



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. : 01167967

अभ्यर्थी का नाम/Name of Student : SALONI GAUTAM

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

ENGLISH

तारीख
Date

25/8/2024

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

केंद्र
Centre

DEHRADUN .

निरीक्षक के हस्ताक्षर
Invigilator's Signature

Priya

	<p style="text-align: center;">महत्वपूर्ण अनुदेश</p> <p>उम्मीदवारों को नीचे उल्लिखित निर्देश सावधानी से पढ़ लेने चाहिए। किसी भी निर्देश का उल्लंघन करने पर उम्मीदवारों को मिलने वाले अंकों में कटौती, उम्मीदवारी रद्द या आयोग के परवर्ती परीक्षाओं के लिए वर्जित करने इत्यादि के रूप में दण्डित किया जा सकता है।</p>	<p style="text-align: center;">Important Instructions</p> <p>Candidates should read the undermentioned instructions carefully. Violation of any of the following instructions may entail penalty in the form of deduction of marks, cancellation of candidature, debarment from further Examination of the Commission etc.</p>
1	<p>(क) अपना पंजीकरण सं. एवं अन्य विवरण केवल प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) में उम्मीदवार के लिए निर्धारित स्थान पर ही लिखें।</p> <p>(ख) इस पुस्तिका में अन्यत्र कहीं भी अपना नाम, पंजीकरण सं., मोबाइल नं., पता अथवा प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) संख्या न लिखें जिससे आपकी पहचान का खुलासा हो।</p>	<p>(a) Write your Registration Number and other details only in the space provided in the Question-Cum-Answer (QCA) Booklet for candidates.</p> <p>(b) Do not disclose your identity in any manner such as, by writing your Name, Registration number, Mobile number, Address, Question-Cum-Answer (QCA) Booklet No. etc. elsewhere in the Booklet</p>
2	<p>अपनी प्रश्न-सह-उत्तर पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तर के अतिरिक्त कुछ न लिखें जैसे कि कोई कविता/दोहा, अभद्र या अपमानजनक अभिव्यक्ति इत्यादि और न ही कोई ऐसा चिन्ह/निशान बनाएं जिसका उत्तर से सम्बन्ध न हो।</p>	<p>Do not write in the QCA Booklet anything other than the actual answer such as couplet, obscene, abusive expression etc., nor put any sign/mark having no relevance to the answer.</p>
3	<p>परीक्षक को प्रत्यक्ष/अप्रत्यक्ष रूप से कोई भी प्रार्थना/धमकी भरी बातें न लिखें।</p>	<p>Do not make any direct/indirect appeal/threat to the examiner.</p>
4	<p>उत्तर अस्पष्ट अथवा गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।</p>	<p>Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.</p>
5	<p>उत्तर स्याही में ही लिखें। उत्तर लिखने के लिए पेंसिल का उपयोग न करें, हालांकि आरेख, चित्र इत्यादि बनाने के लिए पेंसिल का उपयोग किया जा सकता है।</p>	<p>Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.</p>
6	<p>प्रवेश पत्र में उल्लेख किए गए माध्यम के अलावा अन्य किसी माध्यम में उत्तर न लिखें। अधिकृत और अनधिकृत की मिली जुली भाषा का भी उपयोग न करें।</p>	<p>Do not write answers in medium other than the authorized medium in the Admission Certificate. Do not use mixed language either i.e. authorize and unauthorized media together for writing answers.</p>
7	<p>प्रश्नों के उत्तर ठीक उसके नीचे दिए गए निर्धारित स्थान पर ही लिखें। निर्धारित स्थान के अलावा किसी अन्य स्थान पर लिखे गए उत्तर का मूल्यांकन नहीं किया जाएगा।</p>	<p>Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.</p>
8	<p>यदि आप अपने किसी उत्तर को रद्द करना चाहते हैं तो उसे पेन से काट दें तथा उस पर "रद्द" लिख दें, अन्यथा उसका मूल्यांकन किया जा सकता है।</p>	<p>If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.</p>

कार्यालय के प्रयोग हेतु For Official Use	कार्यालय के प्रयोग हेतु For Official Use
<p>परीक्षक के हस्ताक्षर Signature of Examiner(s)</p>	

प्राप्तांक के विवरण (परीक्षक द्वारा भरा जाए)/ Marks Details (To be filled by the Examiner(s))

प्रश्न सं. Q. No.	अंक Marks		प्रश्न सं. Q. No.	अंक Marks	
1			11		
2			12		
3			13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		
उप-योग (A) Subtotal (A)			उप-योग (B) Subtotal (B)		
सकल योग (A+B) / GRAND TOTAL (A+B)					



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Time Allowed: **Three Hours**

अधिकतम अंक: 250
Maximum Marks: **250**

प्रश्न-पत्र संबंधी विशेष अनुदेश

कृपया प्रश्नों के उत्तर देने से पूर्व निम्नलिखित प्रत्येक अनुदेश को ध्यानपूर्वक पढ़ें:

कुल बीस प्रश्न दिए गए हैं जो हिंदी और अंग्रेजी दोनों में छपे हैं।

सभी प्रश्न अनिवार्य हैं।

प्रत्येक प्रश्न/भाग के लिए नियत अंक उसके सामने दिए गए हैं।

प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए, जिसका उल्लेख आपके प्रवेश-पत्र में किया गया है, और इस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यू.सी.ए.) पुस्तिका के मुख-पृष्ठ पर निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिखे गए उत्तर पर कोई अंक नहीं मिलेंगे।

प्रश्न संख्या 1 से 10 तक का उत्तर 150 शब्दों में तथा प्रश्न संख्या 11 से 20 तक का उत्तर 250 शब्दों में दीजिए।

प्रश्नों में इंगित शब्द सीमा को ध्यान में रखिए।

प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गए कोई पृष्ठ अथवा पृष्ठ भाग को पूर्णतः काट दीजिए।

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are TWENTY questions printed both in HINDI and in ENGLISH.

All questions are compulsory.

The number of marks carried by a question/part is indicated against it.

Answers must be written in the medium authorized in the Admission Certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in a medium other than the authorized one.

Answers to Questions No. 1 to 10 should be in 150 words, whereas answers to Questions No. 11 to 20 should be in 250 words.

Keep the word limit indicated in the questions in mind.

Any page or portion of the page left blank in the Questions-cum-Answer Booklet must be clearly struck off.

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

1. खाद्य प्रसंस्करण उद्योग का तीव्र विकास किस प्रकार भारत में खाद्य सुरक्षा संबंधी चुनौतियां उत्पन्न कर रहा है? (उत्तर 150 शब्दों में दीजिए)
How is the rapid growth of the food processing industry leading to food safety challenges in India? (Answer in 150 words)

Rapid growth of FPI can open some lacunae in food safety domain, as high pesticide in food exports (oil) to Singapore.

The reason for same is :-

1. Lax authorities in placing checks & balances of on and FPIs.
2. Lacking third party assessment in auditing food products safety standards.
3. Issue of food adulteration by organized crime rackets
eg) Milk & Paper made by synthetic process.
4. Extension of shelf life of products, by infusing food with chemicals.
5. By using chemicals to make/increase physical appeal, flavour of food product.
eg) Cotton Candy ← Rhodamine presene found.

6. Irregular audits

eg Nestle Maggi - lead poisoning.

7. Participation of MSME with substandard of hygiene, poor technology usage in food exports

8. Low investment in R&D

eg Food irradiation techniques kills pests.

To realise FPI potential, these challenges needs to be mitigated :-

1. ↑ R&D
2. Stricter regulation and periodical audits
3. Aligning with phytosanitary measures for exports market.

FPI can act as link between Agriculture and manufacturing realisation potential. Challenges needs to be mitigated.

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 हार्जिए ने
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

PDS system comes into existence with
NFSA, 2013 [National Food Security Act, 2013]
which aims to distribute food grains to
80 cr population at subsidised prices from
FPS outlets in state.

FPS is an evolving process:-

1. Technological upgradation of FPS.
2. Digitization of FPS
3. Biometrically automated system [BAPU] in place to avoid inclusion error.
4. Upgrading infrastructure of FPS shops.
5. Eliminating [Corruption] by digitally integrating.
6. Role of FCI and State government to manage these shops.

उम्मीदवारों को
इस हिसाब में
नहीं लिखना
चाहिए
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VisionIAS

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

Agri-tech Startups are transforming agriculture space by way of innovation, use of new age technology (AI, ML, etc) in making this sector remunerative.

Role in enhancing Farm Productivity :-

1. Enhancing crop yield by rationalising inputs.
2. Crop prediction by ^{estimate} weather predictability
3. Use of efficient water methods, spraying pesticides etc.
eg) Drone usage in spraying pesticides.
4. Estimation of demand, thereby suggesting crops to farmers.
5. Custom Hiring Centers (CHCs) in Uber pooling model to increase farm mechanization.

6. Improving soil health, by curating products based on Soil Health Card.

Market Access

1. Building resilient supply chain for produce.
eg) Ninja Cart.
2. Expanding choices for farmers to sell → ↑ in bargaining power.
3. Eliminating APMC Monopolies by engaging in Contract farming link.
4. Promotes Urban farming by linking Health conscious Urban families with organic producing farmers.
5. Data modelling for crop assessment in next season prevents Food inflation.

Government schemes for supporting agritech will help in transforming agri from 'farm to fork'.

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

Digitization of land records by PM SUAMITVA,

Bhoomi (Karnataka) will help in mapping

land records, ownership of land, its use in digital format for ease in usage by using GPS technologies.

Its roles in implementation of land reforms :-

1. Determining ownership of land can help in land ceiling determination.
2. Promotes land consolidation by Farmer Producer Organisation (FPO) without fear of land grabbing.
3. Necessary step towards Conclusive land titling from presumptive land titling.

4. Mitigates land disputes cases clogging judiciary.
5. Improves infrastructure development, by compensating land owners and easy land acquisition.
6. Helps in determining rights of tenant farmers and hence, better policies for them.
7. Aid in land distribution to marginalised communities.

DILRMP scheme is the umbrella scheme which aims to achieve land digitization. It must be done as soon as possible for further land reforms

5.

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

To fully exploit its demographic dividend and accelerate economic growth, India needs to adopt a manufacturing-led growth model. Discuss. (Answer in 150 words)

10

India is in its 37 year long demographic period and due to nature of manufacturing sector of being labour intensive, it is must to focus on this sector.

Need :-

1. Leapfrogging from agriculture to service caused Jobless Growth to India.
2. Incapacity of Service sector to create jobs in large number and quickly too.
3. Huge investment is needed in human Capital for white collared jobs; whereas adequate investment in human capital for blue collared jobs.
4. To tap 'China+1' strategy investment into India.
5. To become part of Global Value Chain (GVC) (~2.4%) in commodities.

6. For achieving 'Inclusive Growth' .
7. For achieving 'Export led growth model'
via manufacturing .
8. For balanced & regional development .

(eg) One district one product scheme .

9. For leveraging relative competitive
advantage in labour intensive

(eg) Textiles, leather etc .

10. For supporting traditional skill craft by
generating employment opportunities .

(eg) Pathani silk saree of Gujarat .

However, logistic

Government policy of P.LI, Design
linked Incentive, Employment linked incentive

(EDI) schemes; Upgradation of ITIs ;
implementation of labour laws will help in
development of manufacturing sector .

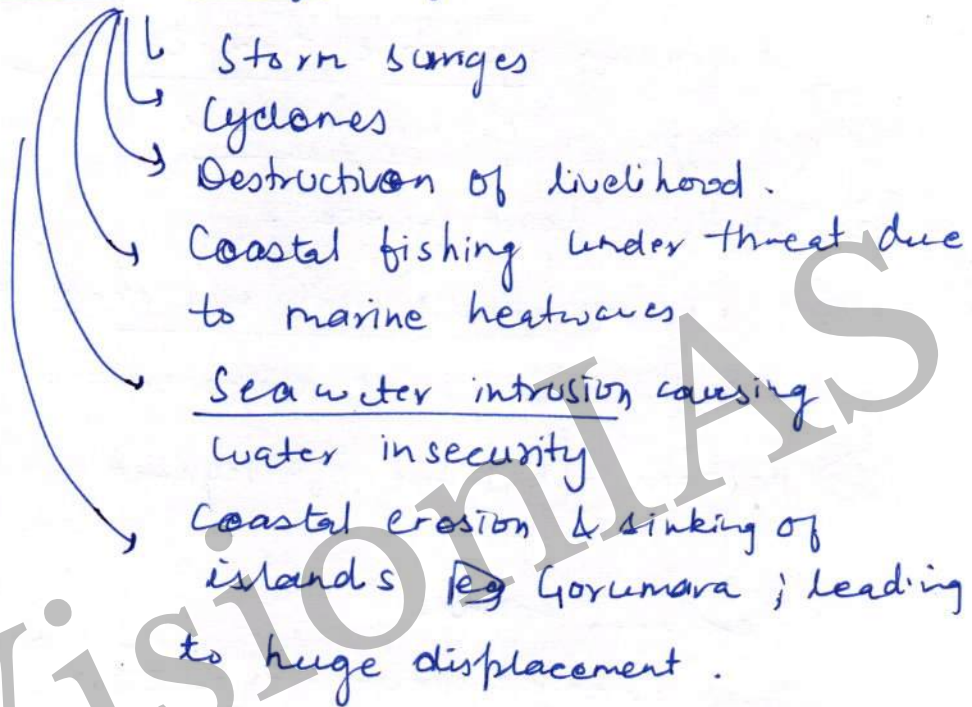
6.

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

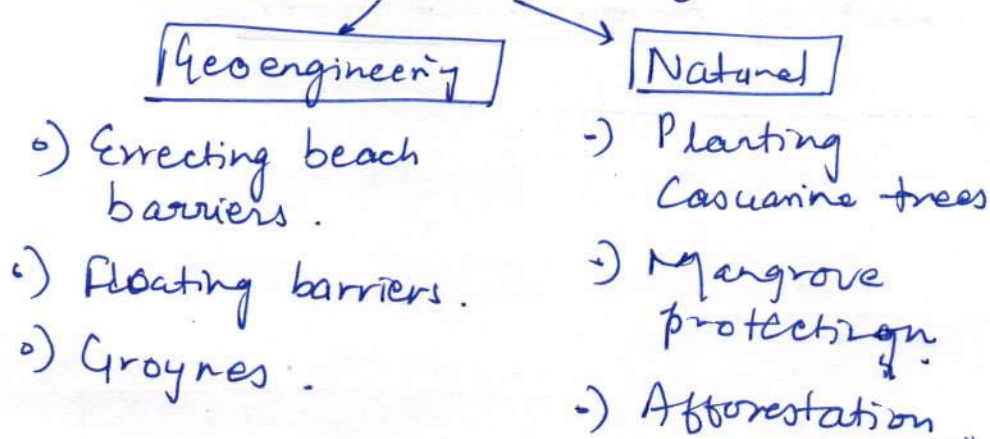
उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
Candidates must not write on this margin

Indian coastal communities are vulnerable to climate change hazards like:-



It is necessary to build resilience to tackle natural hazards by:-

1. Coastal shoreline stabilization



2. Government schemes

- 2) MISHTI - Mangroves protection
- 3) PM-MSY - Fishing promotion and aquaculture adoption.

3. Sustainable agriculture practices adopted by coastal people.

eg) Kuttanad Sea level farming (KIATHS) in Kerala.

4. Implementation & strict adherence to CRZ regulations.

5. Deployment of Early Warning systems for cyclones to save lives.

6. Implementation [Geological Committee] report to avoid landslides in regions like Western Ghats.

For inclusive development, sustainable approach is required. Building resilience is multipronged approach, hence stakeholder participation is appreciated.

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

Green Credit Programme by MOEFCC under

EPA, 1986 is launched by India in

COP 28 - UAE.

Role / Significance :-

- ① Incentivising Voluntary efforts towards protection of environment.
- ② Applicable to civil societies and individuals; unlike corporates in carbon trading credits.
- ③ Aims to achieve behavioural change.
- ④ Complements & balance individual initiative, without compromising economic growth by industries.
- ⑤ Pushes corporates to engage in energy-transition technologies.

Certain Challenges :-

- ① Fear of greenwashing.
- ② Procedure and regulation of Green Credit scheme lies with ICFRE, Dehradun; not a statutory body.
- ③ Seen as delaying in attempt of achieving carbon neutrality.
- ④ Could not impact to nudge eco-friendly practices of corporate.
- ⑤ Misuse of credit by evil society.
- ⑥ Lack of monitoring & regulating efforts.
- ⑦ Activities that qualify as green credit needs elaboration.

Step is positive, however its implementation needs to be seen. Safeguards & checks & balances be in place it must,

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

NAVIC is Indigenously developed
Satellite navigation system covering
1500 km from India's frontier consisting
of 7 satellites → 4 Geosynchronous
→ 3 Geostationary.

4. China -

Bei-
Dou(Existing
Satellite
System)

1. USA - GPS

2. EU - GALILEO

3. RUSSIA - GLONASS

5. Japan -

QZSS

Thereby, India's own NAVIC

has certain advantages:-

① Military application

→ Resolution of less than 1 cm

provides tactical advantage
to forces to carry out mission.

- ② Services to citizens with standard positioning services.
- ③ Better flight management used by DGCA.
- ④ Useful for traffic management, urban planning etc.
- ⑤ Collaborated with LAGAN to enhance maritime surveillance.
- ⑥ Reduce dependency on foreign powers.
- ⑦ Better resource optimisation by detailed oriented planning.

Hence, it is needed for India.

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)

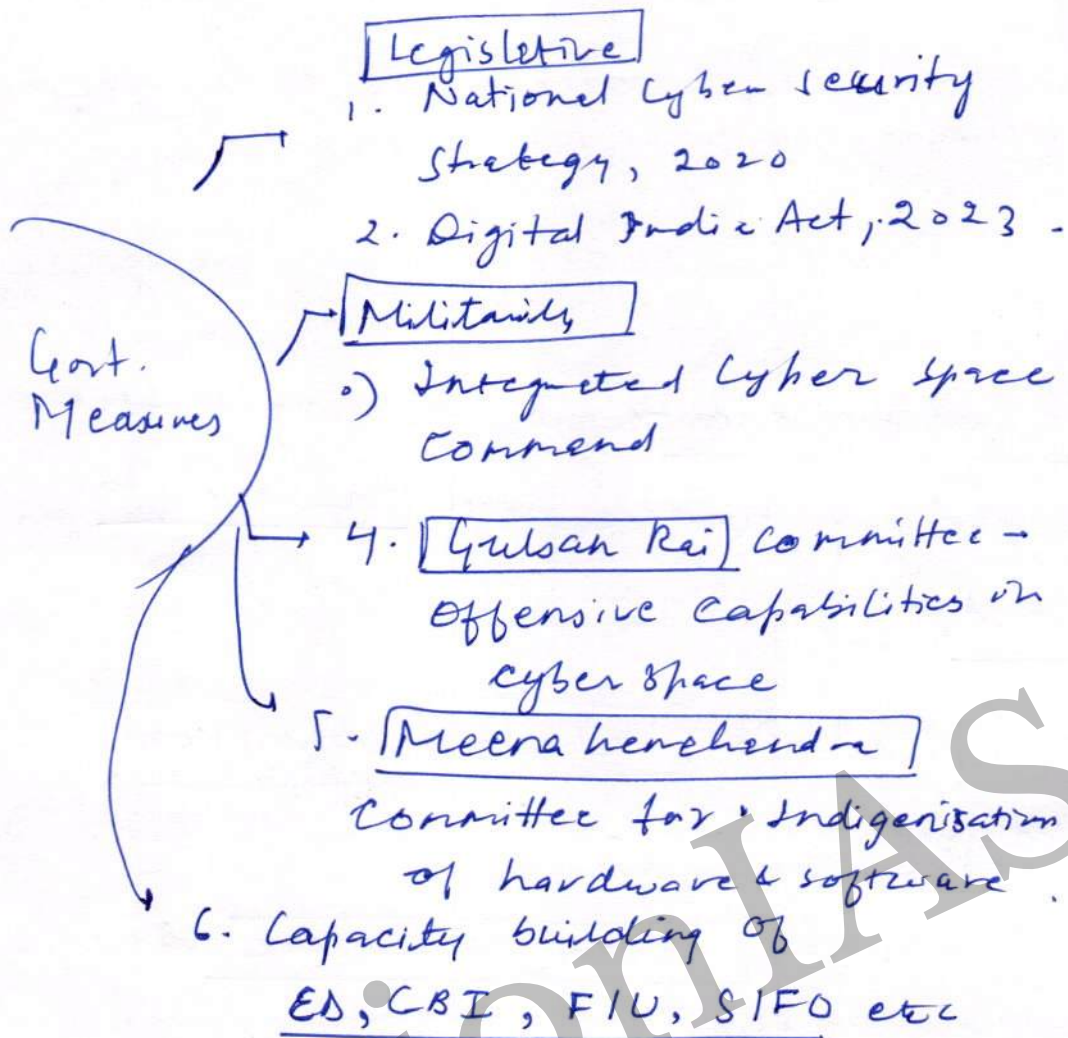
Cyber-enabled financial crime has emerged as the new frontier of global money laundering. Discuss. How can the government address this issue? (Answer in 150 words) 10

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

Recently, South East Asian countries have been caught where Indians being illegally employed and engaged in cyber enabled financial crime.

New frontier of Global Money Laundering :-

- ① Anonymity shields from investigative agency.
- ② Automated transaction shields source of layering money.
- ③ Decentralised nature due to blockchain made tracing difficult.
- ④ Use of cryptocurrency poses threat to economic sovereignty of country.
- ⑤ Linkages with terror groups & organized crime.
- ⑥ Use of dark nets for illegal selling of drugs → Silkroute.



To protect new frontiers, Cyber police must be energized with training and capabilities.

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 adoption is necessary in face of changing warfare from traditional to hybrid.

Need for Technology absorption in defence sector :-

- ① Provides Tactical advantage against adversaries.
- ② To optimize resource constraints and efficient utilisation of resources.
- ③ To complement manforce and reduce their ~~se~~ chances of sacrificing life.
- ④ To aid in better decision making.
- ⑤ In times of cost competitive warfare, with significant damage.

eg) Precision drones

(C) To counter new age threats like cyber frauds, attacks, drone attacks etc.

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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- Challenges faced by Indian Army
1. Developed nations ahead in race of LLM - ~~eg~~ China has 248 LLM, whereas India started with BharatGPT
 2. Inadequate domestic manufacturing capabilities.
 3. Inadequate R&D to research new age technology application in defense.
 4. Mean age of Indian Army is 28 years; hence adoption becomes difficult.

AI wing in Indian Army, Drone manufacturing policy, Policy on promotion of technical textiles, AgriVet for Agile armed force will help in technology adoption of Indian Army.

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 हिसाब में नहीं लिखना चाहिए
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North-Eastern Region (NER) is composed of seven sister states separated by Siliguri corridor. It has been underdeveloped due to neglect and frequent political instability.

Some issues in the development of trade & industries are :-

1. Poor development of logistics in the states.
2. Issues of conflict due to porous border with Bangladesh and Myanmar
3. Political neglect after independence.
4. Ethnic diversity causing instability in region.
eg Kuki-Meitei conflict in Manipur.
5. Radicalised insurgent outfits
eg NSCN-IM destabilising Nagaland.



6. Less skillful human resource availability.
7. Under utilisation of hydroelectric potential of Brahmaputra.
8. Low FDI attraction in NER.
9. Illegal migration of Refugees and organized crimes in NER disturbs social fabric.
10. Thickly forested region and huge diversity of flora and fauna restricts developmental works due to protest by Environmental activists.

Yet, few industries like oil and natural gas along with coal prospered in this region.

eg) Digboi oil field of Assam.

And, recent investment in Bamboo products, Silk industry are giving results.

Other Measures for NER development areas :-

1. National Mission on organic value chain development in NER.

2. National Mission on Edible Oil - Oil Palm (NMEOP - OP) to reduce import dependency.
3. Dedicated ministry on North Eastern development.
4. Development of Physical Infrastructure - Kisan Rail, Krishi Udaan 3.0 ; Digital via Bharat Net ; Social via Government schemes - PMAY, TELE MEDICINE etc.
5. North Eastern Council for collaboration and cooperation in solving deadlocks.
6. Multiple security peace agreements by center and radical outfits (ULFA etc).
7. International diplomacy to ensure connectivity and boosting trade in region through Kaladan Multimodal Project , BBIN , disruption of Free movement Regime etc .

NER is integral part of India and its overall development is required for National Integration.

12.

जलवायु परिवर्तन और बढ़ते जल संकट के युग में, सूक्ष्म सिंचाई प्रणालियां भारत में संधारणीय कृषि पद्धतियों में किस प्रकार योगदान दे सकती हैं? (उत्तर 250 शब्दों में दीजिए)

In the era of climate change and growing water scarcity, how can micro-irrigation systems contribute to sustainable agricultural practices in India? (Answer in 250 words)

15

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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As per MoJS, by 2031, India's per capita water availability will be down to 1387 cum classifying under water stress category. A lot of this is attributed to climate change induced variability in Indian monsoon.

The solution to conserve water lies in sustainable agriculture practices - i.e. Microirrigation

1. Saves water

As per ES-2019; 18% water efficiency could be achieved by micro-irrigation systems.

2. Increase yield, hence crop productivity.

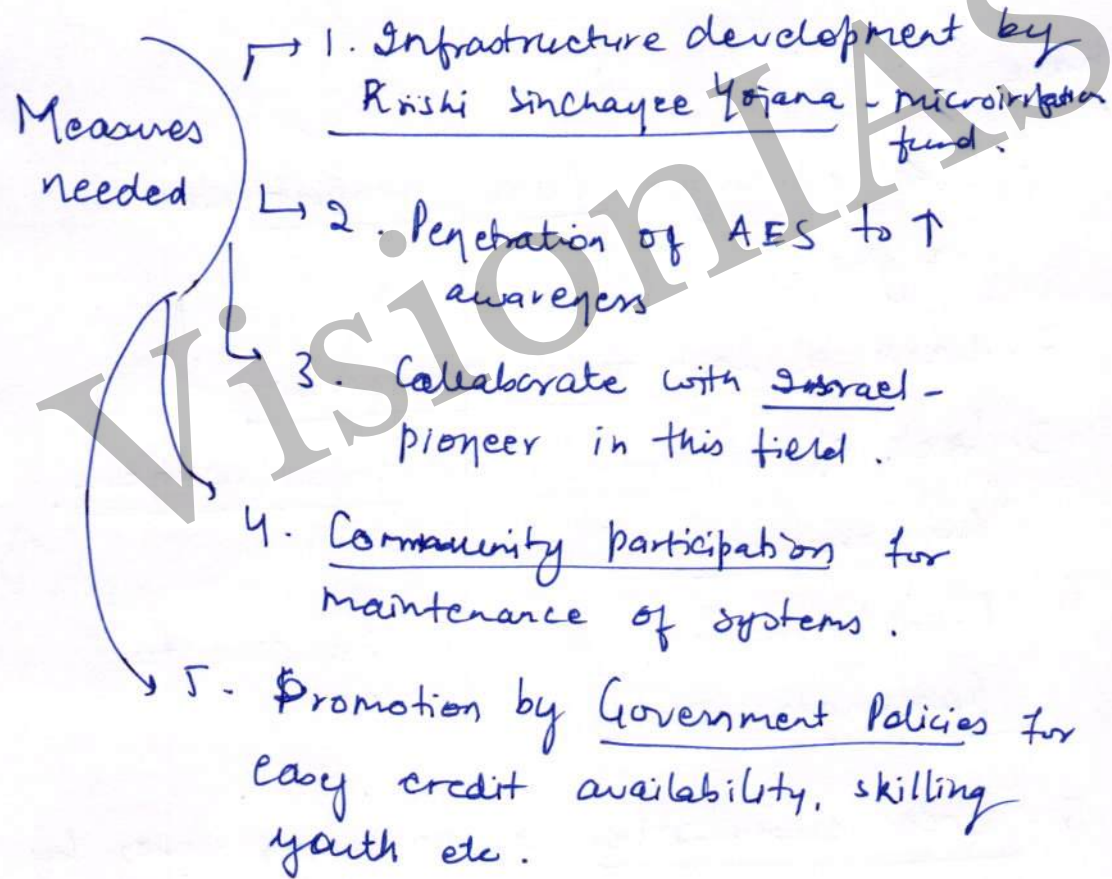
3. Prevents soil degradation by not making it salinized or alkaline.

4. Prevent nearby water bodies from Eutrophication, hence water security.

5. Promotes efficient use of fertilisers.
↳ Sprinkler or drip systems mix with liquid fertilisers. (Fertigation)
6. Prevents land degradation as Ground water excess withdrawal could lead to land subsidence.
7. Prevents excess consumption of electricity used in tube well irrigation.
8. Helps in targeted approach, thereby creating suitable microclimatic conditions for crops.
9. Aid in crop diversification, building resilience of Farmers.
10. Increase income of farmers by rationalising input cost.

However, certain issues exists in adoption of micro-irrigation :-

1. Huge infrastructure cost.
2. Low skilled labour availability.
3. Low penetration of Extension Service (AES), hence, low awareness to farmers.
4. High cost of maintenance as system gets clogged up.
5. Low adoption rate due to easy Govt. policies on electricity subsidy etc.



It can aid in achieving SDG 2.3 (Sustainable agriculture practice) for overall development for agriculture.

13.

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

What strategies can be adopted to overcome the issues pertaining to freight transportation in the Indian Railways and increase its share in the domestic freight? (Answer in 250 words) 15

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Indian railways share in freight : passenger is poor having 30:70; heavily skewed towards passenger share.

Issues pertaining to Freight transport share :-

1. Over emphasized Road transport for freight.
2. Lack of last mile connectivity.
3. Lack of specifically designed wagons for products.
4. Over crowded railway lines due to passenger trains.
5. Cross subsidization of passenger fares by freight profits.
6. Under capacity of catering traffic.

7. Single lines for passenger and freight trains.

8. Slow speed and higher emissions due to poor development of technology.

9. Lack of integrated policy to profitize freight potential.

Strategies adopted

1. Focus on multimodal connectivity to decrease logistic cost from 14% to 8%.

2. Ensuring last mile connectivity like roadways.

3. Expansion of railway track lines.

4. Expansion of private sector in railway wagons for various products.

5. Infusing technology to optimize freight capacity.

6. Tie up with businesses to offer railway freight services.

(eg) Automobiles share by freight train has risen exponentially.

7. National Rail Plan, 2030 by focussing
on raising freight share.

8. Utilising present capacity at optimal
level. like Uber service

9. focus on freight independently by
Dedicated Freight Corridors.

10. Safety of Rails \Rightarrow KAVACH.

Therefore, schemes in Budget, 2023
about 1. High density network.

2. Port connectivity (Sagarmala) will
help in catering to increasing passenger
load and increase freight share.

Since, it is less carbon emitting,
safe, cost effective, time saving, increase
railway freight share must be a priority.

14.

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

Discuss the factors that have aided India in making impressive strides in the renewable energy sector and establishing itself as a frontrunner in the global renewable energy transition. (Answer in 250 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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15

India's share has increased to 45.6% of Renewables in Total Energy mix in 2024.

It has made possible due to Various responsible Factors :-

1. Dedicated and Integrated policy framework.

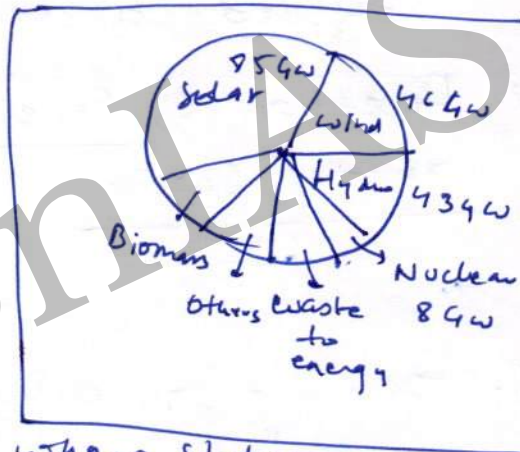
eg National Solar and Wind Hybrid Policy.

2. Cooperative Federalism where States Capitalising on their Strengths.

eg Tamil Nadu - National offshore Wind Policy.

3. Ease in credit availability under PSL category for energy transition.

4. Mission in new frontiers like Green Ammonia, Green H₂ etc.



5. Diplomatic efforts in International Solar Alliance, Global Biofuel Alliance etc.
6. Focus on Waste to Energy plants.
7. Targets like :-
 - i) 20% Ethanol blending by 2025.
 - ii) CoBardhan scheme for biomass, fuelled its adoption.
8. Adoption of Renewables by Hard to abate sectors. India & Sweden Lead IT 2.0
9. Focussing on utilisation of Inter State Water Sharing treaty.
Eg) Rattle (run of river) project on Chenab.
10. Focus on Small modular nuclear power plants to utilise redundant thermal power infrastructure.
11. Skilling youth for energy transition
12. R & D investment for Battery Storage

13. Utilising North Eastern hydroelectric potential. to its optimal capacity.

14. Decentralised generation of electricity

eg PM KUSUM for Agriculture.

eg Bio-pellets from Stubble, avoiding stubble burning.

15. Exploring technologies like

i) Ocean thermal difference.

ii) Geothermal energy (Ladakh plant by ONGC)

iii) Tidal energy etc.

India's Multifranged approach helped in of keeping it track to achieve SDG-6 (affordable energy), by generating green jobs and sustainable development.

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

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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Environmental pollution signifies degradation of land, soil, water in totality.

Agricultural runoff is prime responsible for causing it when laden with fertiliser & pesticides.

It is by :-

1. Eutrophication of water bodies.
2. It leads to mass dying event of aquatic life, increasing Biological oxygen demand (BOD) and Chemical oxygen demand (COD).
3. It contaminates groundwater by heavy toxic elements.
4. Bioaccumulation and Biomagnification of pesticides in food chain impacting whole biodiversity.

5. Impacting human health, responsible for causing cancer.

6. Contaminates soil, making it unfit for supporting crop diversity.

eg) Crop Response ratio due to fertiliser has declined from $\frac{12:1}{(1960)}$ to $\frac{5:1}{(2010)}$

7. Also leads to soil desertification in extreme cases.

8. Destroys land fertility by excessive usage.

9. Responsible for soil alkalisation.

10. Negatively impacts, bacteria already present in soil.

Measures taken to mitigate agricultural runoff :-

1. Controlling fertiliser & pesticide usage.

eg) Nano Urea, Nano DAP.

2. Supporting farmers by adopting Integrated Farming practices

eg) Agri-silvi Culture (Crops + Trees) to resist heavy flow of water.

3. Increase in penetration of Agriculture extension service for Nano Urea adoption.
4. Increase in awareness among farmers
eg Paani Bachao Paisa Kamao Campaign.
5. Rationalising subsidies in eco-friendly manner.
6. Adoption of micro-irrigation and fertiligation techniques.
7. Use of Soil Health Card along with Kisan Credit Card for enhancing credit and input rationalisation to farmers.
8. R & D in agriculture; Crop diversification, GM crops adoption to reduce pesticide usage
eg BT cotton.

Protecting environment without compromising economic development of farmers is need of hour.

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 छवि में नहीं लिखना चाहिए
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15

Himalayan States are witnessing growing tourists (e.g. Kashmir witnessed 2.1 cr tourists in 2023), putting pressure on already strained resources.

Growing Tourist economy is due to:-

1. Rise in disposable income of middle class.
2. Rise in penetration of social media.
3. Supportive Government Policies by vibrant ~~tourists~~ tourists ~~from~~ Himalayan states.
4. Attractive cold weather of Himalayas.

However, it has lead to States going beyond carrying capacity causing man-made disasters :-

1. Rampant landslides due to illegal construction of hotel, dhabs etc on destabilised slopes.

2. Land subsidence

eg Joshimeth due to inland-drainage, over pressure of population leading to collapse.

3. Avalanches due to rising emission (GHG) in Himalayas → Black Carbon → Reducing Albedo → Melting of glaciers.

4. Glacial lake outburst floods (GLOFs) for the same reason.

5. Water scarcity due to over utilisation of water in 5 Star hotels by tourists.

7. Road congestion due to over-estimated tourist arriving in a day.

8. Collapse of man-made structures-bridges, tunnels by natural disasters like floods.

eg Himachal Pradesh Floods, 2023.

9. Encroaching flood plains by illegal construction, made states prone to flooding.

Measures
needed

1. Eco-centric approach of development.
2. INDMA Report on Himachal Disaster highlighted :-
 - Strict enforcement of land-use policy.
 - Destroying & Penalising ill-legal construction.
 - Afforestation on areas near river bed for its stability.
3. Geo-engineering methods for slope-stability like Rock & Bolt; Inland-drainage pipe outlet to prevent landslides.
4. Early Warning systems for Adventure tourism to flourish.
5. Decentralised tourism by making mini-/Satellite tourist sites to reduce overpressure.
6. Schemes like Parvatmala, Ropeway, Astro-tourism promotion, village stays, wildlife/eco tourism etc can aid in sustainable development of Himalayan states.

Along with this, Technology infusion in estimating demand can help in predictive policies.

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 हिसाब में नहीं लिखना चाहिए
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Superconductors are devices which has negligible or zero resistance to flow of energy when cooled to sub-zero temperature.

They fuel innovation and in

Various fields :-

1. Helping in Industrial Revolution 4.0 devices.

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VisionIAS

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नहीं लिखना
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VisionIAS

18.

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

15

India's rank in Global Innovation Index

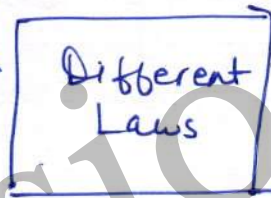
has improved to 40 from 80 in last 8 years.

A lot of this is attributed to improvements in intellectual property rights regime.

3. Patent Act, 1970

1. PPVFR Act, for farmers in breeding seed varieties

4. Trade marks act.



2. Copyrights Act

5. Biodiversity act, 2002.

Yet, despite these acts, certain challenges remain :-

Enforcement

1. Law authorities in mitigating bi piracy threats.
2. Low human capacity to counter such threats.

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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3. Inadequate capacity building of regulatory bodies.
4. Cross-border nature of crime restricts authorities to place checks.
5. Overlapping jurisdiction of various bodies scuffles operation.

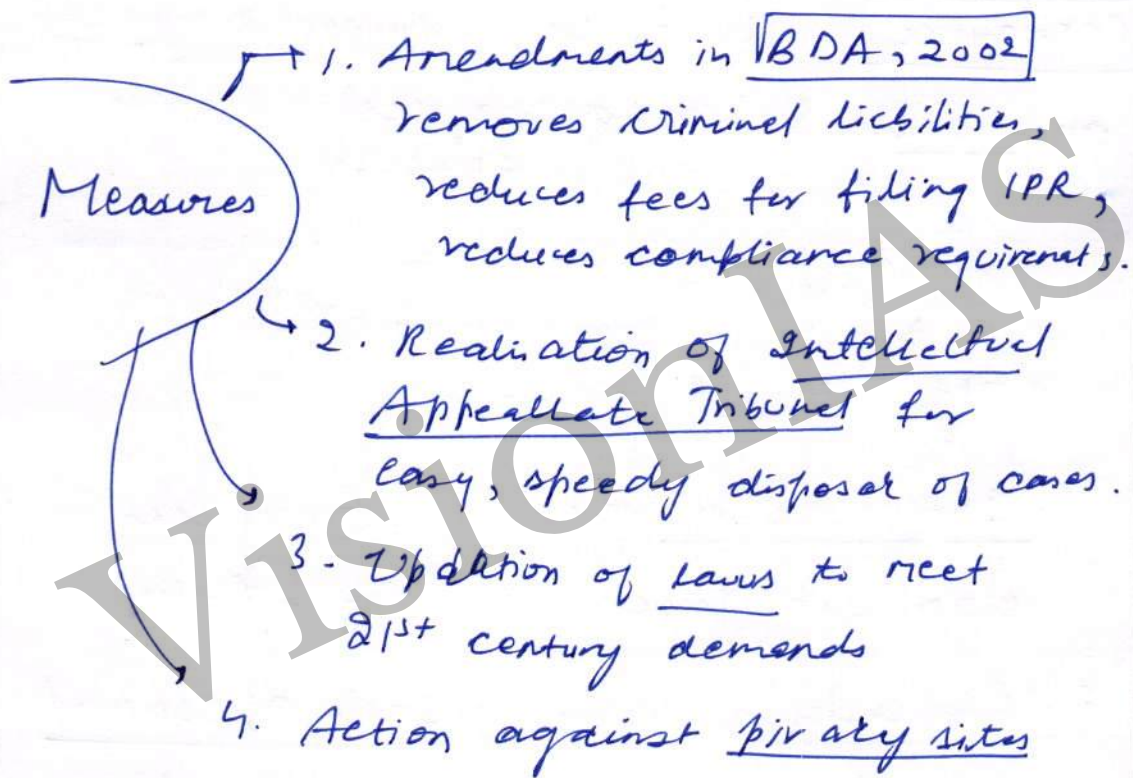
Regulatory

1. Dynamic updation is needed for present day needs in laws.
2. Strict regulations scuffles innovation.
3. Criminal charges instead of civil liabilities restricts innovation regime.
4. Compliance requirements hinders progress.
5. Exorbitant fees for filing patents, discourages new startups.

Administrative

1. Lacked airtical approach of administration

2. Corruption prevalence as piracy market is huge.
3. Inadequate funds.
4. Inadequate physical-digital infrastructure.
5. Inadequate capacity to counter such threats.



To be knowledge based economy,
regulating IPR is need of the hour.
Efforts must be taken to address
challenges.

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

उम्मीदवारों को इस हार्डिग में नहीं लिखना चाहिए
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Integrated theatre Command (ITC)

realised on recommendations of Shekatkar Committee; is to use combined manforce and assets in a geophysical domain -
geographical

Certain challenges, which is inhibiting its progress:-

1. Inter-Services rivalry :- Army seen as dominant force than Navy & Airforce.
2. Difficulty in analysing chain of command as different services has different systems.
3. Confusion with respect to decision making
4. Training requirements to align with ITC.

Despite few challenges, ITC has become necessary for evolving hybrid warfare.

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

USA, China has already streamlined their forces according to ITC. It will help India too, to combat new age warfare

by :-

1. Optimisation of resources

eg → IAF LCA Tejas Useful for Indian Navy too.

2. Benignity among services rather than rivalry.

3. Eliminate duplication of efforts.

4. Better flow of information leads to better decision making.

5. Avoids siloes approach, integration to tackle threats in 360° view.

6. Best practises could be shared & learned.

7. Cost & Time effective way; More impactful.

8. Specialisation over one geography.

9. Already, Integrated Theatre Command in western, maritime, northern border has been realised.

Present, changes that are on trajectory of ITC :-

1. Position of Chief of Defense Staff.
2. Talks about Integrated Cyber Command, Integrated Space Command.

India's growing economy and its aspiration of global leader requires tactical changes in modernising forces; ITC is one such necessary change.

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 development is not just strategic imperative but also of inclusive growth realised by vision of Vibrant Border Village programme.

Their role in Border security :-

- ① First line of information travels via local people.
eg) Experiences in Thargil War
- ② Permanent settlement reemphasize land boundary.
eg) China developing 'Xia-kang' villages on Indo-China border.
- ③ Dual-purpose infrastructure construction for military in times of conflict.
- ④ Protection against land grabbing techniques of China
eg) Salami-slicing

- 5) Intelligence gatherers
- 6) Local economy boasts via tourism.
eg Mane Village in Uttarakhand.
- 7) Supplement military efforts in crisis times.
- 8) Engages in cross border trades links developing cordial relations with neighbours.
eg Barahoti (Silk trade) in India-Tibet in past times in Uttarakhand.

To redise its necessity, to overturn Ghost Villages into vibrant economies, tag of first Village at border has been given.

Other Key Measures are:-

1. Atim Prahari Scheme :- To settle ex-defence employees in border terrains.
2. Skilling youth of border areas in tourist & hospitality sector.

3. Efforts of ECI in ensuring polling station at Kibitho, Arunachal Pradesh for inclusive electoral process.
4. Enrollment of beneficiaries in Government Schemes.
5. Investment in Education, health, Skill to improve Standard of living.
6. Improving physical-digital infrastructure to enhance their connectivity.

Such efforts will aid in 'Sabka Saath, Sabka Vikas', at the same time protect frontiers of country from threat.

SPACE FOR ROUGH WORK

 VisionIAS