



VISIONIAS

INSPIRING INNOVATION

ABHYAAS MAINS

सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2033)

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. : 570255

अभ्यर्थी का नाम/Name of Student : YOGESH DILHOK

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

ENGLISH

तारीख
Date

19-12-21

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

केंद्र

Centre

CHANDIGARH

Dr. J. K. Singh

निरीक्षक के हस्ताक्षर
Invigilator's Signature

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

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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.

भारत में कृषि प्रसार से सम्बद्ध मुद्दों का उल्लेख करते हुए, राष्ट्रीय कृषि अनुसंधान प्रसार प्रणाली को सुदृढ़ बनाने में कृषि विज्ञान केंद्रों (KVKs) की भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

Stating the issues associated with agricultural extension in India, discuss the role of Krishi Vigyan Kendras (KVKs) in strengthening the national agricultural research extension system. (Answer in 150 words)

10

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

Agricultural Extension Activities

are a critical element in transitioning agriculture from low productivity - high input & climate vulnerable to low input high productivity and sustainable agriculture.

Why Krishi Vigyan Kendras were needed?

- ① Build up of technological capability in Agricultural universities but no results in the fields
- ② Most agricultural models reduced to pilot projects -- which are abandoned on account of fear of farmers
- ③ Technologies being developed were not in sync with local demand and tested for newspaper headlines

Kisan Vigyan Kendras

- ↳ On field offices located among farmers for one to one dialogue and needs and aspirations of farmers
- ↳ varieties of seeds and know-how is available at the kendra for perusal.

There are places in Eastern Uttar Pradesh where potatoes are being grown with the same technology as it was in 1600- when it was first introduced. Smart dissemination of knowledge is critical to bring Indian Agriculture to 21st Century as $\frac{1}{2}$ the workforce depends on it.

2.

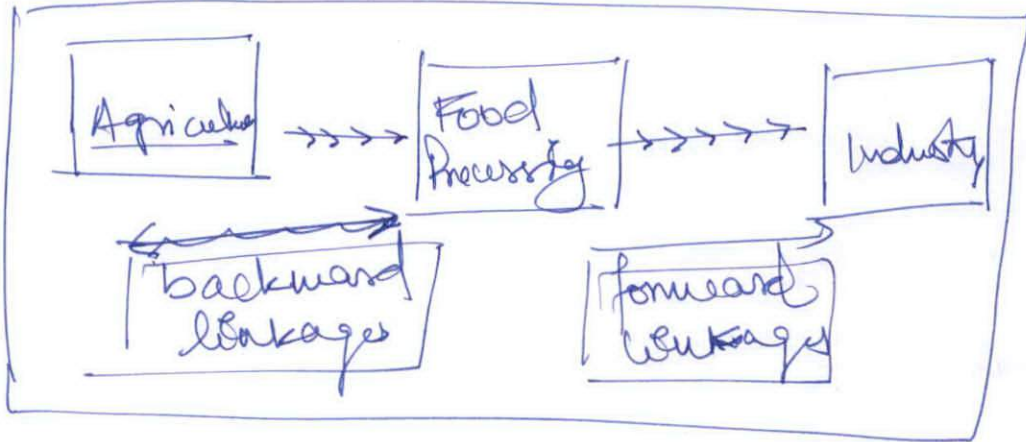
भारत में, खाद्य प्रसंस्करण क्षेत्रक मूल्य संवर्द्धन की अपार संभावनाओं के कारण एक उच्च संवृद्धि और उच्च लाभ के क्षेत्रक के रूप में उभर रहा है। चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

In India, the food processing sector is emerging as a high-growth and high-profit sector due to its immense potential for value addition. Discuss. (Answer in 150 words)

10

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Food Processing sector is a bridge sector between Agriculture and Industry



EMERGENCE → 10% compound annual growth to avoid massive wastage in Agriculture (₹40,000 crore - NITI Aayog)

employs 10 lakh people directly & indirectly

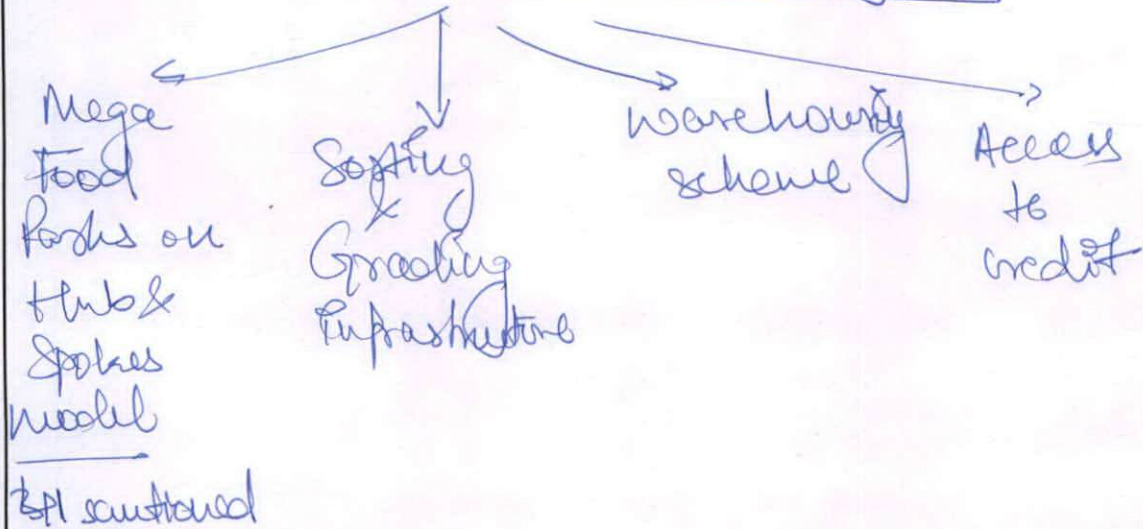
Ashok Dalwai → 85,000 crore needed to correct the infrastructure gap

India one of the largest producers of Agri goods → lot of wastage → bad nutrition, economic loss, lost export opportunity

↑ in demand by an urbanising India (butter packet instead of ghee)

Hence, to correct fragmented production of Agrigoods and irrational consumption

GoI → PM Kisan Sampada Yojana



Considering the massive opportunity for ~~minimising~~ unemployment & increasing exports, GoI has allowed 100% FDI in food processing, allowed priority sector lending and introduced PM-ME scheme with special emphasis on SHGs.

3.

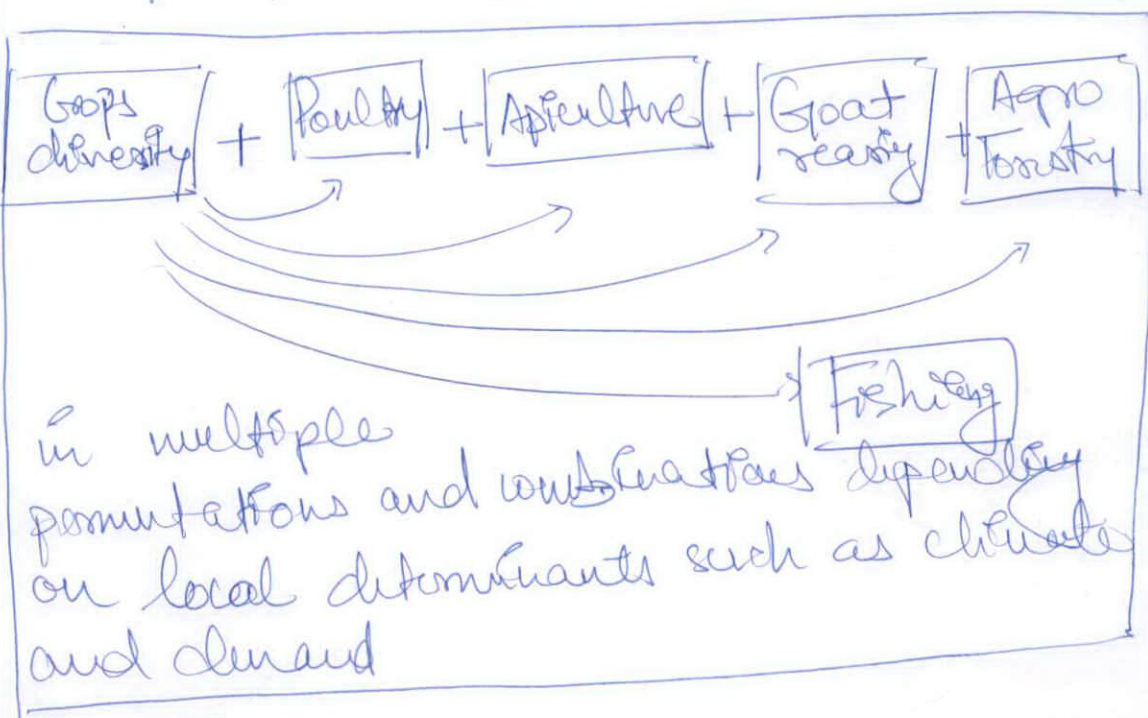
पशुधन आधारित एकीकृत कृषि प्रणाली (IFS) की अवधारणा की व्याख्या करते हुए, इसके लाभों पर चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

Explaining the concept of livestock-based Integrated Farming System (IFS), discuss its benefits. (Answer in 150 words)

10

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Agriculture in India suffers from vulnerabilities based on monsoon pattern, pest attack, low livestock, shifting consumption pattern, fluctuating govt. policy. Hence to stabilise incomes of farmers, GOI has introduced the concept of Integrated Farming System.



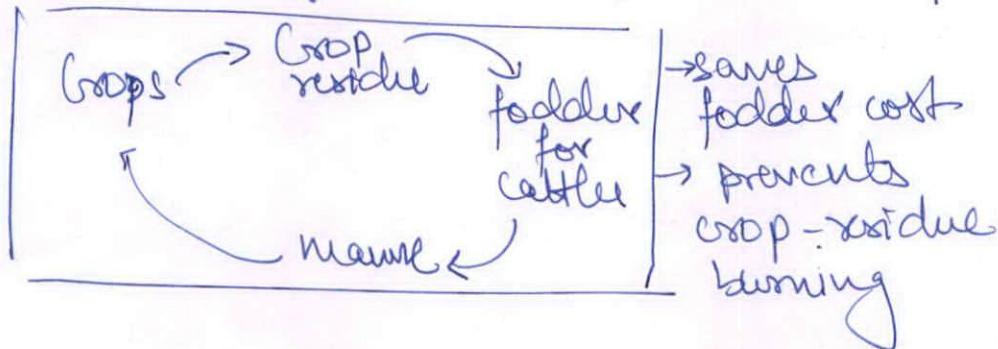
Benefits

① Income stabiliser → Tamil Nadu scheme for distributing Goats to rural

families has had an upward push to incomes

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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② reinforces agriculture productivity



③ Agro-forestry becomes a barrier against disease. ~~but~~ → ecological advantages → low pest attacks.

Integrated Farming & Institutionalisation of age old wisdom of farming against agricultural vulnerabilities. It should be promoted in all districts with its unique requirements.

4.

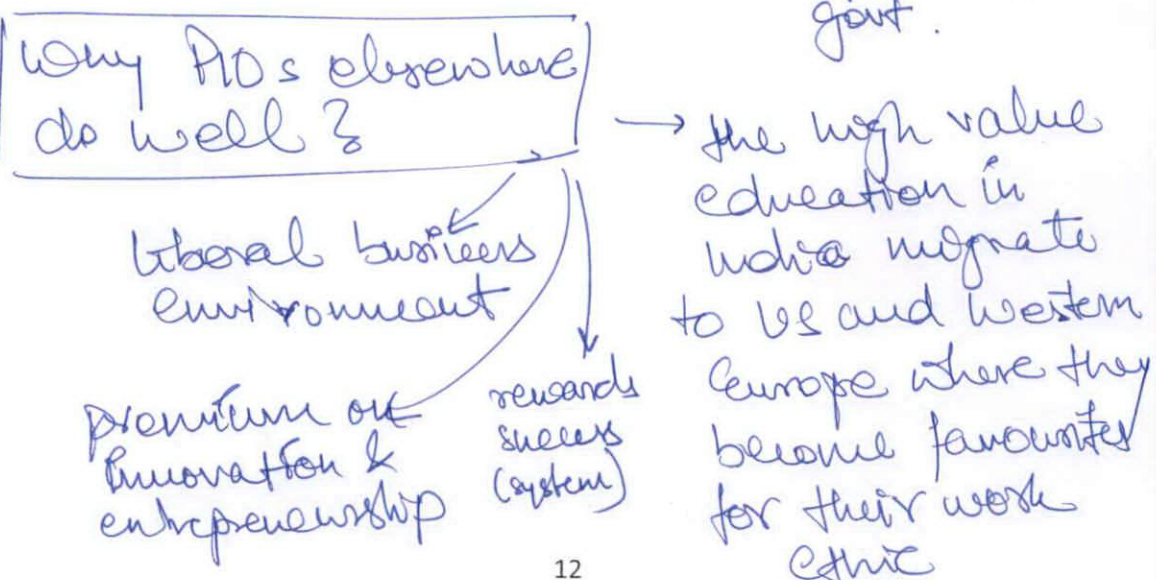
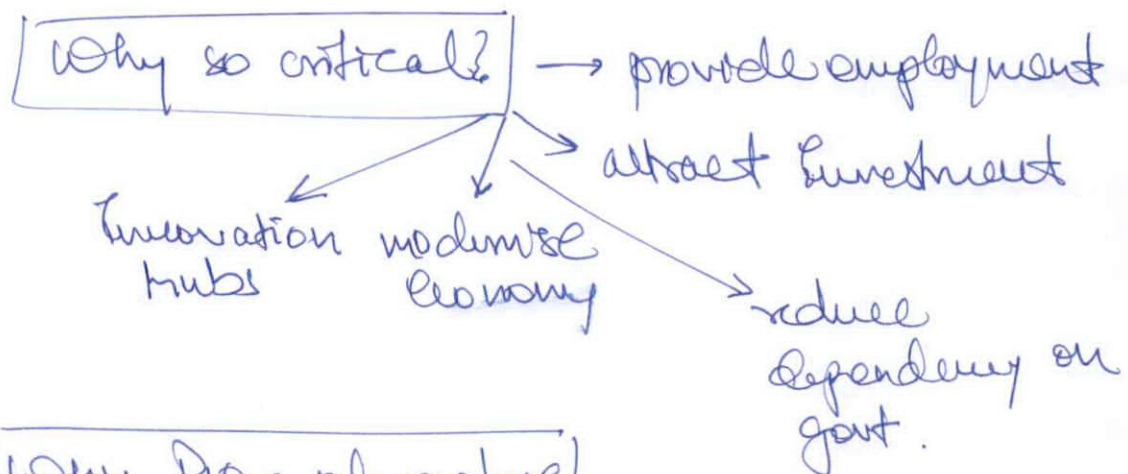
जहाँ भारतीय मूल के व्यक्ति (PIO) विश्व भर में उद्यमिता का नेतृत्व कर रहे हैं, वहीं भारत में अभी भी उद्यमिता दर सबसे कम है। चर्चा कीजिए। साथ ही, भारत में उद्यमिता की गति को बढ़ाने के लिए उठाए गए नीतिगत उपायों का भी उल्लेख कीजिए। (उत्तर 150 शब्दों में दें)

While Persons of Indian Origin (PIO) are spearheading entrepreneurship across the world, India still has one of the lowest entrepreneurship rates. Discuss. Also, state the policy measures that have been taken to increase the pace of entrepreneurship in India. (Answer in 150 words) 10

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Entrepreneurship remains the most critical value generating enterprise in a capitalist economy.

No economy can grow without a steady stream of risk-takers who are willing to predict future consumption patterns.



Issues with Indian entrepreneurship ecosystem

→ compliance regime is too much of a drag.
(400 clearances annual to operate a factory in NCR region)

Ease of Doing business is low

business success viewed with suspicion in the community

education system beats the natural entrepreneurial ability of children

Steps taken by India

→ ease of doing business ranking - state wise (name and shame)

handholding of small business

central portals for compliance

Quick Implementation of labour laws might 'unleash' the Indian tiger on the economic landscape.

5.

'भूमि बैंक' अर्थव्यवस्था को प्रोत्साहन देने और भारत में व्यापार सुगमता (ईज ऑफ डूइंग बिज़नेस) को बढ़ावा देने में महत्वपूर्ण भूमिका निभा सकते हैं। चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

'Land banks' can play a critical role in boosting the economy and promoting ease of doing business in India. Discuss. (Answer in 150 words)

10

Land banks are aggregations of land available with the Government readily available for economic activity. Govt has moved the wheels for setting up a land bank.

ADVANTAGES

- reduce the delays in land acquisition process which hampers the projects themselves
- reduce the compensation cost paid out to farmers for such acquisition
- does not need unpopular amendments to the LARR Act.

ISSUES

- Industrial Location is more important to industry - availability of labour & raw material - hence, just land itself might not be very attractive
- land bank experiments across the world have delivered mixed results

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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↳ fear that most of the land in the bank would be government land only → that could be ~~demanded~~ monetised easily!

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इस हिसाब में
नहीं लिखना
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While Land Banks have the potential to boost economy by making the most time-consuming process (land acquisition) a little less confrontational, government should consult industry & citizen groups for an appropriate legislative framework to facilitate this.

6. वन संरक्षण अधिनियम (FCA) में प्रस्तावित संशोधन, न केवल वन अधिकार अधिनियम (FRA) के विपरीत हैं, बल्कि इनके कारण भारत को जलवायु परिवर्तन पर अपनी प्रतिबद्धताओं को प्राप्त करने में देरी होने की भी संभावना है। चर्चा कीजिए। (उत्तर 150 शब्दों में दें)
- The proposed amendments to the Forest Conservation Act (FCA) are not only antithetical to the Forest Rights Act (FRA), but are also likely to delay India achieving its commitments on climate change. Discuss. (Answer in 150 words)

10

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7.

शहरी क्षेत्रों में बाढ़ की समस्या न केवल नदियों के उफान के कारण है, बल्कि उन अनियोजित तरीकों के कारण भी है जो हमारे नगर, शहरीकरण की प्रक्रिया में अपना रहे हैं। चर्चा कीजिए। इस संदर्भ में, शहरी बाढ़ पर राष्ट्रीय आपदा प्रबंधन प्राधिकरण के दिशा-निर्देशों का उल्लेख कीजिए। (उत्तर 150 शब्दों में दें)

The problem of flooding in urban areas is not only due to overflowing rivers, but also the uninformed ways in which our cities are coping with urbanisation. Discuss. In this context, mention the National Disaster Management Authority guidelines on urban floods. (Answer in 150 words)

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नहीं लिखना
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8.

इसरो अब केवल उपग्रहों के प्रक्षेपण तक ही सीमित नहीं है, बल्कि यह वर्षों से विकास गतिविधियों में अपनी भूमिका को लगातार बढ़ा रहा है। विवेचना कीजिए। (उत्तर 150 शब्दों में दें)

ISRO is no longer confined only to the launching of satellites, but it has been constantly enlarging its role in development activities over the years. Discuss. (Answer in 150 words)

10

उम्मीदवारों को
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9.

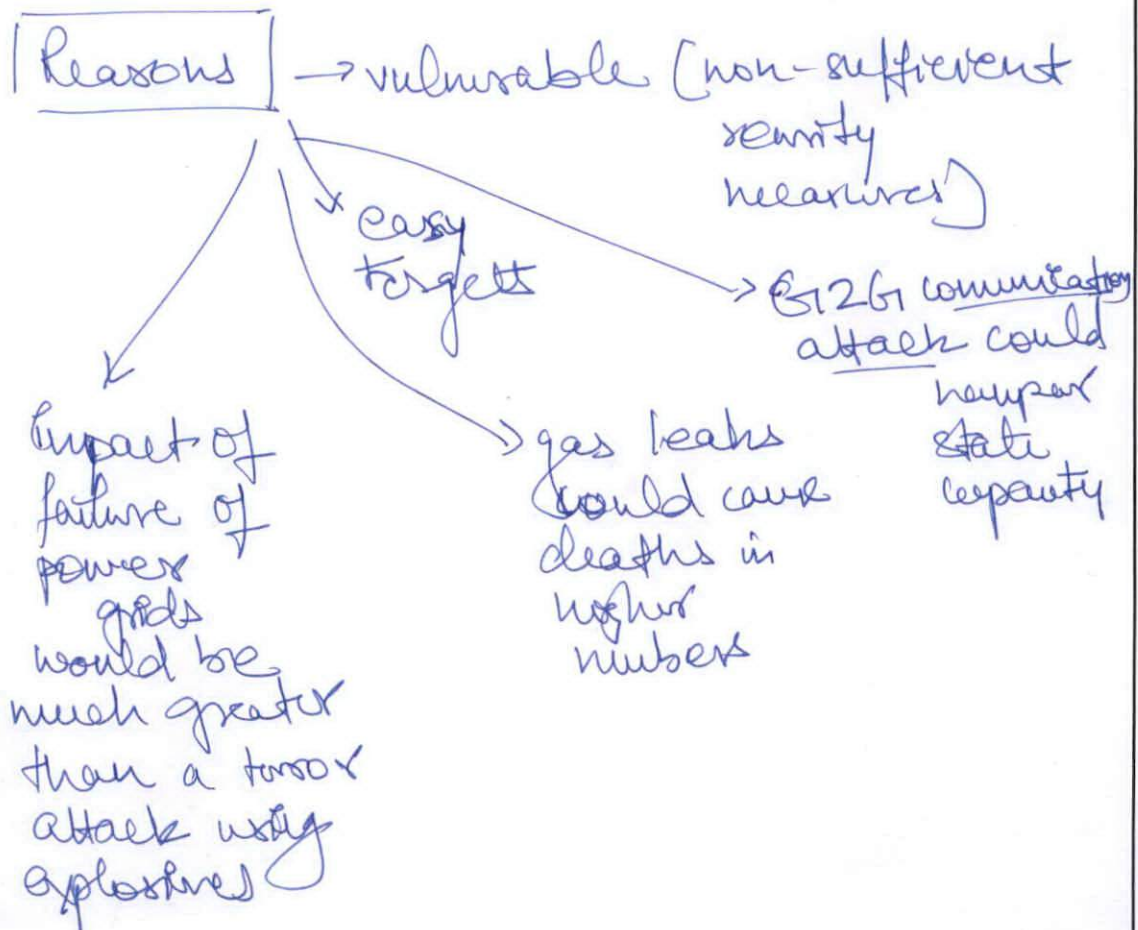
राज्य और गैर-राज्य अभिकर्ताओं द्वारा महत्वपूर्ण सूचना अवसंरचना (CII) को लक्षित करने के पीछे उत्तरदायी कारणों को बताइए। साथ ही, भारत सरकार द्वारा अपने CII को सुरक्षित करने के लिए उठाए गए कदमों पर भी चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

State the reasons behind targeting of Critical Information Infrastructure (CII) by state and non-state actors. Also, discuss the steps taken by the Indian government to secure its CII. (Answer in 150 words)

10

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Modern state runs on complex technologies. A reported Chinese attack on Mumbai hospitals during the peak of COVID crisis highlights Indian vulnerability in this domain.



Steps taken by India

Integrated
Response
at the
Central
level

Augmentation
of capabilities
in partnership
with FICCI

Emergency
Response
mechanisms
(CERT-In)

strengthening of
security at
the level
of critical
infrastructure

The ~~recent~~ attack on
Colonial pipeline in US highlights
the range of issues that could arise from
lax security of Critical Information
Infrastructure.

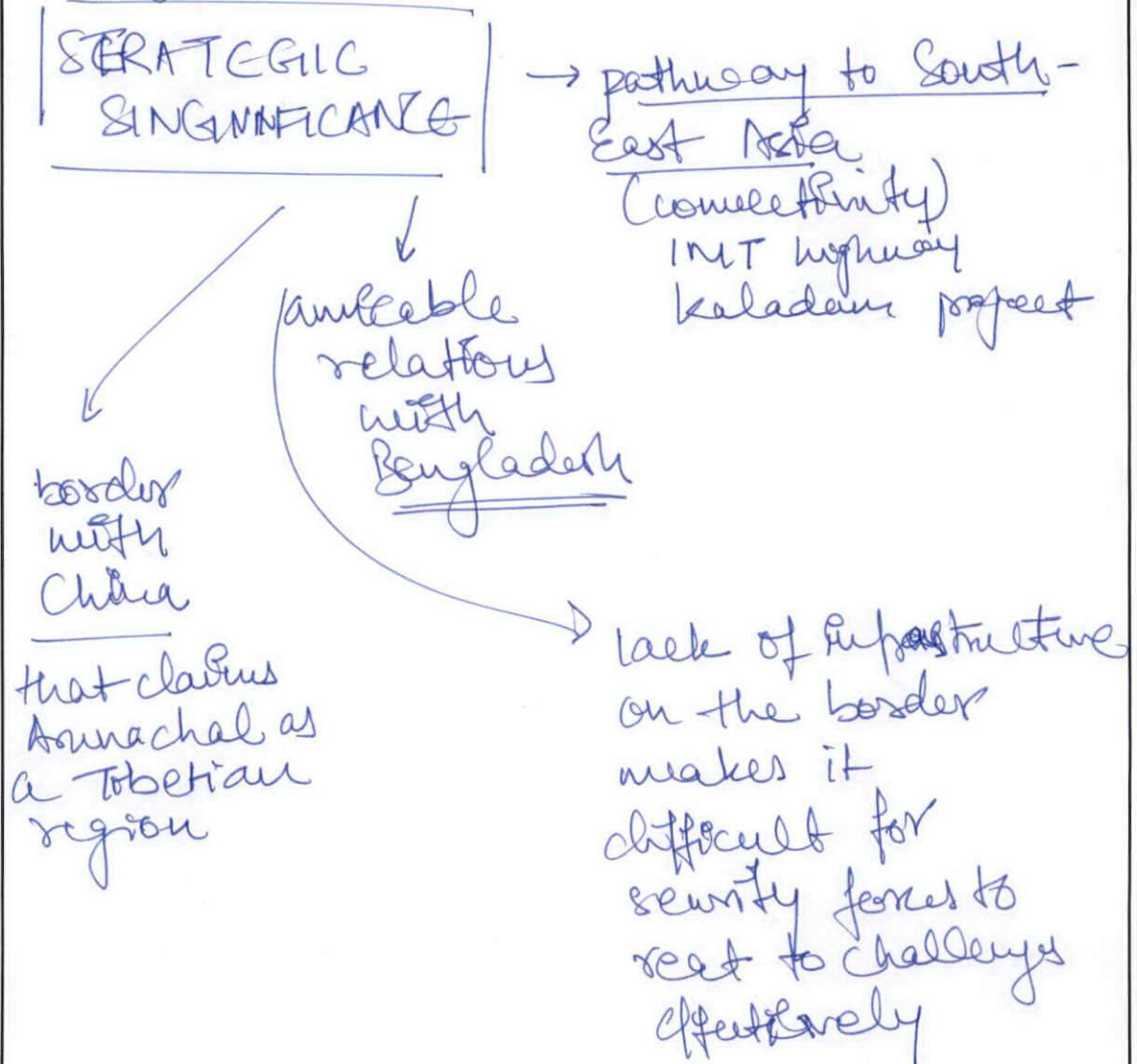
10.

पूर्वोत्तर भारत के रणनीतिक महत्व के बावजूद, इस क्षेत्र को कई सुरक्षा खतरों का सामना करना पड़ता है। चर्चा कीजिए। साथ ही, क्षेत्र में शांति और स्थिरता सुनिश्चित करने के लिए सरकार द्वारा उठाए गए कदमों का भी उल्लेख कीजिए। (उत्तर 150 शब्दों में दें)

Despite the strategic significance of North-East India, the region faces several security threats. Discuss. Also, state the measures taken by the government to ensure peace and stability in the region. (Answer in 150 words)

10

North East is the hub of vulnerabilities due to security issues, border disputes and migration crises on the backs of strong tribal identities.



उम्मीदवारों को इस हाथिए में नहीं लिखना चाहिए
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Security threats

→ Insurgencies galore

↓
Manipur

↓
Nagaland

Mizoram

under
Zorathayme

INSLIN

→ inter state territorial

Conflict → Assam v. Manipur
Assam v. Meghalaya
Assam v. Arunachal

→ tribal identity

→ ethnic strife → Nagas v. Kachis

→ infiltration of combatant from Myanmar

→ migration from Bangladesh (Tripura non-tribal population now 50% of the area)

NEARURES BY GOVT.

~~BSF~~

→ rapid infrastructure development in border areas

Sub Group of Cms from North East.

↓
Look East

↓
Act East with a strong component for North East

→ integrated check posts and strengthening of BSF.

11.

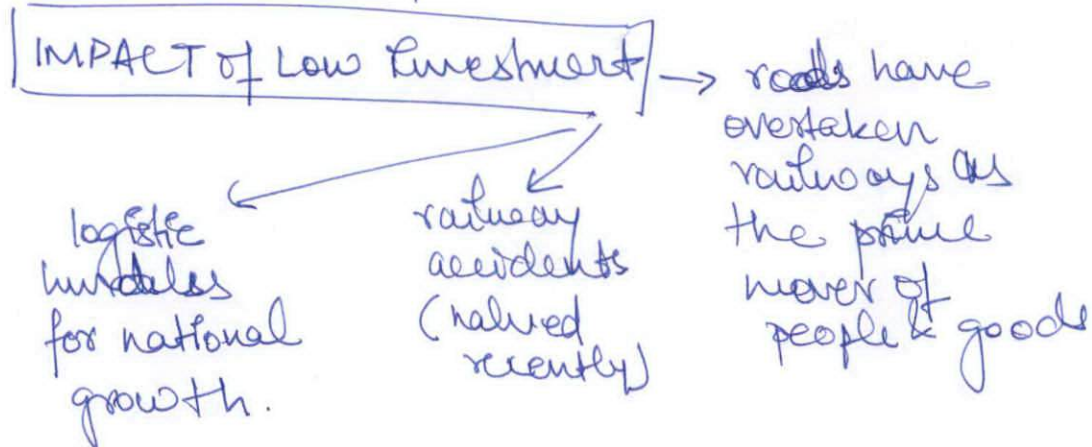
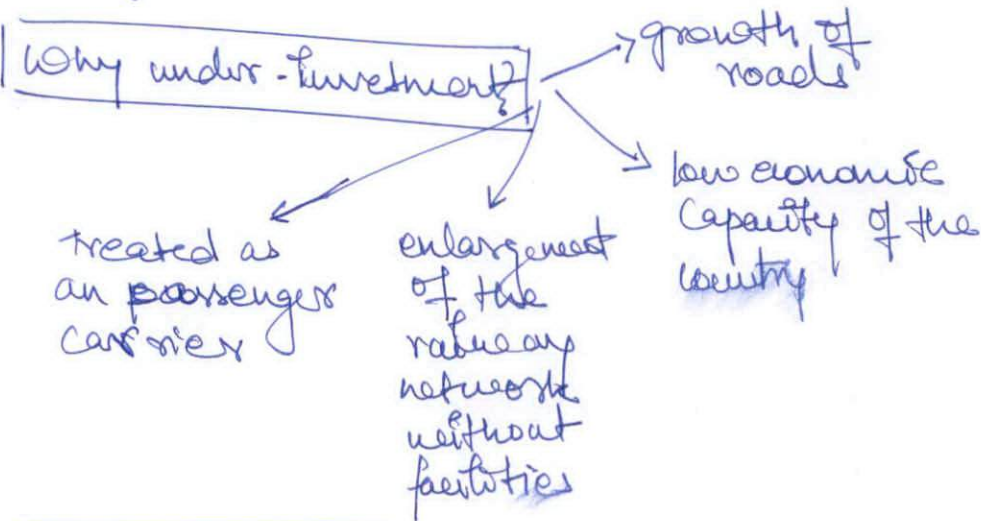
भारतीय रेलवे को लंबे समय से अल्प निवेश की समस्या का सामना करना पड़ा है, जिसने इसके परिचालन के प्रमुख क्षेत्रों पर प्रतिकूल प्रभाव डाला है। इस संदर्भ में, बुनियादी ढांचे के तीव्र निर्माण में रेलवे के समक्ष आने वाली चुनौतियों पर चर्चा कीजिए। साथ ही, इस संबंध में सरकार द्वारा उठाए गए कदमों का भी उल्लेख कीजिए। (उत्तर 250 शब्दों में दें)

Indian Railways has suffered from chronic under-investment, which has adversely impacted key areas of its operations. In this context, discuss the challenges faced by the railways in speedy creation of infrastructure. Also, mention the steps taken by the government in this regard. (Answer in 250 words)

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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15

India has a 68,000 km Railway network which has been a major carrier of people and goods in the country.



Challenges faced by railways

- ① Operational Ratio above 130% if pensions are included - high costs

and low returns

② cross subsidy for passengers
while freight brings more revenue,
people are heavily subsidised

③ Immense competition from air-travel
→ Luxury travel v. speedy travel

1st class tickets = economy air
price far
+
quick

④ Low investment
in safety infrastructure
historically

⑤ Operation & Maintenance requires
skilled workforce

⑥ Ambience issues with Railway
Stations

What has the Government Done?

① Privatisation of certain high volume
routes

② Bidding of local coaches - instead of
large scale import [high tech manufacturing
in Rae Bareilly & Kapurthala]

NATIONAL RAIL PLAN

Petrick Debroy

expansion
of investment
by 2030

it will pay
for itself
by 2080

④ Safety

automation of railway
crossings

⑤ - High Speed
Rail corridors
(Dedicated
~~Rail~~ corridors)
Freight

regular training of
railway maintenance
workers

Railways across the world are looking to air and road travel. However, India needs Railways to decrease its logistics costs $\rightarrow 13-14\%$ of GDP and Dedicated Freight corridors could help with this aim.

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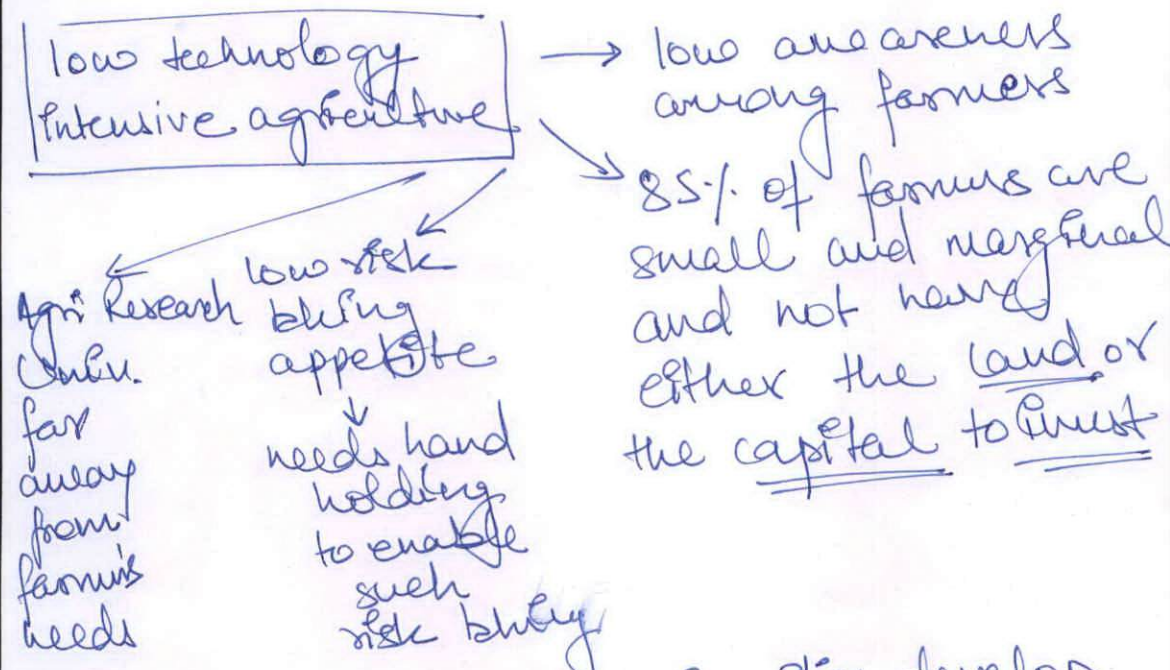
किसानों की आय को दोगुना करने के भारत के उद्देश्य को साकार करने हेतु कृषि प्रणाली के अंतिम बिंदु तक के दायित्वों पर ध्यान देने के साथ अनुसंधान और विकास (R&D) के लिए एक परिवर्तनकारी दृष्टिकोण आवश्यक है। विवेचना कीजिए। (उत्तर 250 शब्दों में दें)

A disruptive approach to research & development (R&D), with a focus on last mile obligations of the agricultural system is necessary to realize India's objective of doubling farmer's income. Discuss. (Answer in 250 words)

15

SOLow model for economic growth in 1950s itself outlined technological progress as one of the key pillars of GDP growth of a nation.

However, India suffers from transforming technological capacity to extension services.



Problems with India's Agri Research

- ① Agri universities develop models and little effort to spread those models among farmers
- ② farmers seek income assurances for experimenting with new techniques.

③ most developments - 'first in India' rather than first in the world.

④ Some of the best agricultural universities - ICAR, PASRI etc. are located in Haryana, Delhi and they are needed in the east → UP, Bihar, Jharkhand - where we need productivity
gap

⑤ Agri Census highlights → land ownership in India is further fragmenting -- most agri models developed in India are for large scale agriculture

⑥ Most of the transgenic varieties being developed or already developed are not going to be allowed in India in near future --- policy constraints

To Double Farmers Income

① precision agriculture → which needs scientific inputs from technological surveys such as ultra local weather forecasts → Agriculture Universities must become the hubs of such techniques

② Agricultural scientists must hold month to season long training-cum handholding sessions for farmers

③ Climate Change Agriculture is the 3rd largest emitter of GHG gases - Agricultural scientists need to develop technologies to reduce these emissions

Pro-demoposes developed by HISA in Delhi was instantly adopted by farmers in Delhi to reduce crop residue burning - because they were located close to each other. Proximity will bring mut & enable work together

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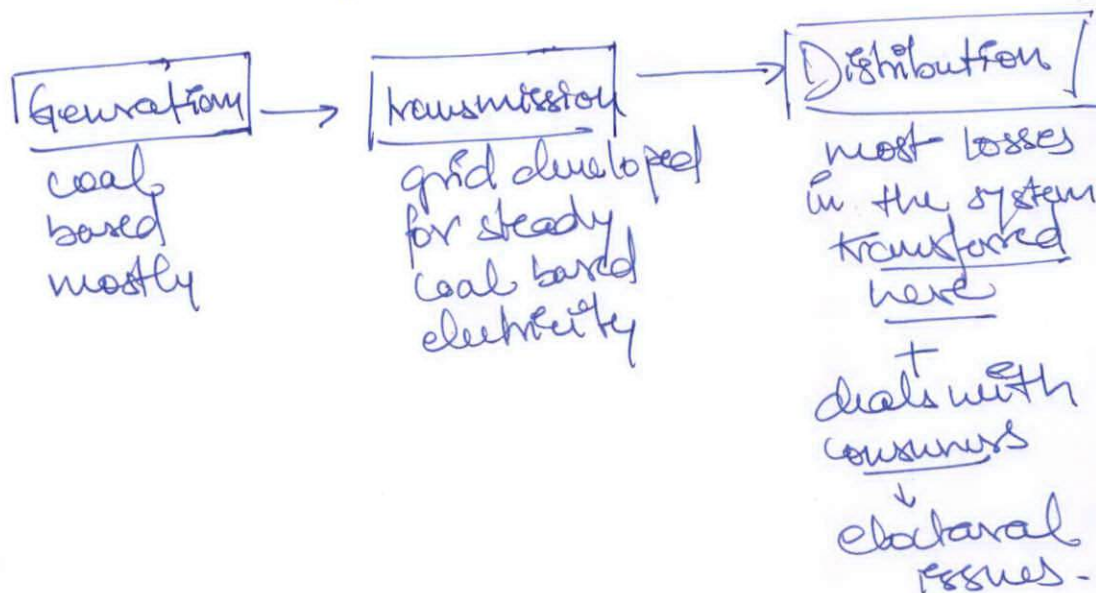
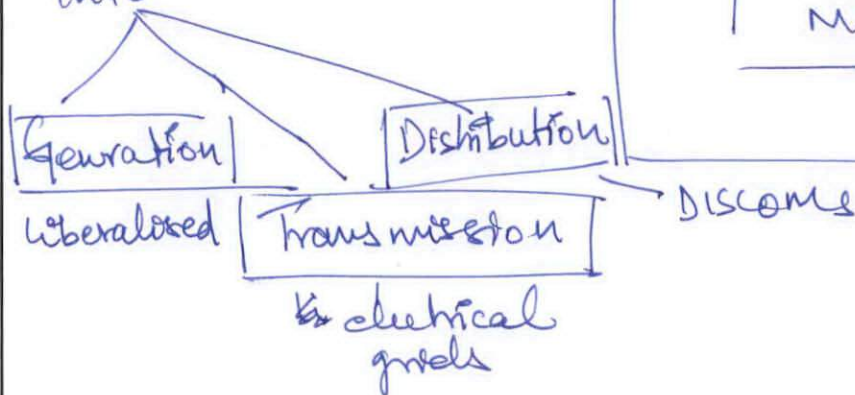
भारत की विद्युत वितरण कंपनियों और विद्युत ग्रिड को जीवाश्म ईंधन से अक्षय ऊर्जा के अधिक संधारणीय रूपों में संक्रमण हेतु सुधारों से गुजरना होगा। चर्चा कीजिए। (उत्तर 250 शब्दों में दें)

India's power distribution companies and electrical grids must undergo reforms to transition from fossil fuels to more sustainable forms of renewable energy. Discuss. (Answer in 250 words) 15

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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More than half of India's energy comes from coal.

Electricity Act divides up the electricity ~~Act~~ sector into



What reforms are needed?

- ① Grid must become 'smart' enough to handle electricity generated from multiple sources
- ② Renewable sourced electricity - must be bundled with coal or gas based electricity to make it steady
- ③ RPO obligations for states must be strictly measured with monthly compliance reports
- ④ UDAY scheme → as a one time restructuring should be expanded and incentivise Discoms to restructure their operations
- ⑤ Smart metering → perpetual and two way for rooftop solar
- ⑥ Consumer Centre - new electricity rules by the Centre should be

Implemented in all states - with compensation rights for the consumers.

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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Recently in the Texas mass electricity grid failure - we saw how windmills and solar panels were not integrated with the grid → this led to a week of electricity collapse in deep winter in the most advanced nation on the planet → Hence, India must

- ① move to renewables
- ② make transmission & distribution renewable friendly.

1. भारत में आगत-सघन (इनपुट इंटेन्सिव) कृषि की प्रथा में, इसकी अस्थिरता और नकारात्मक परिणामों के कारण, बृहद पैमाने पर बदलाव की आवश्यकता है। इस संदर्भ में, निम्न बाह्य आगत संधारणीय कृषि (LEISA) के महत्व पर चर्चा कीजिए। (उत्तर 250 शब्दों में दें)

The practice of input-intensive agriculture in India needs a massive overhaul due to its unsustainability and negative consequences. In this context, discuss the significance of Low External Input Sustainable Agriculture (LEISA). (Answer in 250 words)

15

Agriculture employs more than half of India's workforce and is responsible for around 18% of India's GVA

Why Input Intensive Agriculture is bad?

① Massive debt → Farmer's suicides

→ half of Indian rural households indebted (Agri Census)

→ Debt levels → >90% in Telangana & Andhra Pradesh

→ Indebtedness most prominent cause of farmer suicides in Maharashtra

② Environmental Impact

→ expensive fertilisers & pesticides + herbicides

• are harmful to biodiversity → now there are no ecological barriers to disease and pest outbreaks

→ seeds sold by Bayer & Monsanto are only one time products (terminator seeds) and could add to nutrient poverty

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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(3) Subsidy Burden / → Fertiliser subsidy cost Govt ~ 80,000 crore annually and it is expected to cross 1 Lakh crore this fiscal

(4) Bad nutritional outcome / Input - Intensive mono-cropping techniques are increasing the micro-nutrient deficiency such as zinc & iron.

(5) rising medical expenses + Cancer
trials

Many areas of Green Revolution are experiencing a health catastrophe as fertilisers & pesticides have percolated the ecosystem $\leftarrow$ food & water.

(6) Climate change and unsustainability

high input agriculture → highest share of GHG emissions in dairy & rice cropping

What could be done?

LEISA - low Input Sustainable Agriculture

```

    graph LR
      LEISA[LEISA - low Input Sustainable Agriculture] --> R1[Reduce Input & Input cost]
      LEISA --> R2[reuse materials and previous year input]
      LEISA --> R3[multi cropping to reduce environmental impact]
  
```


- ↳ pooling of resources among many farmers
- ↳ Integrating cattle (small scale) into family practices.

Prime Minister has recently commented that time for high input-intensive agriculture is now over and farmers should innovate with practices such as Zero Budget Natural Farming.

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15.

हाल ही में जारी IPCC की छठी आकलन रिपोर्ट (AR6) - 2021 को मानवता के लिए 'कोड रेड' माना गया है। इस संदर्भ में, भारत पर विशेष ध्यान देते हुए इस रिपोर्ट में उजागर की गई विभिन्न चिंताओं की विवेचना कीजिए। साथ ही, इस रिपोर्ट द्वारा प्रदत्त उपचारात्मक उपायों को भी सूचीबद्ध कीजिए। (उत्तर 250 शब्दों में दें)

The recently released IPCC Sixth Assessment Report (AR6) - 2021 has been deemed as 'code red' for humanity. In this context, discuss the various concerns raised in the report with special focus on India. Also, enlist the remedial measures given by the report. (Answer in 250 words) 15

IPCC has released its sixth assessment scheduled to fall just in time for the Glasgow Summit to put pressure on the political leaders.

What did the report say?

- ① even a planned 1.5°C rise above pre-industrial levels is unlikely be achieved under the Paris obligations
- ② previous modelling was faulty and did not account for many negative feedback loops and hence the rise in temperatures would be much higher
- ③ Ice caps in the Arctic and Antarctic are melting much faster than earlier predicted.

Implications for India

① The Himalayan ecosystem is deteriorating - the third pole ice is melting fast

② this is causing more extreme weather events

- cyclones
- heatwaves
- floods
- GLOFs

③ Agriculture will suffer - both the productivity and farmer incomes

④ Monsoon patterns will shift unpredictably - as they are already changing rapidly

⑤ Forest fires → could jeopardize conservation plans & risk carbon sequestration system

Remedies → Phase out coal
as $\frac{1}{2}$ of India's
energy comes from
coal

Emphasise on renewables including solar & wind

↳ adopt electric vehicles for mass transportation

↳ tax carbon in many forms ^{transport} electricity

↳ Reduce dependency on firewood for rural domestic energy consumption

↳ Reform Agricultural practices → make them sustainable

India's National Action ^{Plan} for Climate Change and Panchamrit pledge at

Glasgow are good steps in this direction. However, the shift towards renewables should not be on the backs of the poorest in the world.

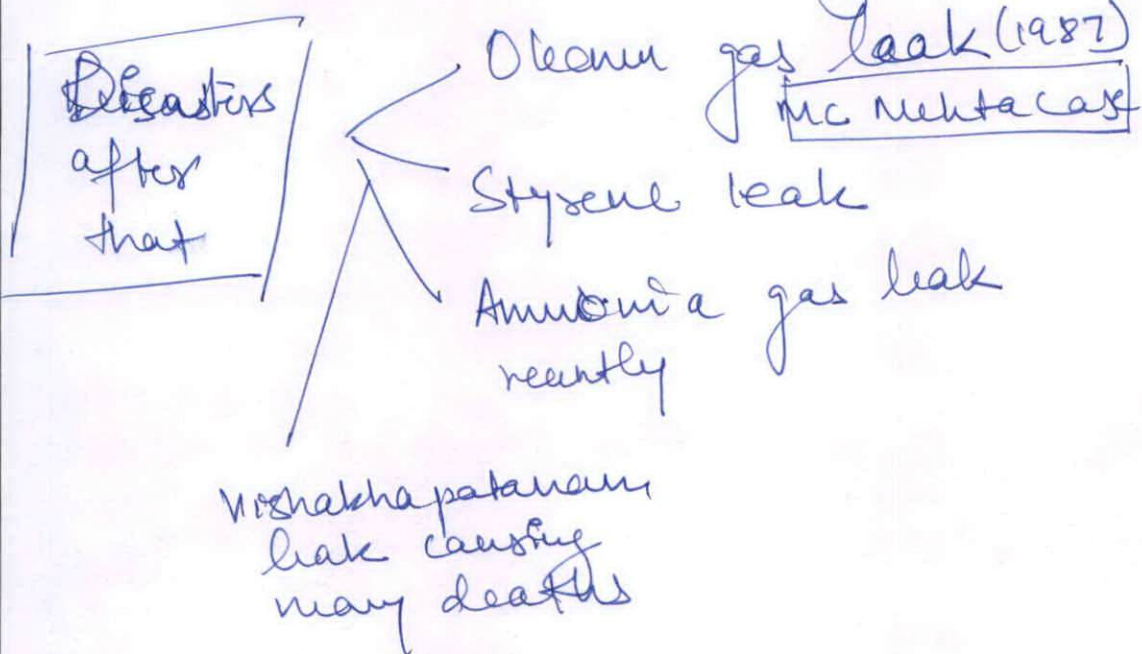
भोपाल गैस त्रासदी से लेकर विशाखापत्तनम में गैस रिसाव तक कई रासायनिक आपदाओं ने भारत में खतरनाक रसायनों (HAZCHEM) द्वारा उत्पन्न जोखिमों को ध्यान में लाया है। इसके दृष्टिगत, भारत में रासायनिक आपदा प्रबंधन (CDM) की तैयारियों के साथ-साथ इसमें व्याप्त कमियों की भी विवेचना कीजिए। (उत्तर 250 शब्दों में दें)

Multiple chemical disasters from the Bhopal gas tragedy to gas leak in Visakhapatnam have brought into focus the risks posed by hazardous chemicals (HAZCHEM) in India. In view of this, discuss the preparedness as well as gaps in Chemical Disaster Management (CDM) in India. (Answer in 250 words)

15

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Bhopal Gas leak in 1984 was one of the worst humanitarian tragedies for India in this century. It led to an environmental awakening in India



These leaks tell us that gas leaks are a recurring nightmare in India.

Causes

↳ lax safety at industrial plants
(they are cost-cutting measures)

↳ steady deterioration of environmental regulation in competitive federalism (race to the bottom) to attract investment

↳ co-location of industry alongside human habitations

↳ lack of awareness among residents of the possible hazards

Preparedness

↳ constant safety checks at industrial plants, especially in the designated 'industrial areas' as they have human habitations around them

↳ local committees should be

engaged in preparedness → awareness generation

Contingency plans should be readily available at all times.

CSR activity for such industry should include measures for such containment

kit for such eventuality should be distributed

Public Liability Insurance Act should be strengthened.

Industrialisation of India should not compromise on the safety of its citizens. NDMA guidelines on the subject should be made available in vernacular for people to understand and absorb.

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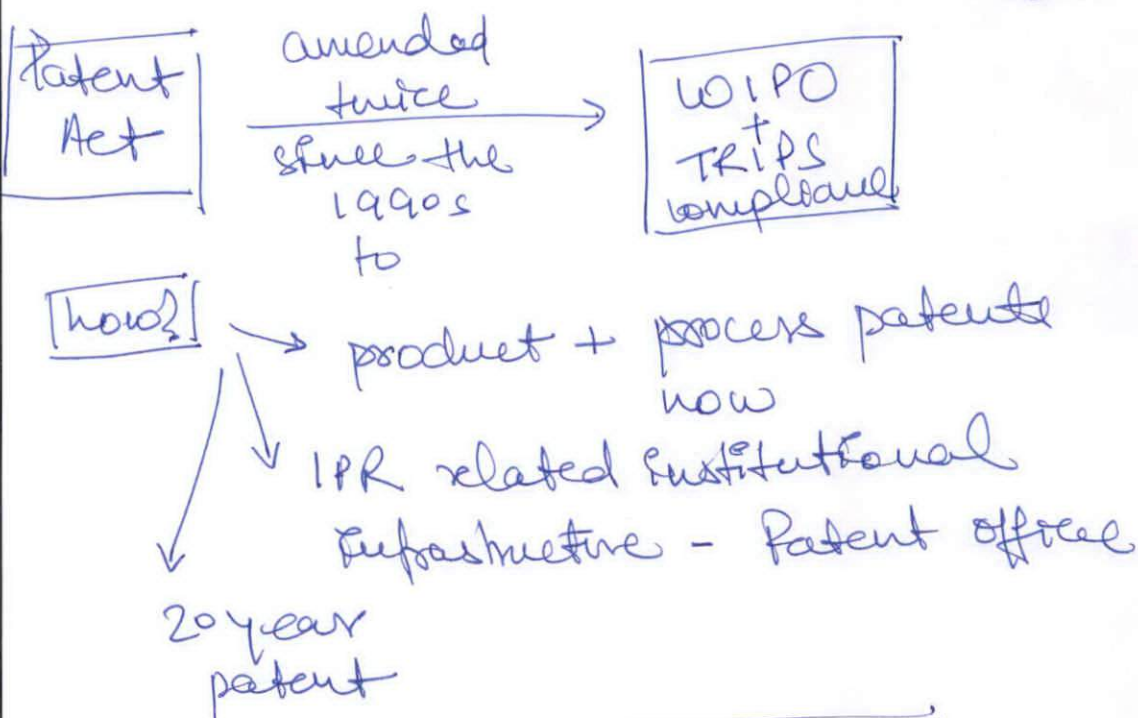
महामारी के समय सार्वजनिक स्वास्थ्य से संबंधित वस्तुओं और सेवाओं के उदारीकरण की बढ़ती मांग ने वर्तमान बौद्धिक संपदा व्यवस्था के संबंध में महत्वपूर्ण मुद्दों को उठाया है। विवेचना कीजिए। (उत्तर 250 शब्दों में दें)

The growing demand for liberalisation of public health-related goods and services amidst the pandemic has raised critical issues with regard to the current intellectual property regime. Discuss. (Answer in 250 words)

15

उम्मीदवारों को इस हार्निंग में नहीं लिखना चाहिए
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Globalisation is present in India —
the most critical manifestation of
this phenomenon is India's IPR regime



However, India & the developing world has earned some exceptions

evergreening
only substantial improvements in efficacy -- for registration of a patent

Compulsory Licensing
if the govt. deems that
no alternative available

COVID tragedy in India raised two contrasting arguments

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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- ① India should liberalise its IPR regime to enable investment in R&D to enable faster development of emergency medicines
- ② India should make its IPR regime more restrictive -
to go for compulsory licensing of medicines whose prices were shooting through the roof during the pandemic

ISSUES

- ① Compulsory licensing may be detrimental to India's appeal as an investment hub for transfer of critical technologies
- ② India is the pharmacy of the world -- any tightening of the IPR regime may threaten India's position
- ③ Fundamental problem with India in Pharma sector --> API dependence on China --> no changes in IPR regime

can solve that problem.

④ A loose IPR regime makes collaboration with the world impossible [Shant State + AstraZeneca]

Article 38 created India as a welfare state and IPSAs make the state in charge of public health. Health could not be made available as a public good unless medicines and associated technology is ~~easy~~ Accessible, Affordable and does not hamper future investment in India.

भारत में रक्षा प्रौद्योगिकियों के स्वदेशीकरण में उप-इष्टतम परिणामों के लिए उत्तरदायी कारणों पर प्रकाश डालते हुए, उन उपायों का सुझाव दीजिए जो रक्षा क्षेत्र में स्वदेशीकरण की गति को तीव्र कर सकते हैं। (उत्तर 250 शब्दों में दें)

Highlighting the reasons behind suboptimal results in indigenization of defence technologies in India, suggest measures which can accelerate the pace of indigenization in the defence sector. (Answer in 250 words)

15

APJ Abdul Kalam was concerned about the dependency of India on outside forces → Dependency Ratio $\frac{\text{purchases from outside}}{\text{total purchases}}$

India continues to perform poorly on the dependency ratio. We import our defence needs from:

- ① Russia (65%)
- ② US
- ③ Israel
- ④ France

CAUSES

- ① Technology Apartheid from 1974 to ~~2004~~ from nuclear blasts to nuclear deal
- ② low motivation levels at HAL, Bangalore, DRDO and Ordnance Factory Boards.

③ No prospective Acquisition Plan

- a 15 year plan so that private sector can anticipate demand

④ A complex DPA → Defense Procurement Policy

⑤ lax IPR regime → disincentivises foreign companies (OEMs) → Original Equipment Manufacturers in partnership with India

⑥ World's most complex and time consuming - weapons trials process

⑦ Research - Military demand gap availability

Military wants something - Scientists deliver something else

⑧ Time lag

- Tejas - single engine - 30 year wait
- Arjun MBT - tank - 30 year wait

these systems become redundant by the time they arrive.

Measures to accelerate

- ① Ordnance Factory Corporation should be completed in time
- ② Prospective Procurement Plans should be produced
- ③ A private sector competition ecosystem eg Boeing - Lockheed Martin
↳ TATA v. MAHINDRA Advanced Systems
- ④ India should partner with Russia in R&D as it provides conditions free access to top end technologies (Branches → export prospects)

~~⑤ Defense~~

India recently made some strides in exports as it became a small sized exporter of arms. Further, India should ~~strengthen~~ its Defense Acquisition Council and provide more >1000 crore acquisition ability to individual forces.

19.

अंतर्राष्ट्रीय सीमाओं की रक्षा के लिए विभिन्न केंद्रीय सशस्त्र पुलिस बलों की अवधारणा के पीछे के कारकों पर चर्चा कीजिए। साथ ही, भारत की सुरक्षा सुनिश्चित करने में इन बलों के योगदान पर भी प्रकाश डालिए। (उत्तर 250 शब्दों में दें)

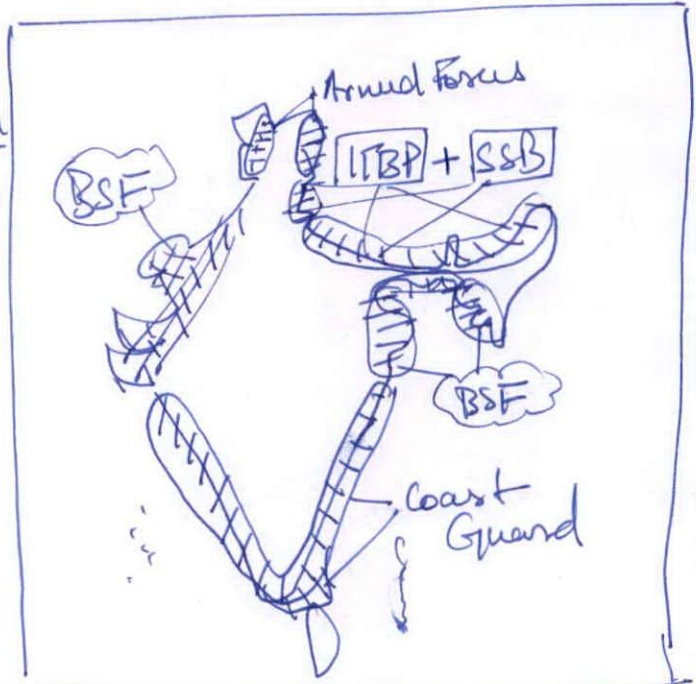
Discuss the factors behind conceptualization of different Central Armed Police Forces for guarding the international borders. Also, highlight the contribution of these forces in ensuring security of India. (Answer in 250 words)

15

उम्मीदवारों को इस हशिफ में नहीं लिखना चाहिए
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Indicates border
Security is 'terrain
and context
specific'

Factors behind
conceptualisation



① Local domain knowledge - Deserts in Rajasthan

② Capacity → ITBP in cold areas

③ Interaction with people → people
Coastal approach

④ Federal principles → State's rights
and local police stations are taken
into confidence

⑤ Maritime Domain Awareness - maritime
borders are much harder to guard than
land borders

CONTRIBUTION

Seema Swalesha Pail has facilitated the free movement regime of people and goods across the Nepal Border while keeping a check on terrorism export through Pakistan.

Border Security Force has the toughest of all tasks

PAKISTAN → constant exchange of fire

→ movement of contraband across the IB

BSF has patrolled the border with brute efficiency without being impeded by the harsh terrain of desert

BANGLADESH - Integrated Check posts and smart policing are allowing BSF to create a 'no death border' as envisaged by S. Jaishankar.

ITBP → patrols the border alongside Indian Army and enables Army access to important local information.

Ridges here are some of the harshest in the world.

IRTO → Border Roads Organisation has allowed the CAPF to function unhindered by building critical infrastructure.

Coast Guard Rapid development in capability & mandate since Mumbai attacks and now is the prime mover behind coastal security in India. → to protect fishermen's lives
→ respond to oil leaks and anti piracy calls.

Central Armed Police Forces have a complicated task → to enforce a border in a naturally connected subcontinent while not jeopardising our relations in the neighbourhood → they have done a splendid task considering the mandate and resources mismatch.

धन शोधन (मनी लॉन्ड्रिंग) गतिविधियों के लिए आभासी परिसंपत्तियों के दुरुपयोग के संदर्भ में, उनकी सुभेद्यता पर चर्चा कीजिए। साथ ही, उन सुधारात्मक उपायों का भी उल्लेख कीजिए, जो आभासी परिसंपत्तियों के उपयोग से उत्पन्न जोखिमों को कम करने के लिए अपनाए जा सकते हैं। (उत्तर 250 शब्दों में दें)

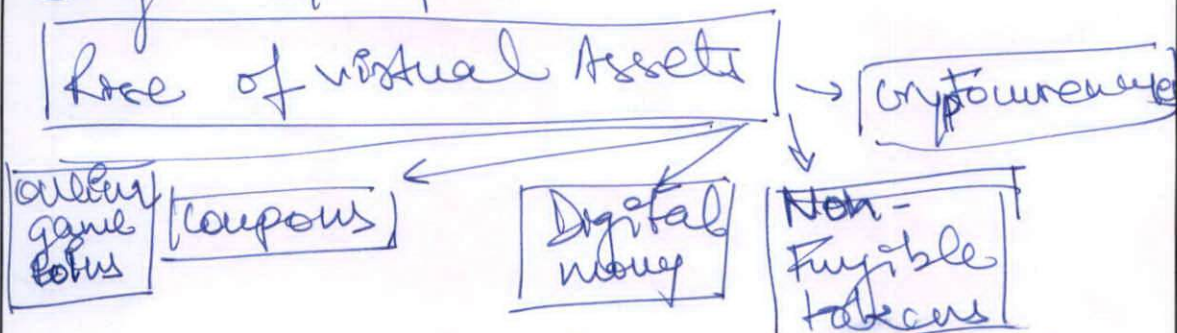
Discuss the vulnerability of virtual assets in terms of their misuse for money laundering activities. Also, state corrective measures that can be taken to mitigate the risks posed by the use of virtual assets. (Answer in 250 words)

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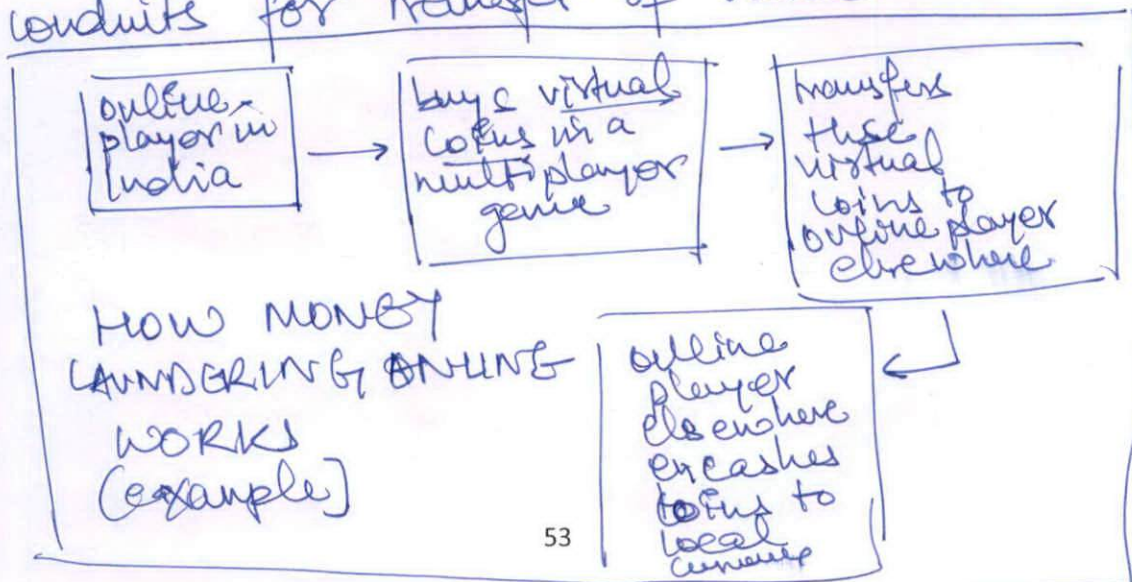
15

Money laundering involves turning assets from illicit activities to clean sources while evading legal scrutiny.

For most part of our history of independent India, we have been concerned with traditional old school money laundering with distinct & identifiable stages of operation.



These virtual assets have become conduits for transfer of value



VULNERABILITY

- ① low digital literacy → Indian data owners → (consumers) can easily become pawns for crime syndicates
- ② lax security architecture - Police stations not trained for digital crimes
- ③ proliferation of cryptocurrencies
- often with no founding asset
↳ legitimisation of such currencies by celebrities (Elon Musk)
- ④ Ambiguous policy → Cryptocurrency
RBI stand is different from Government stand
- ⑤ complex security environment in India - threats of terrorism etc.

CORRECTIVE MEASURES

- ① a trained workforce in security architecture
- ② Digital literacy gaps - PM GDISHA scheme
- ③ Policy of App stores for suspicious

Apps.

④ certainty in policy - Government should introduce and pass a cryptocurrency bill.

Like most crimes and associated activities, Money Laundering has also gone online - Deep Web and Dark Web proliferation are only indicators of this.

Government should partner with technology & advanced nations such as Israel to develop monitoring & vigilance capabilities.

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