



VISIONIAS
INSPIRING INNOVATION
ABHYAAS MAINS

सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2424)

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. : 0246382
अभ्यर्थी का नाम/Name of Student : Janhavi Shekhar .

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

27/08/2023

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

केंद्र
Centre PUNE

निरीक्षक के हस्ताक्षर
Invigilator's Signature

Aariz

	<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
परीक्षक के हस्ताक्षर Signature of Examiner(s)	

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

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



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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.

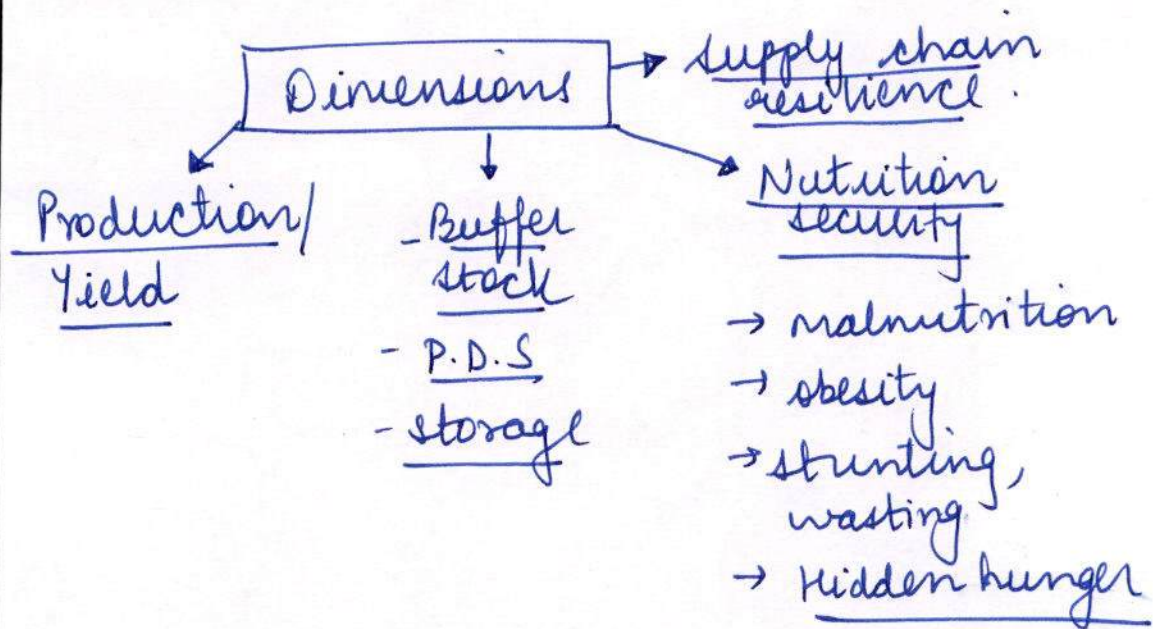
खाद्य सुरक्षा के विभिन्न आयाम क्या हैं? इन आयामों के मद्देनजर खाद्य सुरक्षा सुनिश्चित करने के संदर्भ में भारत की स्थिति का परीक्षण कीजिए। (उत्तर 150 शब्दों में दीजिए)

What are the different dimensions of food security? Examine India's status in terms of ensuring food security with regard to these dimensions. (Answer in 150 words)

10

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

Food security is the availability of food, its access in markets and strong social structures. Russia-Ukraine war has led to fears of food insecurity.



India's status:

① Food Production → surplus in India

eg: - India exports Basmati rice
- India supplied wheat to Egypt
amid Russia-Ukraine war.

India → 385 MT food production
→ Green Revolution ← Rice wheat
→ Millet Revolution
→ largest milk producer

② Buffer stock → maintained by F.C.I
↳ cold chain storage infrastructure created
↳ PDS - aadhar enabled → "One Nation - one Ration card"

③ POSHAN abhiyan → To tackle malnutrition
↳ ICDS - child care
↳ ASHA workers → disseminate information at local level / villages

④ Supply chain → deal with Japan for
→ resilient supply chain
→ Diplomacy in hour of need ← USA, UAE, Australia, etc

Issues → 1) Corruption
→ 2) Regional disparity
↓ 3) Anaemia, Iron deficiency
↓ 4) Maternal mortality
5) Climate extreme events → disrupt supply
eg. Tomato prices → ₹300/kg - 2023.

Food security can be ensured via Swaminathan recommendations, Infrastructure building, Food Processing.

2.

ब्लॉकचेन और चैटजीपीटी जैसी आधुनिक प्रौद्योगिकियां कृषि को अधिक कुशल और संधारणीय क्षेत्रक में बदलने की अपार क्षमता वाले शक्तिशाली साधन हैं। भारत के संदर्भ में चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए)
Modern technologies such as blockchain and ChatGPT are powerful tools with immense potential to transform agriculture into a more efficient and sustainable sector. Discuss in the context of India. (Answer in 150 words)

10

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

Blockchain, chatGPT are Artificial intelligence based, transparent technologies that can aid in agricultural modernisation in India.

How useful?

① Efficiency enhanced:

↳ Purchase of inputs streamlined over blockchain

eg: Fertiliser subsidy, power subsidy, etc

↳ Seed vendors, sellers connected

eg: Better seed replacement ratio.

↳ Marketing easier (eg) e-NAM on blockchain

② Sustainability enhanced:

↳ chatGPT → to address farmer questions.

eg: Grievance redressal

↳ Farming knowledge dissemination

↳ Food processing, cooperatives, FPO's,
marketing can become more efficient via
blockchain database

eg: Plug loopholes, corruption.

↳ Farmer as direct seller → empowerment

Issues

① Data protection - Personal data
regulation

② cyber crimes - hacking, Ransomware
eg: cases increased by 40-50%. 'NCRB'.

③ Farmer illiteracy, lack of access to
digital services.

Digital Infrastructure Units

as announced by PM of India can
aid modernisation of agriculture.

3. वैश्विक अर्थव्यवस्था में वि-डॉलरीकरण की प्रवृत्ति में हालिया तेजी के लिए कौन-से कारक उत्तरदायी हैं? क्या आपको लगता है कि डॉलर का प्रभुत्व जल्द ही समाप्त हो जाएगा? (उत्तर 150 शब्दों में दीजिए)
What factors have led to the recent acceleration in the trend towards de-dollarization of the global economy? Do you think the dollar will lose its dominance anytime soon? (Answer in 150 words)

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

India-Russia, India-VAE, BRICS, etc have signed local currency trade framework to trade in own currencies instead of dollar. [De-dollarisation]

Factors for de-dollarisation:

- ① Tightening of US Federal Reserve rates
eg: Inflation targeting led to dollar strengthening
- ② A $\$$ currency leaving economies \rightarrow
thus reduced FDI's, lack of invest-
-ments.
- ③ Fear of Asian crisis like situation of 1997.
- ④ To de-link from west \rightarrow to strengthen local currency
eg: In events like COVID-19.

⑤ Inflation proofing, supply chain resilience, stay outside US sanctions.

eg: CAATSA.

Will dollar lose Relevance soon?

- 1) Dollar will not lose relevance as it is the most traded currency in world
- 2) ₹ is not fully convertible.
- 3) lack of adequate alternative currency.

In future, dollar may lose relevance

- ↳ rise of digital trade eg: Crypto
- ↳ Rise of Chinese Renminbi, Indian ₹.
- ↳ International organisations - BRICS, SCO may shift to local currency Trades.

A multi-lateral world with strong supply chain markets will ensure global economic growth with rise of the Asian century.

4. विकसित देशों द्वारा भारत पर खाद्य सब्सिडी व्यवस्था में बदलाव करने के अत्यधिक दबाव के बावजूद, भारत के लिए निर्धन व्यक्तियों हेतु अपना नीतिगत समर्थन बनाए रखना एक उचित कदम होगा। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

Despite significant pressure from the developed countries to alter its food subsidy regime, there is merit in India trying to retain its policy support for the poor in the country. Discuss. (Answer in 150 words)

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

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W.T.O has flagged Indian food subsidies many times as Amber box subsidies distorting free, fair trade.

Concerns from → USA → ^{against} protectionist trade
→ Brazil → against sugarcane FTA.
→ Australia → against no entry to Australian Dairy

Merit in Indian subsidies:

- 1) supports India's small, marginal farmers (80% of total farmers)
- 2) M.S.P ensures farmer remuneration
- 3) Keeps farmer distress at bay [eg: suicides]
- 4) Aid in transformation of

subsistence agriculture → commercial agriculture

eg: PM-SAMPADA.
eg: Horticulture share rising, more remunerative

5) upliftment of poor → ensures livelihood

eg: fishermen

6) social inclusion eg. women major part of agriculture, apiculture, etc.

Challenges

- 1) India not join RCEP
- 2) Inward looking trade
- 3) May lose out on partnerships in future

Way Forward → 1) Farmer education
→ 2) Agriculture modernisation
eg: Technology based
↓
3) Increase livestock GVA.

India has been able to reduce poverty by 50% since 2005-2015, such subsidies continue towards achievement of 'Panch Prari'

5.

भारत की जल संबंधी जरूरतों को पूरा करने की दिशा में सरकार द्वारा कई पहलों की शुरुआत की गई है, परंतु जल की उपलब्धता और जल की गुणवत्ता जैसे मुद्दों पर अभी भी नीतिगत हस्तक्षेप की आवश्यकता है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

Several initiatives have been taken by the government towards addressing India's water needs, but the issues of water availability and water quality still warrant prioritised intervention. Discuss. (Answer in 150 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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The Jal Jeevan Mission of Ministry of Jal Shakti is a flagship mission to make tap connections available to all rural households.

Initiatives of government

→ ① Jal Jeevan Mission

→ ② Swachh Bharat Mission

ODF+, ODF++

③ River interlinking (eg) Ken-Betwa

④ Atal Bhujal Yojana → ground water preservation

⑤ Watershed management (eg) Ralegaon Siddhi, Telangana.

Issues:

① Water Availability

↳ geographically distant areas not connected (eg) Mountain settlements

↳ Urban area shortage (eg) Bengaluru.

- ↳ Drinking water crisis
- ↳ Agriculture monsoon dependent → thus deficit in El-Niño.

② Quality of water

- ↳ Issue of river pollution
- ↳ Poor water cleaning tanks
- ↳ STP shortage → mixing of sludge in clean water.

Intervention needed:

- ① UN-WASH - effective implementation
- ② Last mile delivery → of water and not just infrastructure
- ③ Resource management (eg. Urban planning)
- ④ De-silting plants, desalination plants
(eg. Israeli technology)
- ⑤ Rainwater harvesting compulsory all over India.

SDG-6 needs to be achieved by 2030 for clean, hygienic water and sanitation for people of a NEW INDIA.

6. आर्कटिक में हिमनदों के पिघल कर संकुचित होने के लिए उत्तरदायी कारक क्या हैं? पारिस्थितिकी तंत्र पर आर्कटिक हिमनदों के पिघलने के संभावित प्रभाव का वर्णन कीजिए। (उत्तर 150 शब्दों में दीजिए)
 What are the major drivers of glacial retreat in the Arctic? Describe the potential impact of the retreat of Arctic glaciers on the ecosystem. (Answer in 150 words)

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

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With the breakage of various ice masses in Arctic, glacial retreat is seen to be evident. (IPCC)

causes of retreat

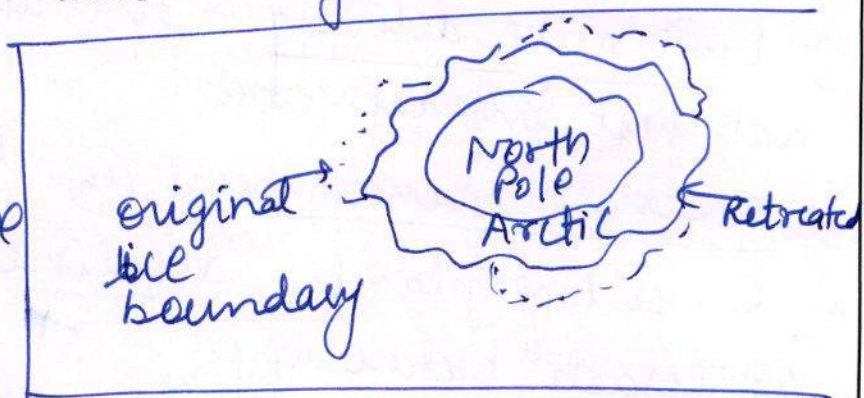
① Global warming (eg) Risen temperatures of 1°C all over globe.

② Marine sea temperature rise

(eg) Marine heat wave.

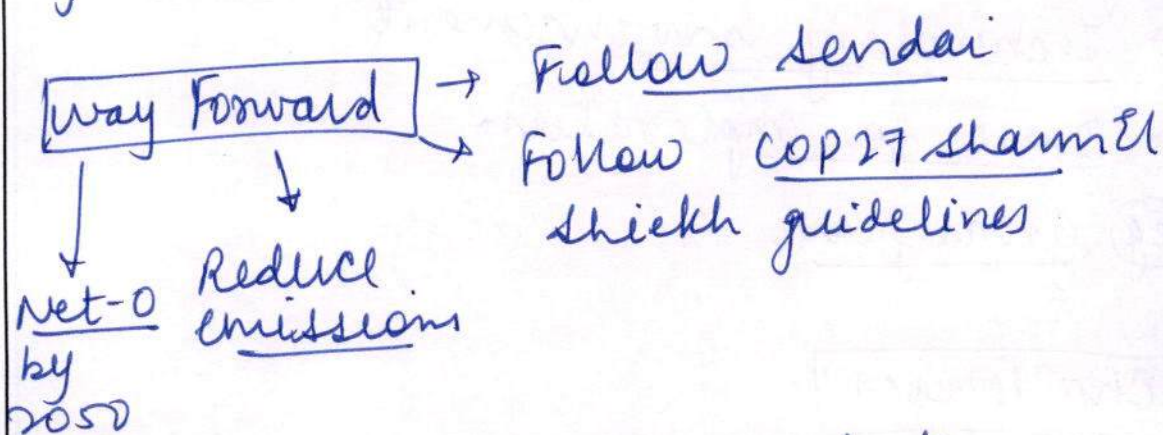
③ A warmer Gulf stream.

④ Ozone hole \rightarrow inward UVA, UVB, UVC sunrays.



Impact

- ① Rise of sea level → threat to Pacific Islands, etc
- ② loss of Polar bears, seals as their ecosystem is destroyed.
- ③ Population of fish reducing ^{as} warmer waters
- ④ May affect Meridional oceanic oscillation (deep sea current)
- ⑤ Threat to Canada, Russia, Scandinavia
e.g. water ingress in coastal cities.



Thus, there is a need to move towards environmental conservation protection to achieve SDG: 14 : life under water.

7. अंतरिक्ष पर्यटन, जिसे सीधे तौर पर एक साइंस फिक्शन फिल्म के रूप में देखा जाता था, अब बिना किसी बाधा के वास्तविकता बन रहा है। अंतरिक्ष पर्यटन से संबंधित चुनौतियां क्या हैं? इन चुनौतियों से निपटने के लिए क्या उपाय किए जा सकते हैं? (उत्तर 150 शब्दों में दीजिए)

Space tourism, which was viewed as something straight out of a science fiction movie, is now becoming a reality albeit not without hindrances. What are the challenges associated with space tourism? What measures can be taken to address these challenges? (Answer in 150 words) 10

Recently space Tourism attempts were made by SPACEX, Atlantic Virginia, etc where humans travelled to low earth orbit for a feeling of "weightlessness."

A Reality

- with private sector participation
 - Technology advancement
 - Quest for exploration
- (eg) Gaganyaan

Challenges:

- 1) space Debris issue
- 2) Human safety (eg) Need adequate testing

3) safety vs commercialisation issue

eg: Rat race to space.

4) Issue of militarisation of space as
the 5th frontier.

5) Human held health risks → Sun exposure
Epine issue

Measures:

- ① Follow space Treaty, 1967.
- ② Responsibility to be set on
companies for space protection.
- ③ Balance pollution caused vs
space exploration.
- ④ Collaborative guidelines for space
usage.

Responsible space Tourism

is needed for sustainability in space.

With increased R&D environment
and human development can be
in tandem.

8. वैश्विक स्वास्थ्य विशेषज्ञ व्यापक रूप से मानते हैं कि CAR-T सेल थेरेपी का विकास कैंसर के उपचार में एक बड़ी सफलता हो सकता है। CAR-T सेल थेरेपी, CRISPR-Cas9 तकनीक में व्याप्त कमियों को कैसे दूर कर सकती है? (उत्तर 150 शब्दों में दीजिए)
- Global health experts widely believe that the development of CAR-T cell therapy can be a game changer in the treatment of cancer. How can CAR-T cell therapy overcome the limitations of CRISPR-Cas9 technology? (Answer in 150 words)

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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10

~~The 2022 Nobel Prize~~

CAR-T cell therapy is shown to have cured cancer patients of their unhealthy cell growth (in the USA).

Limitations of CRISPR-Cas9

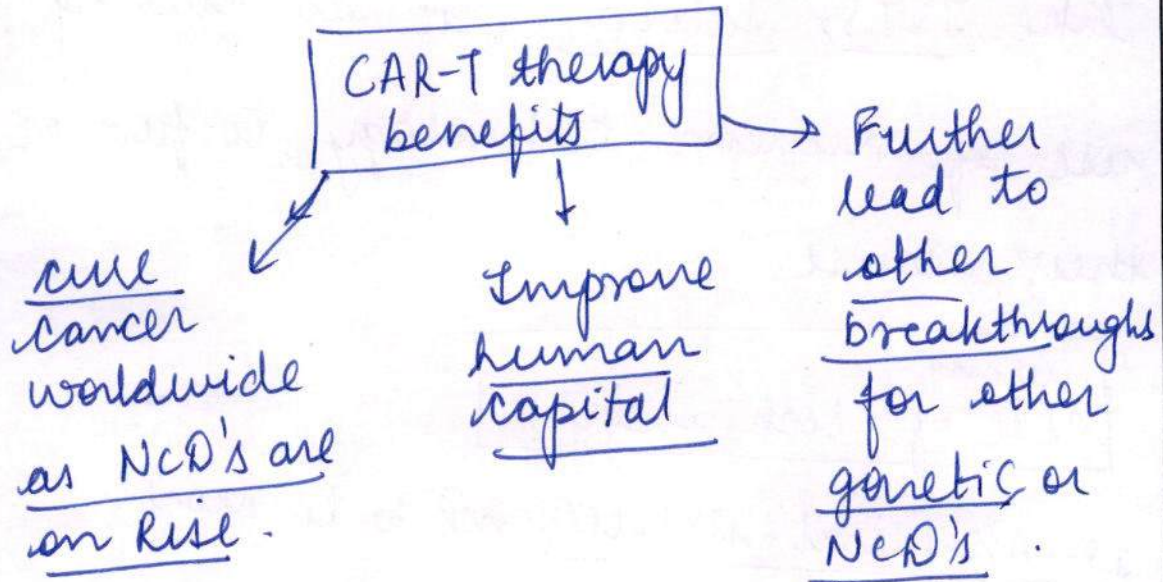
- a gene editing tool only.
- cas9 = scissors → to cut the unwanted DNA, and then to insert the required genetic makeup.
- cannot kill targeted cells.

CAR-T overcomes limitations:

- ① can attack cancer cells.

② T-cells part of immune system

③ Thus our immune system generates T-cells to eliminate unhealthy cells.



Thus, R & D expenditure should be enhanced in India too, especially in biotechnology sector.

9. चर्चा कीजिए कि प्रमुख हिंसक चरमपंथी संगठनों द्वारा नई और उभरती प्रौद्योगिकियों के बढ़ते इस्तेमाल के विरुद्ध संगठित एवं ठोस वैश्विक प्रयासों की आवश्यकता क्यों है। (उत्तर 150 शब्दों में दीजिए)
Discuss why the rising deployment of new and emerging technologies by prominent violent extremist organizations demand concerted global efforts. (Answer in 150 words) 10

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Violent extremist organisations
like ISIS, Jaliban, etc are making use of modern technology to further their cause.

wrong use of technology:

- 1) Artificial intelligence → to morph speeches, videos
- eg. Deep Fakes → create violence confusion.
- eg. Fake video led to Pr. Palghar killings
- 2) Dark Web - for arms deals, black money transfer
- 3) Online / internet / social media - to recruit individuals
- eg. Kerala ISIS recruits.

④ Drones, UAV's → armed with weapons
to cause airstrikes

eg Hamas - Israel.

Need global efforts

- 1) To preserve peace (UN Declaration)
- 2) To protect Human Rights (UNHCR)
- 3) Prevent violent crimes, crimes, genocide
eg: case against ~~Tamil~~ LTTE
SriLankan

'Vasudhain Kutumbakam' can bind
the global community together for
a one-world - one Family via
coordinated efforts of → RATS
↓
PATF UNSC Bilateral

10.

गलवान और यांगस्ते की घटनाओं के बाद वास्तविक नियंत्रण रेखा (LAC) पर तनाव बना हुआ है तथा भारत एवं चीन दोनों सीमावर्ती क्षेत्रों में अपने बुनियादी ढांचों को सुदृढ़ कर रहे हैं। इस क्षेत्र में ITBP द्वारा निभाई जाने वाली भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए)

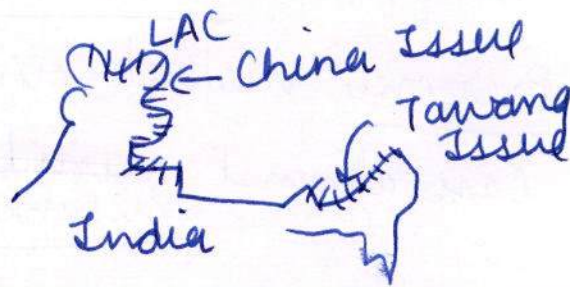
With the Line of Actual Control (LAC) remaining tense after the Galwan and Yangste incidents and both India and China ramping up infrastructure in the border areas, discuss the role that ITBP plays in the region. (Answer in 150 words)

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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The 2020 LAC standoff in Kadakh put the focus back on border issues of India-China and role of ITBP.

current content



1) India, China

both building border infrastructure

(a) Doklam road by China

(a) Railways, Roadways, Bridges

2) India's border development of villages and villegers as

1st citizens for increased surveillance.

Role of ITBP

Protects Indo-China border

↳ Ladakh ↳ Uttarakhand ↳ Arunachal Pradesh

Positives

- 1) Surveillance, deterrence
- 2) Lean force
- 3) Ready for action
- 4) As eyes and ears of India
- 5) Maintain peace in local community

Issues - ① soldier health - poor food, poor clothing, no heaters

eg. Public announcement done by an ITBP soldier - regarding poor food.

- ② Need modern arms, training
- ③ Better health protection needed
- ④ Need to be aware with digital technology, drone, etc.

Thus ITBP plays an important role, modernisation of forces can lead to SMARTER forces.

11. क्या आपको लगता है कि भारत को 'भूमि उत्पादकता' के सिद्धांत को छोड़कर 'सिंचाई जल उत्पादकता' के सिद्धांत को अपनाने की आवश्यकता है? अपने उत्तर का औचित्य सिद्ध कीजिए। यह बदलाव करने में कौन-सी चुनौतियां विद्यमान हैं? व्याख्या कीजिए। (उत्तर 250 शब्दों में दीजिए)
- Do you think there is a need for a shift from 'land productivity' to 'irrigation water productivity' in India? Justify your answer. What are the challenges in making this shift? Explain. (Answer in 250 words)

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

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Land, irrigation are both ^{important} parts of institutional and infrastructural factors for a good agricultural productivity.

India: - Highest available arable land
- Irrigation → 90% from tubewells

Why shift from land → irrigation productivity (Need):

- 1) New Technologies make farming without land possible.
eg: vertical farming → use of 'nutrient water'
- 2) Most ground water extraction rate in India. Thus need for sustainable

irrigation
eg: drip irrigation, sprinkler irrigation
eg: Fertigation

3) without irrigation productivity of land not utilised to a 100%.

Why land productivity too important:

1) Land as a source of nutrients
eg: Nature based solution
eg: organic farming.

2) Soil health can be maintained for higher yield.
eg: soil health card scheme.

3) Symbiosis of biotic-abiotic factors
a must for healthier crops.

4) This would prevent land degradation
eg: India plans to reclaim 24 million Ha land by 2030 [UNCCD]

Challenges to shifting:

1) lack of technology → Access
→ cost
eg: Modern, advanced greenhouses

2) Funding deficit

3) small, marginal farmers rely on traditional methods

eg: NPK fertilisers hand distributed in wrong proportion 6:5:2 instead of 3:2:1.

The shift to irrigation water productivity is a new concept taking shape. With adequate government push it can aid to increase yield and 'Double farmer income'.

12.

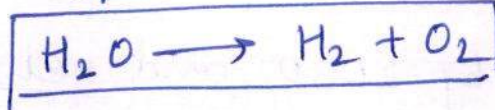
भारत की ऊर्जा सुरक्षा प्राप्त करने में हरित हाइड्रोजन की भूमिका का परीक्षण कीजिए। राष्ट्रीय हरित हाइड्रोजन मिशन, भारत की अपने ऊर्जा लक्ष्यों को प्राप्त करने में किस प्रकार मदद कर सकता है? (उत्तर 250 शब्दों में दीजिए)

Examine the role that green hydrogen can play in unlocking the energy security of India. How can the National Green Hydrogen Mission help India in achieving its energy goals? (Answer in 250 words)

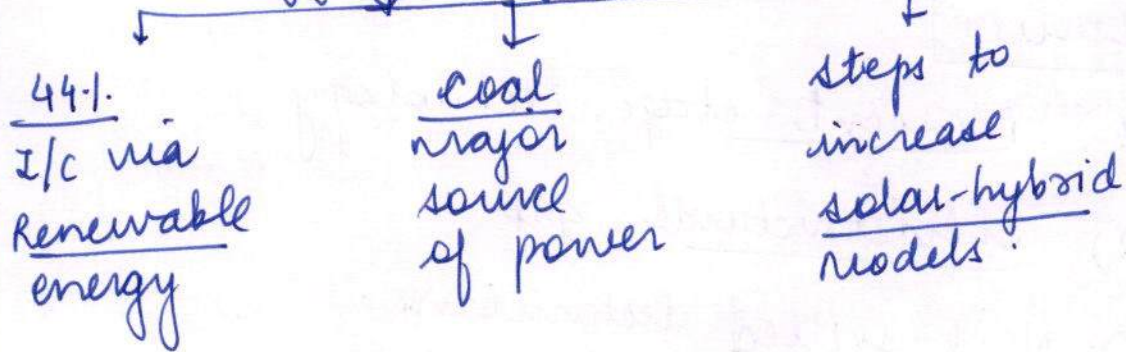
उम्मीदवारों को इस छवि में नहीं लिखना चाहिए
Candidates must not write on this margin

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Green hydrogen is produced from renewable energy, thus causing no carbon emissions.



Present energy security in India



Role of green hydrogen:

- 1) can increased India's Renewable energy potential from 44% → 75%.
- 2) solar, wind energy have limitations green hydrogen can overcome the natural barriers
eg: no need of favourable climate.

3) green-hydrogen deals with Denmark
Germany → to aid tech transfer to
India

eg: Increased efficiency.

4) Achieve India's goal of 45% emission
reduction by 2030 and net-0 by 2070

Issues:

1) Nascent stage technology

2) Infrastructural gap

3) Need skilled technicians.

4) Energy production needs to be
massively scaled up for energy security

5) coal, fossil fuel reliance still very
high.

National Green Hydrogen Mission:

① A policy framework → to

set rules and guidelines in place.

2) Green Hydrogen to be used in hybrid cars, energy production

eg: giving FAME scheme a boost.

3) supply chain management

eg: Demand-supply overcome constraint.

4) Job creation in green energy. Thus attracting youth.

5) Improved R&D → for better technologies.

Thus the National Green Hydrogen Mission can help India achieve its

'Panchamrit' goals given at COP 26 glasgow.

13.

हाल के दिनों में, सरकार न्यूनतम पारिश्रमिक की जगह जीवन निर्वाह पारिश्रमिक को अपनाने पर विचार कर रही है। भारत में जीवन निर्वाह पारिश्रमिक को अपनाने के लाभ और इसमें विद्यमान बाधाएं कौन-सी हैं? (उत्तर 250 शब्दों में दीजिए)

The government has been weighing a transition from minimum wage to living wage in recent times. What are the benefits and constraints in the adoption of living wage in India? (Answer in 250 words)

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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Poverty and Deprivation are a social enemy for better economic growth. Committee's like Jendulkar, defined poverty as deprivation of basic needs of food, shelter, clothing, etc to lead a normal life.

Minimum wage → Living wage
 ↓ ↓
 To take care of these deprivations faced by the poor to allow them to have choices and empowerment.

Benefits of living wage:

1) Factor in inflation.

Solutions :

1. Schemes like MGNREGA for urban areas

eg: Rajasthan minimum urban wage Bill.

2. Local bodies devolution of funds and powers.

eg: better gramots reach.

eg: PESA → issues of tribals taken into account.

3. Social security measures

eg: ~~at~~ 90% economy informal.

Insurance
Formalise economy

4. Skill India, Stand up India focus.

It is important to move from

social protection → social empowerment to

harness India's 'demographic dividend'.

14.

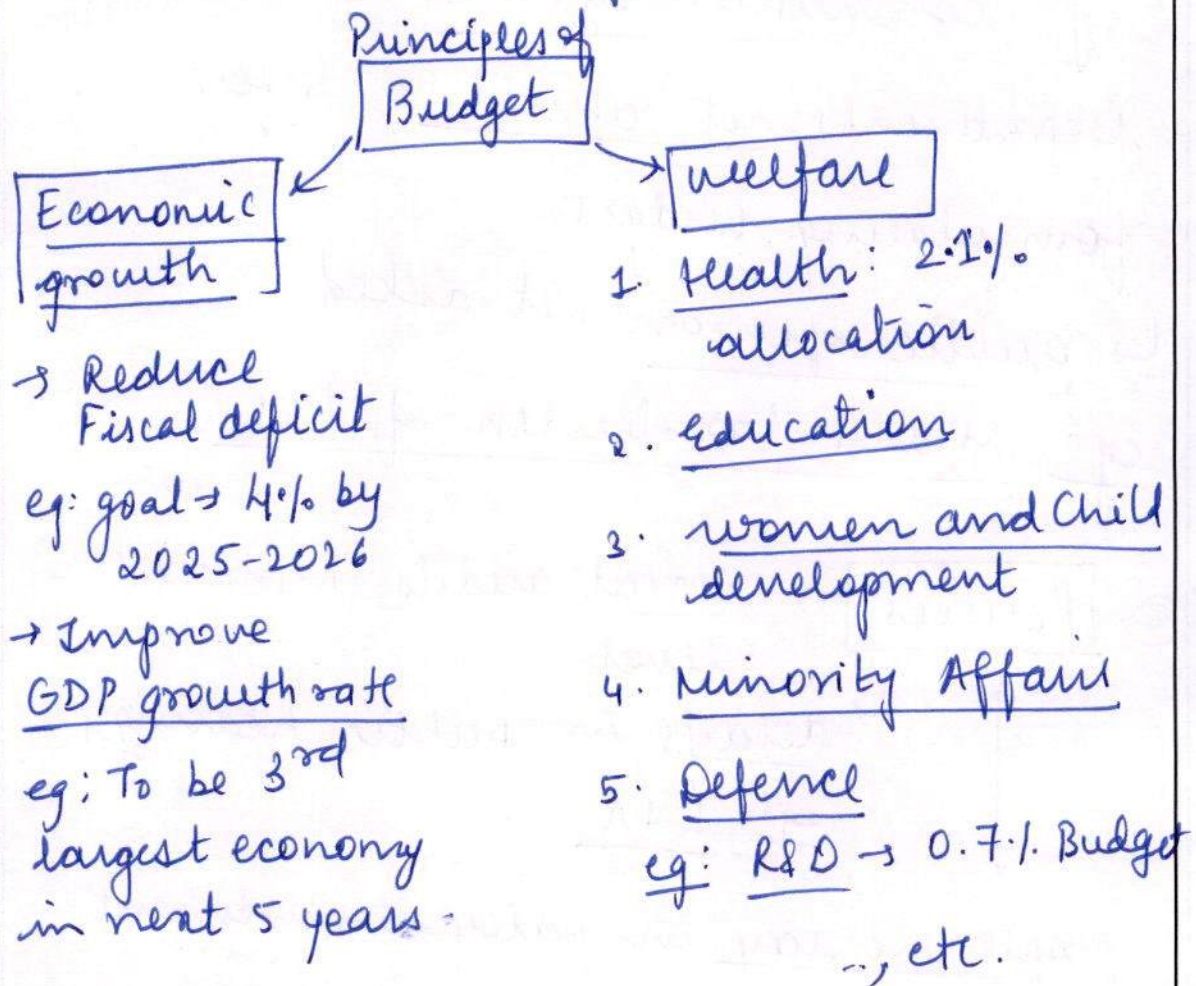
केंद्रीय बजट भारतीय अर्थव्यवस्था के लगभग हर क्षेत्रक को प्रभावित करता है, फिर भी न तो बजटीय प्रक्रियाएं पर्याप्त सार्वजनिक जांच के दायरे में आती हैं और न ही बजट नीतियां। क्या आप इस कथन से सहमत हैं? अपने उत्तर का औचित्य सिद्ध कीजिए। (उत्तर 250 शब्दों में दीजिए)

The Union Budget affects almost every sector of the Indian economy, yet neither the budgetary processes nor the budget policies come under substantial public scrutiny. Do you agree? Justify your answer. (Answer in 250 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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The Union Budget (A112) is a statement of expenditure, income and monetary allocation to different ministries for the given year.



Thus Budget affects the physical
and social infrastructure of India.

Yet, lack of public scrutiny:

① Process → issue of lack of discussion
↳ use of guillotine motion
↳ many times Parliamentary standing
↳ committees bypassed

↳ Departments not referred to before
formulating budget

↳ public opinion not asked

eg: middle tax-burden of tax.

② Policies → social credits miniscule
level
↳ delays in public hearings
eg: EIA

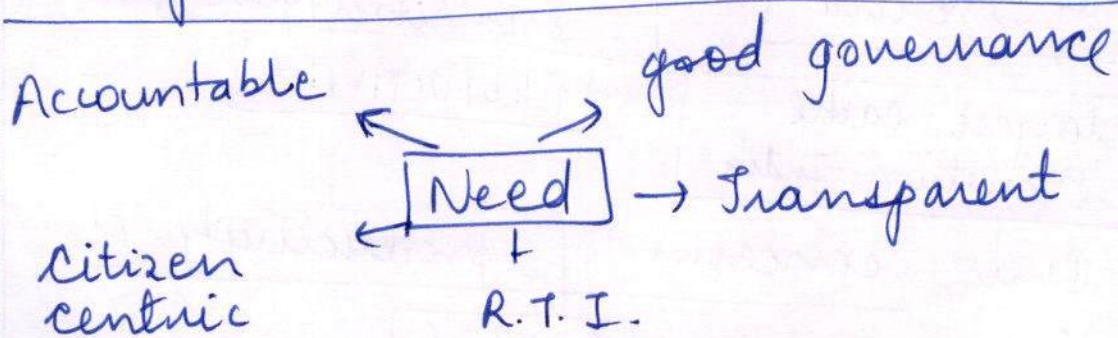
↳ people no say in policy amendment

eg: PM-KISAN → government fixed
₹6000 sum and 3 installments

without consulting farmer organisations.

Positives of Budget process:

1. Drafted by finance department taking into account economic parameter eg: FDI, Remittance, etc.
2. Technicians and people's representatives both formulate it.
eg: Finance Minister and staff involved
3. CAG can scrutiny it later.
4. P.A.C Public accounts committee keeps a check.



Thus more transparency and accountable measures can enhance the Budget process.

15.

भारत स्वयं को दूध की कमी वाले देश से दुनिया के सबसे बड़े दूध उत्पादक देश के रूप में बदलने में सक्षम हो गया है, लेकिन देश में डेयरी पशुओं की उत्पादकता चिंता का विषय बनी हुई है। विवेचना कीजिए। (उत्तर 250 शब्दों में दीजिए)

India has been able to transform itself from a milk deficit country to the world's biggest milk producer, but the productivity of dairy animals in the country remains a concern. Discuss. (Answer in 250 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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India's white Revolution leaded by Dr. Varghese Kurien put India as the largest producer of milk on the global map. Yet India doesn't export.

Cattle → Drought
→ Milch

Cattle types:
- Sindhi
- Gir, etc

Goat, sheep too a part of livestock

Indian cattle = 1800 litres/year
USA cattle = 3000 litres/year

largest cattle population - India

PRODUCTIVITY

Thus, concerns of productivity of cattle remain: **CAUSES**

1. cattle nutrition deficit
eg: lack of healthy fodder ← corn, soy, etc

2. Cattle disease

eg: Foot and mouth disease

3. Natural calamities → death of cattle

eg: Floods, landslides

4. scientific technology lacking

eg: Artificial insemination only in
and around urban centres

5. Farmers look at livestock as a ~~substi~~ 'subsistence'

6. small, marginal farmers

eg: Paucity of credit, funding →

Average yearly income of household
around ₹90,000 - 1 lakh. (NABARD)

Steps taken to improve productivity

1) Cattle shelters

2) Disease prevention

eg: Vaccination

3. Ministry of Animal Husbandary, Fisheries - funded.

4. Animal development Fund.

5. Kisan Vigyan Kendras,
skilling of farmers.

Need/way Forward:

① Focus on quality over quantity.

eg: Need to increase livestock
contribution to ^{agriculture} GDP above 4%.

② R&D in cattle health.

③ shelters in disasters

④ Milking technologies → higher efficiency

Thus livestock can play an important role in increasing Indian GDP, exports and doubling farmers income.

16.

जहाँ एक तरफ जलवायु परिवर्तन, फसल की विफलता के लिए जिम्मेदार है, वहीं दूसरी तरफ चरम मौसमी घटनाओं के लिए कृषि क्षेत्रक स्वयं आंशिक रूप से जिम्मेदार है। विवेचना कीजिए। भारत में कृषक समुदाय की प्रत्यास्थता को सुदृढ़ करने के लिए राष्ट्रीय कृषि आपदा प्रबंधन योजना के तहत क्या रणनीति अपनाई गई है? (उत्तर 250 शब्दों में दीजिए)

While climate change is responsible for crop failures, the agricultural sector itself is partly responsible for extreme weather events. Discuss. What strategy has been adopted under National Agriculture Disaster Management Plan to strengthen the resilience of the farming community in India? (Answer in 250 words)

उम्मीदवारों को
इस हशिप में
नहीं लिखना
चाहिए
Candidates
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write on
this margin

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IPCC 6th assessment report flagged
agriculture to cause 40% of methane
emissions, thus fueling global warming
and climate change.

climate change led to crop failure :

1. Extreme weather events
eg: tomatoes farming in India loses
faced in 2023.
2. Wildfires in Europe, Australia, California
eg: loss of orchards, agricultural crop.
3. Rising temperature → yield reduced
4. Pest proliferation → loss of crop.

Agriculture responsible for extreme weather

1. Methane emissions → global warming

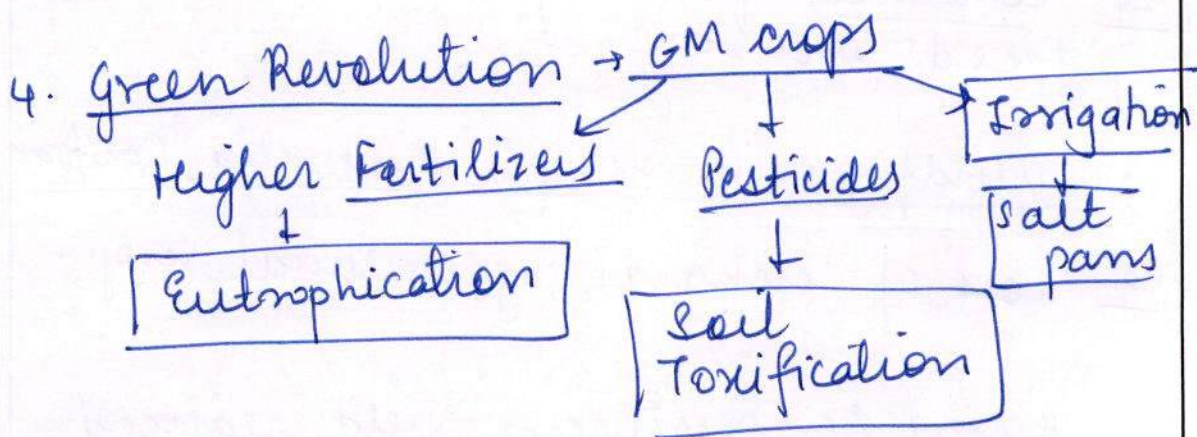
eg: From Paddy, livestock waste, etc

2. unsustainable agriculture practice → land degradation

eg: expansion of Thar desert eastwards

3. Excessive irrigation → soil salinity
→ aquifer imbalance

eg: water shortage for crops.



Strategy adopted for Resilience

① climate smart agriculture →

eg: GM to adapt to high temperatures,
pest resistant.

② Insurance for farmers

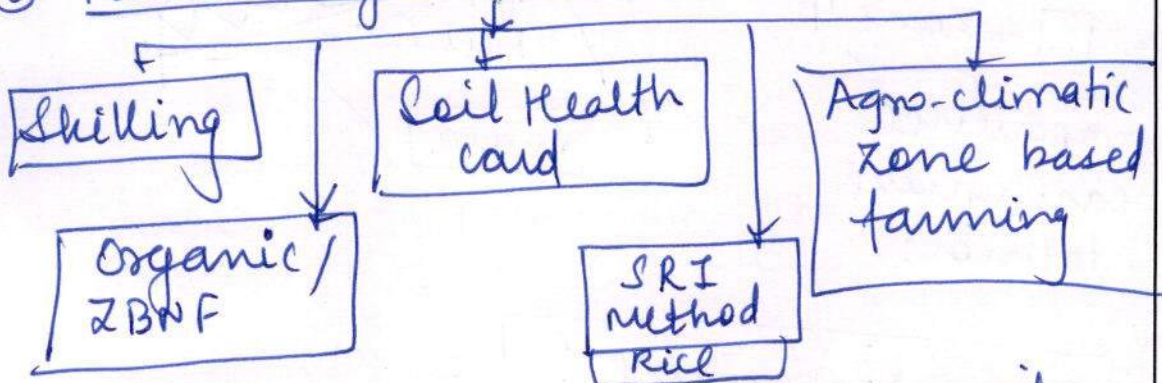
eg: PM-Fasal Bima Yojana

③ Farmer credit: eg PM-KISAN.

④ Technology based solutions

eg: Precision irrigation

⑤ Farmer organisations



⑥ Towards vertical farming → no soil degradation, lesser emissions.

⑦ Towards MILLETS farming.

Millet revolution in India

can lead to better farmer remuneration and ~~an~~ ecology preservation for a 'sahas se samiddhi' strategy.

17.

दिल्ली सहित भारत के कुछ क्षेत्र हिमालय में आने वाले भूकंपों के प्रभाव के प्रति अत्यधिक संवेदनशील हैं। विवेचना कीजिए। भारत में भूकंप से होने वाली हानि को कम करने के लिए कौन-से संस्थागत उपाय किए गए हैं? क्या आपको लगता है कि कुछ उल्लेखनीय कमियां अभी भी मौजूद हैं? (उत्तर 250 शब्दों में दीजिए)

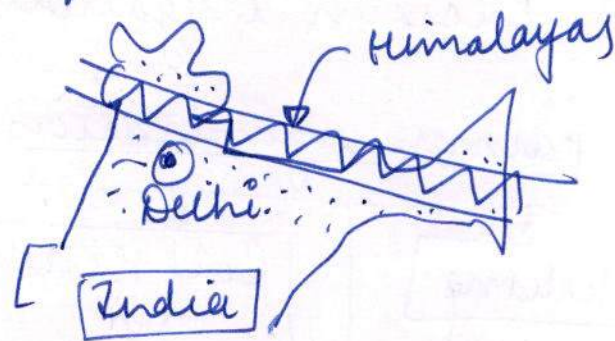
Some regions in India, including Delhi, are highly vulnerable to the impact of earthquakes originating in the Himalayas. Discuss. What institutional measures have been taken to mitigate earthquake losses in India? Do you think there are significant gaps that still exist? (Answer in 250 words)

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

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Delhi lies in Zone-4 of the earthquake prone areas, being in close vicinity of Himalayas.

☐ = Zone 4
experience earthquake tremors.



Why Vulnerable?

① Vulnerability is susceptibility to disasters.

② Poor building codes

eg: High density illegal construction at Kard Bagh.

③ High density settlements

④ No earthquake proofing.

eg: No retrofitting.

⑤ People unaware (eg) lack of mock drill training in case of earthquakes.

⑥ Administrative lax attitude.

Institutional Measures:

① NDMA - National Disaster management authority

SDMA - state level

DDMA - District level

under Disaster management Act, 2005.

② NDMA → creates basic framework
DDMA → implements it on ground level based on local needs

③ NDRF : National Disaster Response Force

eg: Help evacuation in disasters

④ National Disaster Fund created.

eg: PM Relief fund → for unforeseen events

Gaps that exist:

① Poor vulnerability mapping

② Development is haphazard → strain of on ecology

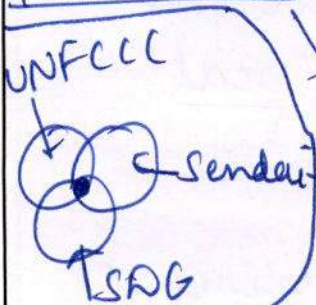
eg: Big Dams → cause tremors
(Koyna Dam earthquake)

③ Lack of Preparedness (eg: Trainings skipped, people too casual)

④ Lack of workforce in Disaster management institutions.

→ Adhere to Sendai Framework

Solutions → CDRI: Disaster Risk Reduction



→ Build back better

Thus resilience can lead to a safer and sound protection from disasters.

18.

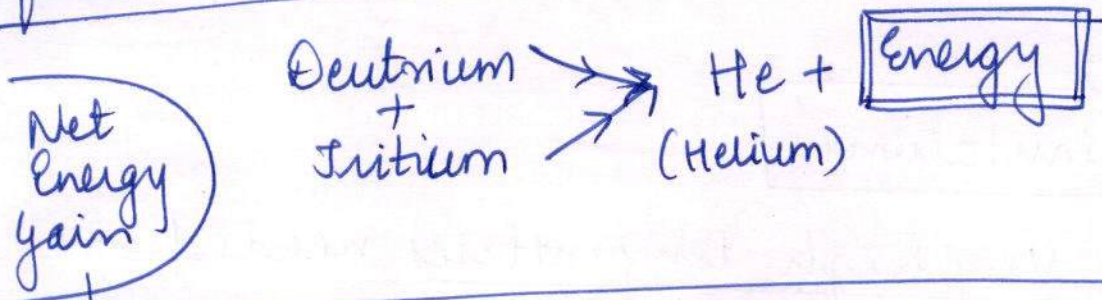
हाल ही में, वैज्ञानिकों ने परमाणु संलयन अभिक्रिया में निवल ऊर्जा लाभ की घोषणा की है, जिसे स्वच्छ ऊर्जा के भविष्य के लिए एक बड़ी वैज्ञानिक सफलता माना गया है। परमाणु संलयन आधारित विद्युत उत्पादन के क्या लाभ हैं? व्यावसायिक स्तर पर विद्युत उत्पन्न करने के लिए इसके उपयोग की क्या सीमाएं हैं? (उत्तर 250 शब्दों में दीजिए)

Recently, scientists announced net energy gain in nuclear fusion reaction, which is considered as a major scientific breakthrough for the future of clean energy. What are the advantages of nuclear fusion based power generation? What are the limitations in using it to generate electricity at a commercial scale? (Answer in 250 words)

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Various fusion reactions were tested by scientists in France and China. Chinese Artificial sun (Tokamak) is said to have successfully carried out fusion tests.



Fusion reaction eg.

ADVANTAGES:

- ① No carbon emission
- ② No radioactive waste
- ③ No waste disposal problem
- ④ A very limited reaction, thus possibility of breakdown is very less

⑤ Raw material easily available
eg: No Thorium, Uranium need.

⑥ easier to build fusion reactors as
need of coolant, moderator
eliminated.

⑦ A chain reaction → thus can
create uninterrupted, continuous
energy flow.

Limitations:

① Very high temperatures needed for
fusion
eg: Temperature in millions °C →
as that of sun.

② Devastation if experiment ~~go~~ gone
wrong.
eg: Plasma state achievement.

- ③ Skilled technicians needed to handle such sensitive plants.
- ④ still a nascent technology.
- ⑤ Strong thick walled reactors needed to sustain excessive temperatures.
- ⑥ Land acquisition issues
eg: In India.

Way Forward → Nuclear Fusion a promising technology
↓
more testing needed
↓
global cooperation needed

↓
Contingency plan should be formulated

Such breakthrough can lead to sustainable living in future

SDG 11, SDG-13.

19.

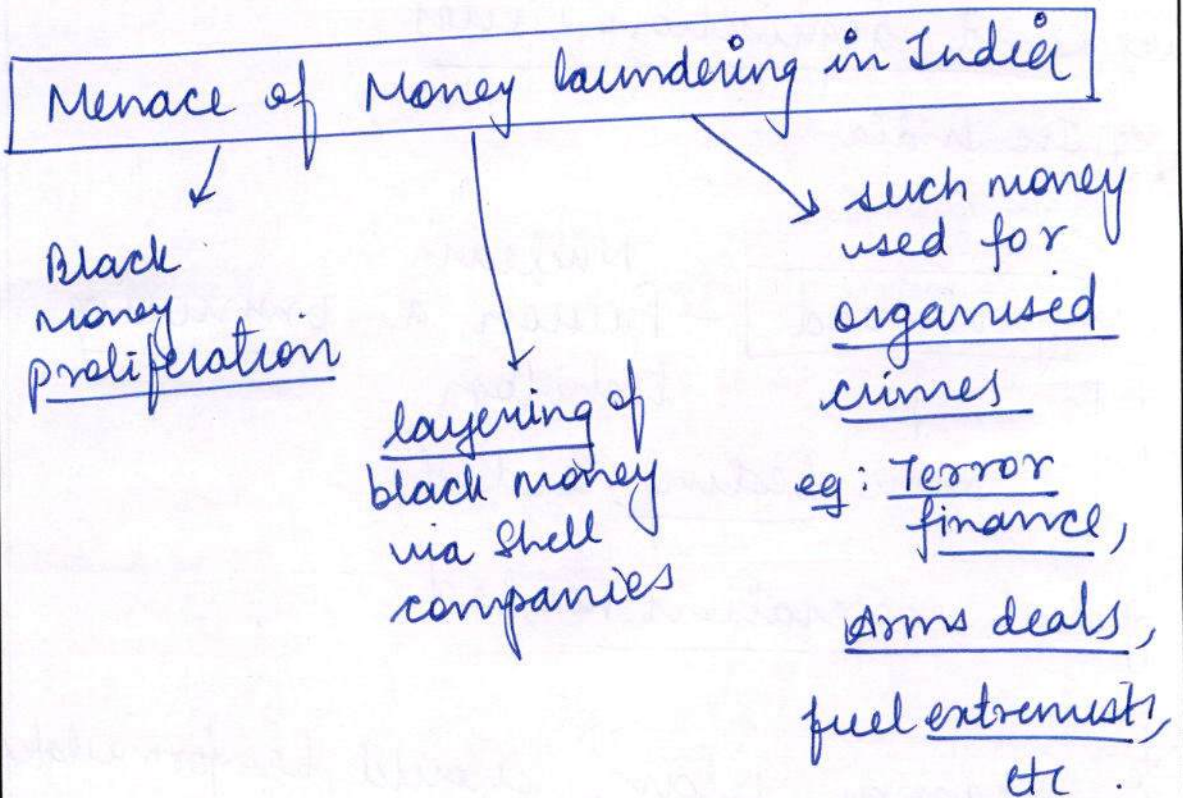
हालिया संशोधन को ध्यान में रखते हुए, भारत में धन शोधन (मनी लॉन्ड्रिंग) के खतरे से निपटने में धन शोधन रोकथाम अधिनियम, 2002 की प्रभावकारिता का परीक्षण कीजिए। (उत्तर 250 शब्दों में दीजिए)

Keeping in view the recent amendment, examine the efficacy of the Prevention of Money Laundering Act, 2002, in tackling the menace of money laundering in India. (Answer in 250 words)

15

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Recently amendments to Prevention of Money Laundering Act, 2002 (PMLA) were done to increase deterrence.



Efficacy of PMLA, 2002 :

1) comes under purview of Enforcement Directorate (ED)

2) Huge powers → deterrence created

eg: arrest without FIR
monitoring of Foreign exchange deals
etc

3) Maintains integrity, security of India

eg: weed out problem makers.

Issues in PMLA:

1) conviction rate of ED very low

eg: 3.3% in 2019

2) New technology making PMLA less effective

eg: Crypto trade, dark net

3) Hawala operations still operating in India.

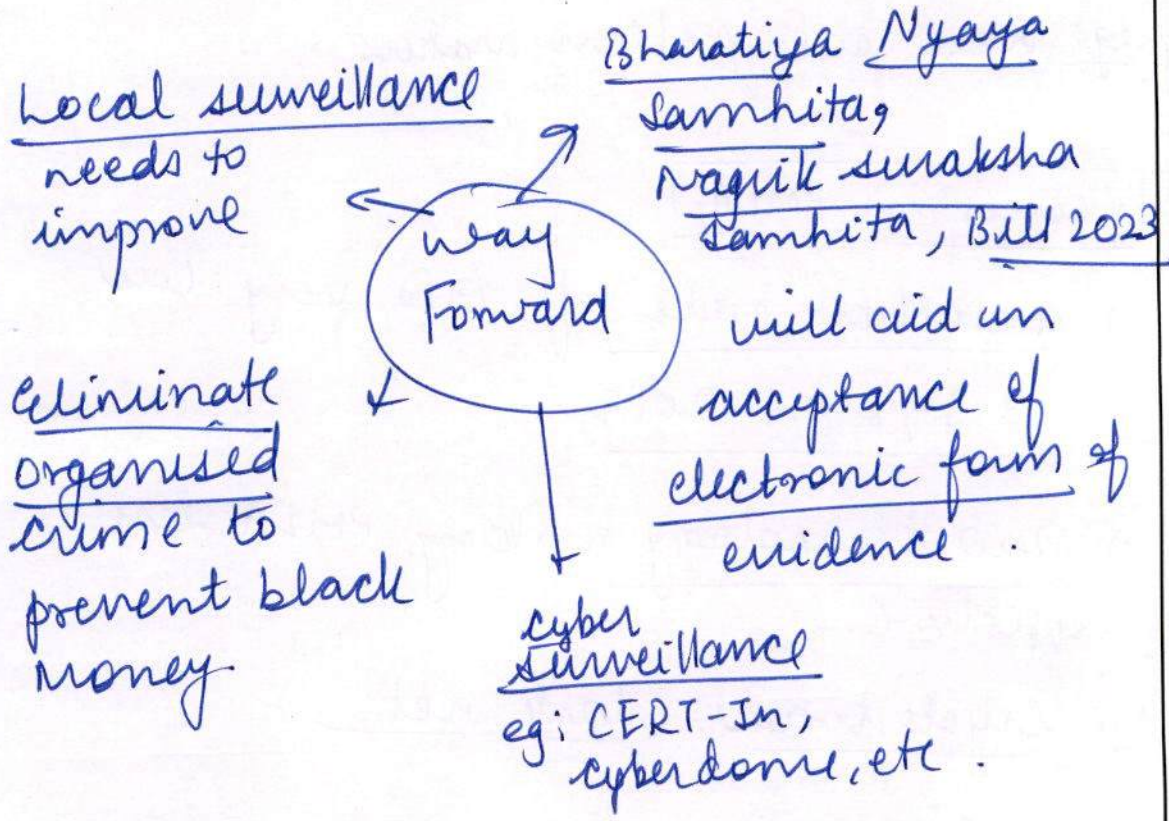
4) systemic corruption → Black money → Money laundering

5) Use of foreign islands / countries to stack black money

eg: Cyprus.

New amendment help in :

- 1) cover electronic means
- 2) Better monitoring
- 3) More surveillance.



PMIA thus plays an important role in sovereignty, security of India for India to reach its goal of a "developed country" by 2047.

20.

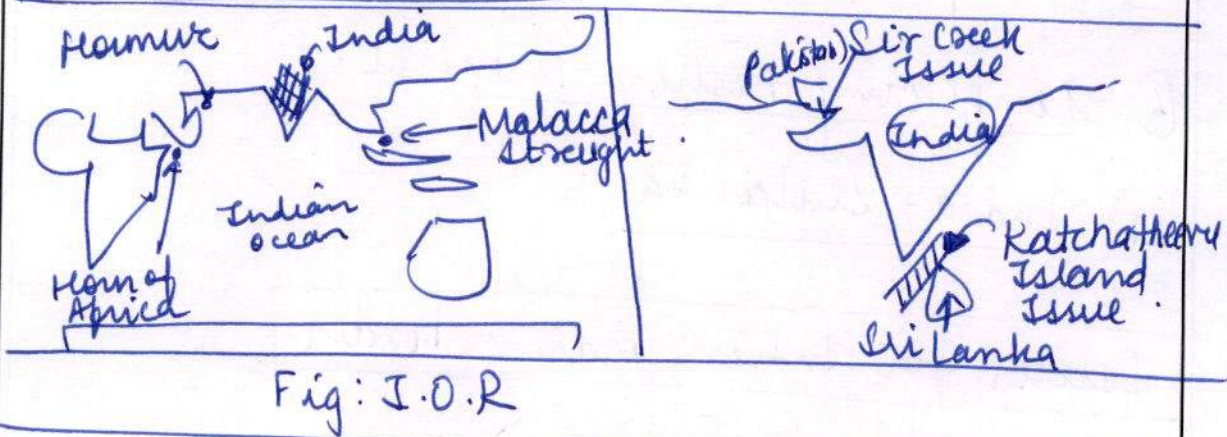
हिंद महासागर क्षेत्र (IOR) में मौजूद उन सुरक्षा खतरों पर चर्चा कीजिए, जिनका भारत के समुद्री सीमा संबंधी हितों पर सीधा असर पड़ता है। इन खतरों से निपटने के लिए एक मजबूत रणनीति सुझाइए। (उत्तर 250 शब्दों में दीजिए)

Discuss the security threats present in the Indian Ocean Region (IOR), which have a direct bearing on India's maritime border interests. Suggest a robust strategy to deal with these threats. (Answer in 250 words)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Recently there has been an increase in Chinese submarines in the Indian ocean.



Threats in IOR:

- ① Rising Chinese presence
eg: submarines, Maritime Silk Route, capture of Hambantota port economic debt-trap diplomacy
- ② Military base at Djibouti - China
- ③ Issue of Piracy
 - ↙ Horn of Africa
 - ↘ st. of Malacca
 - st. of Hormuz.

④ Threat to communication lines

eg: At choke points

eg: 30% of Trade passes through str. of Malacca.

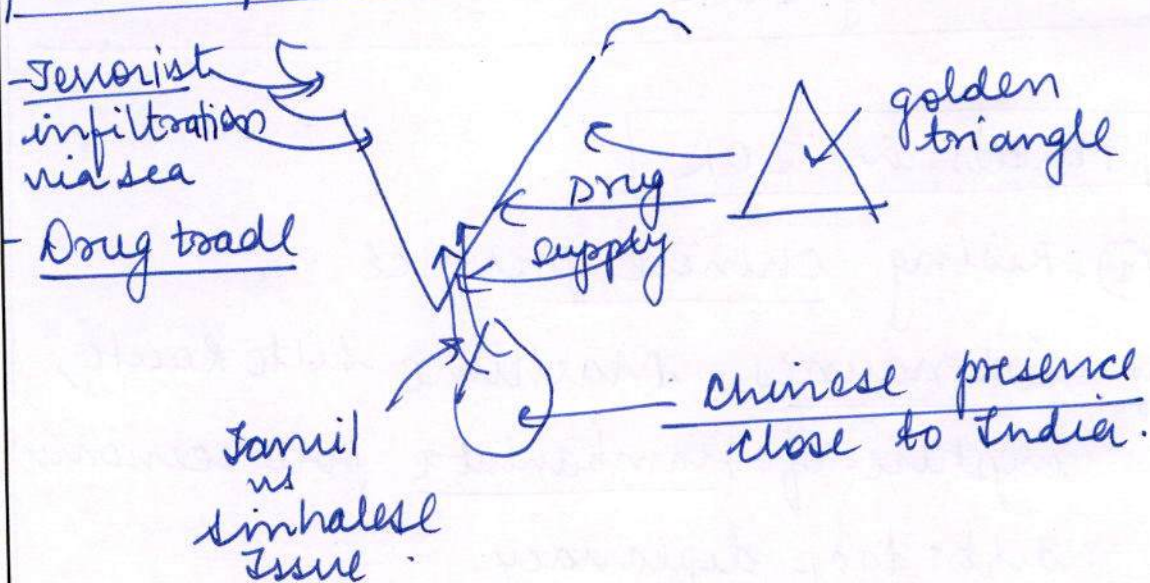
⑤ Race for mineral exploration in deep sea

eg: Polymetallic nodules

⑥ Conflicting Fishing Interest

eg: India - Sri Lanka

Issues for Indian marine border



Strategy to deal threats:

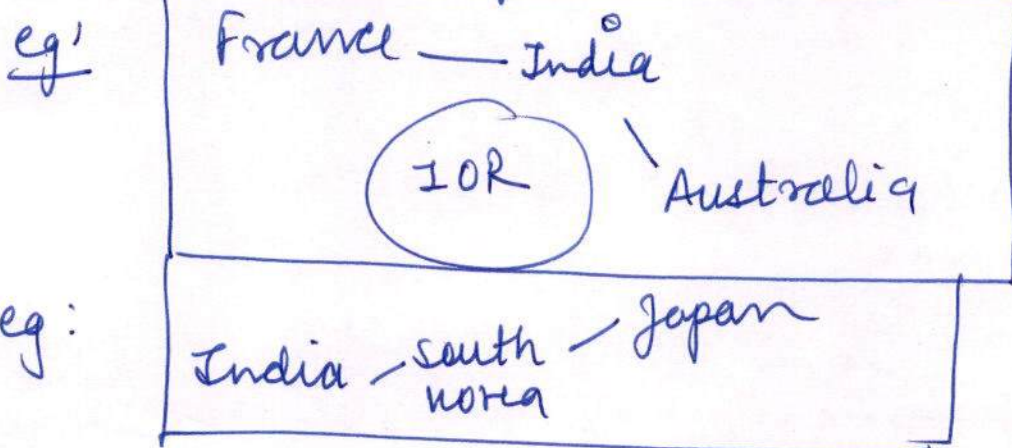
① Maritime surveillance

eg: Navy, coastguard patrols

② Continuation of navy deployment in strait of Hormuz → For safe trade.

③ Anti-Piracy Act, 2019 → to ensure ~~the~~ elimination of piracy in IOR.

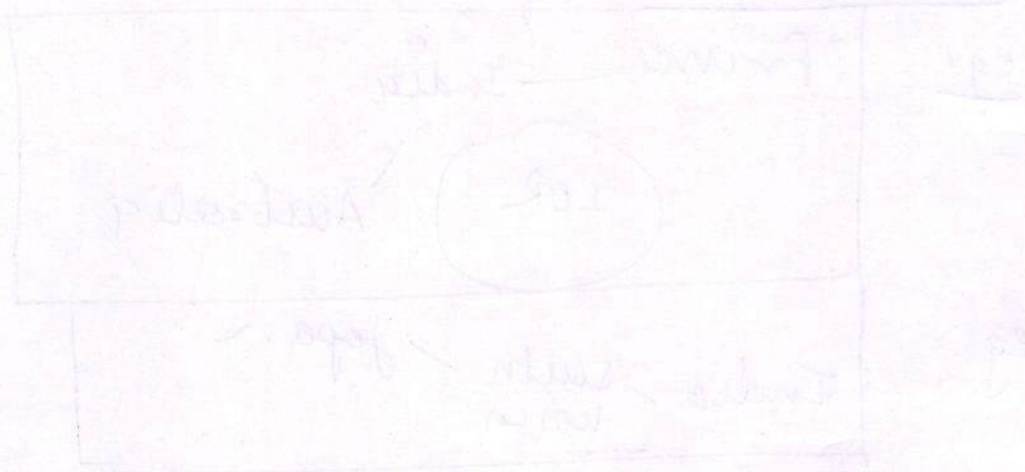
④ Minilateral cooperation



⑤ Strengthen UNCLOS → protect sovereign rights and sharing of common resources.

Thus for India to use as a Jagat guru and sawashreshtha Bharat, a safe and secure IOR is must where India can be a 'NET SECURITY PROVIDER'.

SPACE FOR ROUGH WORK



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