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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. : 972959
0097 2103

अभ्यर्थी का नाम/Name of Student : Utkarsh Patel

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

तारीख
Date

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

केंद्र
Centre

Kaod byh

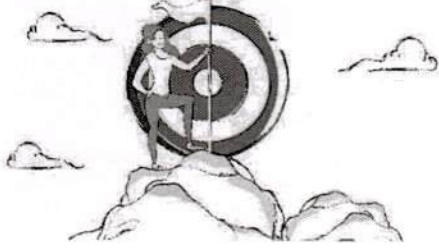
Utkarsh
निरीक्षक के हस्ताक्षर
Invigilator's Signature

	<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>भरीक्षक 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)					



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.

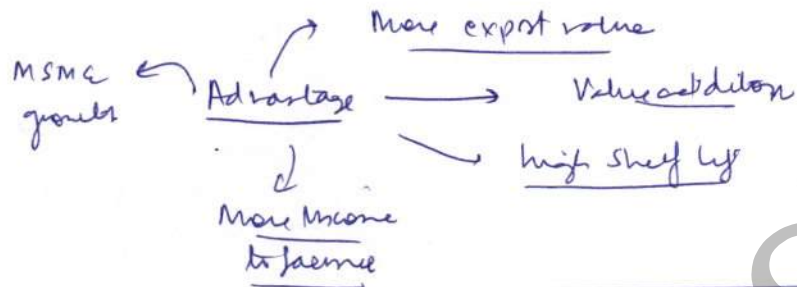
6.

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

Food processing industry has rapidly grown where there are more than 2 lakh enterprises in the sector. It has several advantages

as-



However it has led to food safety challenges

1) Availability of food - As FPI grows more & more of the raw material from agriculture is fed to these industries thus reducing the availability eg. Rice is being fermented to make vinegar so, reduce Rice supply

2) Cost of staple crops increases - as it is diverted to FPI for value addition, so, higher demand so, cost of staple crop increases.

2) Cost of final output from FPI is high so

makes it unaffordable for some sections

→ Thus, leading to unavailability of food hence affect food safety.

3) Food safety can also be understood as

items of quality of final product from FPI -

- If final output is not upto mark for human consumption due to lack of strict quality control causes food safety issues.

Further Measures

Quality assurance
check

Regulation of sector

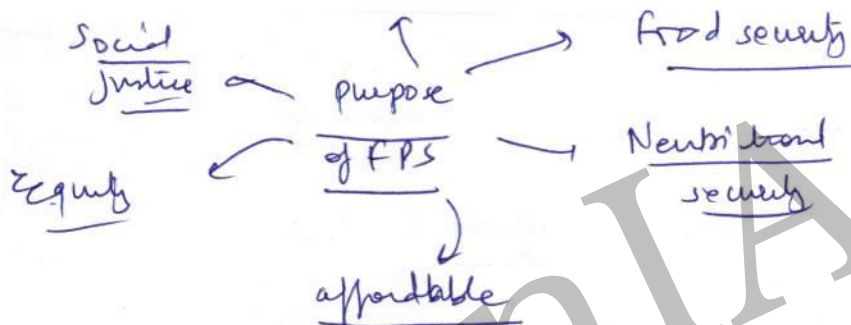
control any predatory practice

Strengthens PDS system

It is a sunrise sector with significant growth potential.

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

Fair price shops under PDS are the node which facilitate distribution of ration and other essential items to beneficiaries. Reduce poverty



Transformation of FPS is an evolving process

* FPS has kept evolving as per need of time -

1) Commodities distribution basket has changed

- Earlier commodities like kerosene oil, sugar was also distributed but now kerosene has been removed from FPS distributors. (LPG replaced)

2) Bespically selected process evolved -

With ~~at~~ evolution more targeted approach was adopted to check leakages and T-PDS was launched.

3) Technological integration - Currently,

PDS shop have employed ITC jobs to ensure smooth distribution & check leakage

4) ONDC scheme - further led to

Nationalising PDS shop, an individual can avail ration from any place in India

5) More targeted approach to reach last mile -

Antodaya was introduced, APL, BPL segregation was made.

Need is → Shata Kr. committee → slowly reducing no. of beneficiaries
more to cash transfer from 80 crore → 60 crore
increase the quality

PDS is an essential step in the direction to bring social justice.

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

Agri startups employ ITC tools to help farmers in improving productivity & market access -

Farm productivity

1) By providing easier access to credit -

eg - JAN KISAN loan is an app that provide cheaper & easier access to credit.

2) By providing access to machinery & help in mechanisation -

eg - Sold farm a Startup which provide access to machinery such as threshers, tractors on ~~easy~~ less price for short duration -

3) By providing weather related information & prediction - Agri startups can use

satellite data & services to provide weather forecast, climate appropriateness of a crop & advice for climate & region specific cropping.

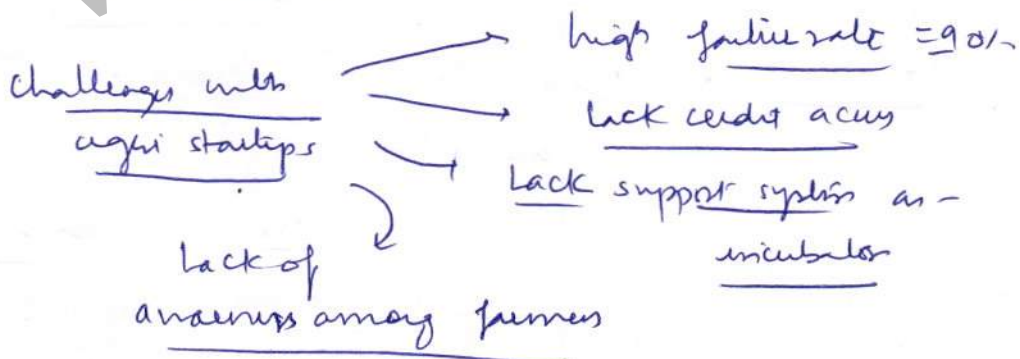
Market access

1) By providing direct link to consumers

eg. Ninjab Kart - it is a startup which directly takes product from farmers & sell to consumers in urban setting.

other eg. - SAFAL

2) By providing price discovery - what is the current prices of different agricultural commodities.



With dedicated push such as ~~Big~~ Budget 23-24 provided for agri tech startup accelerator fund, startups in agriculture sector can do wonders.

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

Land reform collectively refer to broader process of improving the productivity & use of land, also improving the health of land. However, narrowly it is related to land capping, zamindari abolition & surplus land transfer.

Role of digitization of land records in implementation of land reforms

1) Digitization Initiatives - SWAMITVA,

Bhoomi, lokvani, DLRDP.

Role - 1) Provide accurate picture of

land use - how land is employed

agriculture ← ↓ ↓ community housing area park etc

2) Provide details of ownership of land particularly in hilly areas where the records are not well updated.

3) Help addressing land ownership related conflict & issue - by clearly delineating land

4) Understanding quality of land -
Level of degradation / desertification → soil health

5) Provides status of fragmentation of land and also its distribution.

So, together it can help know → land ownership
→ land holding size
→ fragmentation status
→ land health

and can be employed to bring land reforms

We can take learning from successful land reform cases such as - Korea, Bhutan and further can improve the land use & its health. Gender perspective must be taken into account.

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 currently has 64% of population in working age group (16-64). which is projected to reach 68% by 2030. This has good opportunity to reap benefits of demographic dividend.

Need to adopt Manufacturing led Model

- 1) Manufacturing sector is labour intensive

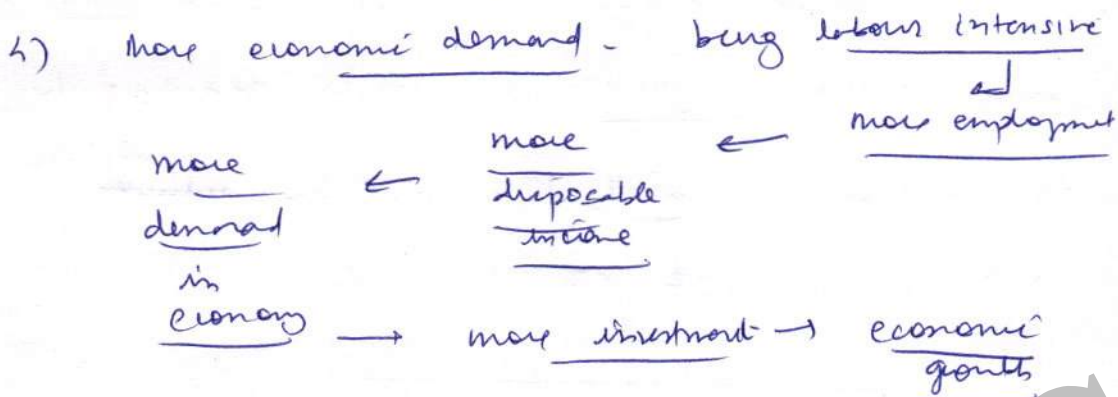
This will provide youths with employment opportunity

- 2) Manufacturing sector contribution to GDP is less - 17% -

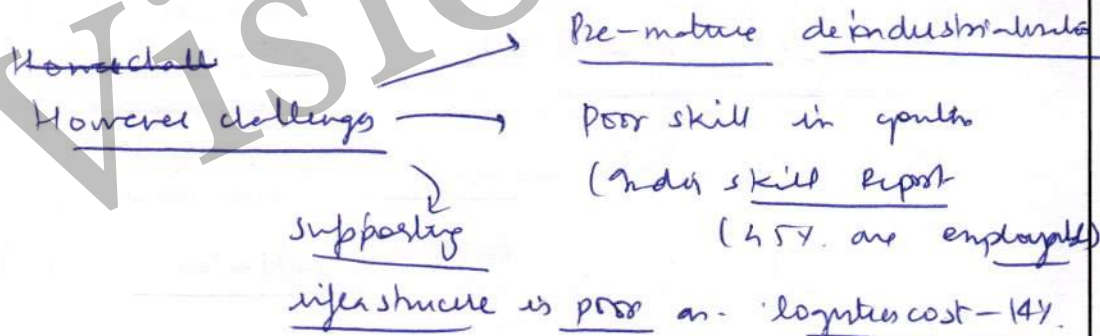
- by reaping benefits of demographic dividend, manufacturing sector can be given a push → thus adding to economic growth.

- 3) Manufacturing sector can help expand

export basket → thus more earning from forex + economic growth.



5) It will also give push to MSME sectors which will generate more employment opportunities for working age population & will also expand export.



As per Davis growth model, India must use its comparative advantage of labour availability & push manufacturing sector.

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

Climate change has led to increase in natural hazards in coastal regions such as increased number of cyclones in ~~Arabian~~ ^{Arabian} sea eg - Tankabe etc.

Strengthening of Resilience

1) Climate sensitive agriculture promoted -
eg - Kaolapat rice cultivation which can tolerate water injuries & heat.

2) Mitigation efforts to be taken -

Plantation of mangroves & shelter belts

eg - MISHTI initiative

+ Renewable energy source promoted.

3) Adaptation steps to be taken where loss can not be recovered.

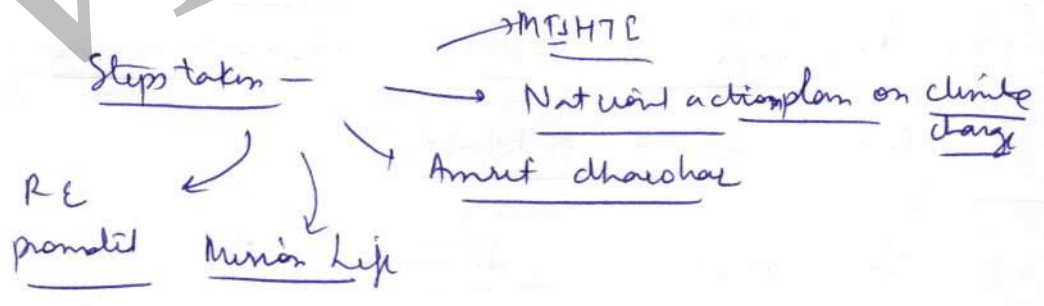
+ eg. use of bio-rock to build corals

4) Awareness & sensitivity developed - create understanding about threat • climate sensitive approach such as - judicious use of forest resources, promote conservation -

5) Nature based solutions - such as planting mangroves

6) Legal approach → follow CRZ legislation strictly → Relocate any polluting industry
→ check sand mining

7) Training, mock drills & sensitisation with climate hazards like cyclone etc.



Prakriti Raksh Raksh Rakshita - If we protect nature, it will protect ~~we~~ us so need is to adopt climate sensitive approach.

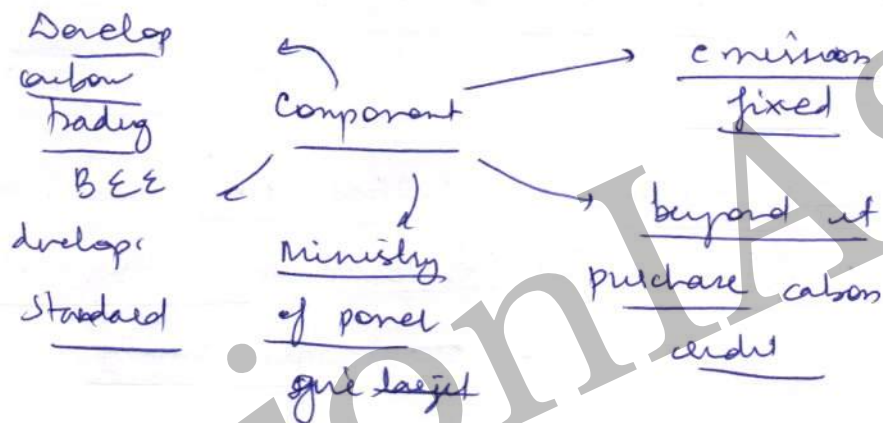
7.

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 हार्शिए में नहीं लिखना चाहिए
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10

Green credit programme has been launched to widen carbon credit market in India. It builds upon PAT to further expand carbon management efforts.



- 1) It aims to reduce carbon emissions from various entities.
- 2) It creates a disincentive for the polluting industries.
- 3) Promotes transition to green, non-polluting sources of energy.

4) Ensure climate justice - by ensuring
polluter pay principle & principle of absolute
liability

5) Promote investment in green & clean energy
& sustainable environment practices.

eg. disincentivize Thermal power plants, promote
them to install desulfurisation units

6) It also incentivize government investment
in green & clean environment initiatives by
putting fines over those violating the norms

7) Concerns - Carbon market not well developed

- Already PA7 scheme is there

- Led to green washing

- No standard unit of measurement

like - carbon equivalent tonne

- Difficult to monitor & implement.

- fines a tool for polluting industry to keep
operating.

Clear guidelines & strict enforcement will
certainly go long way in ensuring successful

8.

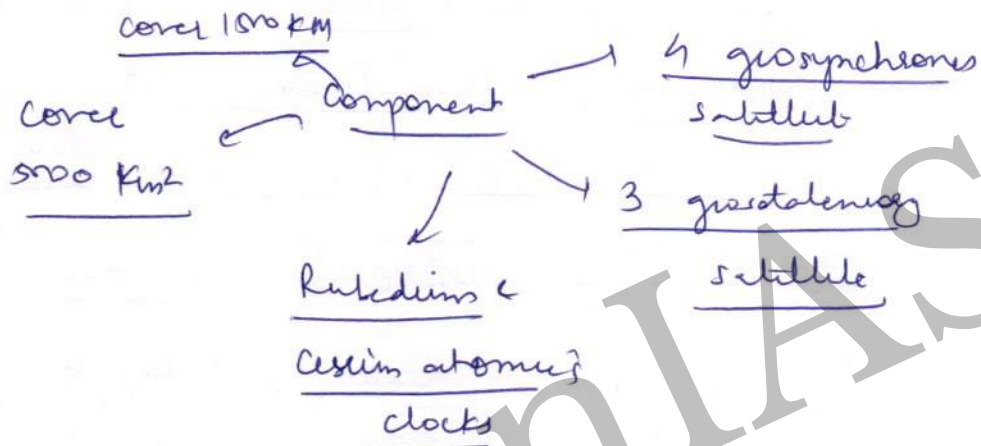
जब पहले से ही अन्य उपग्रह नेविगेशन सिस्टम उपलब्ध हैं, तो NavIC की आवश्यकता क्यों है? (उत्तर 150 शब्दों में दीजिए)

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

10

उम्मीदवारों को इस खण्ड में नही लिखना चाहिए
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NavIC (Navigation with Indian Constellation) is a ~~new~~ navigation system developed indigenously by ISRO.



Need for NavIC

1) Defense security - an indigenous system

make our defense capability robust such

as - use of guided missile require

navigation

2) Sovereignty - It makes India independent and not to be affected by policies of other nation

eg - USA denied India use of

navigation system during Indo-Pak war.

- 3) Exporting services - NavIC can be used to develop other related services such as - 3D mapping, street view, virtual tours which can exported to other players.
- 4) Vast applications - in other sectors such as - gemine is fishery
- jagan in air transport
- 5) Make India future ready - to address any kind of weaponisation of current global navigation systems such as - GPS, Glonass.
- Need is → further make it global
→ improve precision
→ widescale deployment for citizens use.

'NavIC' is certainly a development in right direction to catch our needs as well as those in our neighbourhood of SAARC nations can use it.

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

Cyber crime refers to use of cyber space such as internet, applications, computers etc to bring to an individual or organisation

Emergence as new frontier of global money laundering

1) Cyber crimes to earn illegal money
- Activities such as cyber bullying, cyber hacking, DDoS Attack etc are used to demand ransom.

2) Cyber fraud - used to get access to financial details of individual & make illegal money transfers.

3) Use to also layer & integrate money
- by using digital / Net banking by hacking other's account → transactions as

made to layer & hide money by repeating it
multiple time.

4) Use of netbanking / hachaj - to transfer money
from one jurisdiction to other.

⊙ How to address

1) legal - strengthen the regulation & laws such
as - PMCA, make it future ready

2) Strengthen capacity - of the professionals.
involved in checking it such as ED officials
given cyber ban

3) Institutions strengthened - such as CERT-IN

4) Promote awareness - eg. Cyber Swachhta pakhwada
celebrated

5) Promote safety labs - eg. friskall, safe cloud,
safe devices, anti-virus

Emerging situations require innovative
solutions. Focus must be on promoting
cyber hygiene among individuals.

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

Technology absorption is necessary to address emerging nature of warfare such as non-traditional threats like - use of drones or cyber terrorism.

Need for Technology absorption

1) Improve capacity & capability of army
→ With technological integration such as drones / night vision glasses it will improve efficiency of operation.

2) Emerging challenges - such as drones used on Indo-Pak Border (BSP caught 110 drones - 2022)
It requires use of technology like Jammers.

3) Make the army future ready - as now landscape of war has changing

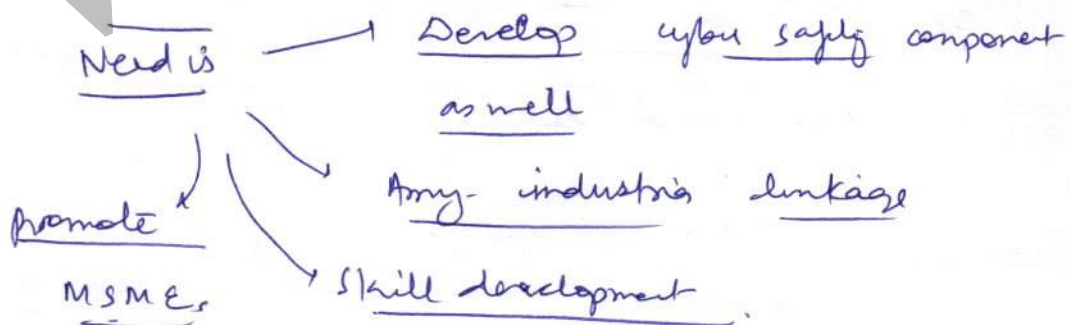
more & more to indirect cooperation using cyber space, informatics warfare. This requires developing cyber capacity.

47) Safety - technological solution will provide safety as - Bomb detector robot

Challenges

- 1) Technology lack compatibility with the army equipments.
- 2) Lack of indigenous development of technology
- 3) High cost of technology integration.
- 4) Technology prone to cyber attack.

5) Data safety issue



Technological integration will Army ready for the needs of 21st century & evolving war landscape.

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)

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

15

NER of India comprises of 8 states which are connected mainland by siliguri corridor and share international border with China, Bhutan, Myanmar & Bangladesh

Issues faced in developing trade & industries

1) lack of proper connecting & infrastructure

- e.g. lack of well connecting roads in hilly terrain of Meghalaya & Manipur

- Lack of other basic infrastructure like electricity in all the areas.



2) Law & order issue - ^{Region} situation has been
marred by many frequent law & order
issues creating disincloe for industries &
trade eg. Recent Manipur violence

3) Polers border - which promote irregularity
activities in the regions of - ULFA in Assam
through blitters. Foreigners aridige in
ransom demand from business businessmen

4) Development versus environment - Region has 60%
area as forest which is reserved by tribes,
so, a balance to this also makes
development of trade challenging.

5) Other issues - Lack of skilled personnel,
lack of capacity of states to undergo
huge capex.

Meanses taken

1) Infrastructure development - such as - PM-
PUNE scheme to provide road

infrastructure in the region

- UDAN scheme connects hilly regions, PM-Jats
Shakti

2) Law & order control - AFSPA have been
imposed, building police capacity eg. SRE
scheme

3) Skill development - Eklavya school, PM-SRI
school, PM-Kaushal Vikas yojana

4) border movements of insurgents - joint
operation like - OP. all clear with Bhutan

5) Special focus - Ministry of development of
NE Region

NER sitting at the cusp of

South Asia & East Asia can play a vital

role in development of whole region.

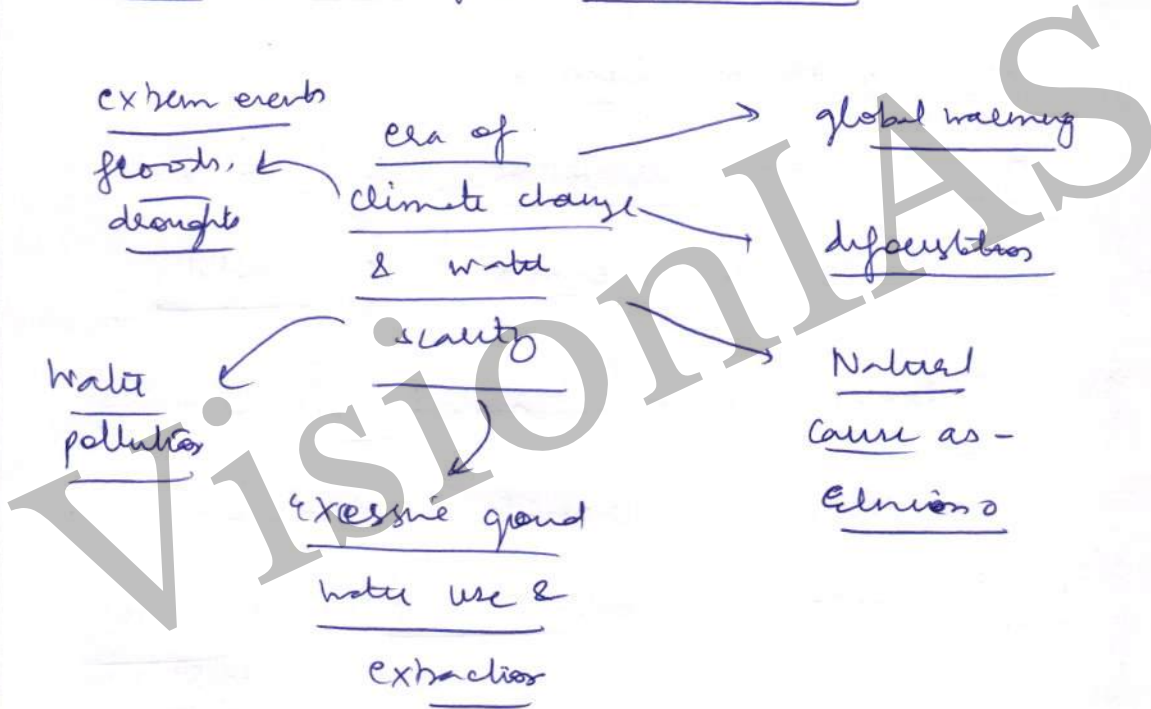
12.

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

As per WMO report - Status of global climate, the average temperature has increased to 1.45° since 1850, and also underscore to 10 Mn people face water scarcity.



Contributions of Micro-irrigation system

1) Water sustainable use - micro irrigation system like spinkler, deep irrigation promotes judicious use of water.

2) Prevent soil degradation

Due to surface runoff of water upper
layer of Humus gets depleted. Micro-
irrigation system prevent it.

3) Address climate insensitive practices

which causes harm to soil as well
as wastage of resources.

eg - flood irrigation in which most
water gets evaporated & wasted.

4) Sustainable use of groundwater -

micro-irrigation mandates judicious

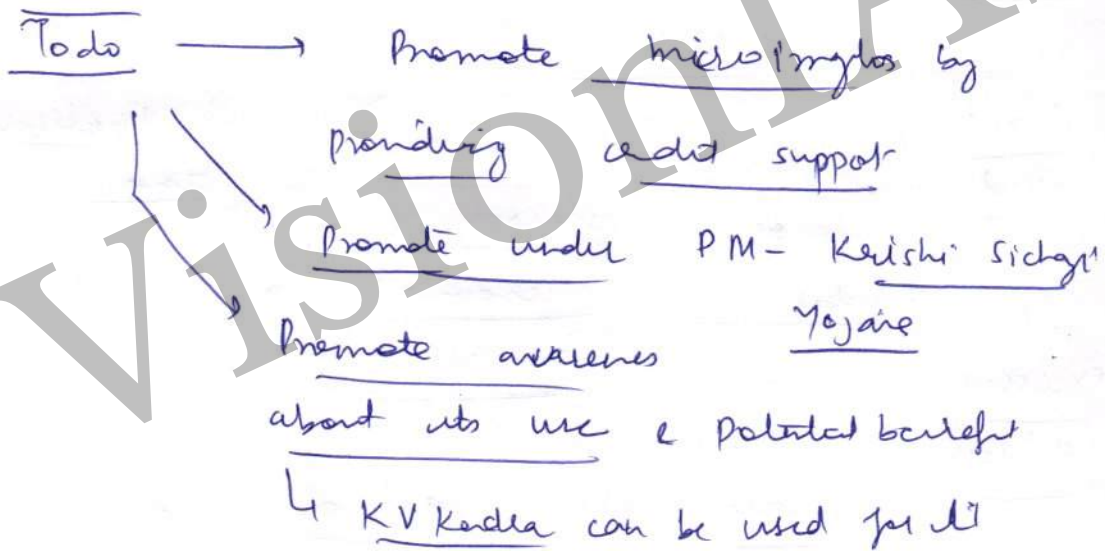
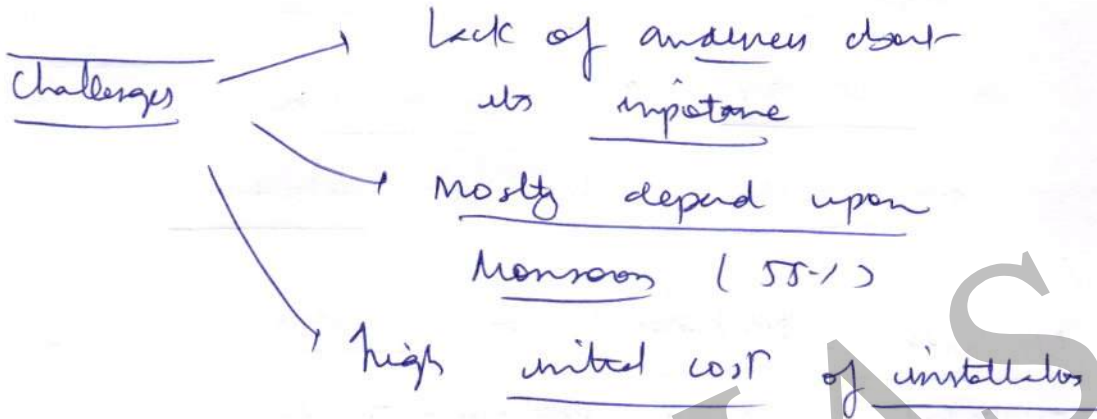
extractor of groundwater (agriculture
largest user).

5) fertigation - micro-irrigation allows

direct application of fertilizers &
pesticides to root of crop using

drip irrigation method.

19) Address the scarcity is due to global warming as - water is used in very less quantity & don't go waste.



It is essential to make Indian agriculture future ready and remain productive & lucrative. As future belongs to Nation not grain not grass

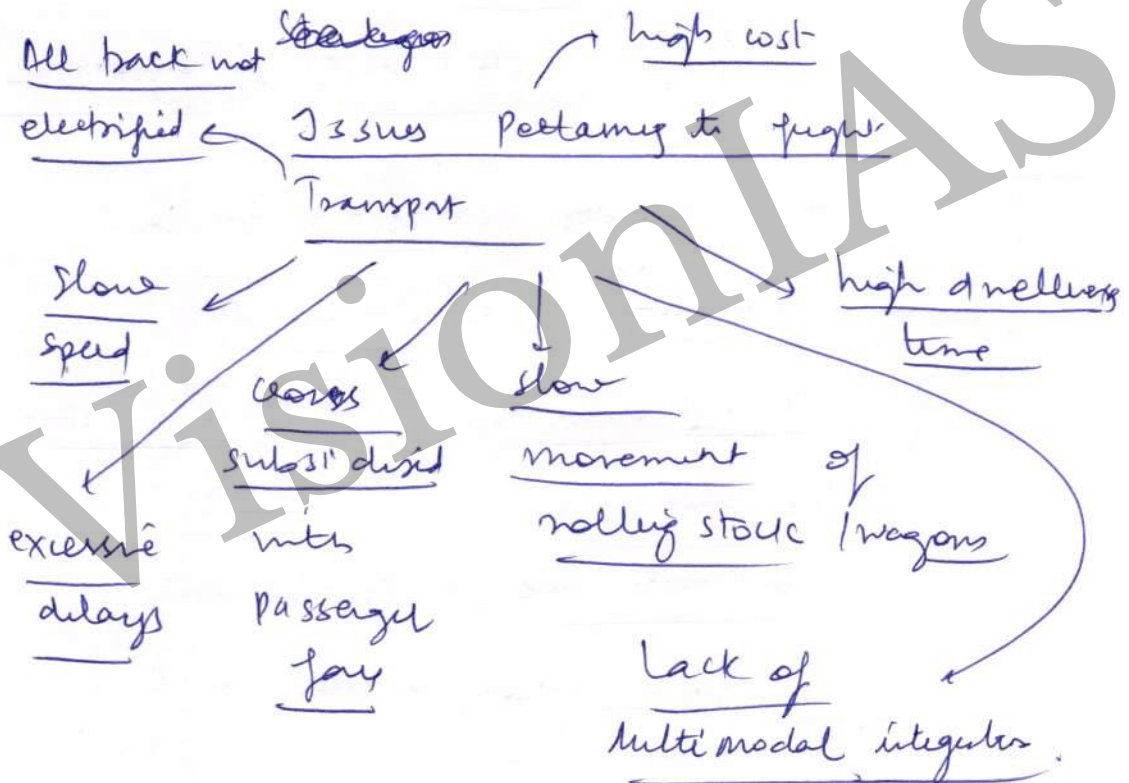
13.

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

Indian Railways share in the freight is 2nd to roadways which is ~ 25-28%. Its contribution is not in commensuration with its potential -



Strategies that can be adopted

- 1) Improve the infrastructure - 1) such as improve the wagons into more

weight carrying capacity

- Moot the development of dedicated
freight corridors with wider tracks
& faster speeds

2) Dedicated track for movement as in DRP.

3) Avoid cross subsidies into passenger
freight which can lead to a situation of
death sprint

4) Promote multiple modal integrations of
railway - seamless transfer of freight
from Road, waterways to Rail can go
a long way in improving freight share.

eg. scheme of ~~Shree~~ Bhaetinda, Sagar mode

National logistics policy provides

for ULIP ports for seamless integrations

5) Electrification of tracks - currently only

45,000 km out of 650000 km is electrified

(IRW)

→ electrification will bring cost down.

6) Private sector participation - as also was
recommended by Virek Debraj committee,
Party participation can bring investment
into infrastructure development.

7) High speed & corporate management - to improve
work culture in Railways & make it more
efficient.

With proper multi-modal integration
& capacity enhancement railways can
reap the true potential in freight
movement. We can learn from
Successful examples like USA, China.

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, India is 4th largest producer of renewable energy in the world with contribution of wind and sun also 4th largest in world.

Factor responsible for making impressive strides

- 1) Abundance of Resources - 1) India being a tropical coastal nation has abundance of solar energy throughout the year
2) Also, 7500 km coast-line provides ample wind energy potential.
- 2) Capacity building - India has put efforts in developing in-house capacity like - 1) JNNURM mission for PV cells
2) Solar Corporation of India, PSU established

3) Policy effort - India has put
dedicated policy efforts such as -

1) National solar mission

2) Nat offshore wind energy policy 2017

4) Global cooperation - India has taken
global cooperation through initiatives

such as - 1. International solar Alliance

2. Global Biofuel Alliance

3. OSDWOG initiative

5) Promote local manufacturing - such as PLI

scheme for PV cells, ~~for~~ VGF for

Battery development (Budget 2023)

6) Increasing share in power generation -

which is currently 40% of total
power generation

7) Taking mega projects - such as Bhakra
Pongestart, cochin airport solarisation,
History solar park of Panagurda.

8) Impressive commitment & fulfillment
as- At UNFCCC to produce 50% of
energy by 2030, previous NDC India
has achieved.

Challenge → Capital requirement
→ Importance dependence (as PV cells)

Climate price → Skilled human is not available

not provided by Developed Nations as committed

flexible energy source as solar → Rapid energy need growth (NB 3 times by 2030 or 2040 level)

As PM, Mohd has said lets turn to

Sun to undergo development. It

highlights the role ~~of~~ Renewable energy
will play in meeting our future needs.

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)

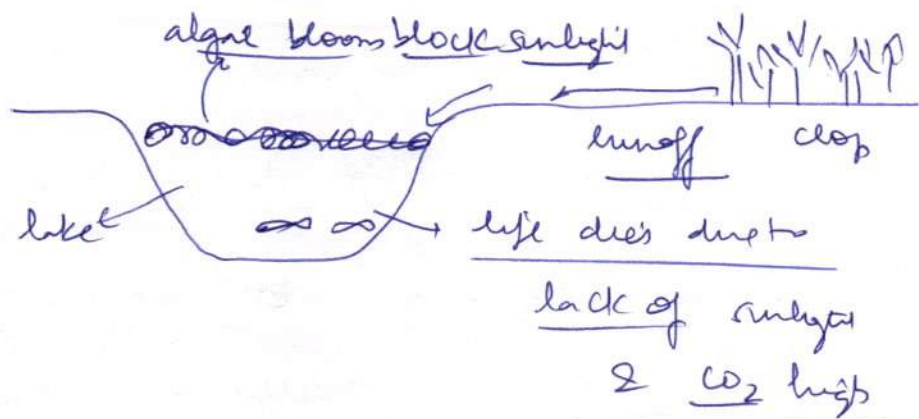
15

Agriculture sector employ fertilizers & pesticides on a large scale as India being the largest user of chemicals in agriculture and also largest importer.

Agricultural runoff & its effect on environmental pollution

1) Eutrophication of water bodies -

Agrirunoff (fertilizers & pesticides) cause algal bloom in lakes which ultimately destroy the ecosystem of lake & make it deplet of life



2) bio magnification & bioaccumulation - it
causes chemicals to amplify & accumulate
in living organisms & thus harm the
whole food web & ecosystem.

3) Soil degradation - use of N:P:K = 8:4:1
at place of prescribed 4:2:1 ratio leads
to soil fertility loss

3) Water pollution - / ground water pollution -
→ It has been found in milliard levels
of phosphorus & potassium in water bodies

3) CH₄ emission - these chemicals also
emit harmful gases on underground
depletion.

Measures that can be taken

1) Rationalization of use of fertiliser & pesticides
- Strict regulation to be implemented
- Sell & purchase of chemicals monitored

- 2) Subsidy on fertilisers to be slowly relaxed as it came large scale use of chemicals
- 3) Create awareness - about judicious use of fertilisers
- 4) Role of Krishi Vigyan Kendra - to ^{test} inspect & recommend judicious use accordingly.
- 5) Promoting organic farming by promoting organic pest control, manure
as - 2 Cro Budget Natural farming
- 6) Nature based solutions - to address runoff
will eg - use of certain bacteria which feed on such chemicals.
- 7) Role of PR1 institute - in monitoring & creating awareness.

To ensure agronomical products of so
human intact & food & nutritional security
is secured, immediate attention must be
taken to sensitize & reduce chemical
use.

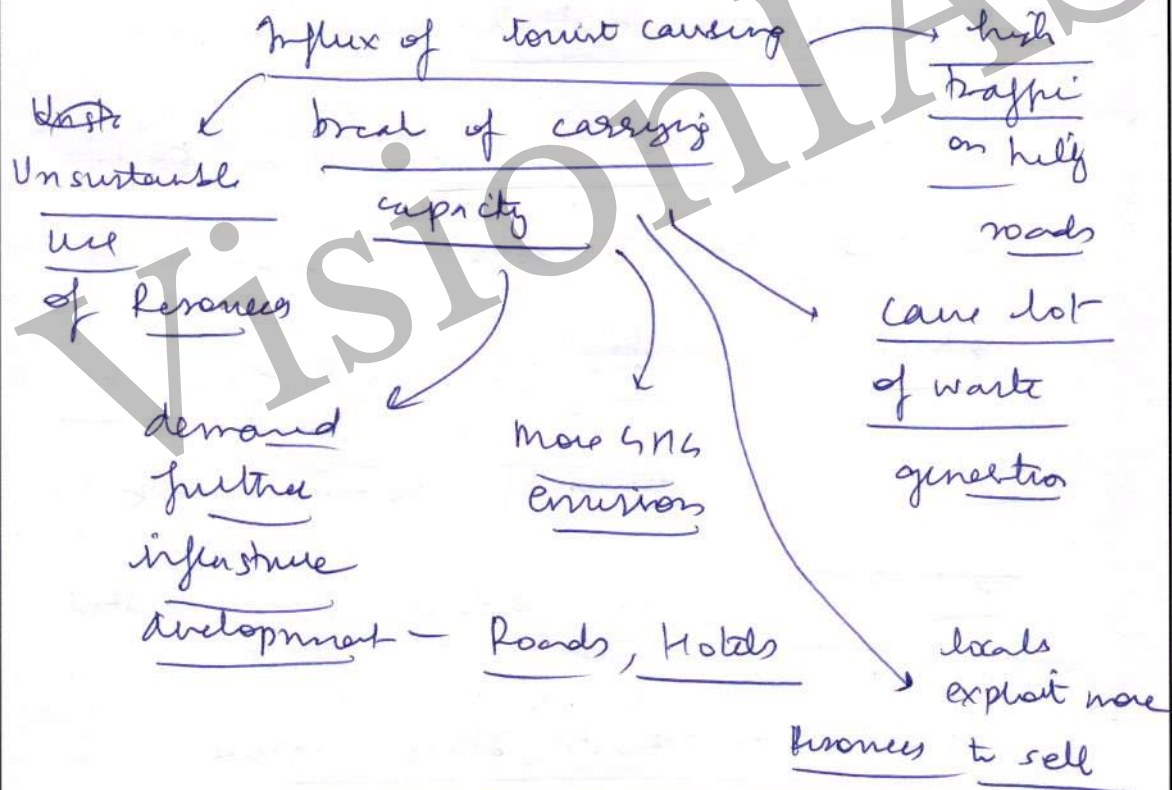
16.

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 क्वेश्चन में नहीं लिखना चाहिए
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There has been a sharp uptick in the man-made disaster events in hilly regions such as landslides in Joshimath regions.



Measures that can be implemented
while promoting sustainable tourism

1) Implementing permit / pass system to
check the tourist number into the
carrying capacity

Example - done in case of Rohang Pass ~~to~~ where
in a day only 1000 people are allowed

2) Hilly Regulation zone like control

Regulation zone - to demarcate
the construction activity.

3) Sensitivity Mapping of regions - so as to

understand the underlying geological
feature, such as - in case of Joshimath

SSI had warned of potential weak
point in the region (unconsolidated
material)

4) Direct tourism to other regions

To avoid oversaturation of any
particular location.

5) Before construction activity carried out - proper
ecological study carried out

eg - In case of Chandam project, committee
by SC had warned by ecological fragility,
ultimately Silk Road tunnel disaster took
place. (example).

6) Create awareness & sensitivity among people
So, as to not create waste and not
exploit local resources

7) Specific Regulation - on tourist influx
during rainy seasons

With a comprehensive plan & holistic
approach the disaster can be avoided
simultaneously promoting sustainable development.

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 कक्ष में नहीं लिखना चाहिए
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Superconductors are conductors (which conduct electricity) at zero resistance. It is achieved partially as very low temperature as (alloy of silver). It is based on Misner effect.

Fuel innovation in diverse fields

1) Power sector - with carrying current at zero electricity, the loss due to heat will be eliminated so, more efficient transport of power & low cost of maintenance.

2) Health & Medical science - superconductors can be employed to provide better solutions in disease diagnosis as well as well in developing more advanced solutions - eg. role of superconductors

- use of MRI machines to enhance its efficiency
- Role in developing Bio computers like as - NeuroLink

3) Electronics science & Engineering
Better electronic devices - performance of
technology will improve when heating effect
due to resistance can be eliminated -

1. Faster & efficient Phones, laptop
2. More efficient super computers

4) In science & Research - ~~super comp~~
super conductor can be employed in
better detectors & analysis of material
eg - SPEC, STEM, optical tweezers etc.

5) Developing more promising materials
which show novel properties
such as - memory material
- Terafluid

6) Better solar cells & batteries -
With avoiding more efficient energy
conversion & no heat loss,

7) Nuclear science - Superconductivity
can be employed to develop, Nuclear
fusion reactors based on Tokamak which
employ superconductors,

8) Better understood fundamental science -
By employing superconductors - a powerful
magnetic sensor can be created to study
magnetic interactions leptons, quarks, bosons etc

9) Space science - sensors based on
superconductors are more sensitive to
microwaves

Currently superconductors are limited
by its use at very low temperatures -
need is to further push research to
employ its use at room temperatures.

यद्यपि भारत में लगभग सभी प्रकार के बौद्धिक संपदा अधिकारों को कवर करने वाले कानून मौजूद हैं, फिर भी अनेक प्रवर्तन संबंधी, विनियामकिय 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)

India has diverse set of laws to cover IP R rights which are rights attributed to creation of mind. Laws such as patent laws, GI Indicator Act etc.

Numerous agency of enforcement & regulatory & administrative challenge hamper commercialisation

1) Multiple agency provide a silo based approach which at times get challenging for commercialisation as a product may require more than one approval from different agencies.

2) Prevent from efficient operation of IPR granting process - as all

different bodies act in complete segregation
with no mutual exchange & learning, bringing
poor management & efficiency -

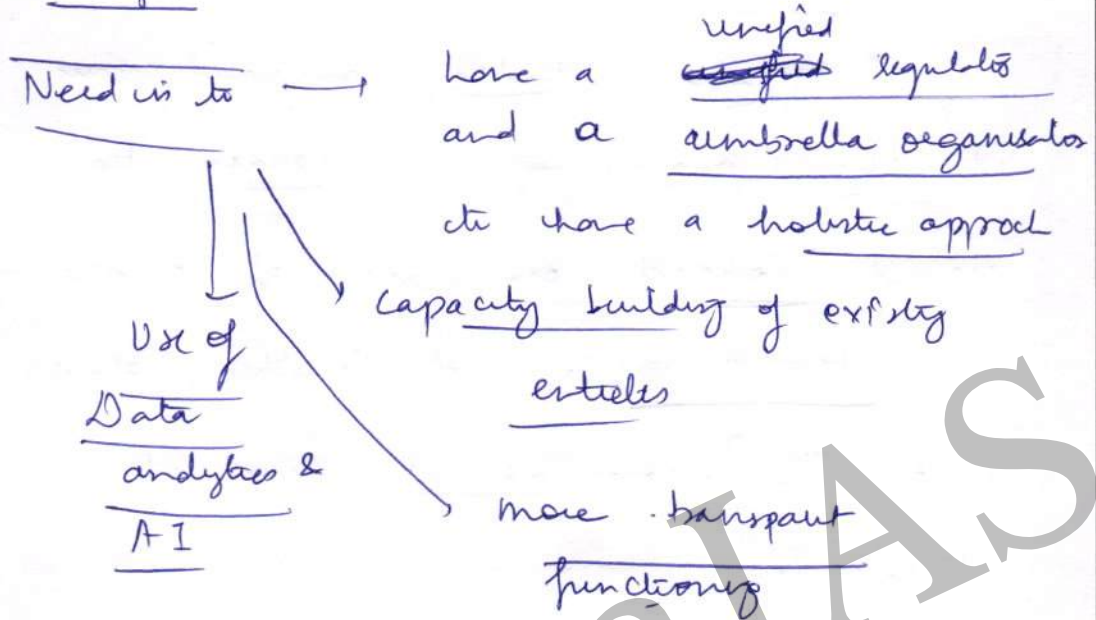
3) Delay in granting IPR - different

laws, bodies means poor capacity &
development of these entities with
limited human resource & capacity.

4) Fragmented laws go against the
global precedent - for example of
USA, Japan with unified bodies
to grant IPR rights -

5) It weakens the ability to rationality
analyse laws & product suitability
for IPR - as a disjoint entity
with poor capacity.

4) Affect EODB - as IPR goals are delayed.



In order to seek investment in economy and achieve the vision of Viksit Bharat by 2047, it is important to secure rights of investors to bring more innovative solutions.

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 command refers to the process of arranging the armed forces on basis of geography (theatre of war). It further brings unity in command at level of theatre.

Challenges in creating
theatre command

- 1) Political will is important - lack of political will is a major hurdle.
- 2) No pilot project to understand the overall effect.
- 3) Resistance from armed forces - to undergo drastic change (parochial mindset)

- 4) Apprehension of dominance of army within a particular theatre. leading to loss of morale for other armed forces
- 5) Resourcе Councіl - as Air force has only 28 squadrons which when distributed across proposed theatres will proportionately stryghts.
- 6) Major overhaul - It is a major change in the overall structure of armed forces (currently - 17 command, 1 A&N group) command
-
- greater integration & rationalisation of manpower
- 1) With theatre creation - more synergy in operation among three organ organs of armed.
- 2) Resource will put to strategic use

as per need eg - distribution of younger
units as India has a scarcity in
its full capacity of readiness.

3) Theatre will have unified command
so, will facilitate integration.

4) Quick decisions - Rational use of resources.

5) Manpower Rationalisation - While
theatre overall requirement of armed
forces & not just separate requirements
can be understood, thus rationalising
overall deployment & recruitment.

A National Security Strategy which
clearly lays out parameters of defence &
security aspect is a guiding
light.

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)

Border villages such as located in Ladakh & Arunachal are very crucial from strategic & security point of view and they are eyes & ear of security forces

First village geographically &
in facilities

border areas

1) Develop the capacity of people in border areas - by providing basic amenities access to services such as - Healthcare & education.

2) Better infrastructure - will help the local people as well as help in movement of armed forces.

3) Improve people engagement in the border areas with security forces, further ~~border~~ bolstering security.

2) It will also strengthen claims to sovereign territory - Ordsy Cheis's Salamy slicing strategy which slowly steadily encroaches upon border village & lay own claims.

Measure being taken

1) Vibrant Village Programme -

By MoHA which seeks to develop the border areas by increasing investment in infrastructure such as school, hospitals

2) Construction of Road by Borderland infrastructure organisations - on a

Priority bars in the border regions such
as - Arunachal or Changtham ~~border~~ border.

- 3) Collaboration with neighbours - such
Kaladan Multi Model Project, Indian-Myanmar
Thailand trilateral to develop infra in
Muzo Bin & Manipur region.
- 4) for North East Region - PM-DIVINE
scheme
- 5) Invest in capacity building - eg EkLavya
school, Kardul Vikas Yojana, Aseem
Ustad scheme
- 6) Promote SNG & NCO - eg. Looms of
Ladakh
- 7) governance autonomy
eg - eg Schedule VI area in fundamental.

These are ear & eyes of security
forces.

SPACE FOR ROUGH WORK



VisionIAS