



**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. : 0710846

अभ्यर्थी का नाम/Name of Student : Madhwa Agarwal

माध्यम: हिंदी/अंग्रेजी  
Medium: Hindi/English

ENGLISH

तारीख  
Date

27th Aug '23

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

केंद्र  
Centre

BHOPAL

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 गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।</p>	<p>Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.</p>
5	<p>उत्तर स्याही में ही लिखें। उत्तर लिखने के लिए पेंसिल का उपयोग न करें, हालांकि आरेख, चित्र इत्यादि बनाने के लिए पेंसिल का उपयोग किया जा सकता है।</p>	<p>Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.</p>
6	<p>प्रवेश पत्र में उल्लेख किए गए माध्यम के अलावा अन्य किसी माध्यम में उत्तर न लिखें। अधिकृत और अनधिकृत की मिली जुली भाषा का भी उपयोग न करें।</p>	<p>Do not write answers in medium other than the authorized medium in the Admission Certificate. Do not use mixed language either i.e. authorize and unauthorized media together for writing answers.</p>
7	<p>प्रश्नों के उत्तर ठीक उसके नीचे दिए गए निर्धारित स्थान पर ही लिखें। निर्धारित स्थान के अलावा किसी अन्य स्थान पर लिखे गए उत्तर का मूल्यांकन नहीं किया जाएगा।</p>	<p>Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.</p>
8	<p>यदि आप अपने किसी उत्तर को रद्द करना चाहते हैं तो उसे पेन से काट दें तथा उस पर "रद्द" लिख दें, अन्यथा उसका मूल्यांकन किया जा सकता है।</p>	<p>If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.</p>

कार्यालय के प्रयोग हेतु For Official Use	कार्यालय के प्रयोग हेतु For Official Use
परीक्षक के हस्ताक्षर Signature of Examiner(s)	

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

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



**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**

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

Food security is a state where <sup>all</sup> people can access affordable and nutritious food at all times.

### Dimensions of food security

- ① Availability: of food grains and allied products (eg: wheat, rice, milk).
- ② Access: whether all people can access the food available (eg: dove by PDS).
- ③ Affordability: the food must be within a reasonable price limit (eg: Operation Greens to control T-O-P prices).
- ④ Stability: whether the food is ~~is~~ available constantly or affected by climate change, wars (eg: Russia Ukraine conflict led to price rise).

## Status of food security:

- ① Availability: Green Revolution ensured.  
315 mn mt of food grains for all
- ② Affordability: Access via PDS is there but  
inflation of 15% in wheat in April 2023
- ③ Access: poor on access as still  
malnutrition high Global Hunger Index Rank 107  
and stunting of 35%. (NFHS-5)
- ④ Stability: climate change affecting yields  
eg: Heavy rains in winter destroyed wheat crop

Issues remain quantity is there but quality  
and absorption is the next challenge.

The government has taken up PM POSHAN  
Shakti, Nutrition Gardens, etc which can  
help India achieve "KUSHTAN MUKT BHARAT"

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

ChatGPT is a conversational AI powered by transformer architecture & machine learning.

Blockchain is a decentralised ledger secured by cryptography. Both are affecting agriculture immensely.

Blockchain & Agriculture:

- ① Secured land record management.  
(eg:) used by Andhra Pradesh government.
- ② Develop a secured food supply chain for exports. (eg:) used by IBM.
- ③ Data management for forecasting data driven decision making by policy makers.  
(eg:) Agri-stack by NITI Aayog.

## ChatPT & Agriuttre :-

- ① Chat Bots :- to solve problems of farmers (eg: voice conversion & regional languages being tried by MelTY).
- ② Platform to boost awareness about existing government schemes
- ③ Get information about marketing, transport, credit and insurance.

### Challenges:

- Digital Divide (Rural vs Urban) farmers
- Farm size is small (86% farmers below 2 hectares)
- Poor infrastructure in rural areas
- Threat of piracy.

Way forward: Common service centre, handholding of farmers, phygital model (physical + digital)

Both tools can make agriculture economically rewarding & intellectually satisfying (MS Swaminathan)

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

De-dollarisation is a phenomenon where there is a shift from dollar as a global currency to other local currencies.

Factors led to recent acceleration :-

- ① Weaponisation of finance by USA.  
(eg: SWIFT sanctions on Russia)
- ② Unpredictability of Federal Reserve of USA  
(eg: rampant rate hikes → flight of capital)
- ③ Emerging foreign currency risk issues  
due to uncertainty
- ④ Emergence of other global powers like  
China (Yuan), India (Rupee).
- ⑤ Pandemic, Russia Ukraine war also pushing

# Dollar dominance

Gradually reducing

- ① Rise of Yuan in SDR Basket | MF
- ② Steps by India
  - NOSTRO | VOSTRO Accounts with Russia
  - Agreement with UAE for local currency settlement system
- ③ Agreements are being entered Bilateral  
(eg: Swap of currencies)

Still far away

- ① US Dollar forms 60% of foreign reserves
- ② Other currencies are unstable
- ③ Reluctance of China | Russia to accept Rupee due to trade deficit
- ④ US economy is still seen as safe haven

De-dollarisation is an opportunity for India to "Internationalise Rupee" so that its bargaining power improves and need for foreign reserves reduces.

4.

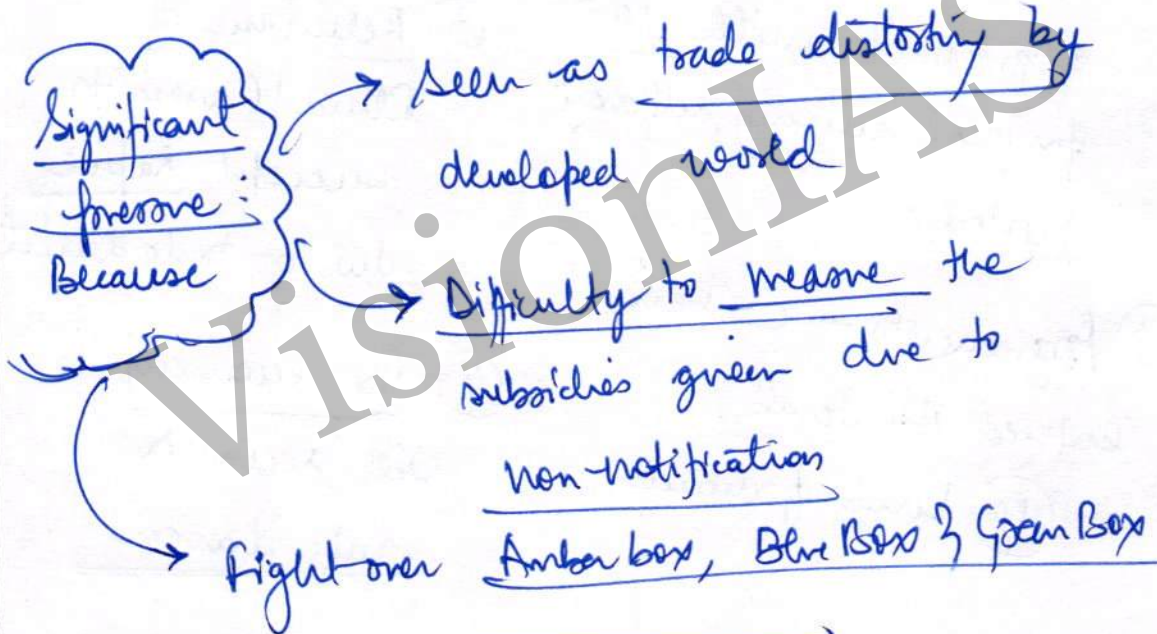
विकसित देशों द्वारा भारत पर खाद्य सब्सिडी व्यवस्था में बदलाव करने के अत्यधिक दबाव के बावजूद, भारत के लिए निर्धन व्यक्तियों हेतु अपना नीतिगत समर्थन बनाए रखना एक उचित कदम होगा। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

10

Overturn the DOHA Accords at WTO, food security regime gaining subsidies by States has been a bone of contention among developed & developing countries.



Yet Merit to retain policy support:

① Large scale hunger & malnutrition

(eg: Stunting [35%], Wasting [19%] (NFHS-5))

② Small scale farmers: (86% below 2 hectares)

- ③ Need to tackle poverty, and hidden hunger (~~and~~ Yellow Rice in PDS)
- ④ Price Assurance by APMC a key tool for food security.
- ⑤ Immunity to farmers from price shocks of inputs (eg: Urea price jumped post Russia Ukraine war).
- ⑥ Achieve goals of health in SDG 3, Article 47 of DPSP.

Way ahead: → Choose Green Box over Amber Box  
(eg: PM-KISAN) (6000 ₹/per annum).  
→ Protection of rights of developing countries under WTO.

India must work to reform WTO and call for global consensus to achieve a permanent solution for food subsidy [using G20].

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  
Candidates must not write on this margin

10

Managing the demand & supply of water has been a priority for government of the day.

Several Initiatives:

- PM Kishu Sishai Yojana
- Atal Bhasajal Yojana
- National Watershed Development Plan
- Jal Jeevan Mission: Rural/Urban  
for Har Ghar Nal se Jal.
- Rain water harvesting promoted  
(eg) completing in Tamil Nadu

Issues of water availability:

- ① Baised allocation & access of rural  
compared to urban
- ② Difficult in arid & drought prone regions

like Rain of Kutch, Madhyanada, Kayalzeena.

~~It~~ UN-Women: Women of 25% households spend 50 minutes per day to fetch water.

Issues of water quality:

① High level of Arsenic: found by BIS in 21 states.

② Ground water contamination due to mining, unsustainable agriculture.

③ High ratio of water borne diseases = like diarrhea, dengue, etc.

Steps that can be taken:

→ Decentralised rain water storage

eg: Bundela tanks

→ Organic fertilizers usage

→ Mining regulation for checking leakage

→ Regular reports by BIS to assess quality.

The "quality and quantity" both are necessary to meet SDG 3.

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

As per IPCC 6th AR6; Arctic is undergoing major retreat with an expectation to go ice free at least once before 2050.

Major drivers of retreat:

- ① Release of GHGs leading to rise in temperature globally.
- ② Ocean Acidification: absorption of CO<sub>2</sub> by oceans and their warming.
- ③ Mining of oil near the Arctic region  
(eg: Eastern Russian region).
- ④ Albedo effect: reducing albedo leading to Arctic Amplification.
- ⑤ Marine pollution: dumping of wastes, oil spills - eroding glaciers.

## Potential Impact:

- (A) On Climate:
- Disturb the AMOC - Ocean Conveyor Belt
  - Polar vortex weakens leading to blizzards.
  - Aggravate climate change further
  - Disturb monsoons around the world

- (B) On Humans:
- Navigation affected.
  - coastal erosion & sea level rise, opening new routes.
  - Release of trapped methane and viruses ⇒ diseases.
  - Reduction in productivity (as per ILO).

- (C) On Flora & Fauna:
- Loss of habitat for walrus, polar bears
  - Impact the migration of species.

The need is for global cooperation through UNFCCC to protect the cryosphere from touching the tipping point.

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

Space Tourism is an upcoming niche industry driven by pursuit to go beyond 100 km Kermann line, urge to explore other planets, etc.

eg: SpaceX, Virgin Galactic are involved.

Challenges :

- ① Human life: at risk due to novel environments of space (microgravity / zero g)
- ② Fear of crowding of space: (Kessler Syndrome)
- ③ Broad socio-economic changes: due to millions of dollars ticket cost.
- ④ Environment effects: Release of GHGs due to take off and landing by few people.
- ⑤ Shift focus of bodies like ISRO/NASA to commercial from R&D / Human growth.

⑥ Technology in initial stages not free from.

Measures that can be taken:

① Global governance : through UN, Artemis Accords for private level partnerships.

② Ensuring safety & security: through trial flights, lunar graded launch vehicle.

③ Using through sustainable fuels.

④ Giving priority to R&D and ensure welfare for all.

⑤ Checking the crowding through coordination

ISRO plans to begin space tourism by 2030,

for the same it must take necessary steps at near future.

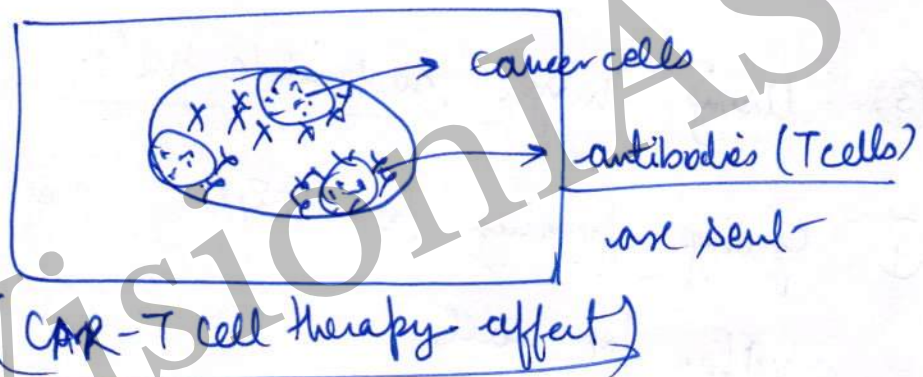
8.

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) 10

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

CAR-T cell therapy is used to treat cancer through antibodies to destroy the cancer cells.



CRISPR - CAS-9 leads to gene alteration by removing the malignant DNA section through 'cutting and replacing' method.

## Overcoming limitations:

- ① Managing without gene changes.
- ② Better response of T cells.
- ③ No insertion of external material.
- ④ Helps reduce painful post surgery

## Impact .

The technology is though in developing stage. This need more R&D and cooperation to ensure better life for patients.

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

New and emerging technology like AI, Crypto currency are 'dual use technology' and thus prone to ~~use~~ misuse by extremist groups.

Rising deployment of new technologies:

- ① Crypto currency: used for terror financing by Hamas in 2019.
- ② Artificial Intelligence: used to spread deep fakes of people in power.
- ③ Use of drones: for attacks on Indian Air Force Base in J&K.
- ④ Cyber crimes: phishing, ransomware attacks
- ⑤ Attacks on AIIMS Database

Concentrated global efforts needed because :-

① Crimes of such nature are beyond the borders (eg: Cyber crimes).

② Difficulty to penalise due to use of sophisticated technology.

③ Use of same technology for spying (eg: Pezans).

Way ahead: → Use UN to tackle lawlessness in cyberspace

→ G20 as an agenda to tackle proliferation of new technology

→ Regional & Bilateral cooperations

(eg) at level of SAARC, SCO.

New and emerging technology are new global

issues that needs to be tackled as per UN Secretary General.

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

10

ITBP is India's border security force guarding the Indo-China Border and small part of Central Inland

Police forces:

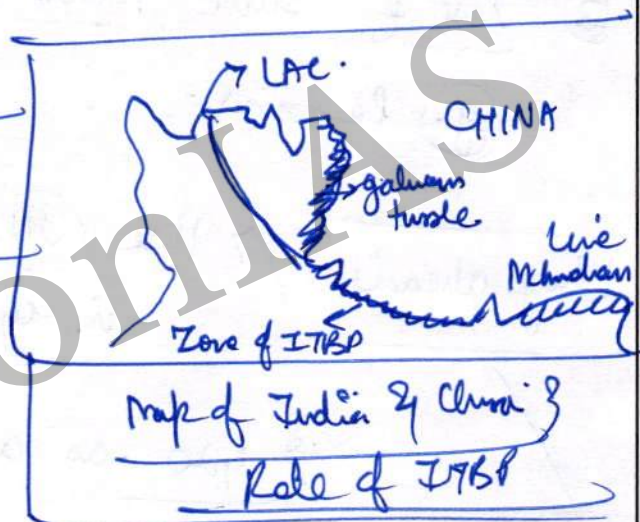
Role of ITBP:

① Providing all round security

to border (eg) Aiding BKO for DBO Road

② Engaging with community to foster trust among them.

③ Maintaining the movement of Chinese forces through patrol stations.



④ Developing counter offensive capabilities through regular training.

⑤ Key role in intelligence collection at the border areas.

⑥ Check illegal infiltration and smuggling across the borders.

⑦ Manage the Integrated Check Posts at the border of Indo-China.

⑧ Engaging with Chinese counterparts through hotlines, border talks, flag marches.

"The people who protect us needs to be protected" through provision of material resources, technology, infrastructure as well as adequate psychological breaks.

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)

15

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

Economic Survey, NITI Aayog, etc have called for a shift from focus on efficiency of land input output (land productivity) to overall 'irrigation focused efficiency' (irrigation productivity).

Need for the aforesaid shift:

① Achieving ~~less~~ <sup>more</sup> from less.  
through use of micro irrigation as suggested by Economic Survey.

② Major area (ICAR Data = 50%) is rainfed

③ Overfocus on land has led to :-

③.1 Poor soil quality due to flood irrigation

③.1 Salinisation

③.2 Focus only on production/output to

feed people rather than sustainable agriculture.

(3.3) Land Degradation is promoted due to excessive fertilizer use.

(4) Achieve Integrated Agriculture:

(eg:) Animal husbandry and agriculture to save water.

(5) The productivity of canals etc is poor (eg:) Jayalaxmi dam leakage.

Challenges in making the shift:

(1) Poor and small land size of farmers

(2) Lack of political will due to freebies & vote banks.

(3) Poor governance on use of ground water

(eg:) 80% ground water used by agriculture.

(4) Microirrigation tool are expensive and need training of farmers.

⑤ Agriculture a state subject requires detailed talks.

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

Way forward: → Subsidy to farmers for micro-irrigation & PM Kirschi Sishai Yojana

→ Promote watershed development approach.

→ Greening the water extraction via renewables (eg. PM KUSUM).

→ Promote rain water harvesting

Case Study | Barmer in RJ used MGNREGSA for rain water wells.

→ National Institute for water use Efficiency can be made as per MIHIR SHAH REPORT.

NITI Aayog's Composite Water Management Index shows demand of water to double of supply by 2030,  
in this regard water use efficiency/productivity should be our top priority.

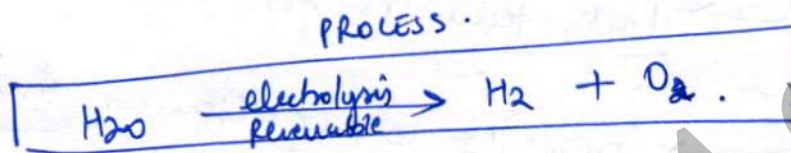
12.

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)

15

Green Hydrogen ( $H_2$ ) is an alternate fuel produced using renewable energy and the process of "electrolysis".



Role of Green  $H_2$  in Energy Security :-

- ① Reduce oil import dependence  
(eg: 80% oil imported)
- ② Help decarbonise heavy industries like steel, chemicals, fertilizers.
- ③ Channelise renewable energy into a "storage form" to beat intermittent supply.
- ④ Smaller plants of electrolyser compared

to thermal plant → inclusive growth.

⑤ Assured supply due to abundance of Hydrogen.

However  
challenges  
too

- Expensive set up
- High corrosion by  $H_2$  in storage
- Lack technology for electrolyzers
- Green  $H_2$  is costlier in tariff than coal.
- Water intensive process and in nascent stage.

National Green Hydrogen MISSION :

a central policy initiative to spend over 15000 crore to develop Green  $H_2$

Infrastructure and ecosystem. Target : 5 mm mt

① Promoting electrolyzer manufacturing through

the SIGHT initiative under Mission

- ② Help achieve Paris Summit Targets set at Glasgow
- ③ Promote R&D in the sector through government push.
- ④ Export potential: of Green H<sub>2</sub> can also be explored.
- ⑤ Build upon huge renewable capacity  
↳ eg: 40% installed capacity.

Green Energy is the future for which Green

H<sub>2</sub> can be a pivotal tool. The need

is to have interstate coordinations and

technological partnership to achieve SDG 6.

and SDG 13.

13.

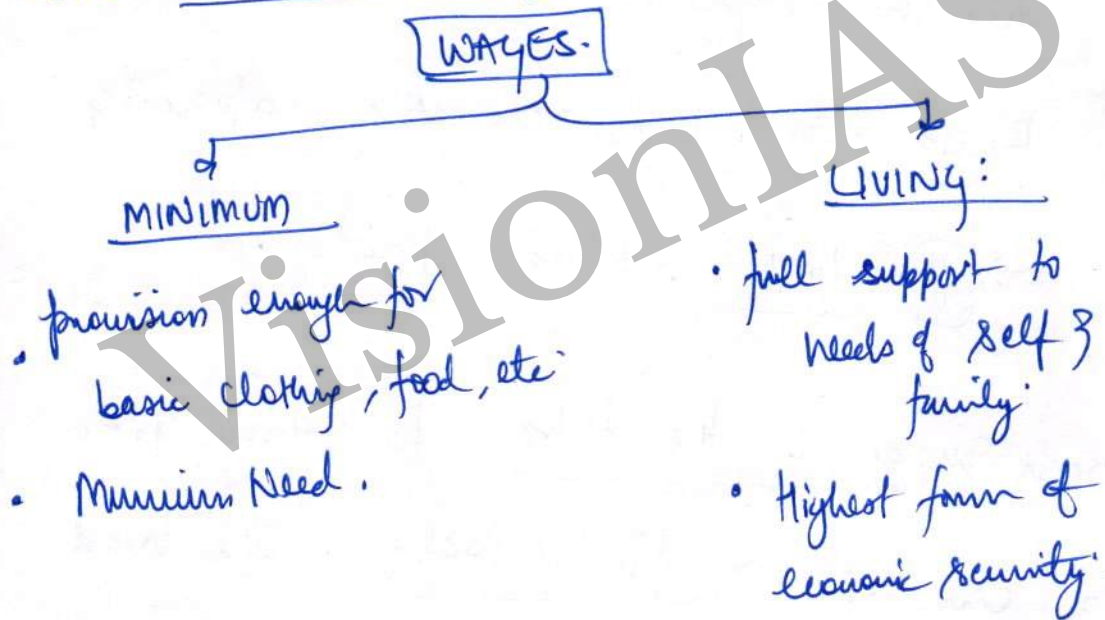
हाल के दिनों में, सरकार न्यूनतम पारिश्रमिक की जगह जीवन निर्वाह पारिश्रमिक को अपनाने पर विचार कर रही है। भारत में जीवन निर्वाह पारिश्रमिक को अपनाने के लाभ और इसमें विद्यमान बाधाएं कौन-सी हैं? (उत्तर 250 शब्दों में दीजिए)

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

15

Being a labour surplus country, India has been at forefront to bring to bring labour reforms and ensure decent work - and economic security for workers.



Measures taken: Code of Wages 2019, talks of minimum & living wages

: Article 43 of DPSP calls for state to aspire for living wages.

## Benefits of adopting living wage:

- ① For workers:
- Ensure income security
  - All round development of worker
  - dignified work rather than modern slavery.

- ② For Businesses:
- Attract efficient human resource
  - Achievement of production targets due to high morale
  - Reduce employee turnover }  
increase longevity

- ③ For Nation:
- Reduce burden to provide social safety net
  - Achieve ideals of welfare state.
  - Boost to international image }  
achievement [SOG 8] - Decent work for all

## Constraints:

- ① Workers :- → Poor Bargaining power of ~~the~~ Unions  
→ Contractualisation of labour force
- ② Employer :- → Burden on business (financial)  
→ Burden shifted to consumers  
(inflation of cash price value)  
→ Make labour less attractive  
and switch to capital intensive.
- ③ Government/State :- → Difficult to regulate as will  
reduce Ease of Doing Business  
→ Deter foreign investments due to  
excess regulation

Way Ahead: Mixed approach of private and state  
role.

: empowering trade union through recognition

The above transition has the potential to  
achieve "SHRAMENA JAYETE" agenda by 2047.

14.

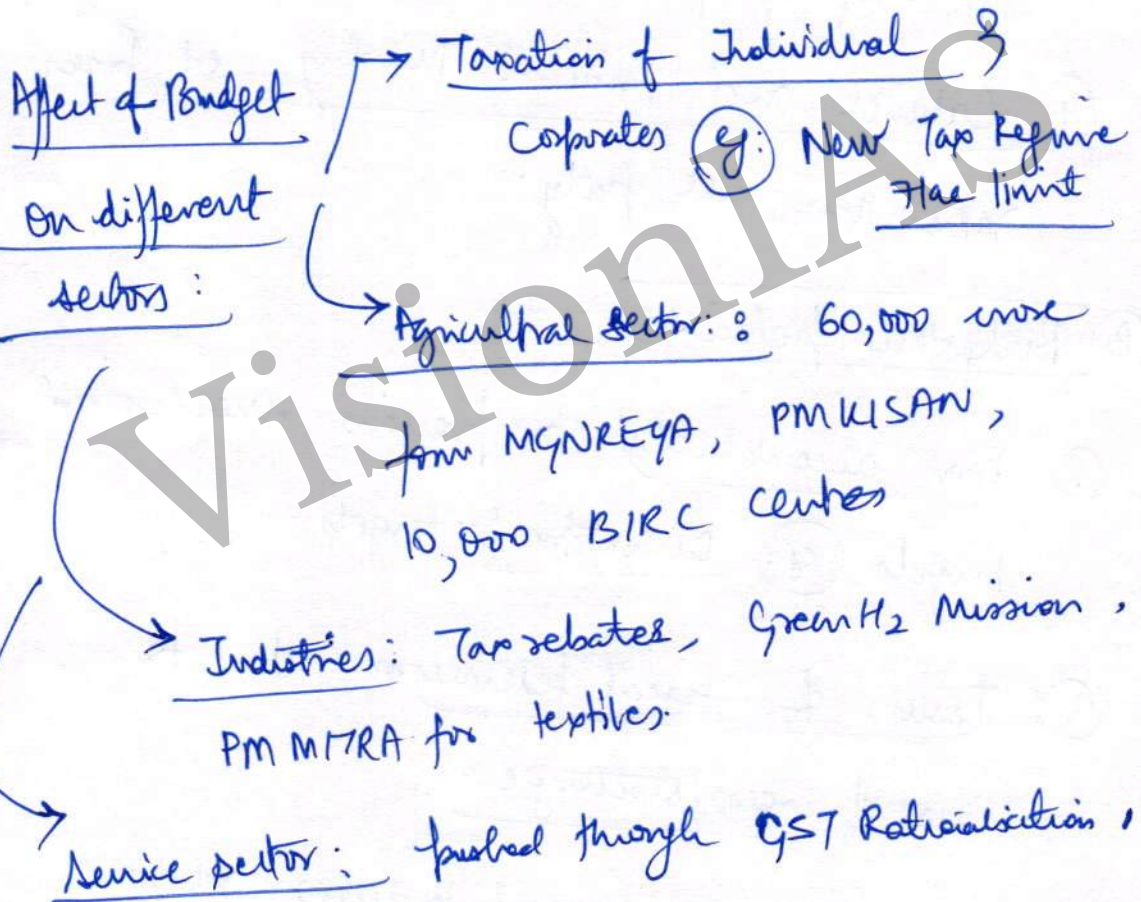
केंद्रीय बजट भारतीय अर्थव्यवस्था के लगभग हर क्षेत्रक को प्रभावित करता है, फिर भी न तो बजटीय प्रक्रियाएं पर्याप्त सार्वजनिक जांच के दायरे में आती हैं और न ही बजट नीतियां। क्या आप इस कथन से सहमत हैं? अपने उत्तर का औचित्य सिद्ध कीजिए। (उत्तर 250 शब्दों में दीजिए)

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)

15

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

The Union Budget of India spends close to ₹ 45 lakh crore annually and having a profound impact on all sectors.



However, the public scrutiny by all stakeholders can be seen to lag:-

## (A) Budgetary process:

① Role of parliament is weak due to time

shortage (eg.) 75% budget passed without discussion.

② Post facto control of finance committees

③ Less role played by public, corporates  
in Budgeting process.

④ Cabinet and financial Ministry led process  
rather than all party.

## (B) Budgetary policies:-

① Poor accountability for previous unachieved  
targets (eg.) Disinvestment targets

② Issues of fiscal federalism due to  
use of cess/surcharge.

③ Focus still on annual budgeting rather  
than Outcome Output framework.

④ No third party assessment of impact.

## However situation changing:

↳ Opinion of industry taken proactively

(eg.) Finance Minister meeting FICCI, Chamber of Commerce

↳ Suggestions for budget sought by MyGov.in from public.

↳ Role of CAG to check schemes

(eg.) Ayushman Bharat had save mobile number for 7.5 lac patients (CAG).

↳ Technology playing its role through e-Budgets

Way ahead: ↳ Strengthen finance committees by discussion of their reports.

↳ Separate report card for previous budget figures

↳ Modern practices: Zero Base Budgeting.

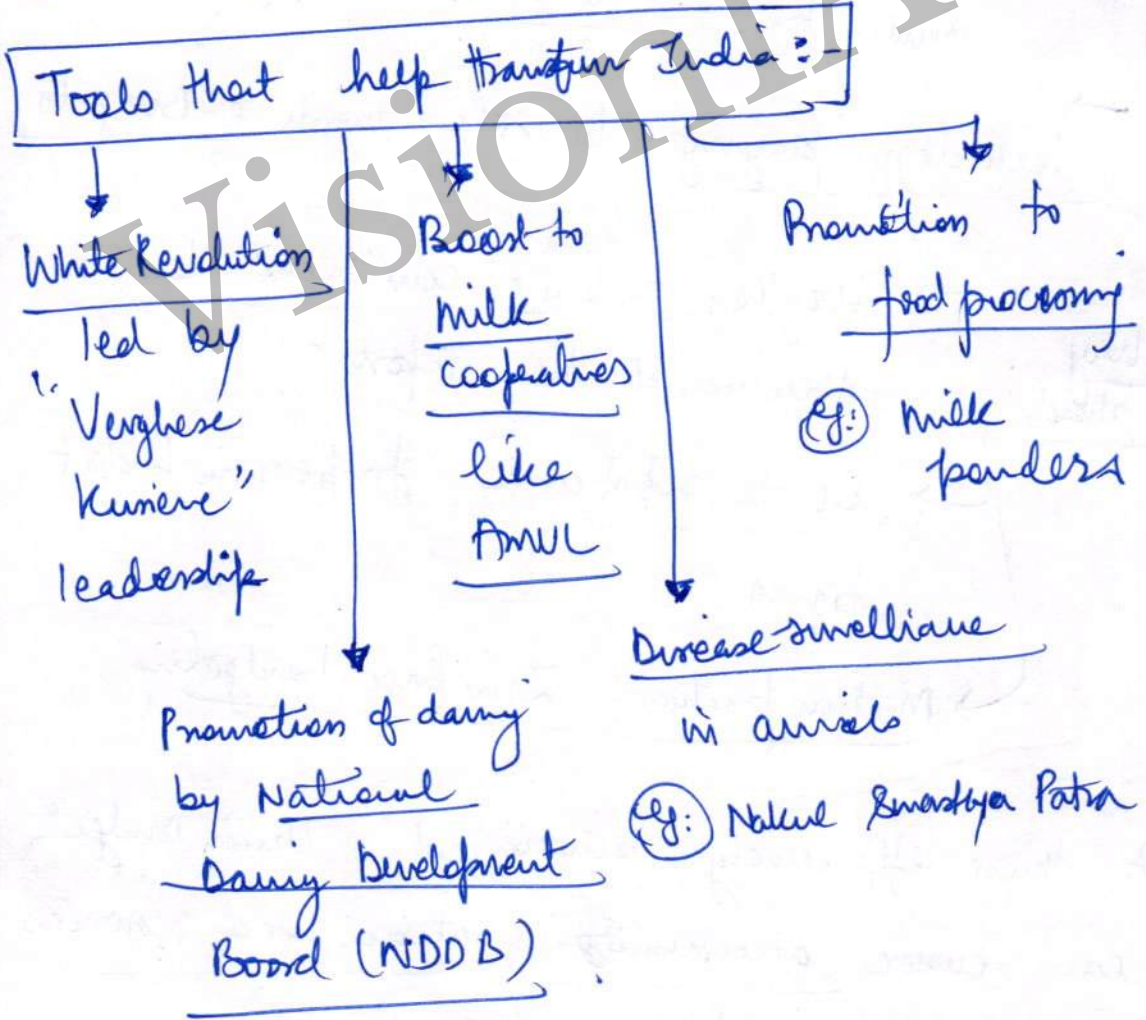
A more effectively scrutinized Union Budget can ensure accountability, rational use of resources and achieve financial prudence.

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

The dairy sector has been a key employment generator in the animal husbandry segment. India's milk production was slower than population growth in 1950s, but now outpaced that



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

## Productivity of animals a concern:

- ① Overall largest cattle population but the herd size per farmer is small showing poor productivity.
- ② Spread of diseases among cattles/animals  
eg: Pox among cows, disease among poultry farms.
- ③ Per animal yield dropping due to climate change.
- ④ The fodder quality is poor for higher productivity.
- ⑤ Infomalisation of sector unlike developed countries like Australia, New Zealand.
- ⑥ Use of foreign breeds rather than indigenous ones like Gir cows.
- ⑦ Poor allied extension services like veterinary & doctors.

## Suggestions:

- ① Use Hub & spoke model for access to fodder (Dalwai Committee)
- ② "High yielding fodder variety" on lines of HYV sides
- ③ Improving "saintany & physksaintany" needs
- ④ Using SHGs: Model of "Pashu Sakshis"
- ⑤ Access to credit, insurance and proper marketing support.

The White Revolution 2.0 can further aid in doubling farmers income & achieving agri-exports targets;

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)

15

As per Economic survey "Agriculture has been a victim of its own success" & suffering the handshakes from extreme climatic events in recent times.

Climate change & crop failures:

- Unseasonable winter rains destroyed wheat crops in 2023.
- ↳ Reducing the yield per hectare to due high temperature.
- Increased frequency of cyclones, sea level rise.

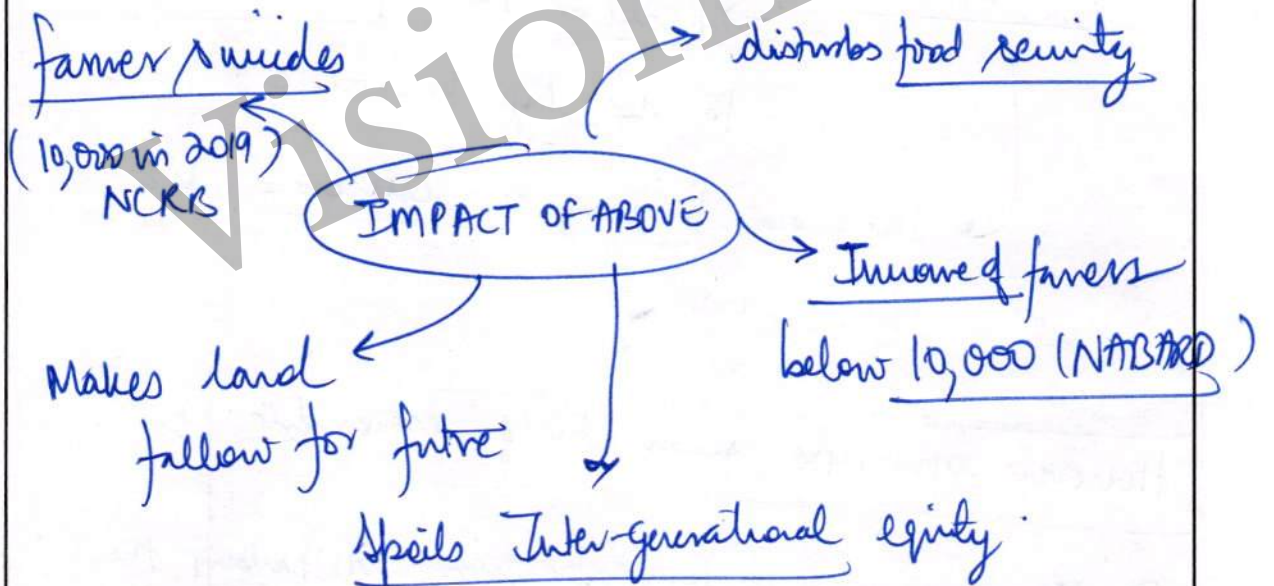
However agriculture sector itself responsible :-

- ① Huge ground water extraction: disturbing the overall hydrological cycle. (over 80% usage).
- ② Burning of stubble: by poorly farmers leading to high GHGs.

③ Excessive use of fertilizers has made the land prone to degradation  
(eg: Punjab's soil).

④ Water guzzling crops leading to droughts  
(eg: Sugarcane in Maharashtra (MH)).

⑤ Landslides increasing 'due to clearing of forests for agriculture (slash & burn)'



National Agriculture Disaster Management Plan:

has been taken to boost disaster resilience

of agriculture sector :-

### Strategies Adopted :

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

① Pre-Disaster : → Early warning systems through  
rainfall monitoring  
→ Training/Education of farmers  
→ Promotion of Natural/organic farming.

② During Disaster : → Response for managing prices of output  
(eg: Export Ban).  
→ Managing the available production via storage

③ Post disaster :  
→ Analysis & feedback for the processes  
→ Insurance & recovery support

The above measures have helped agriculture become stronger to face disasters through both structural & non structural measures.

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)

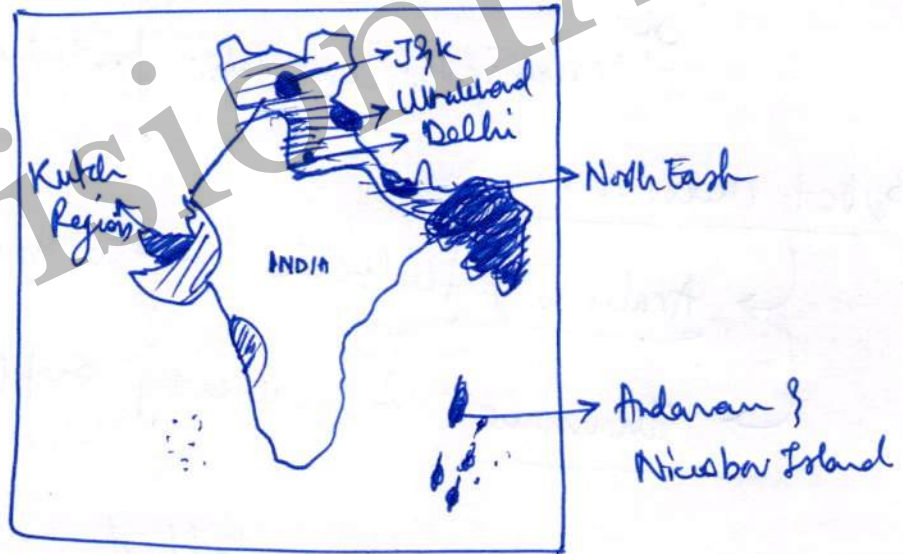
Some regions in India, including Delhi, are highly vulnerable to the impact of earthquakes originating in the Himalayas. Discuss. What institutional measures have been taken to mitigate earthquake losses in India? Do you think there are significant gaps that still exist? (Answer in 250 words)

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

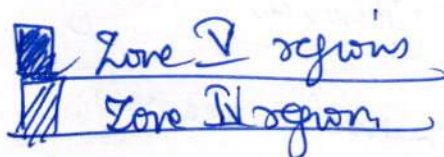
15

India's 59% of landmass is prone to earthquakes under Zone III to Zone V category for which steps are taken with a varying impact.

Regions prone to Earthquakes



SEISMIC ZONES OF INDIA

  
Zone V regions  
Zone II regions

Reasons for

Wulcrability:

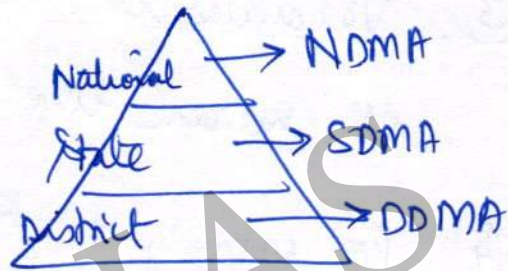
→ Plate boundaries of convergent nature

→ Hotspots near Kutch region

→ Anthropogenic: Reservoirs induced (Koyna)

Institutional Measures taken:

① 3 level hierarchy under the Disaster Management Act 2005



② Role played by Geological Survey of India for monitoring earthquakes.

③ National Earthquake Mitigation Programme

↳ Retrofitting, New Building Code,

④ NDMA Guidelines: → Risk prevention. ~~Early warning~~ through dissemination of information

Disaster resilient structure

Preparedness by training of people/community.

④ Bhagatnub / Assam

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

Significant gaps do exist :-

- ① Lack of enforcement of National Building Code.
- ② Lack of 3rd party evaluators and engineers for disaster resilience.
- ③ Vacancies in Crisis Management Committee at national level.
- ④ Poor capacity of local bodies & communities in terms of rescue, mitigation.

Despite above, regular steps are being taken by India:

- Formation of CDRI
- BIMSTEC HADR Exercise
- Cooperation with Japan for resilience.

A clear adoption of Sardar Baniwala is needed to boost disaster resilience & control the loss caused.

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

15

Nuclear fusion reaction is generating energy by combining two lighter elements to form an heavier element. This is based on the principle of "stellar energy" in universe.

(eg) fusion to form Helium element.

Advantages of nuclear fusion :-

Experiments :- Artificial sun China ITER at France.
---

- ① High output of energy per unit of input of fuel
- ② Clean fuel generation with no release of gases.
- ③ No radioactive waste is generated  
↳ Lesser chances of reactor melting due to use of TOKAMAK.

④ Continuous supply of energy unlike Renewables of solar/wind.

⑤ Effective utilisation of land compared to solar/wind farms needing huge space.

Limitations to generate energy:

① Difficult to sustain reaction for long

② Technology under a nascent stage for fusion.

③ Heavy control over atomic raw material supply chain (eg: NSG (India ≠ member)).

④ Expensive set up of the infrastructure for generation.

⑤ Poor resources forced India to adopt the 3 stage plan instead:

⑥ Challenges of leakage of harmful material.

## Way ahead:

① International cooperation for success

(eg) International Thermonuclear reactor

② Ensure supply chain security for materials for fusion.

③ Technology transfer agreement with the players like France, China, USA.

India's Nuclear energy generation is currently less than 2% of total capacity. The above

Steps can aid in its growth.

19.

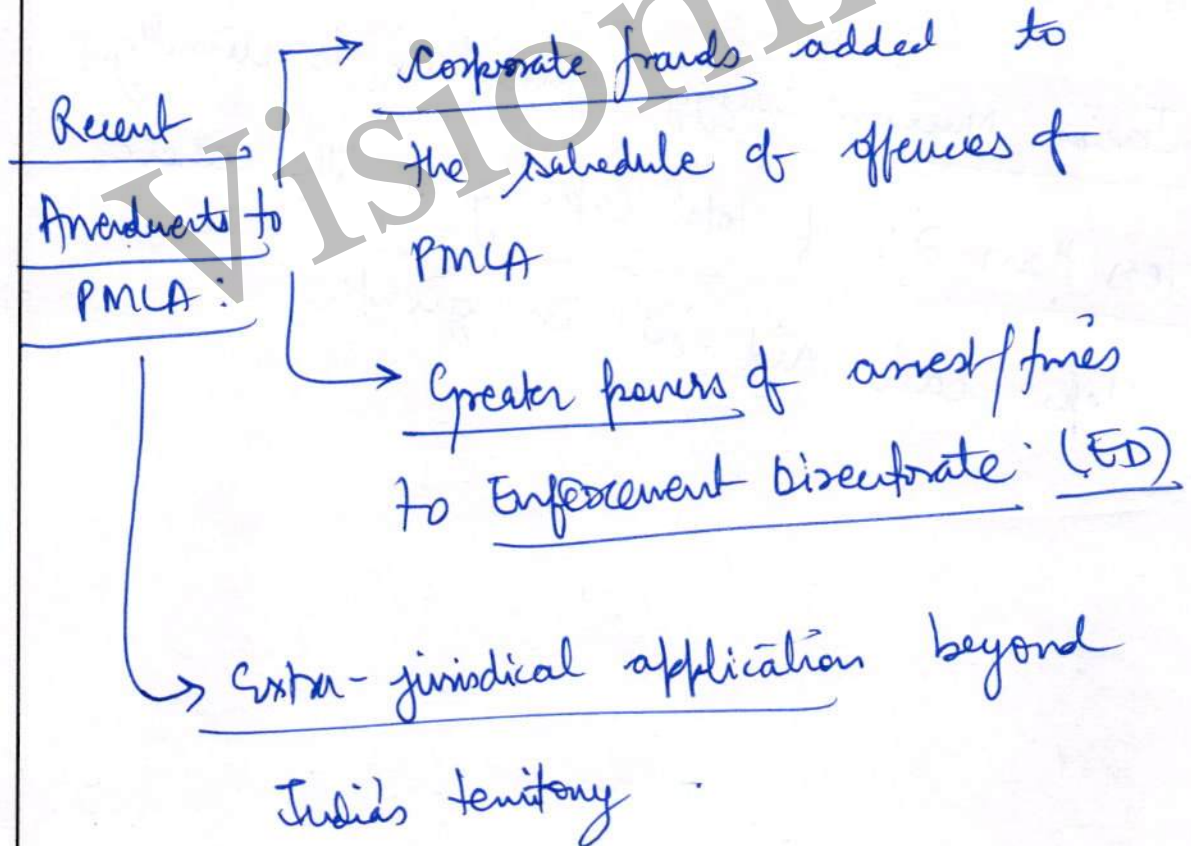
हालिया संशोधन को ध्यान में रखते हुए, भारत में धन शोधन (मनी लॉन्ड्रिंग) के खतरे से निपटने में धन शोधन रोकथाम अधिनियम, 2002 की प्रभावकारिता का परीक्षण कीजिए। (उत्तर 250 शब्दों में दीजिए)  
Keeping in view the recent amendment, examine the efficacy of the Prevention of Money Laundering Act, 2002, in tackling the menace of money laundering in India. (Answer in 250 words)

15

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

## Prevention of Money Laundering Act 2002 (PMLA)

is an overarching framework to manage conversion of illegal money to legitimate property.



## Efficacy of PMCA:-

### (A) Weak in efficacy because:-

- (1) Low rate of conviction by ED in PMCA cases -
- (2) Less than 50% cases have seen filing of chargesheets
- (3) Rampant money laundering continue due to organised crimes.
- (4) Unable to deter NGOs aiding in laundering
- (5) eg: IBS report = leading to 2-3% GDP loss.
- (6) Unable to catch economic offenders due to poor coordination abroad.
- (7) Permitence of golden nexus = real estate, gold business & foreign to laundering.
- (8) Weak inter-agency coordination; among CBI, ED, local police.

Steps that can be taken:

→ Adherence to guidelines of

FATF for money laundering.

→ Speed up work under <sup>bilateral</sup> treaties

for data sharing. (Switzerland)

Technological support (Bigdata, AI) to

to ED for faster resolution.

→ Inter-agency coherence through role of

Economic Intelligence Unit.

Money laundering eats away citizen trust

and as per SUPREME COURT perpetrates

other organised crimes thus spoiling social fabric.

20.

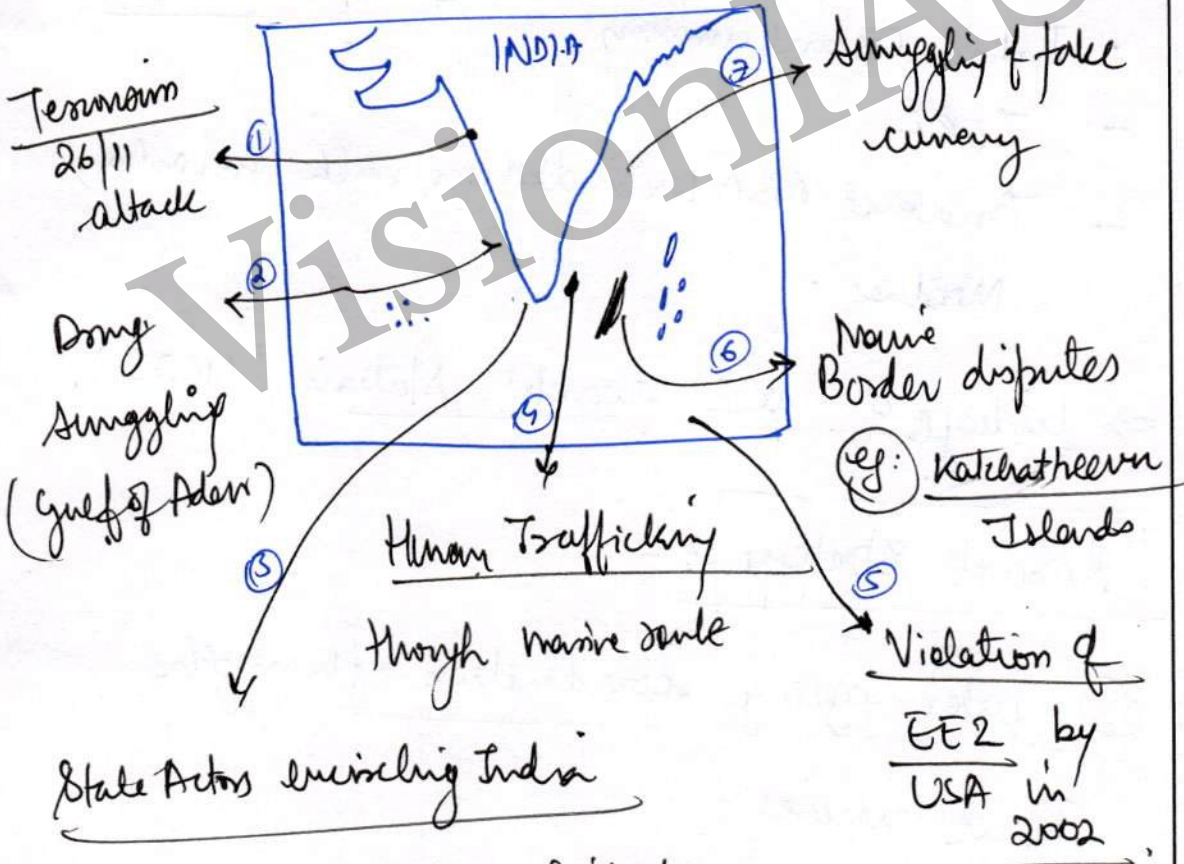
हिंद महासागर क्षेत्र (IOR) में मौजूद उन सुरक्षा खतरों पर चर्चा कीजिए, जिनका भारत के समुद्री सीमा संबंधी हितों पर सीधा असर पड़ता है। इन खतरों से निपटने के लिए एक मजबूत रणनीति सुझाइए। (उत्तर 250 शब्दों में दीजिए)

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

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) 15

India has a large coastline of 7500 km which creates multidimensional security threats for India from state & non-state actors.

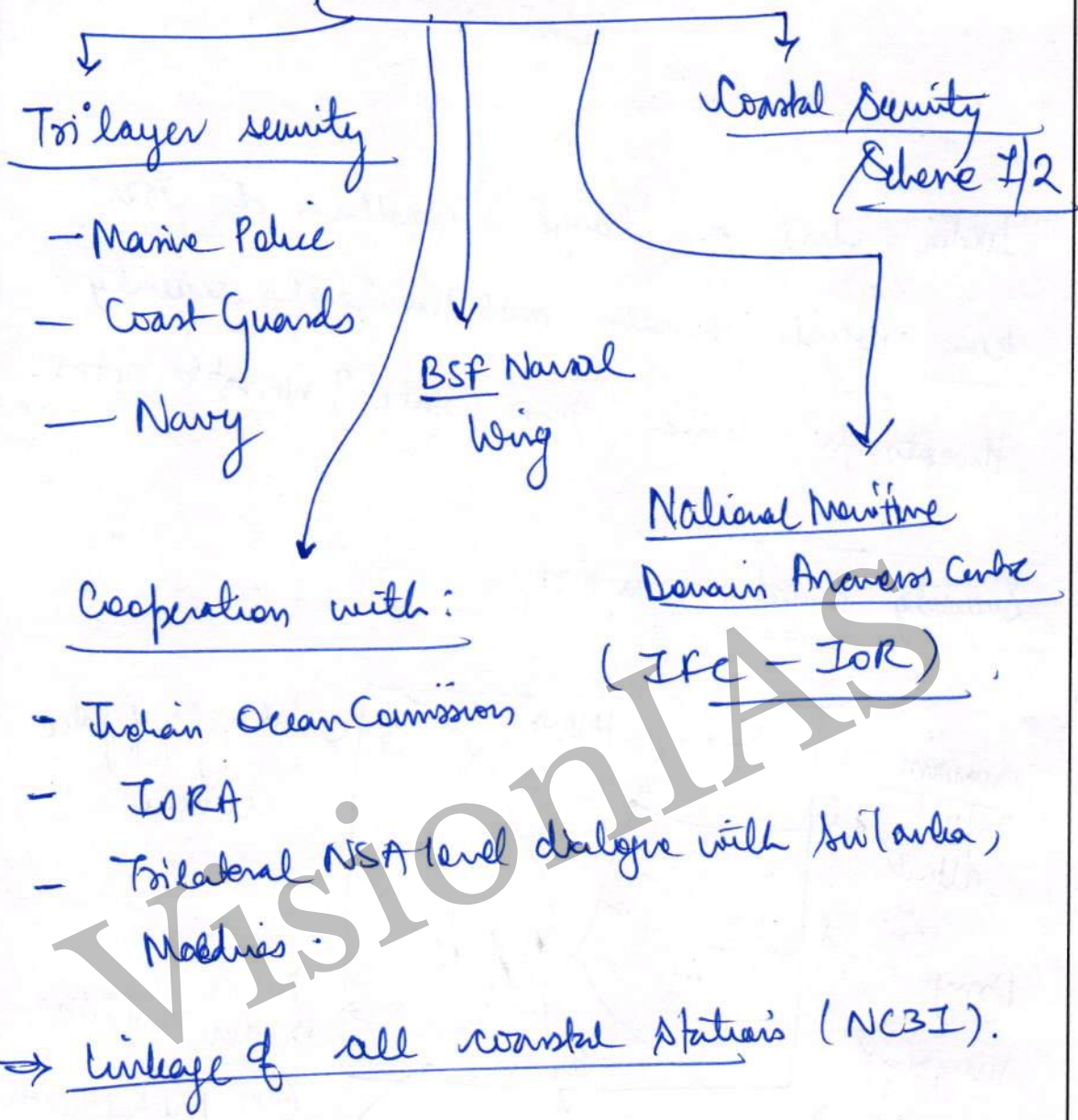
Security threats (via MAP)



State Actors encircling India

(eg) Yuan's ship in Sri Lanka  
: Islands / ports like Gwadar (Pakistan).

Steps that have taken



→ linkage of all coastal States (NCBI).

Robust Strategy :-

- ① Inter-agency coordination through joint exercises.
- ② Resolution of border disputes through diplomatic channels.

- ③ Counter-offensive infrastructure: needed  
such as Predator drones.
- ④ Use Andaman & Nicobar Islands as  
a platform for theatre command security.
- ⑤ Use community as eyes & ears (fishermen &  
fisherwomen)
- ⑥ Intelligence collection, analysis and utilisation  
by IR, R&AW.
- ⑦ Monitoring via satellites through role of  
ISRO.
- ⑧ Boosting defence spending for marine segment  
eg: Recent = Rafale-M from France.

Marine security has to be dealt with a  
"whole of government approach" for long term  
success.

**SPACE FOR ROUGH WORK**

**AL**

VisionIAS