



**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. : 0760881

अभ्यर्थी का नाम/Name of Student : BANINA VENKATESH

माध्यम: हिंदी/अंग्रेजी  
Medium: Hindi/English

English

तारीख  
Date

27/08/2023

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

केंद्र  
Centre

HYDRABAD

निरीक्षक के हस्ताक्षर  
Invigilator's Signature

(Signature)

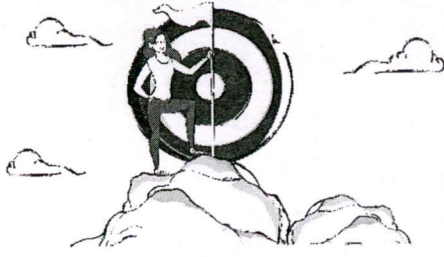
	<p style="text-align: center;"><b>महत्वपूर्ण अनुदेश</b></p> <p>उम्मीदवारों को नीचे उल्लिखित निर्देश सावधानी से पढ़ लेने चाहिए। किसी भी निर्देश का उल्लंघन करने पर उम्मीदवारों को मिलने वाले अंकों में कटौती, उम्मीदवारी रद्द या आयोग के परवर्ती परीक्षाओं के लिए वर्जित करने इत्यादि के रूप में दण्डित किया जा सकता है।</p>	<p style="text-align: center;"><b>Important Instructions</b></p> <p><b>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.</b></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)		
सकल योग (A+B) / GRAND TOTAL (A+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

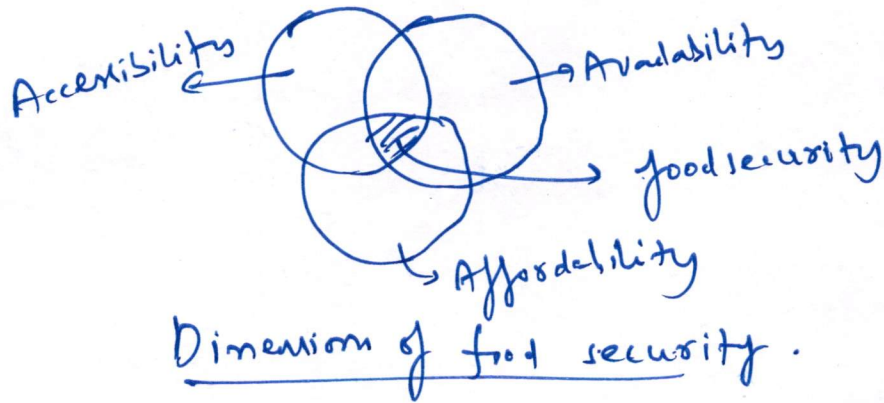
1.

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

Food security for 1.4 bn people is critical to achieving SDG goals by 2030 for India.



### Availability:

- ① Strong surplus exporter of food grains  
↳ \$50bn in agri exports.
- ② Agro-climatic regions diversity enabling production of various crops addressing food & nutrition security

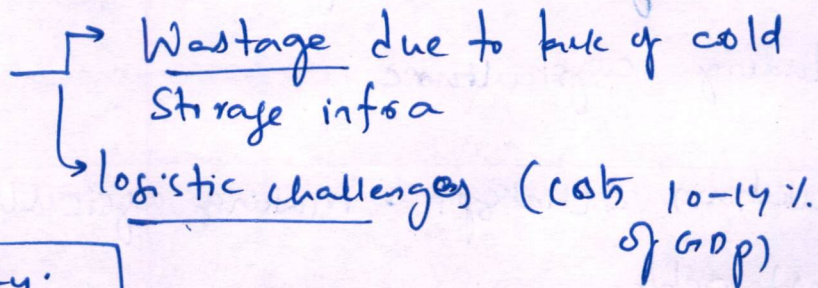
### Challenges:

- 1) GHI ranking — 108/121
  - 2) prevalence of stunting, wasting, Anemia  
↓ ↓ ↓  
19% 36% 57%
  - 3) Monsoon vagaries
- as per NFHS - 2015

## Accessibility:

- ① Targeted public distribution under NFPA act 2013
- ② Open market sales by FCI during inflation & distress
- ③ APMC mandis, facilitating trading at close to rural areas

### Challenges:



## Affordability:

- ① PM Garib Kalyan Anna Yojana, free food grains.
- ② Discounted ration by states like A.P., TN etc.

### Challenges:

- ↳ ① Inflation in prices of vegetables (tomato, onion, pulses)
- ↳ ② Declining income for farmers, job loss due to covid etc. . .

Addressing challenges of food security is integral to human development and Coordinated Action between all stakeholders is needed.

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)

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

10

Tools like Blockchain (based on distributed ledger) & ChatGPT (based on large language models) has the ability to transform sectors of economy including agriculture.

Blockchain & ChatGPT : making agriculture efficient & sustainable:

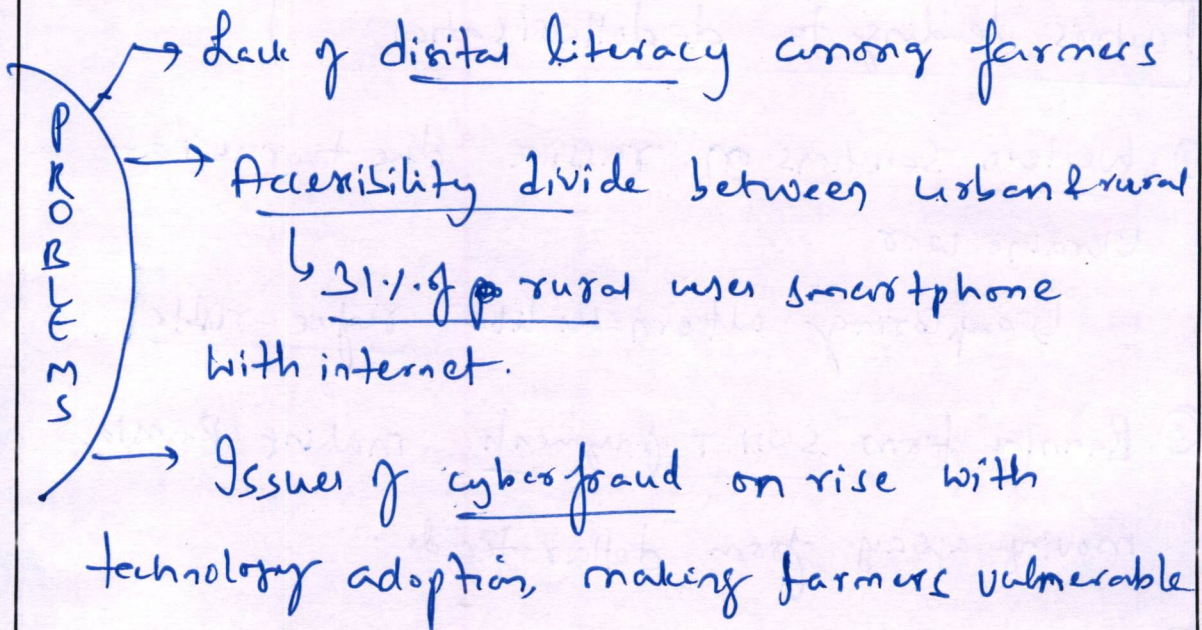
- ① Digitisation of land records using blockchain  
↳ property rights & access to credit for farmers
- ② AgriStack, revolutionising agri ecosystem  
making farming remunerative based on blockchain
- ③ Streamlining transport & logistics using blockchain  
↳ prevent wastage & losses to farmers
- ④ Dissemination of information in <sup>regional</sup> ~~local~~ languages  
↳ Jugalbandi Chatbot, by ChatGPT

⑤ Extension services using chatgpt

↳ democratisation of information access to small & marginal farmers

⑥ Translation of records using chatgpt

↳ promote land registrations, buying & selling, contributing to growth of agriculture.



Above challenges should be addressed to make agriculture transform on lines of sustenance to agrigenouship based model achieving doubling of income by farmers.

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

De-dollarisation refers to increasing use of alternate currencies like rupee, yen, riyal, etc.

in cross border economic transactions.

Factors leading to dedollarisation:

① Western Sanctions on Russia due to Russia-Ukraine war

↳ exploring alternates like rupee-ruble.

② Banning from SWIFT payments making Russia moving away from dollar trade.

③ US Fed tapering & depreciation of local currencies, prompted the move

④ Internationalisation of rupee to achieve

↳ Exchange rate stability

↳ reduced impacts of US Fed tapering

↳ Decreasing dollar dependence to curb

imported inflation.

⑤ New multipolar world, with rise of china moving away from economic hegemony of U.S. dollar

↳ IMF's SDR basket → increased value of ~~year~~  
China's renminbi

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

### Continued domination of dollar:

- ① 88% of foreign reserves use dollar as asset
- ② Significant global trade occurs in dollars
- ③ IMF's SDR basket → U.S. dollars 42%
- ④ Economic dominance of U.S.A  
↳ exports oriented, strengthening dollar
- ⑤ Support of institutions like WB with loans denominated in dollars

De-dollarisation moves are conformed to present day realities of changing global order to put an alternate towards dollar in international trading & india must be ready to face any challenges.

4.

विकसित देशों द्वारा भारत पर खाद्य सस्सिडी 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

India faces pressure from developed economy at WTO over india's subsidies to poor sectors like agriculture, as against free & fair trade practices.

Pressure to alter food subsidy regime:

- ① Hurting free trade practices
- ② Bias towards exports from countries.
  - ↳ Non-tariff measures on agri imports
- ③ Open-market approach based on supply demand
- ④ Crossing 10% GSP threshold in agri subsidies, agreed at WTO.

Food subsidies - justified:

- ① Protect the local industry from foreign competition.

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

② Promote food security for 1.4 Bn people

↳ fertiliser subsidies amounting to 2.25 lakh crore in 2022

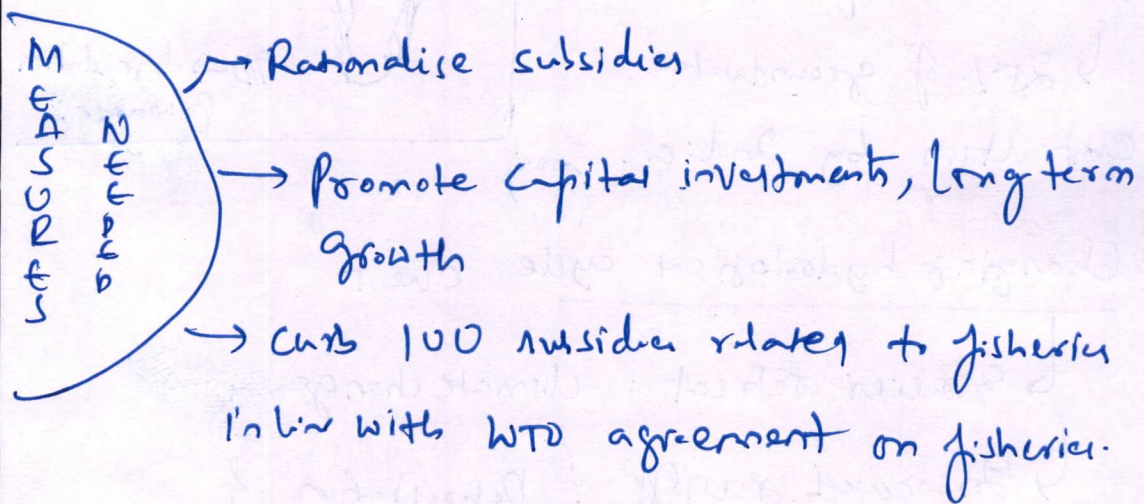
③ Promoting exports to increase income for farmers

↳ subsidies on sugar

④ Developed countries subsidies on fisheries

↳ India offers only fraction of subsidies

⑤ Promote livelihoods & capacities of poor farmers in India.



Food security is critical <sup>in</sup> achieving SDG 12 and necessary reforms in line with global trade practices should be taken.

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)

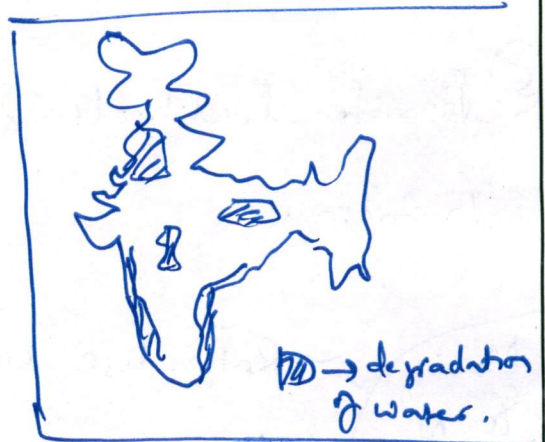
Several initiatives have been taken by the government towards addressing India's water needs, but the issues of water availability and water quality still warrant prioritised intervention. Discuss. (Answer in 150 words)

10

Increased exploitation of groundwater coupled with rising pollution & climate changes pose significant challenges to India's water needs.

### Issues of water availability:

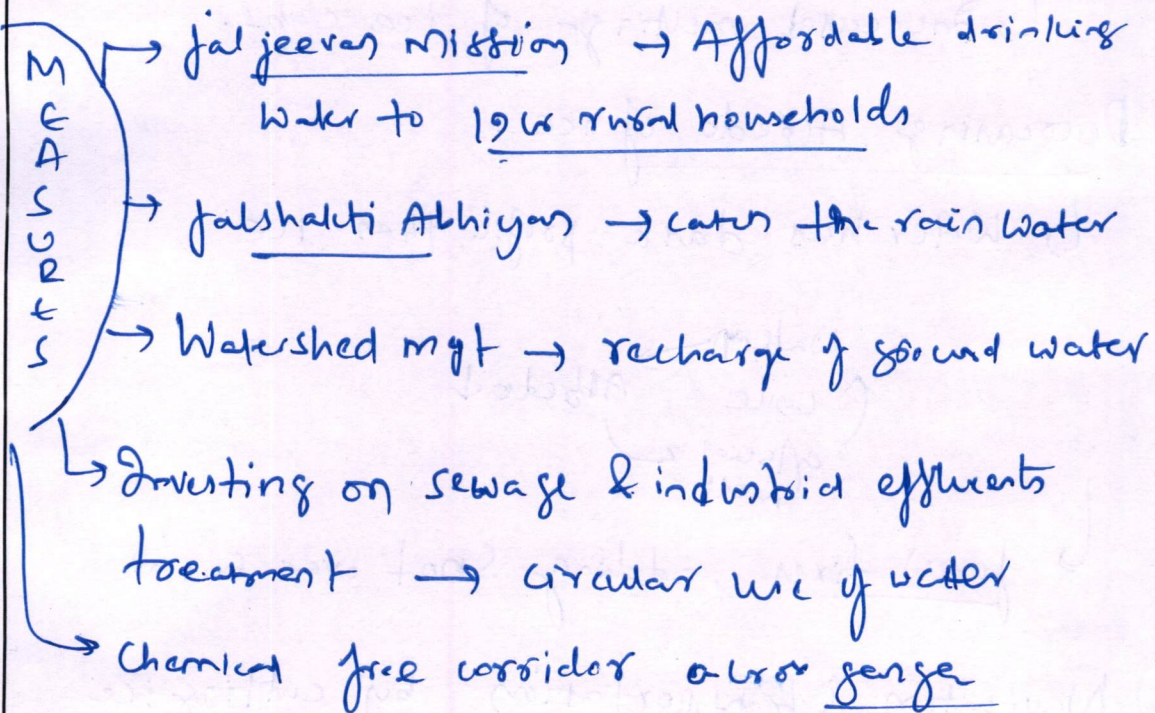
- ① Over-exploitation of groundwater for agriculture
  - ↳ 25% of groundwater extraction by India.



- ② Changing hydrological cycle due to
  - ↳ glacier retreat : climate change
  - ↳ increased runoff : Deposition & Concentration
- ③ Recharge of <sup>ground</sup> water is challenge
  - ↳ hard peninsular rocks
- ④ Shifting monsoon cycles with El-nina challenges

## 4 Issues of water quality:

- ① Increased water pollution
  - ↳ landfills & leaching of heavy materials
  - ↳ industrial effluents discharge  
ex: Kanpur leather industries.
  - ↳ eutrophication due to fertiliser runoff
- ② Arsenic & uranium pollution due to mining in Jharkhand.
- ③ Fluoride contamination



Water is crucial for life and targeted interventions are needed <sup>curious</sup> for its quality & quantity

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

Fast melting of glaciers in Arctic & Antartic is due to human induced effects of global warming having varied impacts on the ecosystem.

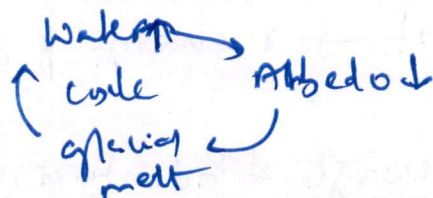
Drivers of glacier retreat in the Arctic:

① Rising of global temperatures

↳ Increased melting of ice caps.

② Decreasing Albedo of ice:

↳ Water has dark profile than ice



↳ forest fires, adding soot over snow

③ Navigation & transportation by cutting ice

↳ accelerating breakdown & melting

in northern sea route.

## Potential impact on ecosystem:

- ① Increased trade due to opening up of new sea routes
- ② Declining Atlantic meridional overturning circulation (AMOC) → one of 9 global tipping points.
- ③ Rising impact of pandemics due to release of viruses
- ④ Sea level rise → coastal erosion & island submergence
- ⑤ Biodiversity impacted by permafrost Glacier melting has varied severe ecological implications & measures needed to be taken to reduce GHG emissions to slow down the processes.

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 relates to a travel to space for recreation, leisure & entertainment purpose which is gaining significance in recent times.

eg: Blue origin, SpaceX working on above concept

Challenges associated with space tourism:

- ① Fixing of regulatory compliance  
↳ Space tourist is not defined in any treaty.
- ② Challenge of space debris with any untoward accidents happening in future.
- ③ Accessibility divide → only rich able to afford
- ④ Increased pollution due to more launches  
↳ little emissions → climate change

## Measures needed to address the challenge:

- ① Guidelines on developing launch vehicles for safety of crew, passengers
- ② fixing compliance burden on companies
- ③ Shifting towards Climate friendly fuels to address GHG & global warming concerns
- ④ Increased cooperation & collaboration among international community
- ⑤ Mitigating challenges of space debris

Space tourism, in spite of its adventurous & promising capacity to earn revenue should be carefully planned by addressing all the limitations to promote Sustainable development

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

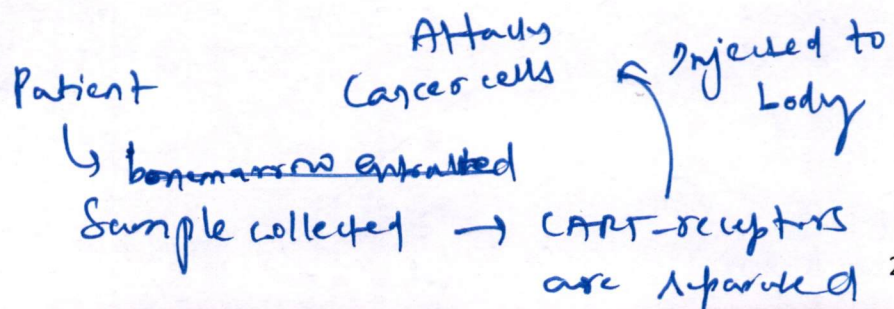
Chimeric Antigen receptor (CAR-T) therapy is advancement over CRISPR-Cas9 in fighting with cancer.

CAR-T overcoming limitations of CRISPR-Cas9:

limitations of CRISPR-Cas9:

- ↳ Delivery of gene to target is difficult
- ~~difficult~~ ↳ Identification issues in determining Cancer cells
- ↳ Editing of all cancer tissues/genes is difficult:

CART therapy — solving the problem:



- 1) Uses own genetic sample of patient in entraining CAR-T receptors
- 2) Easy to administer in the body.
- 3) Can be successfully targetted to attack cancer cells without external assistance needed or in case of CRISPR-CAS9.
- 4) Reduced side-effects

Thus CAR-T has advanced cancer treatment  
overcoming limitations of CRISPR-CAS9  
in achieving SOB3 (health)

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  
Candidates must not write on this margin

Use of modern technologies like AI, Cryptotrading etc. by extremist organisations poses significant challenges to global security, stability & peaceful growth.

Deployment of new technologies: need for efforts

- ① Artificial intelligence to create deep fakes to incite communal violence  
↳ fake morphed photos of pope in jeans.
- ② Cryptotrading for funding narcotics, terror financing
- ③ Advanced arms to launch lethal attacks on security personnel & civilians.
- ④ Blockchain applications for enhanced security & grading monitoring

## Need for concerted global efforts & measures

### ① ~~Impacts~~ to Measures needed

- ① Crypto asset & reporting framework (CAARF)  
↳ cut financing to terrorist elements.
- ② Enhanced Cooperation among security personnel  
↳ Interpol
- ③ UN reforms:  
↳ Adopting Comprehensive Convention on international terrorism, proposed by India.
- ④ Maritime & border security:  
↳ leverage grouping like QUAD, SCO, etc. . .
- ⑤ Enforce regulations of arms to countries like Pakistan, Korea involved in terrorism.

Concerted & sustained measures should be taken to fight agenda of extreme organisations & ensure peace . . .

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

ITBP (Indo-tibetan border police) is one of the central paramilitary forces guarding borders between India & China.

Role of ITBP in ensuring security:



- ① Vigilance in the border regions, eyeing Chinese developments in infrastructure
- ② Deter aggression & interference of Chinese forces as highlighted in galwan valley, tawang valley
- ③ Rapid deployment of infrastructure through support to programmes like Vibrant villages program of MHA.
- ④ Disaster relief & support measures

## Challenges faced / Limitations of ITOP:

- ① limited personnel
- ② Need more infrastructure in border areas for faster deployment of troops
- ③ faster access to finances for building outposts etc...
- ④ Coordination with other forces is limited & needed to be enhanced.
- ⑤ Intelligence support should be ramped up with training & capacity building.
- ⑥ Ensuring living conditions for soldiers in harsh conditions.

Above measures should be taken to strengthen ITOP in ensuring border security.

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

Land productivity is measured in terms of yield per unit area of land whereas irrigation water productivity refers to the efficiency of use of water i.e. water required for unit of grain produced

Importance of land productivity:

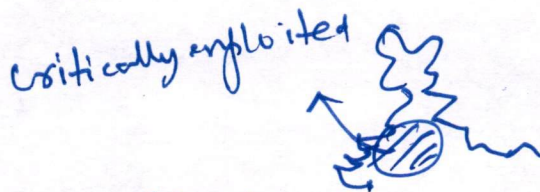
- ① Meet the rising food security demands of the burgeoning population.
- ② Promoting exports to yield foreign exchange & increased income for farmers.
- ③ Raising buffer stocks to meet future contingencies

Shift needed towards irrigation water productivity

- ① Overexploitation of ground water resources

↓  
14.1 districts are

overexploited as per CGWA



- ② Impacts of climate change on hydrological cycle, necessitating water use efficiency.
- ③ Increased intensity of El-nina
- ④ India as net water exporter due to low efficiency and water guzzling crops like sugarcane.
- ⑤ Increasing yields at same time consuming less water resources, as we are facing severe water crisis (per capita availability is  $< 1700 \text{ m}^3$  per annum)

### Challenges in shifting towards a water productivity irrigation

- ① Nascent stages of development of micro-irrigation techniques
- ② Heavy capital expenditure on inputs, puts burden on small & marginal farmers
- ③ Uneconomic size of landholdings, discouraging investments

④ limited awareness among farming communities about ill-effects of overuse of water

⑤ Regional economic balances

↳ eg: Rich communities of Punjab vs farmers of Jharkhand etc. - -

Measures needed to improve irrigation water productivity

① Rapid expansion of micro-irrigation

↳ eg: Scaling up PM Kisan Sinchayee Yojana

② Watershed management to improve water use

③ Promotion of crops like millets with dual benefits of less usage of water & nutritional security

④ Credit support through schemes like Kisan Credit Card, Agriculture Infrastructure Fund of NABARD

Climate resilience of agriculture is paramount in achieving SDG10 & irrigation efficiency is the need of the hour.

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

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

Green hydrogen refers to production of hydrogen using electrolysis method where electricity <sup>used</sup> is generated through renewable sources like solar, wind.

Green hydrogen - unlocking energy security:

- ① Reducing imports of crude oil, gas.  
 ex: \$155bn dollars annual import burden on port.
- ② Enhanced access to clean energy, thus accelerating transition towards green growth.  
 ex: As per IRENA, 12% of global energy demand by 2050 is met by green hydrogen.
- ③ Achieving climate commitments  
 ↳ Net zero by 2070, committed at Cop27
- ④ Meeting the domestic demand due to Industry 4.0, urbanisation etc...

## National hydrogen mission - Achieving energy goals. (NHM)

- ① 125 GW renewable energy addition by 2030 through green hydrogen.
- ② 5MMT of green hydrogen production by 2030, propelling decarbonising industry & transport.
- ③ Exports of green steel & green ammonia, earning foreign exchange.
- ④ Creation of green jobs & green GDP growth through investments of 3.5 lakh crore & 20 lakh jobs.
- ⑤ Achieving import substitution of fossil fuels & taming importer inflation.
- ⑥ Achieve energy resilience by reducing impacts of global events like Russia-Ukraine War on India's energy sector.

SDG-11-3-1  
SDG-11-3-2

Capital expenditure with limited participation from private sector.

Dependence on china for import of critical electronic components

limited electrolyser manufacturing capacity

Costs of production of green hydrogen, not at parity with conventional sources

Measures needed

Active participation of private players through subsidies, interest subvention, PFI etc.

Support to states in clean energy transition

↳ Interest free loans

↳ Green credits to increase adoption of hydrogen

Clean energy transition is critical towards achieving SDG-9 (innovation & infrastructure), SDG-13 (climate action) & promoting NHM is a step in the right direction.

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)

15

Minimum wage refers to the amount needed to ensure basic survival of humans whereas living wage refers to amount ensuring survival with dignity & growth.

Benefits of adopting living wage in India:

- ① Living a life with dignity as it is integral to right to life under Art. 21
  - ② Capabilities of humans are recognised and supported through living wage.
  - ③ Achieving social mobility through improved access to health, education etc. -
  - ④ Removal of people from below poverty & uplifting their socio-economic conditions.
- eg: 15-1. of India is multidimensionally poor as per NITI Aayog

## Constraints in adoption of living wage:

- ① Informal nature of workforce in India.  
eg: 90% of labour works in informal sector
- ② Exploitation by business class & middlemen  
eg: Issues of abuse by muggadams in sugar fields of Maharashtra
- ③ Fearing backlash by business class in enforcing Code on wages in letter & spirit
- ④ Dichotomy between ease of doing business & ensuring living standards for labour class through living wages, quality of life.
- ⑤ Strained revenue resources of government, failing to do any positive interventions like  
↳ fiscal deficit of 6% GDP in 2022

## Measures needed to ensure living wage for people:

- ① Strict implementation of code on wages in

Letter & spirit .

- ② Exploring concept of universal basic income as suggested by economic survey.
- ③ Focusing on skill dev for upward mobility  
e.g.: Accelerate PM Kausal Vikas yojana
- ④ Promote employment & entrepreneurship through MUDRA, Startup India, Standup India.
- ⑤ Promote insurance among poor through PM Jeevan Jyoti Bima Yojana, E-SHRAM etc.

Living wages are crucial for holistic growth of poor & marginalised and steps should be taken to empower them, achieving Sobit (reduced inequalities) by promoting concept of Sabka Saath Sabka Vikas .

14.

केंद्रीय बजट भारतीय अर्थव्यवस्था के लगभग हर क्षेत्र 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 हिसाब में नहीं लिखना चाहिए  
Candidates must not write on this margin

15

Budget/ Annual financial statement is tabled annually under Art. 112 of the Constitution which projects the income-expenditure profile of govt & initiatives for socio-economic growth

Budget policies - under substantial public scrutiny:

- ① Responsibility to legislature
  - ↳ Mandatory approval, otherwise leading to fall of government.
- ② Departmental Standing Committee's, going into propriety & prudence of budgetary allocations before tabling in parliament.
- ③ Scrutiny by Comptroller & Auditor General (CAG) highlighting discrepancies
  - ↳ Eg: CAG flagging irregularities in PM-JAY scheme.

④ Limits under Fiscal responsibility & budgetary management (FRBM) to manage fiscal deficit below 3% of GDP

⑤ Scrutiny by public accounts committee, (PAC) estimates committee & committee on public undertakings.

### Budgetary policies - evading public scrutiny

① Post modern nature of review by PAC.

② Shifting goal posts of FRBM limits.

↳ eg: Union to achieve 4.5% of GDP (fiscal deficit) by 2025-26.

③ Lack of discussions in parliament on CAG findings & reports of PAC etc...

④ Extra-budgetary resources (EBR),

Subverting the process of scrutiny

↳ Raising loans through PSU's & cooperatives

⑤ Increased cen & surcharges, depriving

## States of their Constitutional fiscal rights

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

### Measures needed to improve scouting :

- ① Limit off budget borrowings , flagged as concern by RBI, Finance commission etc..
- ② Deliberations on CAG findings & other committee reports on finances , demanding accountability
- ③ Following FRBM limits in letter & spirit
- ④ Promoting cooperative federalism spirit through fair devolution of taxes to states

Finance commission as bulwark of fiscal federalism should rightly address the issues and give necessary <sup>to center</sup> guidelines in the larger interest in ensuring fiscal stability through budgetary policy reforms.

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  
Candidates must not write on this margin

15

With the success of white revolution, India emerged as the largest producer of milk in the world with improvements in percapita consumption

Reasons/behind transition from milk deficit → biggest milk producer:

① Success of white revolution through establishment of dairy cooperatives like Amul.

② Improvement in yield of milk animals.

③ Infrastructure & logistics aiding transport of milk, processing & exports.

④ Successful linkage of small & marginal farmers with towns in supply of milk



- ⑤ Availability of veterinary hospitals & increased access to vaccines & feeders

### Productivity of dairy animals — concern

- ① Limited yields compared to breeds across world like jersey, holstein
- ② Susceptibility to diseases & pests  
eg: Prevalence of Foot & mouth diseases.
- ③ Increasing challenges of quality fodder due to change in land use pattern
- ④ low research & development in improving breed quality.
- ⑤ Diversion towards meat exports

### Measures needed to transform dairy productivity

- ① Improvement of breed quality
  - ↳ Sex tested semen
  - ↳ cross breeding with foreign varieties.

② Improvement of food quality & healthcare support through Rashtriya Karkaderu Aayog & breeding centers

③ Diversification of dairy products to produce cheese, butter etc. having export potential

④ Improving in cold storage, processing infra.  
eg: PM formalisation of food processing enterprises

⑤ Reform cooperatives to ensure increased income & efficiency improvement

↳ Cooperative Societies Amendment Bill, 2022

Overhaul of dairy sector is instrumental in achieving food security (SoFI&2),

increased income for farmers & achieving

export oriented growth for rapid bio-economic transformation.

16.

जहां 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

Agriculture sector is witnessing impacts of climate change exacerbated by anthropogenic interventions having long term bio-economic-environmental implications.

Climate change - crop failures:

- ① Erratic nature of south-west monsoon due to increasing El-nino cycles.
- ② Increasing heatwaves, affecting crop productivity  
↳ 10% decline in wheat productivity due to temperature rise in coming years.
- ③ Spreading of land degradation & desertification affecting crops  
↳ 30% India's land is degraded as per desertification & land degradation Atlas, MoRCC

④ Intensity of cyclones, cloudbursts, landslips damaging standing crops.

⑤ Droughts coupled with flash floods, wreaking havoc with changes in hydrological cycle.

### Agriculture sector - fuelling climate change:

① Spreading of shifting cultivation leading to deforestation & reduced carbon sequestration

② Increased GHG emissions for agriculture & livestock sector  
↳ Responsible for methane emissions

③ Faulty irrigation practices - leading to increased methane emissions. eg: flood irrigation

### National Agriculture disaster mgt - resilience of farming:

① Resilience of dryland farming

↳ Watershed management

↳ Insurance promotion

↳ mixed farming to hedge climate impacts



- ② Research & development to develop low GHG varieties  
ex: ICAR heritdhara (feed) → low methane emissions from livestock sector.
- ③ Bio-technology to ensure food & climate security:  
↳ GM-crops to increase yields, drought & pest resistance
- ④ Shifting towards crops like millet having benefits of
  - low water requirements
  - ↳ climate resilient
  - ↳ nutritional security & income for farmers
- ⑤ Awareness creation, training & capacity building among all stakeholders
- ⑥ Big data, AI to predict future scenarios through climate modelling  
Agri-resilience to climate change is key towards achieving sustainable economic growth & balanced development of all communities & measures should be taken as discussed above.

17.

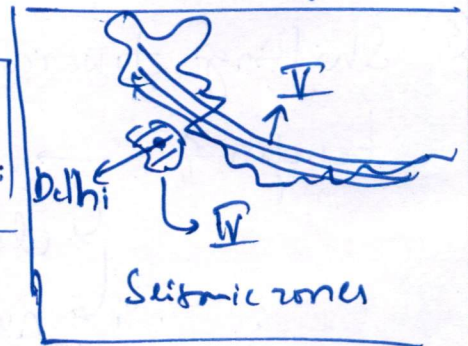
दिल्ली सहित भारत के कुछ क्षेत्र हिमालय में आने वाले भूकंपों के प्रभाव के प्रति अत्यधिक संवेदनशील हैं। विवेचना कीजिए। भारत में भूकंप से होने वाली हानि को कम करने के लिए कौन-से संस्थागत उपाय किए गए हैं? क्या आपको लगता है कि कुछ उल्लेखनीय कमियां अभी भी मौजूद हैं? (उत्तर 250 शब्दों में दीजिए)

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)

15

Delhi, owing to its location in seismic zone-IV is highly prone to earthquakes necessitating necessary interventions to reduce damage.

Vulnerability of delhi to earthquakes originating in himalayas:



- ① Seismically active zone of fragile himalayas & its proximity
- ② Unplanned & haphazard growth of urbanisation with lack of infrastructure.
- ③ Poor quality of infrastructure like buildings, bridges, without earthquake proofing
- ④ Density of population is high, increasing vulnerability
- ⑤ Increased encroachment of flood plains  
↳ At risk of earthquake induced floods

## Institutional mechanisms to mitigate earthquake impact..

- ① Seismic mapping to identify areas of vulnerability using remote sensing
- ② Retrofitting of buildings to increase resilience
- ③ National building code (NBC) 2016, for earthquake resistant designs.
- ④ Resettlement & rehabilitation of people living in highly fragile areas
- ⑤ Training & capacity building of NDRF for emergency rescue operation.
- ⑥ National earthquake risk mitigation project
  - ↳ installing early warning systems
  - ↳ Climate modellings & future scenarios using available data.
- ⑦ Impact assessments for infrastructure development in sensitive areas like Himalayas

## Gaps in the institutional mechanisms:

- ① More of a reactive approach in dealing with earthquake related disasters
- ② Early warning systems (EWS) are less developed & spatial adoption is skewed.
- ③ Limited availability of funds in mitigation & adaptation
- ④ Building code guidelines are less enforced.
- ⑤ Lack of city specific action plan for dealing with disasters like earthquakes.

Building upon traditional knowledge, retrofitting of buildings with climate smart technologies & city specific management plans should be expedited to minimize the losses induced by disasters like earthquakes.

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) 15

Experiments like International thermo nuclear experimental generator (ITER) by CERN delivers promising gains in achieving nuclear fusion for sustainable growth of future.

Advantages of nuclear fusion based power generation:

- ① Clean source of energy without any GHG emissions.
- ② Sustainable heat can be generated for longer periods.
- ③ Reduced dependence on fossil fuels, achieving import substitution for India  
ex: \$158 bn imports of energy sources by India annually.
- ④ Climate commitments  
↳ Net zero by 2050

⑤ No challenges of radioactive waste disposal, as is the case with nuclear fission technologies.

Challenges in adopting nuclear fusion for power generation; Commercial scale

- ① Nascent stages of development with initial levels of attaining energy gain
- ② High initial capital expenditure
- ③ Lack of access to technology, making transition difficult for developing & LDC countries.
- ④ Increasing energy demands, necessitating continued use of fossil fuels  
Eg: Coal as necessary evil, identified by eco. survey.
- ⑤ Challenges in maintaining fusion temperatures as high, requiring expertise in technology & human resources

## Measures needed to meet demands of power:

- ① Continued investments in R&D of fusion tech
- ② Promoting small modular reactors (SMR) (200mV)  
based on nuclear fission for clean energy.
- ③ Explore alternate renewably like solar, wind  
in meeting climate goals.
- ④ Promotion of breakthrough technologies like  
biomass to energy, ethanol blending  
to reduce GHG emissions. ↳ E20 → 2025 target

Renewable transition is key towards climate  
resilience and promotion of nuclear fusion tech  
(SDG13)  
should be increasingly expedited with collaborations  
among international community in achieving  
the same.

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

Prevention of money laundering act (PMLA), <sup>act 2002</sup> is aimed to curb the menace of money laundering which poses significant challenges like tax evasion, terror financing, organised crime etc...

PMLA act 2002 - efficient in controlling money laundering

- ① Regulation on crypto exchanges, dir' per latest  
  - ↳ KYC norms for customers amendment.
  - ↳ Notifying suspicious transactions to govt.
- ② Cross country extradition for trials under provisions of money laundering act.
- ③ Definition of money laundering is expanded to include various offenses, strengthening act
- ④ Reverse burden on accused, that stringent action on offenders is ensured.
- ⑤ Right to seize, arrest under raids.

## PMCA act - failure to deal with moneylaundering

- ① Increasing use of cryptocurrencies for moneylaundering, making it difficult to trace & punish.
- ② Benami transactions are on rise, tracing is difficult
- ③ Using tax havens like mauritius for round tripping & ~~base~~ tax evasion
- ④ Lack of coordination among ~~member~~ countries
  - ↳ Challenges in extraditing Vijay malya, Nirav modi, Mehul choksi.

## Measures needed to fight moneylaundering:

- ① Enhanced regulation on crypto trading  
Eg: OECD crypto asset reporting framework.
- ② Strengthening FATF monitoring and ensuring compliance from countries like Pakistan etc. . .

- उम्मीदवारों के इस हाथिए में नहीं लिखना चाहिए  
Candidates must not write on this margin
- ③ No money for terror campaign (NMF) to increase crackdown on moneylaundering.
  - ④ Increased digitisation & plugging loopholes in FTAs to deter tax evasion & moneylaundering.
  - ⑤ Coordination between all vigilance units like ED, CBI, NIA through data transfer & sharing.
  - ⑥ Training & capacity building of personnel to create awareness on latest frauds using technologies.

Moneylaundering poses significant challenges to economic growth & income security of nation and concerted efforts should be taken to address challenges as discussed.

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

Indian ocean region (IOR) is flourishing economic region with 90% of trade in volume & 70% in value passes through it, making the region's security critical in global economies.

Security threats in IOR - Impact on India's maritime interests:



① Increased infiltration of terrorists using sea routes  
eg: 2008 Mumbai blast terrorists entered through sea.

② Illegal trade of drugs & arms.  
eg: from Golden Crescent to Golden Triangle.

③ China's String of pearls:  
↳ Affecting sovereignty & security of India.

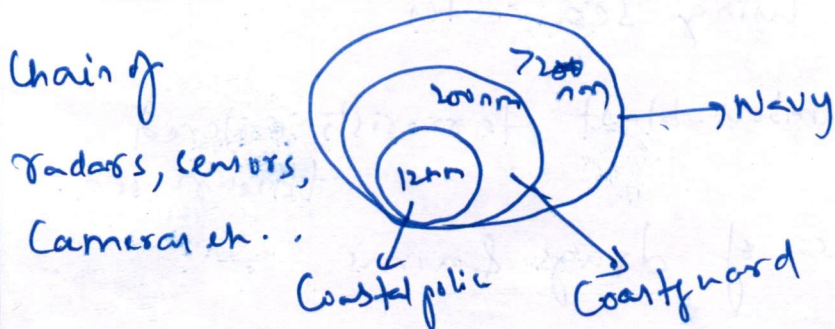
④ Increased presence of Chinese ships in IOE:  
Spying concerns. ↳ Dowing of spyship  
at Hambantota port, Sri Lanka

⑤ Seapiracy among Africa's east coast &  
hurting merchant trade in IOE region  
↳ eg: Somalia pirates.

⑥ Military & bloc formations like AUKUS,  
increased tensions with China in the IOE region,  
detrimental to peaceful trade in the region.

Strategy to deal with threats in the IOE region:

① Enhanced coastal security: through



② Creation of IMAE under National Maritime  
domain awareness project for increased  
surveillance in the Indian ocean region.

- ③ Biometric ID's to fishermen & automated vessel traffic identification mechanisms to detect illegal ships in the region.
- ④ Coastal exercise involving local communities as eyes & ears of sea. eg: Seavigil
- ⑤ Increased coordination among coastal police, Coastguard & Navy
- ⑥ Measures to curb illegal, unreported, unregulated fishing (IUU)  
↳ As these routes are exploited by terrorists, mafia etc. . .
- ⑦ White shipping agreements with littoral countries for coastal security. in line with SAHAR vision
- Coastal security is critical in IOR region for india's economic & strategic interests related to maritime domain and measures should be ~~be~~ expedited in the same direction.

## SPACE FOR ROUGH WORK

AL