



# 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. : 0998375

अभ्यर्थी का नाम/Name of Student : NITISHA THAKUR

माध्यम: हिंदी/अंग्रेजी  
Medium: Hindi/English

English

तारीख  
Date

27/08/23

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

केंद्र  
Centre Bhai Joga Singh  
Public School, New Delhi

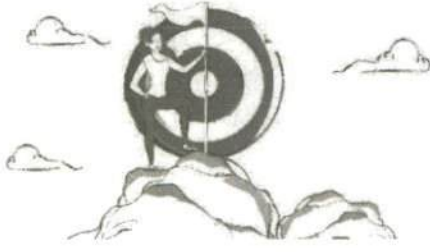
Gauri  
निरीक्षक के हस्ताक्षर  
Invigilator's Signature

	<p style="text-align: center;"><b>महत्वपूर्ण अनुदेश</b></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;"><b>Important Instructions</b></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 मंड़ी 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)					



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

निर्धारित समय: तीन घंटे  
Time Allowed: **Three Hours**

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

**प्रश्न-पत्र संबंधी विशेष अनुदेश**

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

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

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

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

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

प्रश्नों में इंगित शब्द सीमा को ध्यान में रखिए।

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

**QUESTION PAPER SPECIFIC INSTRUCTIONS**

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

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

*All questions are compulsory.*

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

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

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

*Keep the word limit indicated in the questions in mind.*

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

## EVALUATION INDICATORS

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

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

**All the Best**

1.

खाद्य 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)

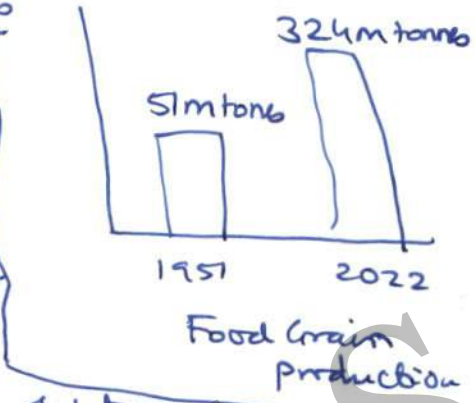
What are the different dimensions of food security? Examine India's status in terms of ensuring food security with regard to these dimensions. (Answer in 150 words)

10

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

Food security refers to the availability, accessibility and affordability of food to all citizens at all times

Dimensions and India's status	India's status
Dimensions	India's status
① <u>Availability</u>	Steps like green revolution led to increased food production (324 m tonnes)
② <u>Affordability</u>	Public distribution system (PDS) → Rice ₹2/kg and wheat ₹1/kg
③ <u>Accessibility</u>	Food Corporation of India (FCI) procurement and distribution in rural areas
④ <u>Nutrition</u>	Still lagging - NFHS-5 35% Undernutrition 19% Wasting



⑤ Hidden Hunger

→ Malnutrition in India exists → As per Global Hunger Index (GHI) in 2020 ranks 101/116 countries

⑥ Resilience

eg Covid related inflation controlled via imposition of Essential Commodities Act

⑦ Supply Chain resilience

Agni-Stra fund - ₹1 Lakh to invest in cold storage

Way forward

- ① Food Fortification
- ② Reduce Food Squeeze Budget
- ③ Dalwai committee → Millet production

Only a food secure nation can help achieve vision of Developed India by 2047

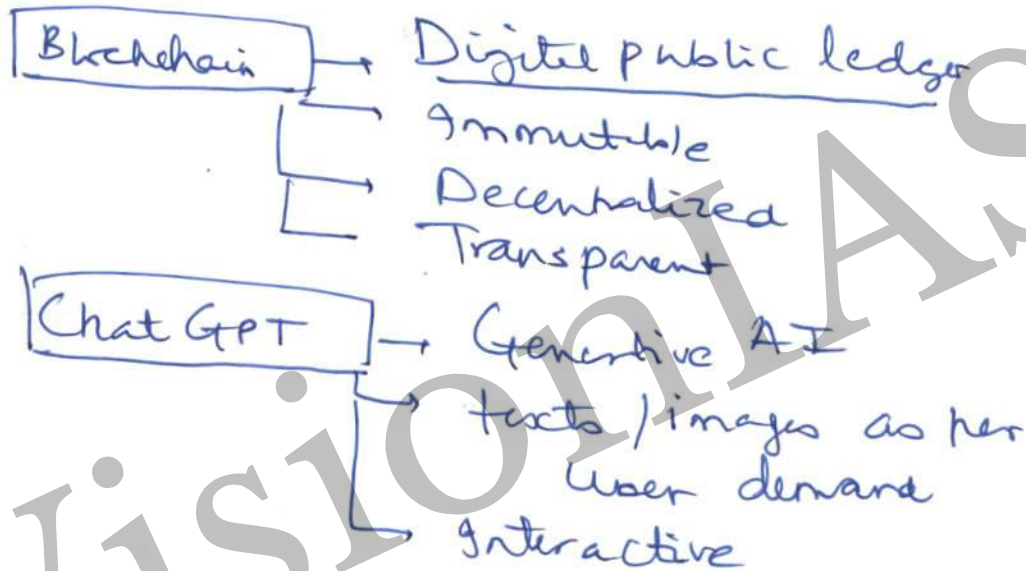
2.

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

As India moves to Web 3.0, Industry 4.0 and Genetics 2.0, modern technologies like Blockchain and ChatGPT have potential to revolutionize agriculture



Agriculture	Blockchain	Chat GPT
① <u>Pre sowing</u>	→ Information dissemination on soil condition, MSP, seed water availability	→ Farmers can seek knowledge about which crops to grow, method of <u>cultivation</u> → innovation

Agriculture	Blockchain	Chat GPT
② During sowing	<ul style="list-style-type: none"> <li>→ Information about location of water irrigation</li> <li>→ Custom highin centers</li> <li>→ tractors availability</li> <li>→ <u>Pre contracts</u> (<u>Smart contract</u>)</li> </ul>	<ul style="list-style-type: none"> <li>→ Best case methods of Cultivation sowing</li> <li>→ See images about method of using tractors</li> </ul>
③ Post sowing	<ul style="list-style-type: none"> <li>→ Income diversification methods</li> </ul>	<ul style="list-style-type: none"> <li>→ Generate ideas to diversify incomes</li> </ul>
④ Marketing	<ul style="list-style-type: none"> <li>Smart contracts</li> <li>- eNAMS</li> <li>→ Price discount</li> </ul>	<ul style="list-style-type: none"> <li>→ ways to augment income</li> </ul>

As Agriculture continues to employ 45.5% workforce, with technology aiding doubling farming income will lead to wage augment for farmers and food security for consumers

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 इच्छा में नहीं लिखना चाहिए  
Candidates not write on this margin

Dedollarization refers to reduced usage of dollar currency for trade settlement and medium of holding foreign currency by countries across the geographies.

### Factors leading to dedollarization

- ① Weaponization of Currency (eg) Freezing of SWIFT Account of Russia
- ② Geopolitics (eg) Russia-China - no limit friendship zone - push to Yuan-Ruble
- ③ Sanctions Impact Reduction (eg) CAATSA on India import of \$400
- ④ Effect of Taper tantrum in 2013 led to flight of FDI/FII from India
- ⑤ Volatility of domestic currency (eg) India's  $\text{₹} = 1/80 \$$  due to \$ strengthening not ₹ Weakening.

⑥ Fluctuating Forex → India's forex reduced to \$500bn in 2023

### Dollar dominance reduce

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

Yes	No
<p>① <u>Bilateral deals</u> (eg) Russia - India trouble deal in oil exports</p> <p>② <u>India's rule</u> (eg) UPI with UAE, Malaysia</p> <p>③ <u>Recommendations</u> of <u>Tarapur Committee</u> → Full Account Convertibility</p>	<p>① 70% Forex Reserve and 80% trade in \$</p> <p>② SDR currency dominance</p> <p>③ Recognition by Bretton Wood Institutions</p>

Overall, dollar will not lose its dominance since it dominates trade, foreign reserve and SDR currency in IMF.

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)

10

At WTO, developed countries push for reduction of Amber Box Subsidy - where food subsidy is categorized as illegal to be reduced to  $< 10\%$  of price of (1986-88) levels for developing countries.

Merit in India's policy support

① India - Agrarian economy

⇒ 45.5% (Agriculture) are in agriculture

② Low wage of farmers ⇒

As per 79<sup>th</sup> household survey, farmers' income only ₹10,000/month

③ Significant poverty rate


NITI Aayog → MPI is 14.96%

④ Poor indicators performance

→ Global Hunger Index 101/116<sup>2</sup>

- ⑤ Address situation factors (eg) Covid led lockdown → need to protect migrants - under PM Gareeb Kalyan Yojna
- ⑥ Ensure food security → support to farmers → farmers confidence
- ⑦ Mid day meal - to improve education enrollment

### Way Forward

- ① Rationalization of subsidy  
(eg) 

Year	Subsidy (Lacs)
2021	₹2.36
2023 Budget	₹1.96
- ② Focus on empowerment of poor (Ashok Gulati) → (eg) High allocation on education, skill development
- ③ More focus on physical Assets  
- Jal Shakti, Awas Yojna

With Peace Clause at WTO a temporary arrangement needs to be shifted to permanent arrangement at WTO

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 क्राशिए में नही लिखना चाहिए।  
Candidates must not write on this margin

10

As per NITI Aayog, 67% of households do not have access to clean water. And per capita availability reduced from 1800m<sup>3</sup> to 1400m<sup>3</sup> →  
(2001) (2015)  
leading to water stress situation.

### Initiatives

- ① Jal Jeevan Mission - ₹ 69 lac crore allocation to Budget 2024
- ② Rune household support - 56 Lt/day and functional household taps by 2024
- ③ Water harvesting and recycling push
- ④ Finance Commission - tied grants to improve water availability
- ⑤ Decentralization (eg) Pate Water Panchayats to revive old ponds
- ⑥ First water body census of 2023  
→ 24.24 lac bodies enumerated

## Issues

### Availability

- ① By 2050, water.org forecasts water scarcity ( $< 1000m^3$ )  
→ Falcken Indesc
- ② Rural-Urban divide
- ③ Inter regional disparities  
(eg) North (perennial rivers) vs South (seasonal rivers)

### Quality

- ① Water Contamination  
(eg) Pungent Cancer caused due to huge fertilizer
- ② Water borne diseases
- ③ Algae overgrowth (Eutrophication)
- ④ Industrial effluents

### Way Forward

- ① WASH strategies
- ② Mishra Shah committee (combine water body authorities)
- ③ Replication of Namami Gange
- ④ Community participation

Thus, to fulfil SDG 6 (Clean water and sanitation) Whole of Govt-society and people involvement is needed.

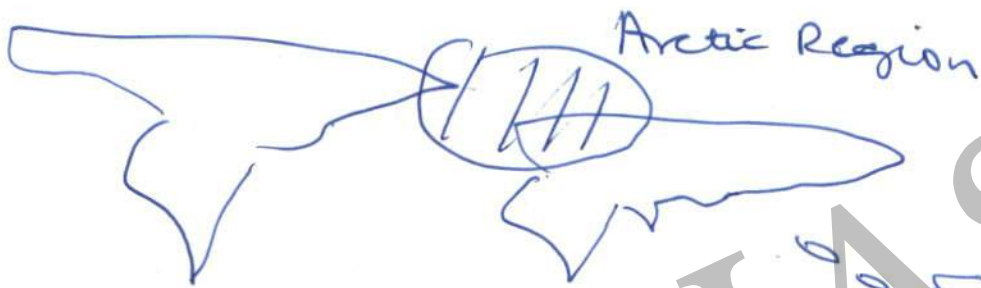
6.

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) 10

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

Arctic Region, as per IPCC 6<sup>th</sup> Assessment Report is losing glaciers at an accelerating pace



### Drivers of Glacier retreat

- ① Arctic amplification - 2 times loss of arctic due to albedo
- ② As per IPCC 95% glacier retreat due to climate change induced by anthropogenic factors
- ③ Triple Planetary Crisis

Climate Change

Biodiversity

Environment

## Potential Impact

- ① Loss of biodiversity
- ② Arctic resources (eg) Fish, minerals
- ③ Sea routes for navigation
- ④ Security threats (eg) China's  
access to India
- ⑤ Monsoon impact

These impacts are multi  
dimensional -

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

With Chandrayaan 3

success in 2023 and ensuing

Gaganyaan Mission of 2024, space

tourism is becoming a reality

Challenges

① Limited technology → India  
Spends only 0.67% of GDP

on technology

② Skill development (eg) only  
5% formally skilled

③ High cost of technology  
⇒ limited funds, to be  
balanced with welfare needs

④ Space Challenges (eg) High pressure  
absence of water

⑤ Low training source (eg)  
Indian Astronauts trained in  
USA for Gaganyaan Mission

⑥ limited private sector  
participation

Way Forward

1) NSDL and  
InSPACE

2) Technology  
Sharing  
(eg) ICET

These steps will help  
India reach the space and  
utilize the 4<sup>th</sup> dimension of  
space security.

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 कक्ष में नहीं लिखना चाहिए।  
Candidates must not write on this margin

10

## CART-T cell therapy aims

to use gene editing technology

to take out T cells - immune

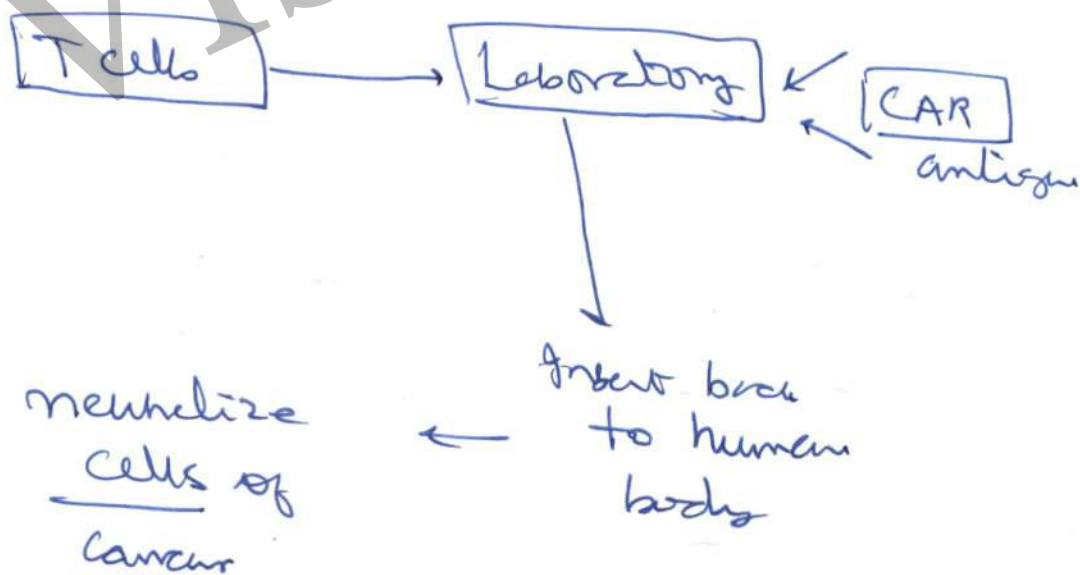
cells of body, - edit them with

Chimeric Antigen and incorporate

high ~~ad~~ ability to address

the neutralization of CAI cancer

cells.



## CART → Overcome CRISPR-CAS9

① More robust - since non ~~invasive~~  
invasive

② CAS-9 relies on ~~the~~ pathogen  
bacteria to guide to the  
right location

→ In CART → lab changes  
leads to more probability of  
Success

This, in 21st century, new  
technologies like CART can provide

SDG 3 - Good health and well  
being

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 नही लिखना चाहिए\*  
Candidates must not write on this margin

In the era of Web 4.0 and Industry 3.0, New and emerging technologies (NET) make security challenges non lethal but more crippling.

NET - more dangerous

- ① Asymmetric warfare → cannot be tracked by conventional power
- ② Rise of hybrid means of warfare  
traditional + Non traditional
- ③ Anonymity (eg) Use of drones to drop drugs in Punjab
- ④ Cross border terrorism (eg) Crypto currency → illegal funds

⑤ Radicalization (eg) ISIS recruit Indians via Telegram

⑥ Identity theft (eg) Pakistan lone wolf attacker in Indian soil

⑦ Strong organized crimes

(eg) Narco-terrorism Herzbeils

⑧ Threaten state security (eg) FARC drug terrorism in Latin America

Need for global efforts

① Delhi Declaration → Uniform laws on NET to curb terrorism

② Guidelines on Drone technology

③ CCIT → cross border international terrorism to address challenges of cryptography

Collective efforts will lead to safe, secure and flourishing rule based world order.

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)

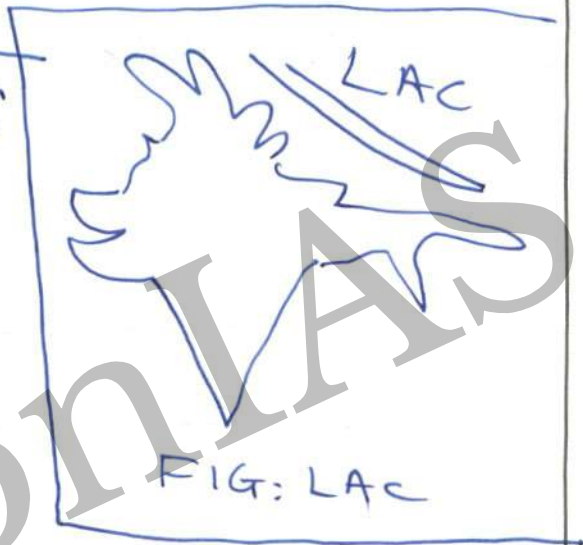
With the Line of Actual Control (LAC) remaining tense after the Galwan and Yangste incidents and both India and China ramping up infrastructure in the border areas, discuss the role that ITBP plays in the region. (Answer in 150 words) 10

उम्मीदवारों को इस हफ्ते में नही लिखना चाहिए।  
Candidates must not write on this margin

Line of Actual Control (LAC)  
is the 3488 km border that India  
Shares with China.

LAC-tensed situation

① Galwan clashes  
in 2020 - death of  
34 Indian soldiers  
due to clashes at  
3 and 4 fingers



② Yangste clashes - due to border  
dispute and Chinese advancement  
across border

③ Salami Slicing - layer by layer  
advancement of China into India

④ Disputed region of Aksai Chin  
threat of violence

⑤ Cartographic aggression by China ⇒  
renaming of border districts

### Ramp of border infrastructure

① Border village development

→ Vibrant Village Programme

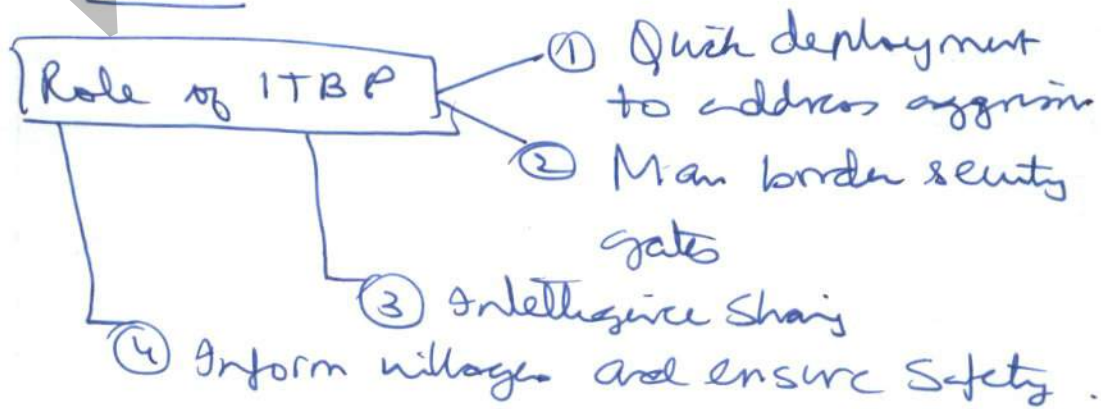
(₹ 4800 cr Budget 2024)

② Road construction - China in  
border of Arunachal Pradesh

③ Intelligence border - deployment of  
drones, AI, etc

④ Village defence Guards to guard  
border

⑤ widening of roads along international  
border



Recent BRICS sideline meeting  
(2023) of China-India presents hope for  
disengagement across border (LAC) 25

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 खण्ड में नहीं लिखना चाहिए • Candidates must not write on this margin

15

Land is an inelastic source of factor of production, whose productivity rise can augment agricultural productivity.

Need to shift from land productivity to irrigation water productivity

① Optimum Gross and Net Sown Area Ratio [At 1.42] - limited scope to enhance productivity

② limited land availability

(eg) Land density rose from  $48/\text{km}^2$  (2001) to  $59/\text{km}^2$  in 2022 due to population pressure.

③ High pressure on water sources

(eg)  $< 1400 \text{ m}^3$  per capita

## availability of water - water stress condition

(4) Agriculture uses 83% of fresh water need to improve water productivity

(5) Unsustainable method of production

(eg) Flooding method of Paddy cultivation

(6) Over utilization of ground water

As per NITI Aayog Composite Water Index → 25% Ground water overutilized

(7) Irrational subsidy on water

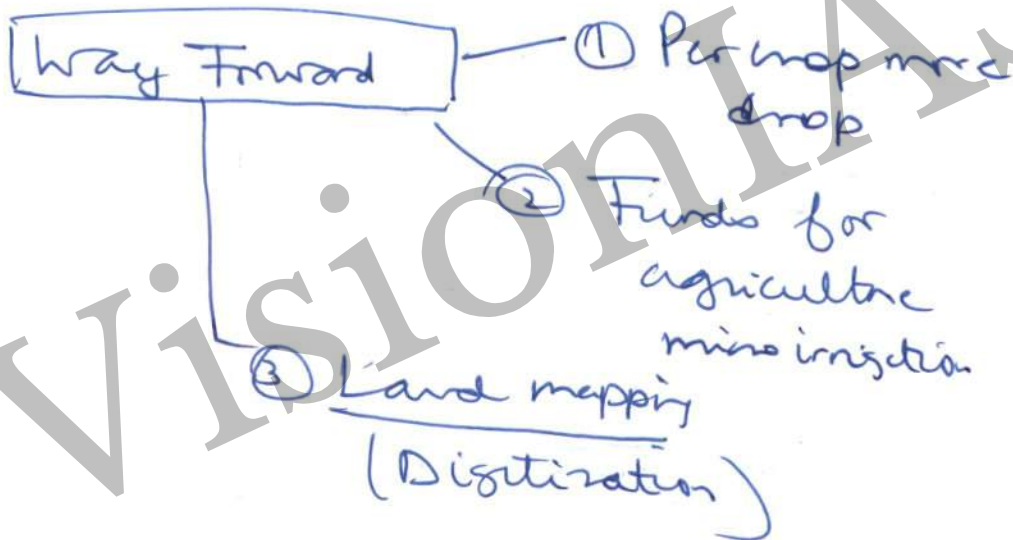
→ susceptible to misuse

### Challenges

(1) State policy - subsidy on water  
→ continued over-use

(2) Lack of awareness among farmers

- ③ Agriculture dependent on rain - need to secure water sources
- ④ Use cost of micro-irrigation investment
- ⑤ 867. farmers are small and marginal - cannot adopt water efficient technology due to high initial cost



Both land and water productivities needs to be enhanced to be able to improve agriculture productivity, reduce initial water input and uphold balanced development.

12.

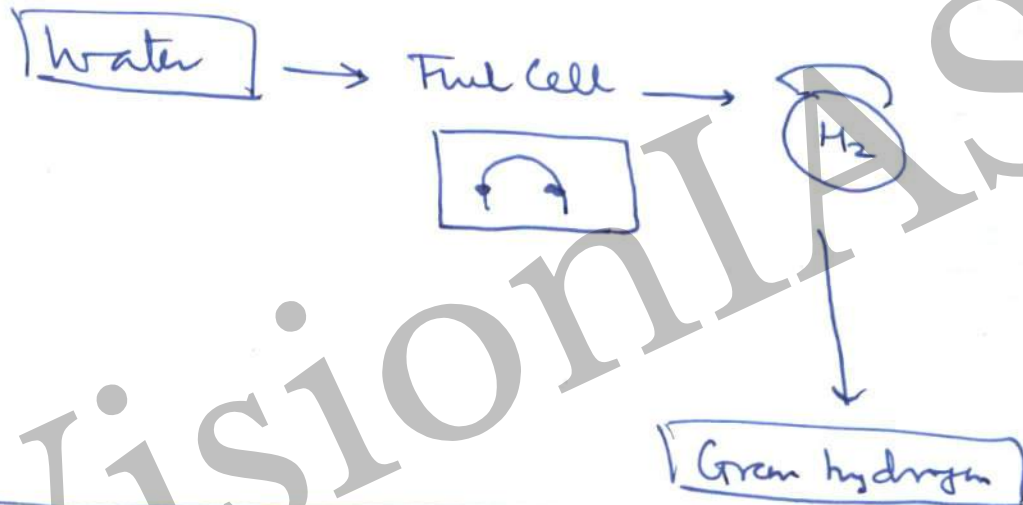
भारत की ऊर्जा सुरक्षा प्राप्त करने में हरित हाइड्रोजन की भूमिका का परीक्षण कीजिए। राष्ट्रीय हरित हाइड्रोजन मिशन, भारत की अपने ऊर्जा लक्ष्यों को प्राप्त करने में किस प्रकार मदद कर सकता है? (उत्तर 250 शब्दों में दीजिए)

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

15

Green Hydrogen is hydrogen production from electrolysis of water, which is clean, green and high in energy density.



Role of Green Hydrogen to unlock energy security

① Achieve Panchamrit target

→ Net zero by 2070

② Diversification of energy source

(eg) 85% ~~imports~~ of energy needs met via imports.

③ Reduce import bill and financial constraints (eg) Force in India reduced to less than \$600bn

④ Continuous availability of energy to drive growth

⑤ Push to Atmanirbhar Bharat - indigenous source of energy

### National Green Hydrogen Mission - 2023

① The Budget ~~is~~ set as allocated

₹ 19700 crore for 2023-27

② Creation of 5 mmt in next 3 years

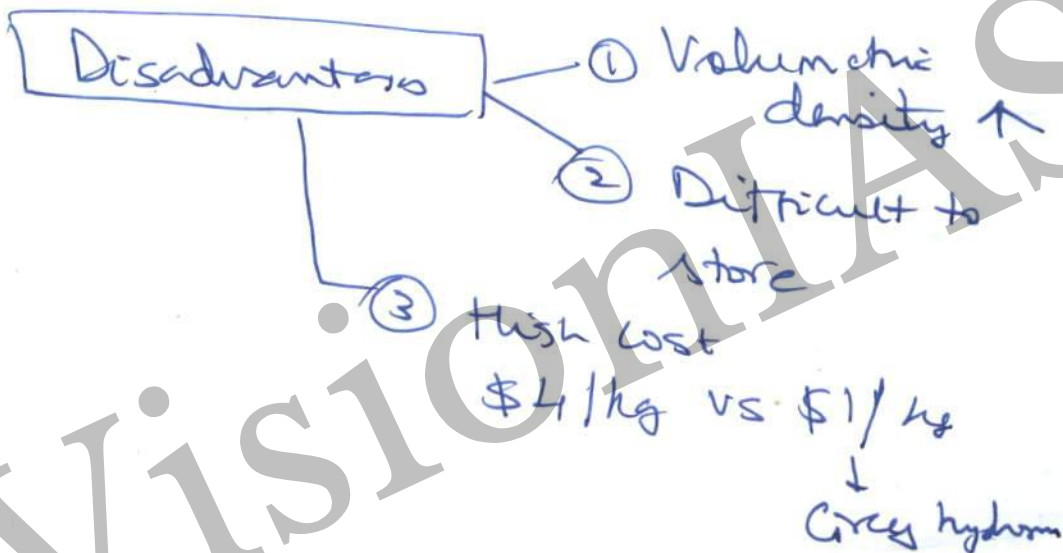
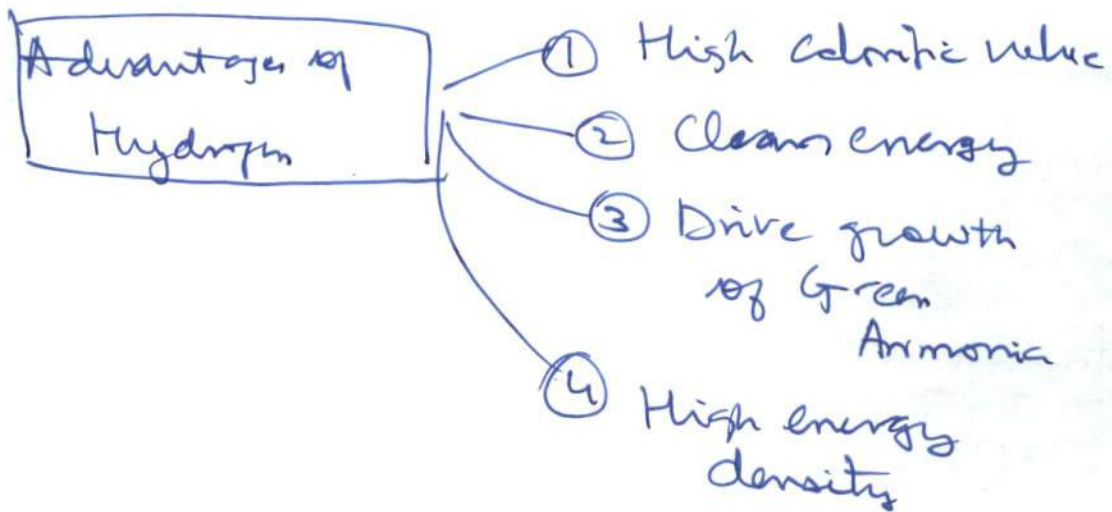
③ Electrolysis capacity of 125 GW

④ Produce 6 lac jobs

⑤ ₹ 8 lac crore cumulative investment in green hydrogen

⑥ SIGHT - Strategic Intervention in Green Hydrogen policy - to involve private investment

⑦ Save ₹1 lac crore on imports of fossil fuels



Government vision to push for green hydrogen by Green Hydrogen Mission aims to realize SDG 7 (clean energy) and make India's goal of Panchamrit a reality.

13.

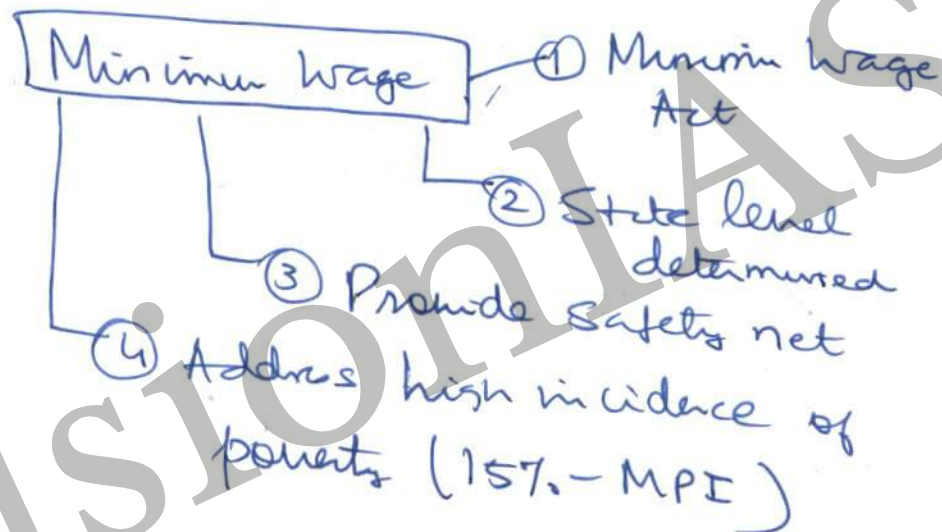
हाल के दिनों में, सरकार न्यूनतम पारिश्रमिक की जगह जीवन निर्वाह पारिश्रमिक को अपनाने पर विचार कर रही है। भारत में जीवन निर्वाह पारिश्रमिक को अपनाने के लाभ और इसमें विद्यमान बाधाएं कौन-सी हैं? (उत्तर 250 शब्दों में दीजिए)

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

15

As per Article 39 the State is mandated to provide living wage to all citizens in the spirit of welfare, Sarvodaya, Antodaya.



Advantages of living wage

- ① Uphold the spirit of Constitutional morality - Dignity of life
- ② Reduce incidence of MPI  
⇒ As per NITI Aayog, MPI's

largely due to poor health  $\Rightarrow$  cannot be solved by minimum wage

③ Subjective interpretation of minimum wage (eg) ₹ ~~2100~~ 212 in MGNREGA not sufficient to live a decent life

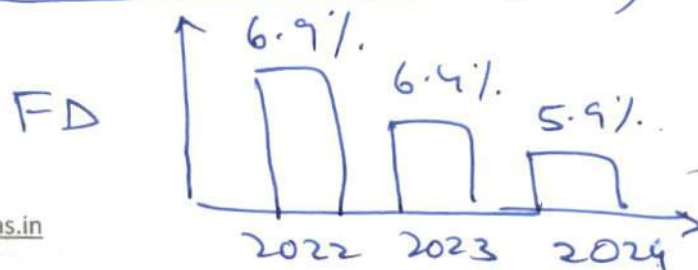
④ Reduce intergenerational poverty  
Since living wage provides opportunity to explore alternative livelihood

⑤ Promote social mobility  
 $\Rightarrow$  India ranks 69/74 in social mobility

⑥ Achieve the vision of developed India by 2047 - life of flourishing reality

### Challenges

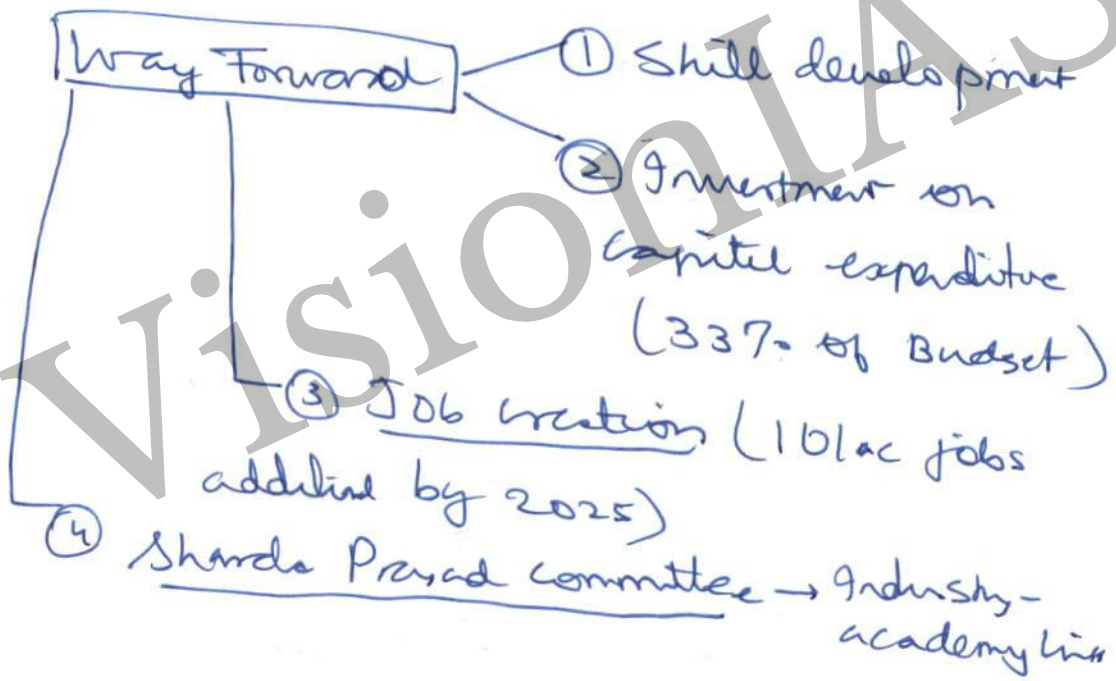
① Fiscal constraint (FD)



② Violate the golden rule of fiscal policy  $\Rightarrow$  to borrow to invest not for revenue expenditure

③ Ballooning interest & loan repayment  
 $\Rightarrow$  20% of Budget (₹ 1 Lakh Crore)

④ Dependency effect  $\rightarrow$  cuts innovation  
Reduces motivation for workforce  
upskilling



In the spirit of Sabka Sath,  
Sabka Vikaas Sabka Prayas, focus  
should be to provide living wage along  
with capital investment to drive  
inclusive growth.

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)

उम्मीदवादी को इस इशिये में नहीं लिखना चाहिए  
Candidates must not write on this margin

15

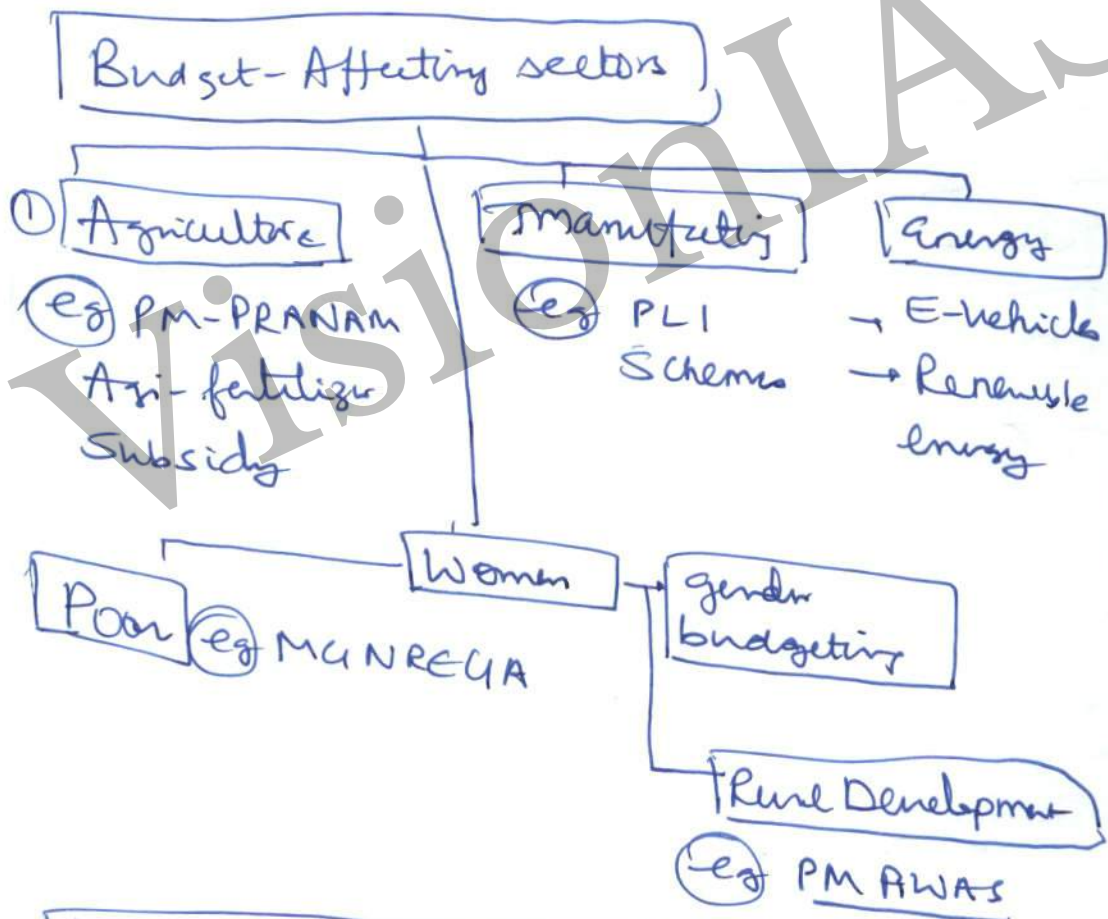
## Union Budget under Article 112

(Annual Finance Statement) delineates

sources of revenue and expenditure

of Union Government along with

policy targets.



Limited Public Scrutiny

① Expost facto power of CAG

(eg) Mismanagement of Jan Arogya Fund

- ② Public Accounts Committee → only recommendations in nature
- ③ Limited Consultation with public
- ④ Closed door dealings with public groups (eg) FICCI-Finance Ministers meeting
- ⑤ Passage of budget via voice vote → disruptions and limited discussions

However, scrutiny exists

Budgetary Process

- ① Consultation and invitation of expert opinions
- ② Role of media - creating awareness about possible changes
- ③ Debates and discussions  
(eg) Shadow Budget by e-GROW foundations

## Budget policy - scrutiny

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

- ① Department related standing committees (DRSC) - referred ~~budget~~ budget for each department.
- ② Recurs after budget presentation  
⇒ for discussions
- ③ Expert committee/opinions invited to discuss
- ④ Feedback mechanism  
(e.g.) Poor allocation of funds for PVTG led to PVTG 2.0 in

Budget 2024

Thus, limited scrutiny issues of Budget have been addressed through debates, meetings, ~~recurs~~ in budget session and public consultation to ensure unity of voice, unity of purpose.

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)

15

India is the world's largest milk producing nation, due to third largest bovine population, contributing to augmentation of farm income.

Transformation from deficit to world's biggest producer

- ① Cooperative revolution → white revolution by AMUL - community engagement
- ② Institutional credit availability  
⇒ As per NABARD, productivity is directly correlated to credit
- ③ Sahakar se Samridhi → prosperity through cooperation
- ④ Supply chain resilience - since shelf

life of milk is low - connectivity  
to demand centers reduce time

## Productivity of Dairy ~~Farms~~ Animals low

- ① Poor nutrients availability - low  
quality fodder
- ② Climate change → low agriculth  
productivity  
↓  
limited  
fodder for livestock ← Fodder inflation
- ③ Unscientific methods (eg) Artificial  
insemination industry not regulated  
→ faulty methods of insemination
- ④ Breeding of livestock not explored  
at commercial scale
- ⑤ Poor environment - disease issues  
(eg) Cattle disease in 2022 led  
to death of dairy animals

## Way Forward

- ① Agri dairy infrastructure fund (2023 Budget)  $\Rightarrow$  ₹20 lac crore - Utilize for livestock dairy animals
- ② Regulation of industry of artificial insemination
- ③ ~~AIICSA~~ <sup>CNP</sup> programme - gen. chip to track livestock - world's largest programme
- ④ Breeding of livestocks dairy animal to enhance productivity
- ⑤ Control on use of antibiotics for cattle  $\rightarrow$  may lead to Antimicrobial disease.

As dairy farms contribute to progress of Doubling Farm Income (Dalwai Committee) need to augment health of cattle by restricted use of antibiotics, artificial insemination and clean conditions.

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

15

As per IPCC, 6<sup>th</sup> Assessment report 2022, rising intensity, duration and frequency of aberrant weather conditions leads to crop failures.

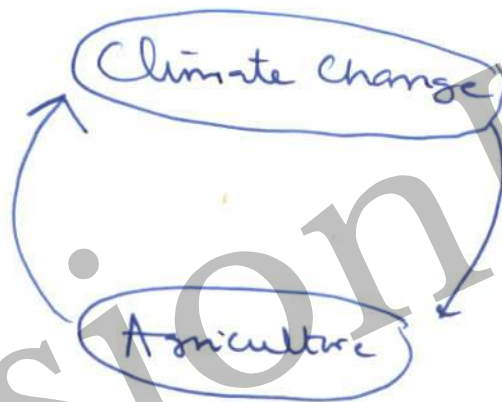


FIG: Feedback loop

Climate Change → crop failure

① Agriculture - considered to be enterprise under open sky → affected by climate change

② Food, inflation → 7.97% in India, driven by climate change

③ 58% of land is rained - monsoon dependent

④ Food grain loss (eg) 30mn tons lost in 2003 due to El Niño

⑤ Over impact on some crops

(eg) tomato inflation of 400% in 2023

### Agriculture - Affecting weather

① Unscientific methods of cultivation

(eg) stubble burning in Haryana

② Over exploitation of natural resource

(eg) Asia in India uses 83% fresh water

③ Deforestation due to area under

cultivation  $\Rightarrow$  149 million Ha

under agriculture

④ Over use of fertilizers  $\Rightarrow$  contaminate

water  $\Rightarrow$  affect Evapotranspiration

⑤ Loss in moisture  $\Rightarrow$  Drought like

conditions

## Strategy under Agri Disaster Mgmt Plan

- ① Climate smart agriculture by precision farming (eg) Use of data to decide crop production
- ② Induction utilization of resources  
(eg) Micro irrigation
- ③ Early warning system - to aware farmers about impending climate calamities
- ④ Reduce impact of weather  
(eg) Green house buildings to provide natural environment in ~~an~~ artificial conditions
- ⑤ Agriculture accelerator funds → investment in storage, cold chains

As climate change is both affecting and being affected by agriculture climate smart agriculture will improve resilience and reduce impact on agriculture to ensure sustainable development.

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

15

Earthquakes are sudden release of vibrations from Earth's crust due to stress built in the plates.

As per Geological survey of India (GSI), 58% of India is earthquake prone, with 11% in Zone II most of which is in Himalayan zone

Reasons for vulnerability

① Geological structure



Indo-Australian

Eurasian plate

FIG: Convergent plate boundary



MAP: Earthquake in Himalayas

② Fault lines (eg) Joshimeth built on Vaiknita fault - more vulnerable to earthquakes

③ Unconsolidated land material

(eg) Weak structures of foundation contribute to earthquakes

④ Rising Himalayas → 5cm/year shows active plate movement

### Institutional Measures

① National Building Code - to be followed to build new buildings

② Retorfitting of seismic hazard buildings already existing

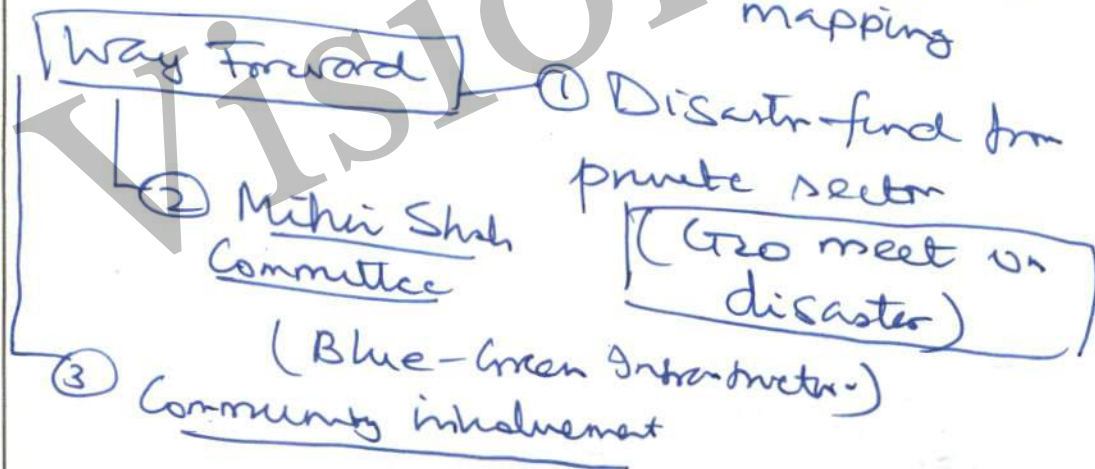
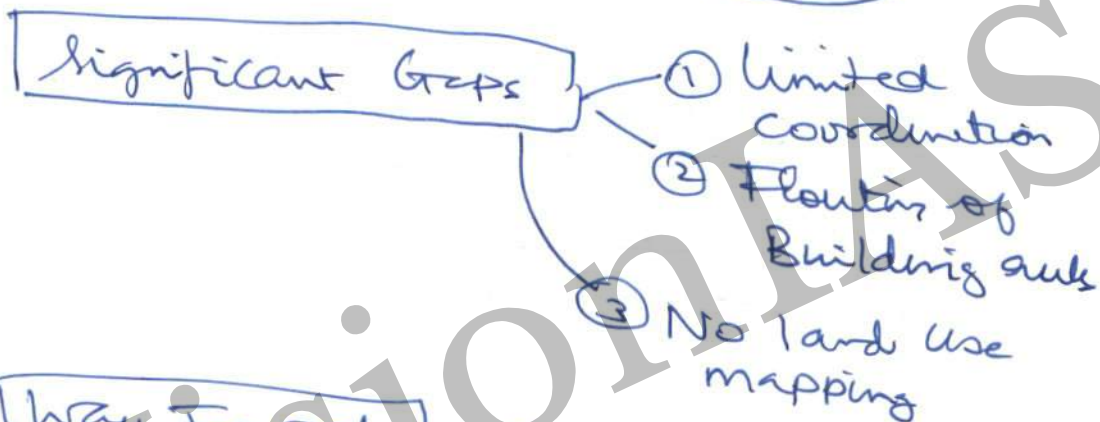
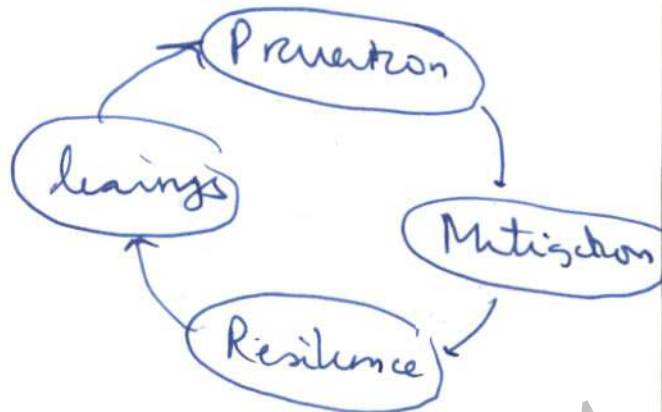
③ Regulatory mechanism - to ensure its implementation

④ Emergency response (eg) Mock drills

⑤ Capacity building (eg) Modules & procedural guidelines

⑥ Center - State Coordination to ensure quick deployment of help

⑦ Sendai framework of disaster risk reduction



As WB estimates 200mn people in India to be affected by earthquake by 2050, need for adaptation of building code, land use mapping and mitigation is needed.

18.

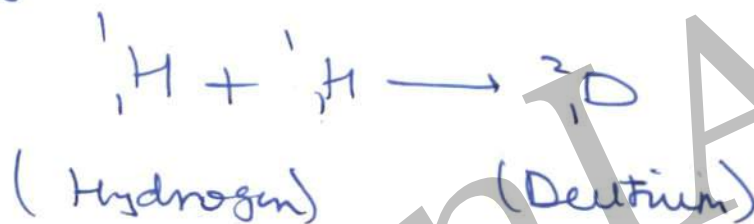
हाल ही में, वैज्ञानिकों ने परमाणु संलयन अभिक्रिया में निवल ऊर्जा लाभ की घोषणा की है, जिसे स्वच्छ ऊर्जा के भविष्य के लिए एक बड़ी वैज्ञानिक सफलता माना गया है। परमाणु संलयन आधारित विद्युत उत्पादन के क्या लाभ हैं? व्यावसायिक स्तर पर विद्युत उत्पन्न करने के लिए इसके उपयोग की क्या सीमाएं हैं? (उत्तर 250 शब्दों 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 हार्फ में नहीं लिखना चाहिए  
Candidates must not write on this margin

15

Nuclear Fusion is the technology of combining two light nuclei like Hydrogen to yield huge energy.



At ITER (Inter Thermo Nuclear Experimental reactor) → Tokamak technology ~~at~~ demonstrated net gain in energy.

### Advantages

① Push to clean energy

⇒ As per 6th IPCC Report, world needs to reduce 43% emissions by

2025 to achieve Carbon neutrality  
and meet Paris climate goals

② Push to India's Panchamrit

(eg) Become Carbon neutral by  
2070

③ Much safer than fission  $\Rightarrow$   
due to radioactive waste absence

④ Replication of natural phenomenon  
 $\Rightarrow$  nuclear fusion like sun,  
stars,  $\rightarrow$  more stable

⑤ Technology sharing reduce climate  
injustice (eg) top 1% contribute to  
17% GHG while bottom 50% countries  
to 12%

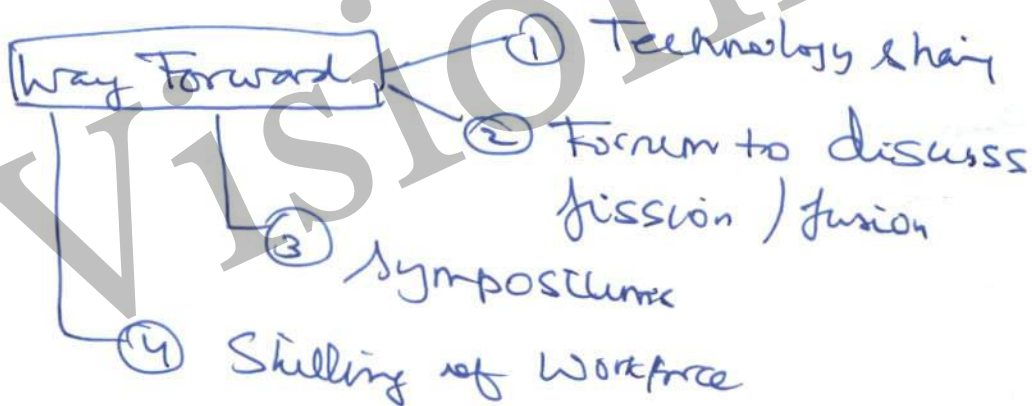
⑥ Balance growth and development  
with environmental conservation

Challenges

① Difficult to replicate the  
conditions (eg) Sun undergoes

fusion at 1.5 million °C

- ② Technology concentration with developed countries → may lead to climate injustice
- ③ Limited skills (eg) Only 5% Indian workforce is skilled & difficult to operate
- ④ India's program in FISSION → 3-stage nuclear reactor may be rendered irrelevant.



As the world progresses in fusion technology, steps like tech sharing, skilling will help realize

SDG 7 (Clean energy)

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)

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

15

Money laundering (OECD) is the process of disguising illicit money source as legal by incorporating in the money system.

Steps



Amendment in PMLA 2002

① Identification and expansion of beneficial groups / individuals  
⇒ Now, groups exposed to 10% (pre 25%) to business under PMLA

② Due diligence enhanced of NGOs Civil societies ⇒ registration certificate renewal needed

③ Politically exposed persons (PEP) definition broadened

④ All NGOs under Section 8, Companies Act 2013 Under PMLA

⑤ 50th GST Council expanded to include GSTN Networks under PMLA to adhere to FATF

⑥ Company secretaries, CAs, CS, now included under PMLA

### Efficacy of PMLA

High effective

Limited effect

① Expansion of definition - under course

② ~~8~~ Whole of supply chain and identification

③ Illicit activities like drug trafficking, narcotics to be addressed

④ Limits scope for money laundering

① Only 19% prosecutors file cases

② Poor conviction rate

③ Restricts ease of doing business

④ Hinders economic growth (eg) GST regulations

# Way Forward

## I Institutional Measures

- ① Adherence to FATF guidelines
- ② Data sharing (eg) FIU-India
- ③ NATGRID modernization to digitize transactions

## II International convergence

- ① Reduce cross border illegal movement
- ② Global rule of cryptocurrencies to reduce money laundering

## III Other

- ① Awareness among citizen
- ② Training of workforce

PMLA costs 2-5% of GDP (FATF). Collective efforts and data sharing along with PMLA implementation will lead to its control.

20.

हिं 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  
Candidates must not write on this margin

15

India's 7500 km of maritime border makes her vulnerable to security threats in IOR; India being a 'Stationed Ship' in IOR has security fallout implications

### Security Threats

① Impact on internal security

(eg) Mumbai 2008 attacks via water route

② Piracy attack in Arabian Sea close to Somalia

③ Disruption of Sea Lines of Communication (SLOC) (eg) Choke point (Malacca) weaponized

④ Illegal migrants (eg) Rohingyas from Cox Bazar Island

⑤ Drug trafficking - from Golden Crescent  
(~~Afghan~~ Iran - Pakistan - Afghanistan)  
and Golden triangle (~~Be~~ Myanmar -  
Thailand - Laos)

⑥ Alleged fishing (eg) Sri Lanka Katchavechu  
Island

⑦ Human trafficking via sea routes

⑧ Misuse of Free Navigation Rights  
(eg) Surveillance ship of China  
(Yang'e) in Sri Lanka

### Robust Strategy

#### I. Laws

① Anti Piracy Act 2013 to navigate  
piracy attacks in high seas

② IT Act 2008 - Intelligence sharing  
to ensure quick deployment of  
force

#### II. Institutional

① Naval Symposium to take  
Stock of maritime issues

② intercoordination among State and Center

III Other measures

① Bilateral deals

eg Cambodia - India mangdiell

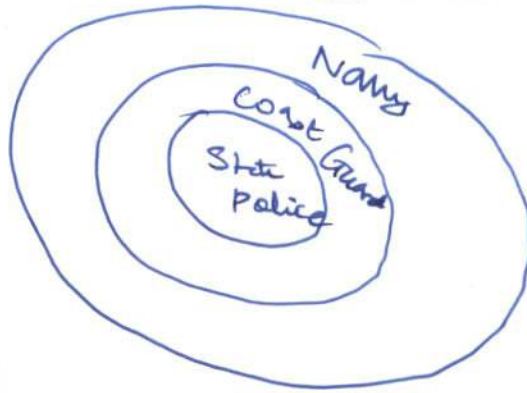


FIG: Coordination among forces

② Rule based world order adherence

eg UNCLOS rules

③ Network and data sharing

④ Maritime border structures

eg Electronic guarding posts

Maritime security poses challenge to India's security. Steps like Coordination, information dissemination and International actions will help ensure maritime security

SPACE FOR ROUGH WORK

VisionIAS