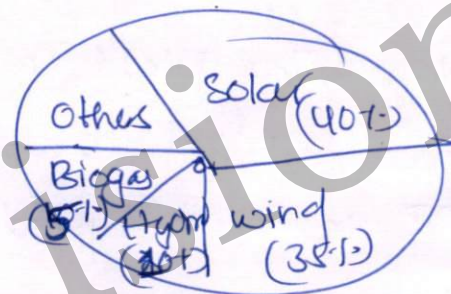


Fig: Energy mix of Renewable energy

Factors that aided India in making stride in renewable energy & front runner

- Govt policies like Renewable purchase obligation, National Solar policy, Green Hydrogen Mission, Hybrid Renewable policy, PM KUSUM etc

② Int'l targets - like Panchamrit goal, MNDC,
International Solar Alliance etc
favoring its push towards it

③ Geographical aid → Tropical Country
(Abundant Solar)

↳ Coastal Country
(Offshore wind)

↳ Agricultural Country
(Biowaste to Bioenergy)

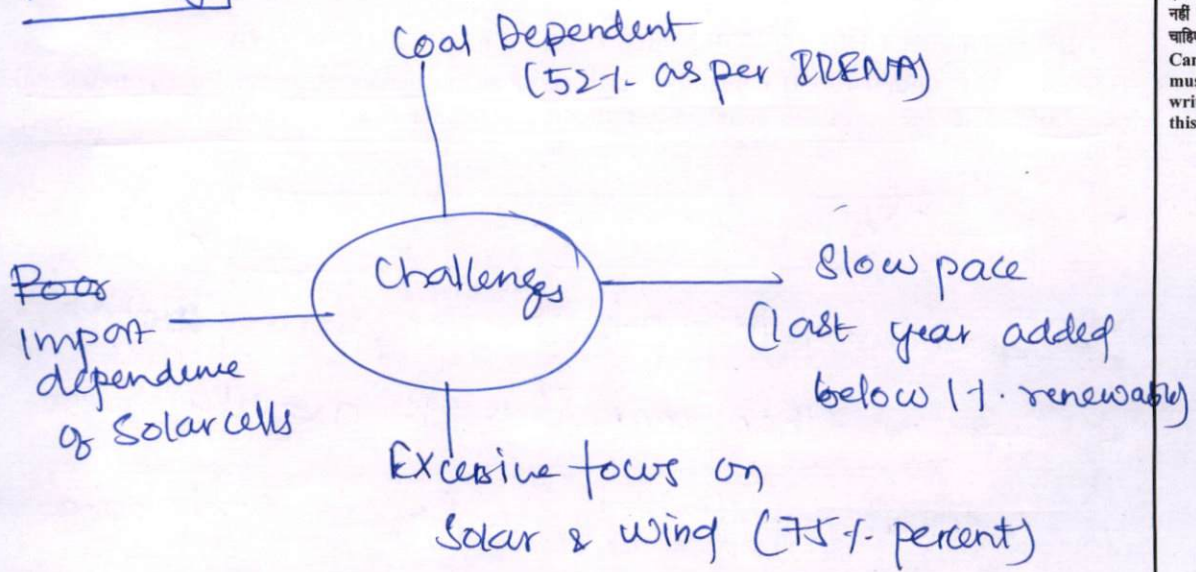
↳ High Seas, Rivers (Hydro)

④ PPP model → Adani Solar plant in Kutch
↳ Tata Solar plant in Gujarat
↳ AMR wind mill plant etc

⑤ Largest ^{semi-}skilled population in India towards
renewable energy sector

⑥ Traditional knowledge - like installing roof
top solar cell, Biogas plant etc in
villages

Challenges



Therefore there is need of push towards Renewable transition by stringent renewable energy policies and gradual shift towards (phasing down of coal). It ensures India to fulfill SDG goals and self reliant in renewable energy sector (PLI in Advanced Solar cell manuf)

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)

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

15

As per Central Ground Water Authority, 60-1. Of Groundwater in Agriculture fields is polluted in one or other form. This is mainly due to fertilisers & pesticides leading to contribute for environment pollution.

How does it contribute to Env pollution

① Percolation capacity of soil makes it to downpour the gaps in between soil towards groundwater pollution

(eg) → Fluorine Contamination in Nalgonda

② Air pollution where sprayed pesticides contaminates the local environment leading to fatality of farmers

(eg) → Telangana farmer death in 2014 April after spraying pesticide

③ Soil pollution - due to excessive Urea fertiliser

not in the optimum ratio of 4:2:1

(eg) However, Urea is used in
ratio of 28:4:1

④ Plant pollution - as sprayed pesticides /
fertilisers not been targetted at
specific site but all over plant

⑤ Surface water pollution - due to flood
irrigation post usage of fertiliser
& pesticide

Measures needed to mitigate the agriculture
risks

① Use of Precision Agri like drip & sprinkler
irrigation (eg) → PMKAY - Per drop more
crop

② Use of Nano Urea & Nano DAP such that
fertiliser won't get run off easily

③ Use of AI, ML, Drones to avoid excess

Use of input to avoid runoff (eg) Drone didi

④ Taking use of Agriculture universities, Scheme

Scientist to device strategy for the prevention of agri runoff

⑤ Taking help of traditional knowledge

(eg) → Amrighata system
• Pyre system

⑥ Promoting Crop diversification towards low

water guinking crops like millets

(eg) → Odisha incentives to millets farmers

⑦ Using GM crops that makes farmers to reduce use of pesticides & fertilizers

Therefore we need to transform from Amadats to Wfadats is not only

reducing agri runoff but ensuring sustainable energy produced from low input farming

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) 15

Recent Joshimath crisis is a testament to the fact that Himalayas has breached their ecological carrying capacity. This has enabled to have consequences of various man made disaster. A recent report of Ministry of Home Affairs ²⁰¹⁹ says - Himalayan states are susceptible to disasters.

Disasters in Himalayan States

① Glacial lake outburst flood → in Sikkim

& Uttarakhand

② Land sinking - Joshimath (2015)

③ Floods - Uttarakhand (2022)

④ Land Slides in Chameli district 2019

⑤ Glacier melting leading to influx of snow

Measures to be implemented to prevent such disasters

- ① Sustainable tourism - with ecological carrying capacity taken into consideration (eg) → Hawaii tourism, Tibet tourism
- ② Collaboration between states of Himalayas to share best knowledge & risk sharing mechanism (eg) → Uttarakhand - Himachal Collaboration team
- ③ Infrastructure development with EIA and local community is taken into consideration
- ④ Proper NDMA guidelines is followed to adapt/prepare for next guidelines disaster
- ⑤ Ensure following of M. Mishra committee guidelines on Himalayan ecosystem
- ⑥ Local traditional knowledge to be promoted (eg) → Dhway - Jhawari system in case of earthquake disaster of J & K
- ⑦ Large amount of funds under special

category states needs to pooled for disaster management

⑧ Disaster Management fund not only worked for the adaptation but also towards mitigation (eg) CAG report stated no efforts in mitigation front

Therefore as Sendai framework mentions

Disaster Risk Reduction should be our motto and Pm 15 point formulae need to be implemented

In spirit.

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

Super conductors are material that conduct or passes electricity without minimal resistance. It is a future material that has many advantages in various fields.

Ex: Germanium at near zero temperature
Carbon fibre

How it fuel innovation in diverse field of Science & tech

① Nanotechnology - Helps in building the space elevator

- Nanobots for delivery of drugs

- Nano ~~area~~ materials in electricity transmission

② Robotics - Helps in developing Cyborg technology

- Provide intermittent supply of Robots manufacturing for humanity benefit

③ Biototechnology → Developing new GM crops
like GM bringing through
Use of Superconductors

→ Enabling precision use of
gene editing technology by
use of Super Conductors

④ Energy → for Nuclear fusion & fission
generation

→ Transmission of electricity to
far away places without any
technical losses

⑤ AI & ML → Requires lot of new materials
like Super conductors

→ ~~ML~~ Human Brain Neuralink
success can be attributed to
Super conductors

⑥ Blockchain tech → requires large ^{amt} of
power supply without
any restriction (Thus Super
Conductors is need of hour)

④ I.R.4.0 → requires superconductors as base material to fuel the energy required to connect various devices ..

Therefore superconductors is an emerging technological field that has huge potential in making India ready for next Industrial revolution 5.0

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)

15

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

Intellectual property Rights are creation of individual minds for the benefit of society. They are protected under various legislations.

Laws covering IPR rights

- ① Copyright Violation Act 1967
- ② Trademark violation Act
- ③ Geographical Indication Act 1999
- ④ Patents rights Act 1967
- ⑤ PPFVR Act 2001
- ⑥ Biodiversity Act 2003

Challenges hampering Commercialisation

① Numerous enforcement

- ↳ Existence of various legislation overlapping in jurisdiction
- ↳ Numerous bodies from GEAC, IPR tribunals etc
- ↳ Lack of uniformed framework that covers all the laws

② Regulatory & Administrative Challenges

- ↳ Some of the IPR violation comes under Ministry of S & T while other like GM crop under Ministry of Environment
- ↳ Recent revocation of IPR tribunals

③ Other

a) Law of protection of traditional knowledge at International arena - More miscore by countries (eg. Haldi, Basmati)

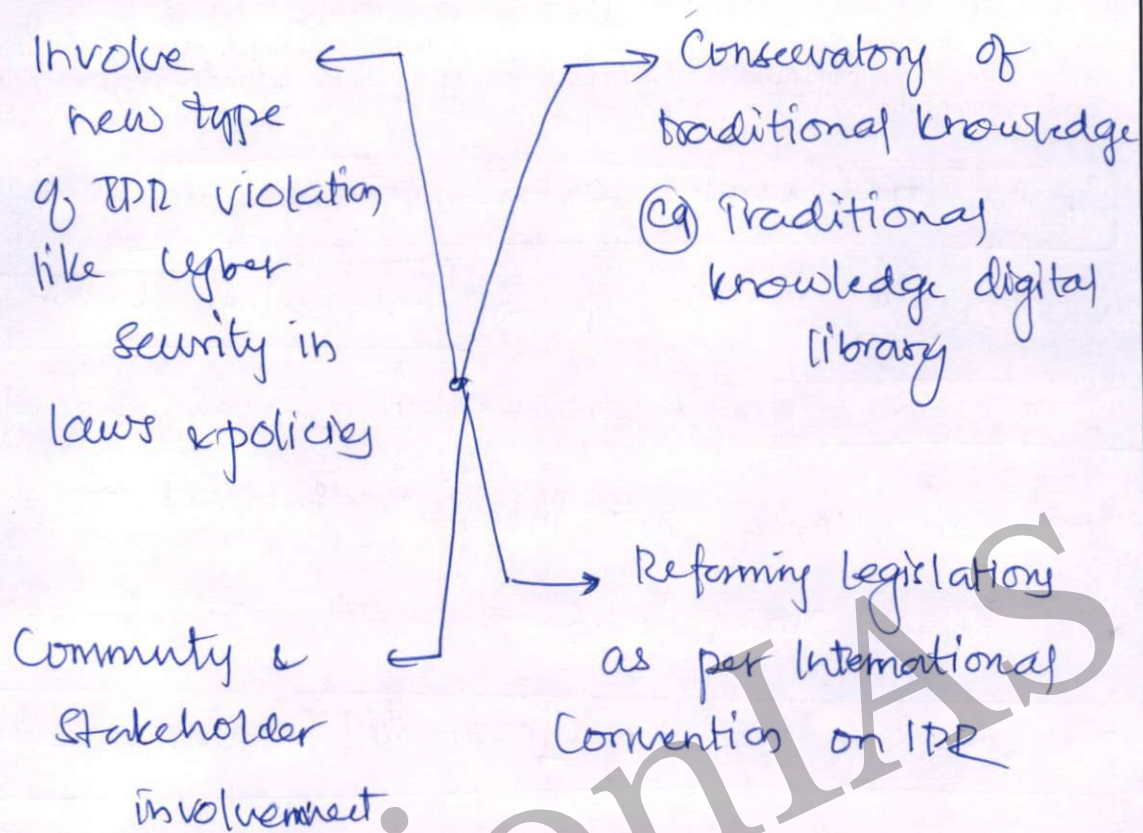
b) Clashes between Corporates & farmers as seen in Gujarat case of Corporate farming

c) Our policies not in line with TRIMS & TRIPS

d) Data sharing issue on IPR with other countries (eg. Personal data protection Act)

~~✗~~

Measures needed



Addressing above challenges ensure India to be following vision of

Jai Vigyan, Jai Anusandhan

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

Shekatkar Committee on Defense reforms has recommended setting up of Integrated Theatre Commands. It is geographical based command area that integrate, interrelate all these armed forces to work at tandem.

Challenges in creating Integrated Theatre Command

- ① Poor Resource distribution
 (a) → Airforce resources distributionally Challenge
- ② Lack of convergence among the services
- ③ leads to hierarchical nature of services & their decision making
- ④ High initial funding is required to integrate all these services

⑤ Lack of training of personnel on the
integration of services

⑥ Diverse geography requires unique challenges
& strategies - thus not one size fit all
approach

⑦ Andaman theatre requires development
of Port & shipment → Violates EIA and
extinction of local tribes

Theatricalisation of Command benefits

⑧ Greater Integration

a) Unification of services same as
PLA of China

b) Knowledge sharing among them

c) Risk sharing mechanism of each
other

d) Success for case study of Unification
during Kargil war

② Rationalisation of Manpower

- a) ~~Dis~~ Disuniformity of personnel in Army, Navy & Air force can be curbed
- b) Reduces recruitment of large people
↳ Helps decrease in ~~the~~ ^{reverse} expenditure
- c) In line with Agneepath scheme

③ Resources rationalisation

- a) Sharing of best resources in their ^{vault}
- b) Ready for modern warfare technique
↑
make
- c) Clipping of one resource for multiple use
→ Aircraft Carrier → Navy
→ Airforce

Thus Integrated Theatre Command □

a age old strategy which was even mentioned
in Chanakya Niti but in a nascent way.

20.

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

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

Border Villages are not last frontier areas but a welcoming geographically into the interior of our nation. This kind of perception has made India to focus on Border villages.

Treating border villages first geographically

- ① Acts as first buffer area against any attack
- ② Enable to device strategy by armed forces due to its geography
- ③ Propose the area to be vigilantly strong against any coercive action
- ④ Enable people in the villages as intelligent sharing groups to the armed force due to geography

Border villages → facilities in terms of first village

① Require sufficient infra support in case of attack or disaster

eg → Jhawari EX system in Jammu

② Proper skill based population by Govt support for thriving environment not to get alienated

③ Proper employment opportunities that sets the local context like Transhumance in Ladakh, food processing industry in J&K

④ Ensure aspects of basic necessities like education, health facilities to not getting alienated

Govt steps

① Vibrant village programme - to develop villages as model villages in border areas by proper infrastructure

- ② Schedule 6 → to give autonomy to
4 states of north east who have
border with myanmar & Bangladesh
- ③ Article 271A to K - which ensures self
governance and separate powers for
village development
- ④ Ministry of North East region - specifically
dedicated to the region development
- ⑤ Special Category States - Extra funds from
centre to states of border for
development
Therefore ^{when} a nation border is
^{secured}, then nation is protected" - Hence,
border villages need to be developed as
Adarsh villages

SPACE FOR ROUGH WORK

AL

VisionIAS