

**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 उपरान्त 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. : 444569.

अभ्यर्थी का नाम/Name of Student : Akanksha

माध्यम: हिंदी/अंग्रेजी  
Medium: Hindi/English

English

तारीख  
Date

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

केंद्र  
Centre Bhai Joga  
Singh School,  
Karol Bagh.

निरीक्षक के हस्ताक्षर  
Invigilator's Signature

ChL



<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>
<p>1 (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>
<p>2 अपनी प्रश्न-सह-उत्तर पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तर के अतिरिक्त कुछ न लिखें जैसे कि कोई कविता/दोहा, अभद्र या अपमानजनक अभिव्यक्ति इत्यादि और न ही कोई ऐसा चिन्ह/निशान बनाएं जिसका उत्तर से सम्बन्ध न हो।</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>
<p>3 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>
<p>4 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>
<p>5 उत्तर स्याही में ही लिखें। उत्तर लिखने के लिए पेंसिल का उपयोग न करें, हालांकि आरेख, चित्र इत्यादि बनाने के लिए पेंसिल का उपयोग किया जा सकता है।</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>
<p>6 प्रवेश पत्र में उल्लेख किए गए माध्यम के अलावा अन्य किसी माध्यम में उत्तर न लिखें। अधिकृत और अनधिकृत की मिली जुली भाषा का भी उपयोग न करें।</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>
<p>7 प्रश्नों के उत्तर ठीक उसके नीचे दिए गए निर्धारित स्थान पर ही लिखें। निर्धारित स्थान के अलावा किसी अन्य स्थान पर लिखे गए उत्तर का मूल्यांकन नहीं किया जाएगा।</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>
<p>8 यदि आप अपने किसी उत्तर को रद्द करना चाहते हैं तो उसे पेन से काट दें तथा उस पर "रद्द" लिख दें, अन्यथा उसका मूल्यांकन किया जा सकता है।</p>	<p>If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.</p>



कार्यालय के प्रयोग हेतु For Official Use	कार्यालय के प्रयोग हेतु For Official Use
<p>परीक्षक के हस्ताक्षर Signature of Examiner(s)</p>	

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

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



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Time Allowed: **Three Hours**

अधिकतम अंक: 250

Maximum Marks: 250

**प्रश्न-पत्र संबंधी विशेष अनुदेश**

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

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

सभी प्रश्न अनिवार्य हैं।

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

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

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

प्रश्नों में इंगित शब्द सीमा को ध्यान में रखिए।

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

**QUESTION PAPER SPECIFIC INSTRUCTIONS**

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

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

All questions are compulsory.

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

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

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

Keep the word limit indicated in the questions in mind.

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



## EVALUATION INDICATORS

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

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

**All the Best**



1.

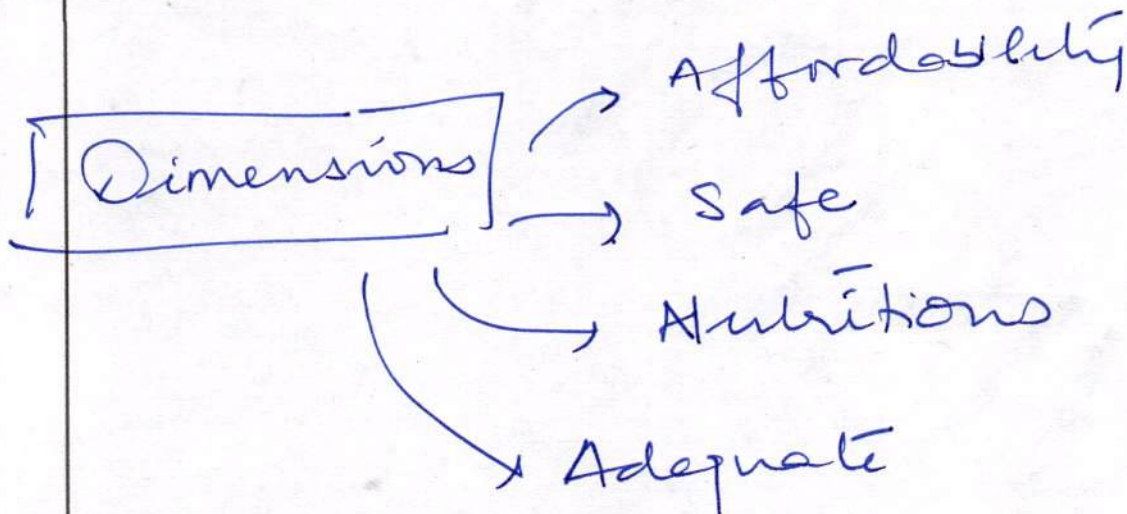
खाद्य सुरक्षा के विभिन्न आयाम क्या हैं? इन आयामों के मद्देनजर खाद्य सुरक्षा सुनिश्चित करने के संदर्भ में भारत की स्थिति का परीक्षण कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

Food security refers to the availability of adequate, safe and nutritious food, to all people, at all places and time. at affordable costs (UN World Food program)



India's Performance

① Affordability : Good.

⌈ Right to affordable.



# food under National Food Security act

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

## ② Safe : Poor

- [eg] Rotting foodgrains in silos  $\rightarrow$  mycotoxins.
- [eg] Chemical fertiliser overuse.

## ③ Nutrition : Poor

- [eg] Hidden hunger.
- [eg] Cereals dominate production like rice and wheat

## ④ Adequate : Poor

- [eg] 107/121 in Global Hunger Index.

India should improve and evaluate its performance in all the above metrics to truly bring about inclusive development.



2.

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

10

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

Industry 4.0 consists of AI, Blockchain, IoT have taken over all the areas, and agriculture is no different.

Use of technology for agricultural transformation

- ① Precision agriculture.  
[eg] Soil health monitor
- ② Internet of things for micro irrigation



(2) Blockchain : use of ~~to~~  
monitoring benefits and  
drawbacks of scheme.

(4) Chat GPT : can help in  
determining inputs

(5) Drone surveillance : for  
checking pest attacks.

(6)

wadhwa committee has  
also suggested digitisation  
of food management  
practices ~~for~~

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

De-dollarization of the economy refers to the replacement of dollars (greenback) with other domestic currency like rupee, in international transactions.

### Factors

- ① Ascendency of currencies like ₹ in terms of stability.
- ② Other initiatives like
  - Masala Bonds.
  - Full current account convertibility.
  - Vostro Accounts for



③ Decline in the economic dominance of USA since Washington Consensus in 1980s

④ Multipolar economic world order

→ Beijing Consensus

→ Push for reforming WTO, IMF etc

→ other multilateral agencies

like Asian development  
bank from global south

I think that dollar shall remain  
the hegemonic hard currency  
for ~~one or two~~ the next decade  
however, ~~at~~ in the meantime,  
other currencies like rupee,  
Yen etc shall be ascendent,  
on back of full current and  
capital account convertibility  
(Tarapore Committee) to establish  
a truly multipolar currency  
system



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

10

India's food subsidy has breached the "de minimis" criteria under the Amber box of Agreement on Agriculture by WTO.

Pressure from world

Bring down subsidy to less than 10%.

Replace trade distorting practices with others.

Countervailing measures by Europe & USA

Merit in Food Subsidy

①. Curb hunger and malnutrition

[for] India 107/121 in Global hunger index.



② Procurement of foodgrains  
from farmers

- for assured returns.
- avoid distress sale.

③ Facilitate human development,  
poverty alleviation

④ Taking care of migrant  
populations

[ef] One nation, one ration card.

⑤ Targetting the poorest, and most  
vulnerable.

[ef] Anyodaya Anna Yojna

[ef] Pregnant and lactating mothers  
under NFSA.

India should resist the  
pressure of lowering food  
subsidy from rest, but should  
make it more efficient through  
Digital India for prosperous.



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

10

India has 4% of water resources and 18% of world's population, thus making water conservation initiatives a top priority.

### Initiatives by government

- ① Jal Jeevan Abhiyan : 55 l/ per capita tap water to rural households.
- ② Jal Shakti Abhiyan : water conservation
- ③ Atal Bihari Vajpayee : sustainable groundwater conservation.
- ④ Interlinking of rivers : to connect water deficit areas to water rich areas.  
[eg] Ken Betwa.



Required priority for water quality and Inter availability needed.

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

- ① Scarcity: UN water report says that 26% of population lacks safe water
- ② Polluted stretches of rivers  
[ex] most in Maharashtra, Kerala, Bihar
- ③ Unsustainable groundwater extraction  
[ex] 90% of all GW extraction in India
- ④ Virtual water trade is unaccounted

way ahead

→ Circular water management  
→ Phytoremediation  
→ Traditional conservation structures like Johads, Surangams etc  
→ Micro irrigation

Water is bedrock of all human existence, ~~but not~~ and must be

conserved to avert 3rd world war according to Dublin principles



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

Arctic retreat is specially pronounced, as compared to other zones cryospheric zones, which has wide ranging effects on resources rivalry, water security etc.

### Drivers of Arctic Retreat

① Global warming : heating of the earth.

[eg] Earth warmer by  $1.2^{\circ}\text{C}$  as compared to pre-industrial levels (IPCC).

② Arctic Amplification : phenomenon of 2-4 times greater warming

③ Albedo effect : melting ice reduces reflectn of sunlight by white ice  $\rightarrow$  further warming.



④ Affect of warm currents

[ex] like Gulf current

⑤ Resource race in the region

[ex] Russia's nuclear ice breakers

Impact of Arctic retreat on ecosystem

① Rise of sea level.

② Zombie Ice and broken ice sheets

[ex] Ok Jokul extinct in Iceland.

③ Extinction of species like

Polar Bear.

[ex] needs ice to hunt seals/fish.

④ Slowing down of Antarctica  
circulation → less mixing of water

Arctic is one of the tipping points  
in the climate change (IPCC), which  
shall cause reversible and  
devastating changes in earth's  
ecosystems



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

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए  
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Companies like Amazon, Space X have been actively pursuing the possibility of space tourism services, that shall enable the people in experiencing extra-terrestrial environment, literally.

But challenges remain

① exorbitant costs : shall enable only few super-rich to partake this experience.

② Safety concerns : because of space debris, Kessler effect etc.

③ Commercialise the space sector  
→ contrary to its status as global commons



④ Opportunity cost : wasteful  
luxury against pending goals  
of removing poverty (SDG 1),  
hunger (SDG 2), etc.

⑤ No significant spin off benefits  
→ as opposed to scientific  
missions to space.  
[eg] Chandrayaan 3.

### Measures to address

- ① Precede manned tourism with  
robotic missions first, to test safety
- ② ~~Include~~ Test Rescue capsules,  
and other safety devices.
- ③ Space tourism can be made  
contingent on interest and merit  
rather than wealth.

Finally, private sector should be  
made a party to the liability  
conventions to address any  
harms arising out of it.



8.

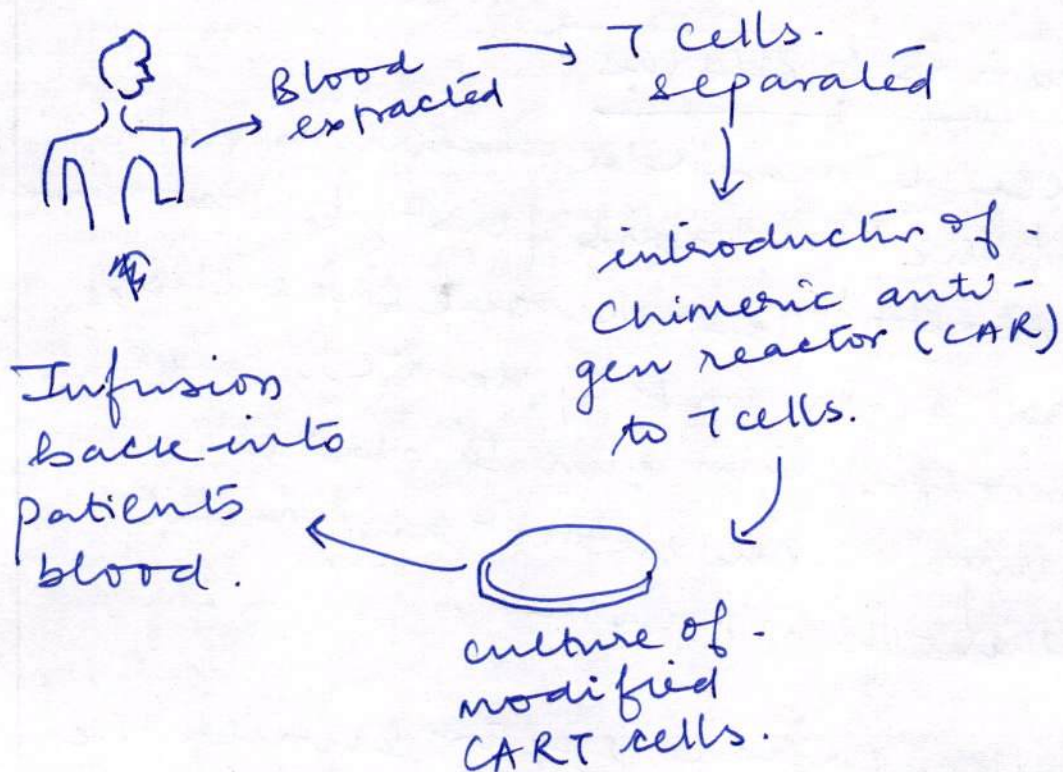
वैश्विक स्वास्थ्य विशेषज्ञ व्यापक रूप से मानते हैं कि CAR-T सेल थेरेपी का विकास कैंसर के उपचार में एक बड़ी सफलता हो सकता है। CAR-T सेल थेरेपी, CRISPR-Cas9 तकनीक में व्याप्त कमियों को कैसे दूर कर सकती है? (उत्तर 150 शब्दों में दीजिए)

Global health experts widely believe that the development of CAR-T cell therapy can be a game changer in the treatment of cancer. How can CAR-T cell therapy overcome the limitations of CRISPR-Cas9 technology? (Answer in 150 words)

उम्मीदवारों को इस हाथिए में नहीं लिखना चाहिए  
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10

CART therapy refers to the modification of the patients' own T cells (immunity mainly) to fight against cancer cells.



CART process against Cancer.



## Benefits of CART over CRISPR-Cas9

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

- ① Less chance of body rejecting the treatment: because no foreign element introduced
- ② faster
- ③ Apprehensions of - off targeting and unintended mutations in CRISPR-Cas9.
- ④ less intensive than CRISPR technology.
- ⑤ Difficult to use CRISPR technology against multitude of cancer cells. not in CART.

Other benefits → faster recovery  
→ only one time treatment required (unlike chemotherapy)  
→ no radiation required - less chance of relapse.

CART therapy shows much promise in its ability to treat cure cancer and thus must become the focus of cancer research.



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 हाशिए में  
नहीं लिखना  
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The Christchurch shooting in  
France and radicalisation of  
youths over facebook in India.

Show the role of emerging technologies  
in enhancing threat of radical  
extremist organisations.

Need for concerted global efforts

① Technologies defy boundaries, and  
thus no nation alone can tackle.

[eg] Recruitment of volunteers  
by ISIS in India.

② Radicalisation and terror incidents  
through propaganda.

[eg] Youtube channels banned  
by PIB recently.



③ lone wolf attacks and D17.

Terrorism rather than network of planned operations

[ex] Gun violence / Shootings in USA

④ Regime of privacy in west  
and democratic countries.

⑤ Xenophobia because of increasing  
globalisation, culture shocks and  
migration.

[ex] Root cause to be addressed.  
collectively

Way forward

Balance privacy with  
efficient detection of  
radicalisation  
[ex] PIB fast checking  
unit

Opportunities  
of gainful  
employment to  
all.

Criminalise fake news.

India should sign the Declaration  
on the future of internet & to  
share its concerns and negotiate  
a way forward on dealing  
collectively with extremists.



10.

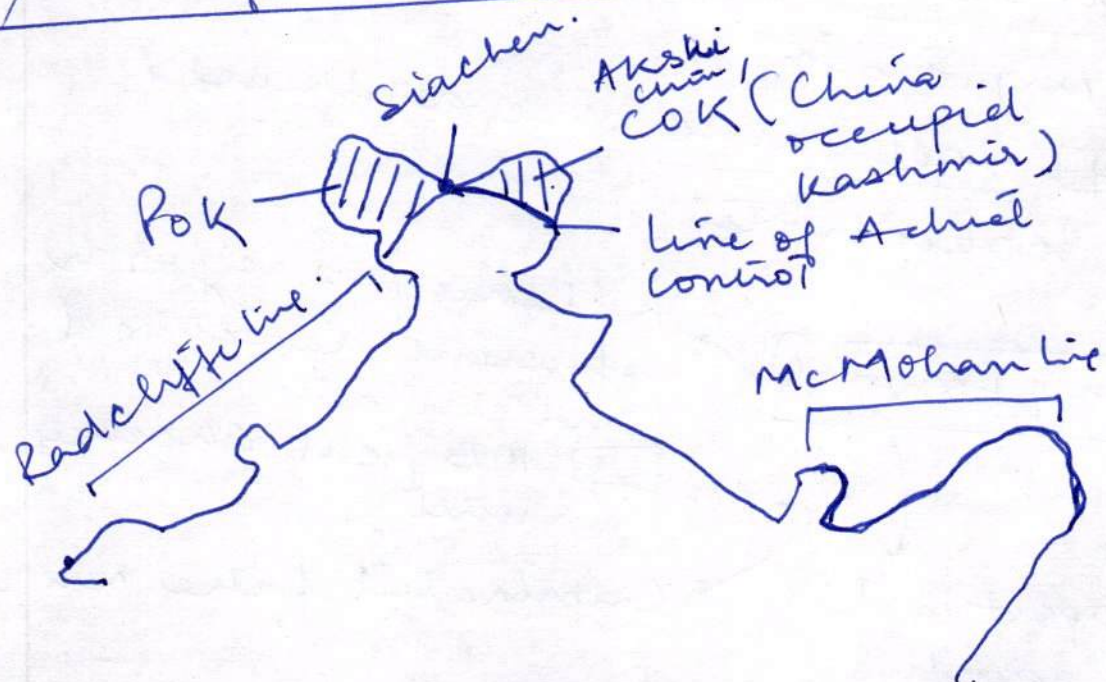
गलवान और यांगस्ते की घटनाओं के बाद वास्तविक नियंत्रण रेखा (LAC) पर तनाव बना हुआ है तथा भारत एवं चीन दोनों सीमावर्ती क्षेत्रों में अपने बुनियादी ढांचों को सुदृढ़ कर रहे हैं। इस क्षेत्र में ITBP द्वारा निभाई जाने वाली भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

10

उम्मीदवारों को  
इस हिसाब में  
नहीं लिखना  
चाहिए  
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Line of Actual Control is the boundary between China and India, and remains tense because of annexation of Aksai Chin after 1962 war.



India's disputed borders.

Factors causing tensions in LAC



# ① Frequent Skirmishes and Stand offs.

- [eg] Doklam stand off.
- [eg] Lathur Le pass.
- [eg] Galwan valley stand off.

उम्मीदवारों को इस कक्ष में नहीं लिखना चाहिए  
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# ② Rapid development of border infrastructure by China.

- [eg] China Pakistan economic corridor (CPEC)
- [eg] Military roads and airstrips

# ③ Aggressive and expansionist stance of China.

- [eg] claiming Arunachal Pradesh as part of Pakistan's 5 fingers

# ④ Cartographic Warfare

- both China and Pakistan maps show entire Kashmir to be a part of Pakistan, and Aksai Chin to China

## Role of ITBP -

- ① Maintains the borders along the LAC and McMahon line.



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 हाशिए में नहीं लिखना चाहिए  
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~~Land productivity is an outdated~~  
~~from~~

Irrigation productivity measures the productivity of agricultural production per unit of water used for irrigation rather than per unit area of land.

Need for shift from land to irrigation water productivity

- ① Scarcity of water resources: as  
→ need for more efficient use this  
→ Contrastingly, land available is fixed.

- ② Land productivity is an outdated concept



③ More consistent with ongoing schemes.

[eg] 'Per drop more crop' under PM Kisan Sanchayee Yojna.

④ Can be an effective indicator of where to invest, and government interventions. [eg] Canal development  
[eg] micro irrigation.

⑤ Help shift from water guzzling crops to hardy crops like millets (eg).

⑥ More efficient agricultural practices development.

[eg] Direct Seeding of rice.

[eg] System Rice Intensification

⑦ Mitigation and Adaptation to climate changes.



## Challenges

① Land productivity has become an accepted metric of productivity

② Rain fed areas : difficult to measure  
? irrigated productivity

[eg] 48% of agriculture in India is rain fed.

③ shall shift focus away from  
- balanced use of fertilisers -  
- scientific management of soil. ~~[eg] Amit Shah~~

④ [eg] PM Pradhan

Way ahead

Develop composite indicator rather than choosing one.

Adopt micro irrigation (soil-water productivity)

Agriculture, as the employer of more than 40% of population is the bedrock of Indian economy, and must be made more productive on all fronts like irrigation, land, fertilisers etc.



12.

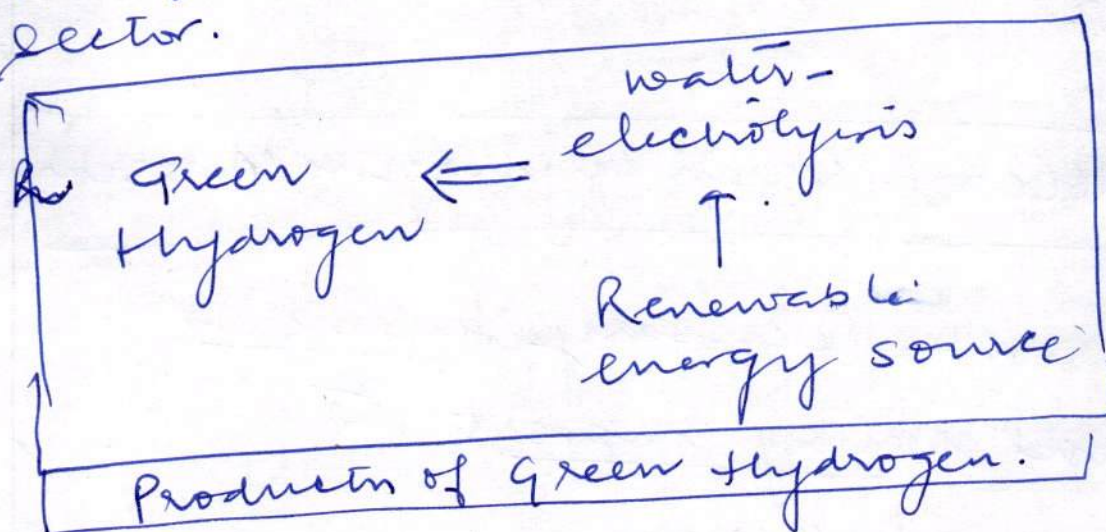
भारत की ऊर्जा सुरक्षा प्राप्त करने में हरित हाइड्रोजन की भूमिका का परीक्षण कीजिए। राष्ट्रीय हरित हाइड्रोजन मिशन, भारत की अपने ऊर्जा लक्ष्यों को प्राप्त करने में किस प्रकार मदद कर सकता है? (उत्तर 250 शब्दों में दीजिए)

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

उम्मीदवारों को इस शीट में नहीं लिखना चाहिए  
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15

Union Budget 20 23-24 has unveiled a Green hydrogen policy for sustainable energy sector.



## Role of Green hydrogen

- ① Almost no green house emissions and pollution.
- ② No fossil fuels involved: this is a true alternate to fossil based economy.



③ Reduce carbon intensity of  
the economy.

[eg] NDC: reduce C intensity by  
45%.

④ Can be easily used in all form  
of vehicles, industrial use etc

### Role of Green Hydrogen Mission

① Provide necessary financial  
and policy support to  
manufacturers

~~②~~ [eg] through viability Gap  
funding.

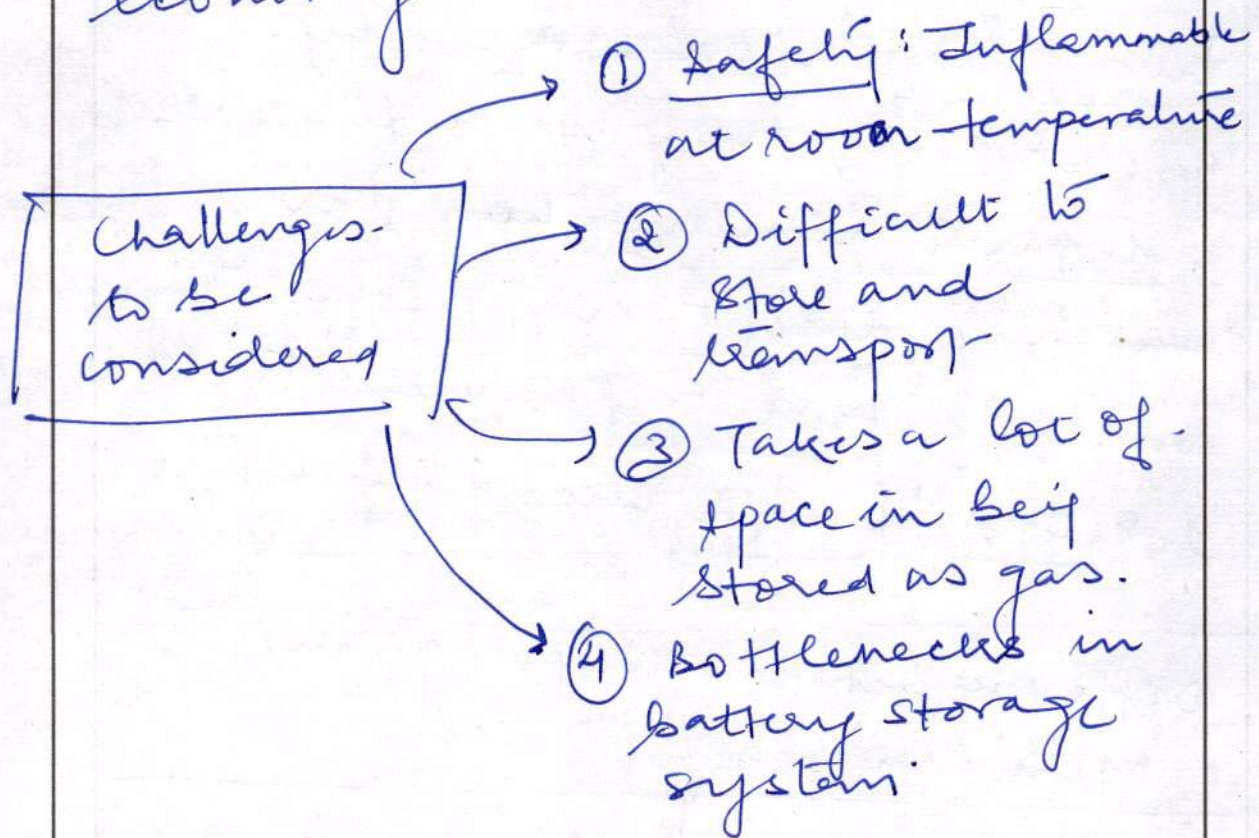
② Centres of excellence for R&D  
in green hydrogen

③ Set a policy framework for  
production, transportation  
and storage.



④. Pave the way from fossil economy to hydrogen based economy

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए  
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Green hydrogen mission shall enable India to meet its goal of net zero emissions by 2070, as well as diversify and fortify its energy sector against geopolitical and ecological concerns.



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 हाशिए में  
नहीं लिखना  
चाहिए  
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living wage, considered by government, may be defined as adequate remuneration for ensuring decent living conditions and opportunity for growth for oneself and one's family.

Difference between living wage and minimum wage.

Living wage	Minimum wage.
① adequate returns for ensuring decent living and growth opportunities	① Only meets basic needs. like food, shelter etc.
② Maximalist approach	② Minimalist approach
③ Idealistic of Amartya Sen capability model. (human founs.)	③ Instrumental ④ increase demographic dividend



## Benefits of living wage

- ① focusses on human development in a holistic sense, and development of capabilities.
- ② Considers non monetary aspects of living as well.
  - [ex] entertainment
  - [ex] Peace and stability -
- ③ Based on an expansive definition of Article 21, (Mareka Gandhi case) rather than just bodily safety.
- ④ Accords dignity to the worker as a citizen
  - minimum wage only treats them as productive instruments.

## Challenges

- ① Burden on public exchequer:
  - [ex] Around 4% of Budget goes into transfer payments like subsidies.



② Better to subsidise essential services than one off payment

[eg] ~~no~~ possibility of misuse / frivolous use of money

③ lack of implementation of even minimum wage

[eg] Informal sector economy

④ lack of Political will

[eg] Universal Basic income has disappeared from conversations.

⑤ Gender disparity

[eg] Almost 90% women work in informal sector, where implementation of any scheme is patchy.

⑥ No way forward → Sign ILO convention on labour.

→ Channelise labour living wage through Company act amendment

→ Amend labour code.

Working class welfare is the determining factor behind success of -  
Amrit Kaul



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 स्थिति में  
नहीं लिखना  
बाह्य  
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Union Budget (A. 112) is an annual document prepared by Department of Economic Affairs, Finance Ministry, laying out the planned priorities and expenditure for the next year, as well as sources of revenue.

Affects of Budget on all sectors of the economy

This can be demonstrated through Budget 2023-24, which affects

- ① women: Mahila Samman Yojana
- ② Education: Digital Library, Ekta School.



## ② Taxes-

- [eg] cut customs duty on electric coils
- [eg] Increase customs on precious metal articles

उम्मीदवारों को इस कक्ष में नहीं लिखना चाहिए  
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## ④ Tribal development

- [eg] PVTG development mission.

Lack of Scrutiny on Budget process and provision

## ①. Majority will ~~of~~ dominates the legislative exercise

- [eg] If government is in majority, there is no scope for legislative check on budget provision without governments cooperation.

## ②. Guillotine provision

- [eg] All demand for grants deemed passed after 26 days of discussion voting, if not already considered.



## ③ No effective say of Rajya Sabha. (RS)

[eg] Budget only laid in RS, not introduced

[eg] Rajya Sabha can only suggest changes, not reject provisions.

## ④ No Presidential Check.

[eg] President cannot send back the budget with suggestions

## ⑤ Poor discussion of provisions and impacts in media and public

## ⑥ Dense language of budget, incomprehensible to layman.

## ⑦ No provision for seeking public comments and objections.

Way forward

- window of 15 days for public comments
- easy version of budget released for public
- Budget to be passed by 2/3rd majority.

"Sabke Saath, Sabke Vikas" should

Start from reforming budget process.



15.

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

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

उम्मीदवारों को इस कॉपी में नहीं लिखना चाहिए  
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India is the largest producer of milk, owing to the white revolution of 1960s and 1970s and successful experiments like AMUL cooperative.

However, productivity challenges remain

①. Diseases among cattle are prevalent

[Ex] lumpy cow disease.

[Ex] Brucellosis and foot & Mouth disease.

② low productivity of indigenous breeds having some like Sahiwal and Red Sindhi



③ No sustainable and humane method of dealing with old and unproductive cows.

④ Poor condition of Goshalas  
— poor funding and support—

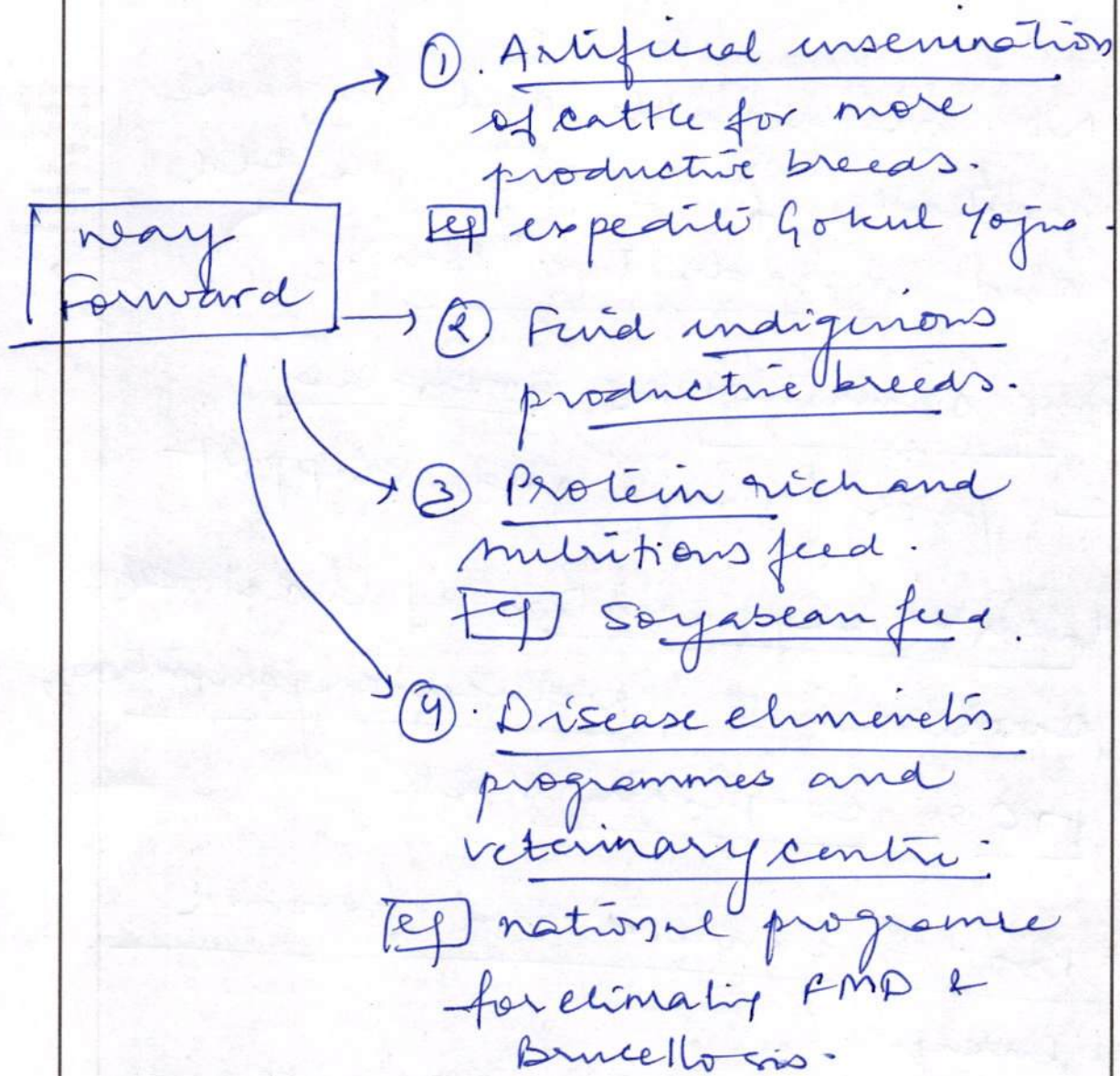
⑤ Lack of organisation of livestock owners into Producer organisations, FPOs, cooperatives etc.

⑥ Poor backward and forward linkages.

[F] inaccessibility of cold chains, etc leading to spoilage.

⑦ Poor Quality of feed, consisting of mostly dry fodder. → low productivity.





The livestock sector must be developed, in accordance with the vision of Directive principles of scientific management of cattle, through a and sustainable white revolution.



16.

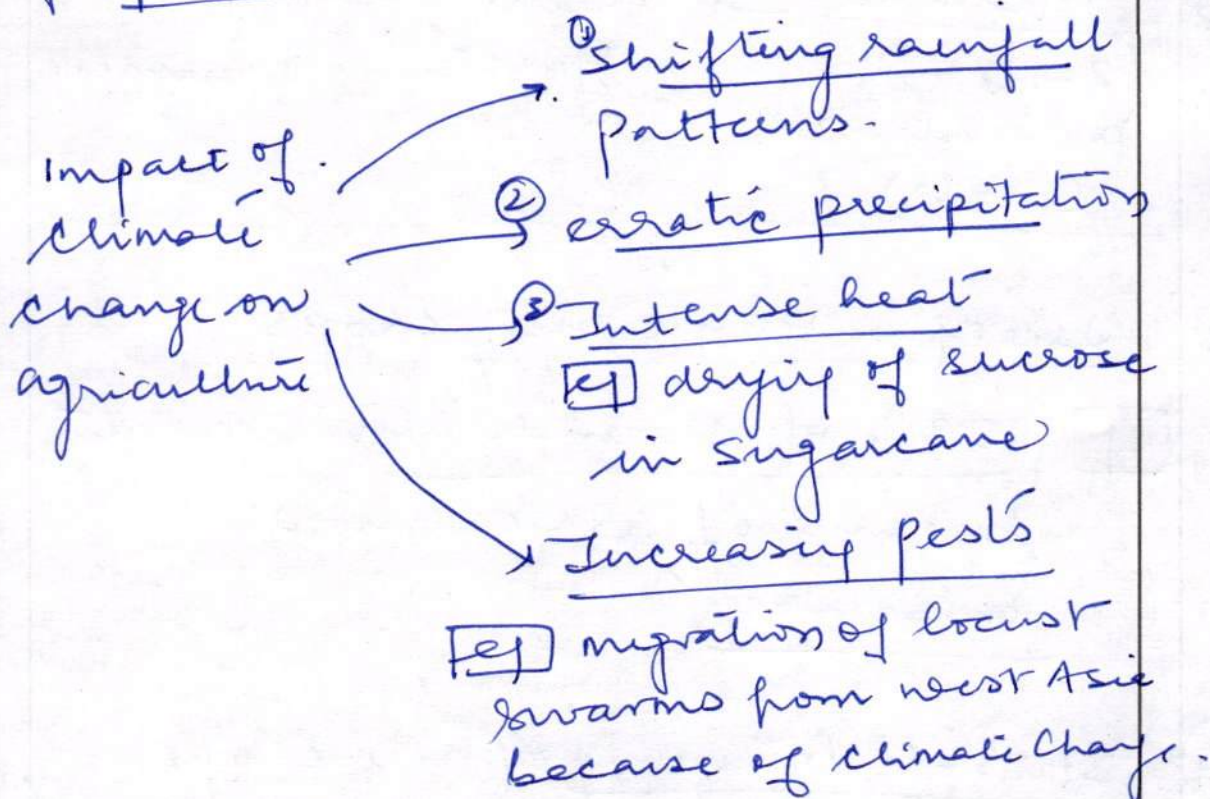
जहाँ एक तरफ जलवायु परिवर्तन, फसल की विफलता के लिए जिम्मेदार है, वहीं दूसरी तरफ चरम मौसमी घटनाओं के लिए कृषि क्षेत्रक स्वयं आंशिक रूप से जिम्मेदार है। विवेचना कीजिए। भारत में कृषक समुदाय की प्रत्यास्थता को सुदृढ़ करने के लिए राष्ट्रीय कृषि आपदा प्रबंधन योजना के तहत क्या रणनीति अपनाई गई है? (उत्तर 250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

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

उम्मीदवारों को इस कॉलम में नहीं लिखना चाहिए।  
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The agricultural sector is going through a crisis, because of climate change related factors as well as faulty agricultural practices.



Impact of agricultural practices on extreme weather events



①. Canal and tubewell irrigation  
via flooding

→ leading to increased evaporation  
that causes increased rains.

② Livestock sector

→ use of methanogenic feed makes  
it one of the largest emitters of  
methane.

③ Methane → Greenhouse → Global  
(260% of pre-industrial levels) affect warming

③ Use of water guzzling crops

[ex] 89% of groundwater extraction  
because of agriculture's  
imbalance

④ Stubble burning of rice crops  
remains → pollution and global  
warming.



⑤. Encroachment of forests to  
turn into crop lands

⇒ Reduce carbon sinks.

• Cutting of mangroves reduce  
natural barriers against Tsunami

उम्मीदवारों को  
इस क्राशिए में  
नहीं लिखना  
चाहिए  
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### Strategy under National Agriculture DM Plan

① Promote sustainable agriculture  
practices

[eg] micro irrigation, Drip and  
sprinkler irrigation.

② Adopt hardy crops like millets

③ Precision and smart agriculture

④ Zonation of so areas vulnerable  
to extreme weather events

⑤ Real time monitoring and  
communication.

Shielding the agricultural sector  
from increasing extreme weather  
events is a must to double  
farmer income.



17.

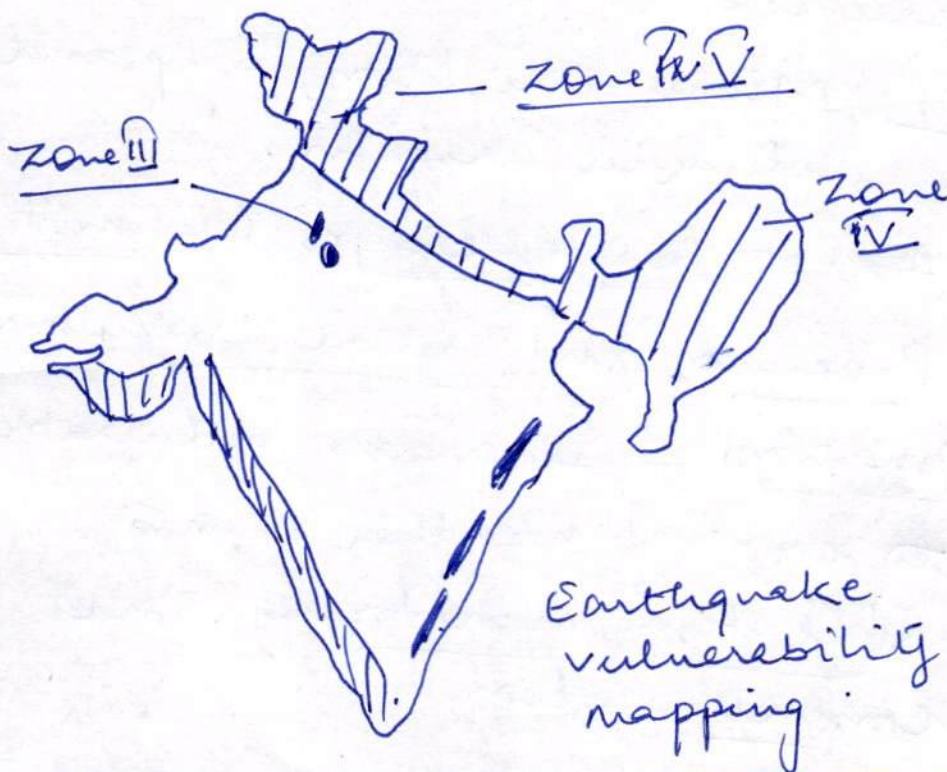
दिल्ली सहित भारत के कुछ क्षेत्र हिमालय में आने वाले भूकंपों के प्रभाव के प्रति अत्यधिक संवेदनशील हैं। विवेचना कीजिए। भारत में भूकंप से होने वाली हानि को कम करने के लिए कौन-से संस्थागत उपाय किए गए हैं? क्या आपको लगता है कि कुछ उल्लेखनीय कमियां अभी भी मौजूद हैं? (उत्तर 250 शब्दों में दीजिए)

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

उम्मीदवारों को  
इस क्राशिए में  
नहीं लिखना  
चाहिए  
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Seismic zone mapping of India places areas like Himalayas, North east region, capital city of Delhi in extremely vulnerable zones.



Impacts of quake vulnerability

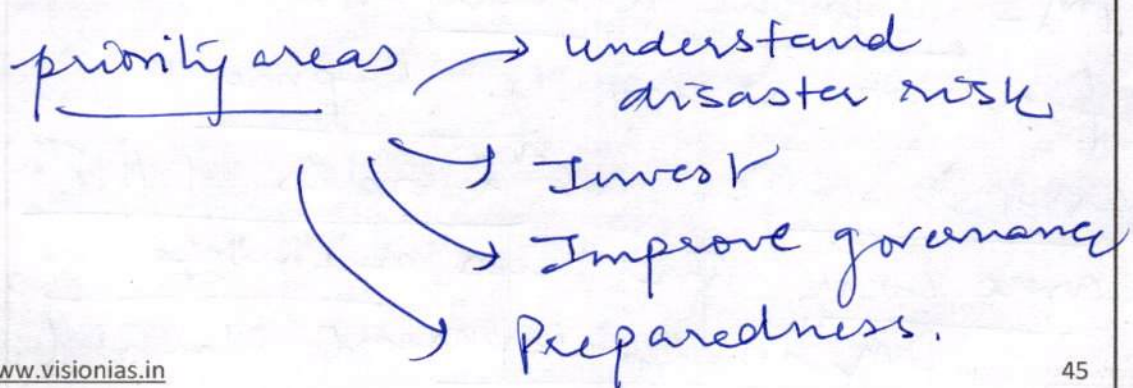
- loss of life and property  
e.g. Bhuj, 2001
- coastal earthquakes → erosion & Tsunamis  
e.g. Tsunami of 2004
- landslides.



## Institutional measures for mitigating losses

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

- ① Early warning system: with sub surface sensors, Richometer etc.
- ② Earthquake vulnerability zonation mapping: for special efforts in vulnerable areas.
- ③ NDMA guidelines for earthquakes
  - a) Early warning system
  - b) local capacity building
  - c) enforce building codes.
  - d) communication and information
  - e) Mock drills.
- ④ Membership of Sendai Framework, with its focus on 4.





- ③ National Disaster Management Act 2005 established national and state DM. authorities ; funds etc.

### Challenges | Gaps.

- ① Over burdening the terrain in vulnerable areas  
[eg] Tapog Tapovan Vishugad hydro project in Joshimath
- ② Quarrying and mining in western ghats
- ③ Poor enforcement of building codes in
- ④ Urban sprawl and haphazard development of cities like Delhi.

PM's 10 point agenda, with its focus on seeing development and disaster as "2 sides of the same coin" and thus mainstreaming DM in development should be adopted in all its dimensions.



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

उम्मीदवारों को इस वॉशिंग में नहीं लिखना चाहिए  
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Net energy gain refers to the situation in which a nuclear reaction exists more energy than what has ~~got~~ put into it, which enables it to achieve ignition

### Advantages of Nuclear Fusion

- ① less polluting than nuclear fission technologies. (less nuclear waste)
  - ② Produce more energy than fission or any other source of renewable energy.
- ∴ future of non-fossil energy



③ More Stable

[Ex] Self limiting reactions which  
will prevent a run off and  
melt down of reactors

④ Can be used in producing other  
renewable energy.

[Ex] Pink hydrogen : through  
electrolysis using nuclear energy

⑤ Non exhaustible source of energy  
because of high energy intensity  
and with a small amount of fuel

⑥ Scope in India

→ Immense source of thorium in  
monazite sands

→ Uranium found in : Rohil -  
Ghatshwar, Jaduguda etc.

Challenges



# ① Pollution

[ex] Kudankulam protests against hot water discharged in water bodies → heat pollution.

② high initial costs

③ Opportunity cost

[ex] millions of people go hungry

④ Possibility of nuclear accidents

[ex] Fukushima, 2011

[ex] Chernobyl, 20 1986.

✱ India should not shy away from experimenting with nuclear energy. Investing in Tokomaks (fusion reactors) and small scale reactors can help it chart a sustainable path towards producing 50% of energy from non-fossil source (NDSC)



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

Money laundering refers to the illegal and illegitimate process of making ~~the~~ illegal or black money seem legal.

3 layered process of ML

1. Placement - placing illegal money in legal system
2. Layering - complex transactions
3. Integration - part of formal economy.

The recent amendment to PMLA' 2002 makes it an extraditable offense, and gives enhanced powers to ED to attack and seize assets.



## Efficacy of PMLA '2002

- ① makes money laundering an offence and thus provides leg mechanisms to cut links with terror funding
- ② ED is armed with immense powers to seize, attach assets related to the offence.
- ③ A right step in enforcing fiscal discipline and financial integrity.
- ④ Prevents losses to the government revenue because of illegal acts.
- ⑤ Provides a basis for cooperation with international ML initiatives like (membership of) FATF and ILO.



## Challenges and Concerns.

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

- ① not enough safeguards against  
the misuse of act
- ② Can be used to target  
opposition leaders and curb  
democratic dissent  
[ex] ED raids on Manish  
Sisodia.
- ③ Need for bolstering &  
agreements for extradition  
[ex] Nriav Modi and  
Vijay Malhya still not  
extradited.

PMLA is an effective instrument  
for countering Money laundering  
and Terror financing. If concerns  
are not addressed, it can be  
a genuine step towards making  
India a \$5 trillion economy



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

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

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

15

India has a vast coastline of around 7500 km and thus has heightened stakes in the security of the Indian ocean region, <sup>(IOR)</sup> for its international trade (95% through ocean route), coastal safety and fishing industry.

### Security Threats in IOR.

①. Chinese presence rising: leading to encirclement or string of Pearls Strategy

[eg] 99 year lease of Hambantota port (Sri Lanka) through Debt diplomacy.



②

## Piracy operations

[eg] in Persian Gulf, Red Sea and Strait of Malacca where much of international trade happens.

③

Climate Change: leading to rise of Indian ocean level and marine heat waves

[eg] Indian ocean water rise by 1-2 cm per year.

④

Disputed territory

[eg] Sir Creek with Pakistan.

⑤

Interest of other global players in IOR.

[eg] USA interested in Indo-Pacific.

## Strategy / way forward

①. Counter Chinese dominance



through multilateralism

[eg] BIMSTEC, SAARC, even SCO.

② Anti piracy operations in affected area

[eg] Operation Lankalp in Persian Gulf.

③ Mitigation and adaptation to deal with climate crisis

long term

[eg] IFLEDS  
eg Panchamrita  
eg Net zero by 2070.

short term

[eg] Indonesia  
shifting  
capital from  
Jakarta to  
Nusantara.

④ Military operations with global players to evolve cooperation

[eg]

⑤ Cooperation with other stakeholders in IOR on development

[eg] SAGAR (security & growth for all in the region)

[eg] IORA

Through the above strategies, India can become a net security provider in the IOR.



## SPACE FOR ROUGH WORK

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