



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. : 0389741

अभ्यर्थी का नाम/Name of Student : Vivek Sonawane

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

27/08/2023

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

केंद्र
Centre

Mumbai

निरीक्षक के हस्ताक्षर
Invigilator's Signature

	महत्वपूर्ण अनुदेश	Important Instructions
	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।	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.
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। (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।	(a) Write your Registration Number and other details only in the space provided in the Question-Cum-Answer (QCA) Booklet for candidates. (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
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।	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.
3	परीक्षक को प्रत्यक्ष/अप्रत्यक्ष रूप से कोई भी प्रार्थना/धमकी भरी बातें न लिखें।	Do not make any direct/indirect appeal/threat to the examiner.
4	उत्तर अस्पष्ट अथवा गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।	Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.
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।	Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.
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।	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.
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।	Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.
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।	If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.

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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)					



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

According to Global Hunger Index 2023, India was ranked 107th out of 120+ countries. This violates right to nutritious food under Art. 21 - Right to Life.

★ Dimensions of Food Security

- 1] Accessibility :- Of nutritious food at all times & as needed according to body's requirement.
- 2] Affordability :- To be affordable for each & everyone - rich & poor.
- 3] Quality :- Consuming safe & sanitary food.
- 4] Nutritious :- Be adequately nutritious in Macro & micro-nutrients.
- 5] Availability :- To each corner of the country.

* India's status

- 1] Food surplus today with Agriculture exports. Thus, quantity ensured post Green Revolution
- 2] Presence of PDS, MDM & Subsidy ensures affordability for poor & migrants.
- 3] Safety compromised at Cover 4 Plinth storage. Also, excessive use of fertilizers, pesticides.
- 4] Micro-nutrient deficient like Iron, Ferrous, Calcium. Thus, introduced Golden Rice - Vit. A.
- 5] PDS & 'One ration, one country' mobility ensures this.

Need to work on nutritious & availability front by Millet promotion at International Millet Year. Ensure Samraddh, Sudraddh, Sashakt Bharat 7
↳ VB Patel.

2.

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

10

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

Agriculture contributes 17% to GDP & employs 45% of population. Industry 4.0 tools offers many advantages for it.

★ Potential of Blockchain in Agriculture

1] Agricultural marketing to realize best price discovery at APMC.

2] To manage storage & safety of grains. e.g. FCI stocks overflow by 2.5 times surplus.

3] Predict weather of areas in near-term. Important when there's Global Warming.

4] Devise fertilizer, pesticides pattern to maximize yield output.

5] Storing data related to inventory.

* Potential of Chat-GPT in Agriculture

1] Knowledge of best-practices to farmers. e.g. Organic farming, ZBNF

2] AI-powered solutions for farming problems. e.g. Amount of inputs necessary for best output.

3] Education & awareness in farmers.

4] Help in credit-taking & lending activities. And reduce NPA's.

5] Allow cooperatization & Food Processing.

6] Predict best-time to sell.

Both these technologies if utilized properly at ground-level will allow Doubling farmers' income by 2024.

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 लक्षित में
नहीं लिखना
चाहिए
Candidates
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Dollar although most established global currency is reducing its shine due to both internal & external reasons.

* Factors for de-dollarization of economy.

- 1] Conservative FED policy to restrict dollar build-up.
- 2] Emerging competition from other currencies. e.g. China's Yuan in IMF basket.
- 3] Preference for self-empowerment & local currency. e.g. India's Aatmanirbhar.
- 4] Preference for other currency trade bilaterally. e.g. India-Iran oil trade.
- 5] De-globalization trend in economy

4 reducing faith.

* Will dollar lose its dominance soon

उम्मीदवारों को
इस क्राशिए में
नहीं लिखना
चाहिए
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1] Highly unlikely since still most-favoured currency.

2] International standard for currency exchange is still \$.

3] IMF's basket still dominated by it. Even WB, NDI gives loans in \$.

4] Forex reserves of almost all countries have dollar's presence.
e.g. India's 580 bn \$

5] USA still holds hegemony over Western markets.

Thus, although dollar is here to stay, RBI has been strengthening Rupee by its Repo operation to ensure [Atmanirbhar Bharat.]

4.

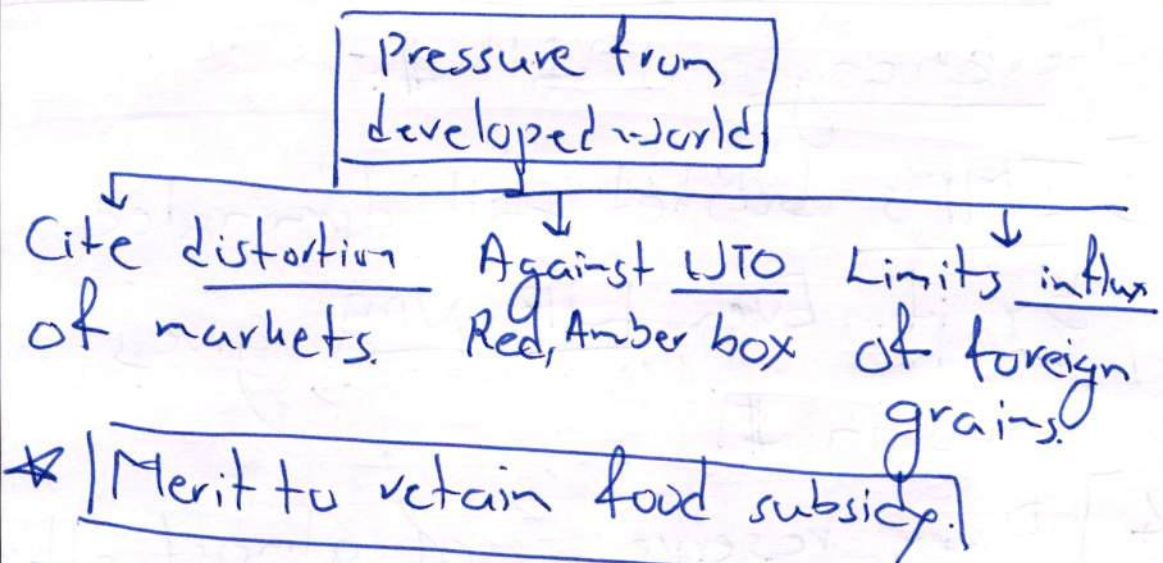
विकसित देशों द्वारा भारत पर खाद्य सब्सिडी व्यवस्था में बदलाव करने के अत्यधिक दबाव के बावजूद, भारत के लिए निर्धन व्यक्तियों हेतु अपना नीतिगत समर्थन बनाए रखना एक उचित कदम होगा। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

WTO

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 provides Food Subsidy to the tune of 2.7-1. This is in the form of fertilizer, PDS, electricity, etc.



- 1] In line with SDG-1, 2 - Zero Hunger & No poverty.
- 2] Provide basic Right to Food & nobody goes to sleep hungry as promised by National Health Policy.
- 3] Ensure affordability for poor.
- 4] Provides basic-minimum

guarantee of price to farmers.

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

5] Steer & control food production
in India. |e.g. MSP increased
of Millets - ragi, jowar.

6] Ensures nutritious food both in
quality & quantity to poor.

7] Ensures poverty-alleviation of
farmers.

8] Economic growth & informal
employment ensured [SDG-8]

Rationalize subsidy
to meet WTO norms

Use of DBT



Plan to push funds
in Research (0.65% today).

Promote micronutrients
& [Millets]

Thus, India's subsidy regime
ensures inclusive growth & Antyodaya
[see Sarvodaya] - Gandhiji.

5.

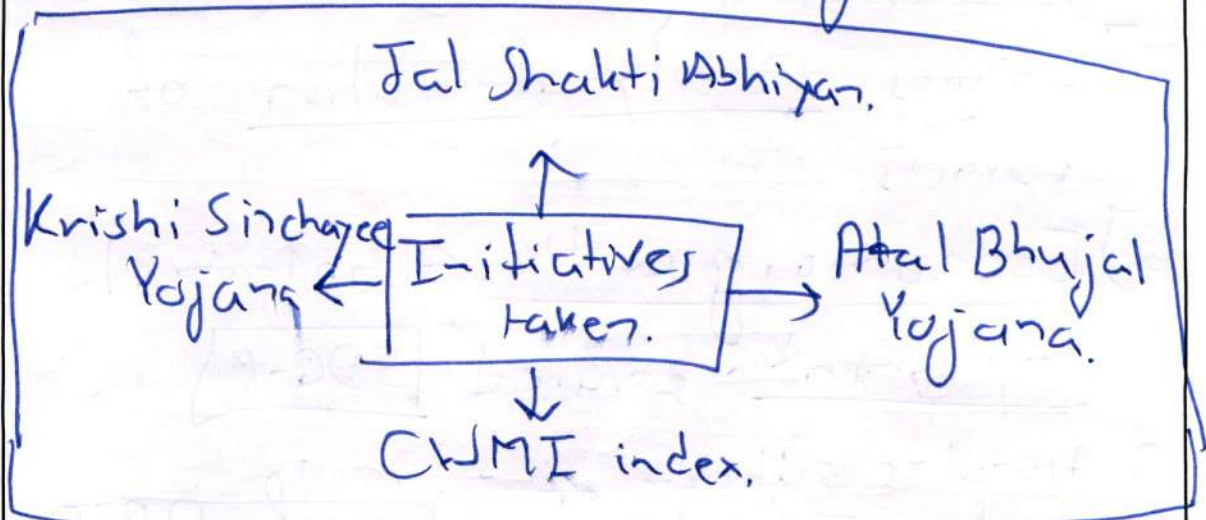
भारत की जल संबंधी जरूरतों को पूरा करने की दिशा में सरकार द्वारा कई पहलों की शुरुआत की गई है, परंतु जल की उपलब्धता और जल की गुणवत्ता जैसे मुद्दों पर अभी भी नीतिगत हस्तक्षेप की आवश्यकता है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

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NITI's CWMI cited India is going through its 'worst-water crisis'. Home to 1.7% of global population but we extract 25% of groundwater.



* Issues of availability & quality.

- 1] Safe drinking water still unavailable to tribals, rurals. e.g. Saharizar in MP.
- 2] Highly polluted river, lake waters
- 3] Contamination by Uranium, Arsenic, Fluoride creates health

disorder [e.g.] ~~Water~~ Bone issues.

4] Slums, villages still lack 24x7 supply.

5] Over-exploitation of groundwater by Agriculture. →

6] Promotes other disorder - violates SDG-6 - WASH



★ Way forward

→ 1] Greywater management in Agriculture.

→ 2] Traditional & water-saving techniques. [e.g.] Ahar-Pyne

→ 3] Micro-irrigation promotion

→ 4] Raise awareness on wise-use & saving.

→ 5] Reduce wastage - Recycle, Reuse & Reduce.

Benjamin Franklin warned - "When the wells are dry they know the worth of water!"
Thus, ensuring water security is essential SDG-6

6.

Ans Ans

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

Arctic glaciers are retreating as noted by IPCC report on Cryosphere which warned 60% loss in glaciers by 2050.

★ Drivers of glacial retreat

1] Arctic amplification exacerbating melting.

2] Climate change & Global Warming — 1.1°C rise currently.

3] Deposition of ash by thermal power plants decreases Albedo.

4] Tectonic changes in Mountains.

5] Increasing pollution & exceeding carrying capacity.

6] Disturbed Trans-Meridional —

Ocean Circulation currents.

* Potential impact on ecosystem.

- 1] Loss of life & livelihood for indigenous species e.g. Polar bear.
- 2] Rise in sea-water rise at equator by 8-10mm.
- 3] Disease vulnerability increases in Tundra & Temperate region.
- 4] Reduction in biodiversity & health of ecosystem.
- 5] Carbon emissions increase which are trapped in permafrost.

Reducing Carbon emissions, Afforestation & CCUS technologies are vital today. India's target of Panchamrit will go a long way to protect glaciers.

Net-zero ✓
Carbon sink ✓
Non-renewable intensity ↓
Non-fossil fuel ✓

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 (ST) is a 2 billion industry with new players providing space travel to those who are interested.

★ Challenges with ST

1] Remains expensive & thus out of reach for most people.

2] Presence of debris in space may increase. Promote Kessler Syndrome

3] Safety of clients needs to be ensured.

4] Rocket fuel burning adds GHG in atmosphere.

5] Monopolized by few players -
SpaceX, Jeff Bezos, etc.

★ Measures to be taken.

1] Promote space sustainability
by clean missions.

2] Rationalization of prices by
more people, low cost.

3] Ensure no extra debris is
added.

4] Using reusable rocket-launchers

5] Promoting Indian private players
by InSpace, NSIL, etc.

Space tourism is becoming
a new sector which needs to
be accessible, sustainable, safe
& enjoyable for all.

8.

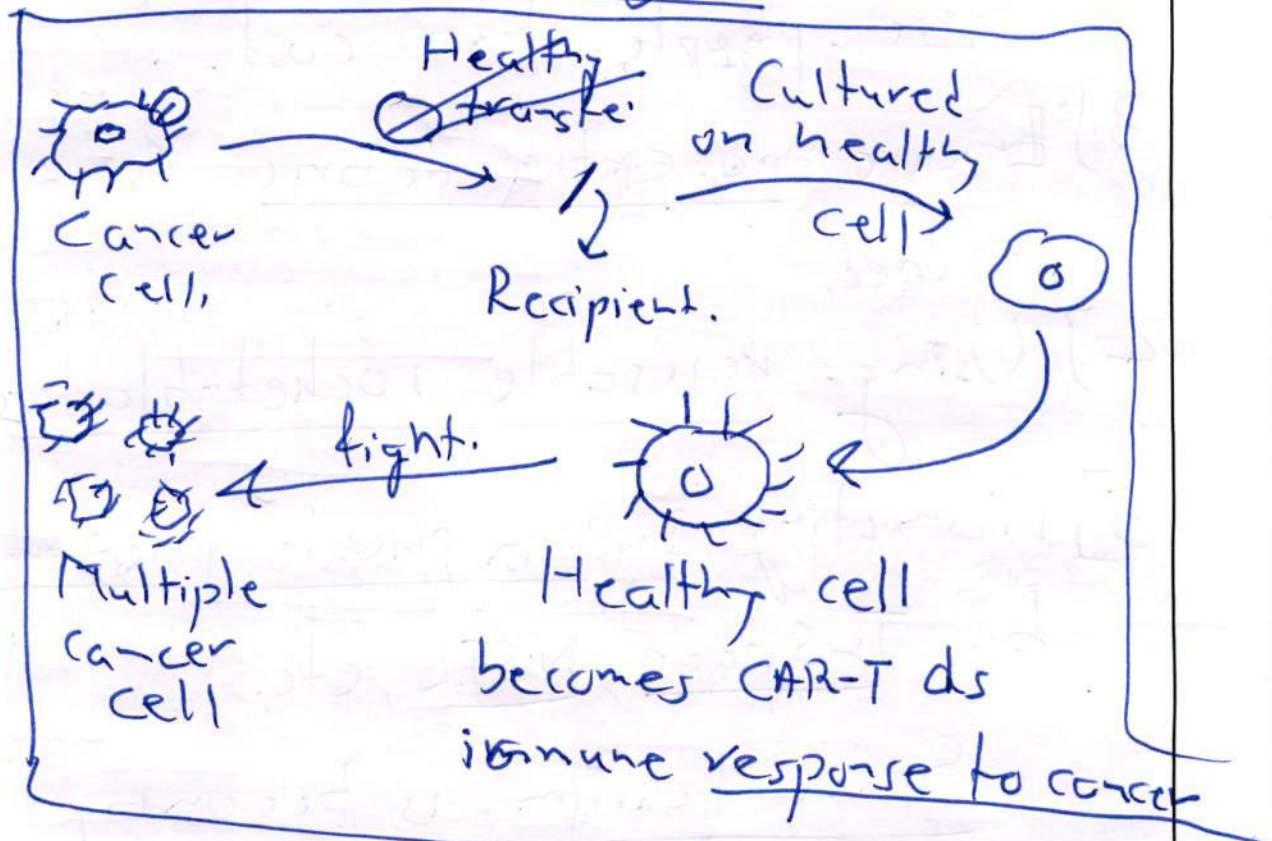
वैश्विक स्वास्थ्य विशेषज्ञ व्यापक रूप से मानते हैं कि CAR-T सेल थेरेपी का विकास कैंसर के उपचार में एक बड़ी सफलता हो सकता है। CAR-T सेल थेरेपी, CRISPR-Cas9 तकनीक में व्यास कमियों को कैसे दूर कर सकती है? (उत्तर 150 शब्दों में दीजिए)

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

CAR-T cell treatment is gaining wide recognition in its potential to treat cancer.

★ CAR-T functioning.



★ Overcoming CRISPR-Cas9's limitations

1) Faster response due to quick culturing.

2] Cheaper than CRISPR.

3] Requires lower scientific
skill.

4] Chances of rejection &
mutation are lower.

5] Is not permanent like Gene
modification. Thus, localized
& targetted.

6] Well researched & commercially
available.

7] There's a natural response
of immune system thus acceptability
increases.

CAR-T promises reduction
in health burden of globe &
ensuring SDG-3 Good health
& well-being.

9.

चर्चा कीजिए कि प्रमुख हिंसक चरमपंथी संगठनों द्वारा नई और उभरती प्रौद्योगिकियों के बढ़ते इस्तेमाल के विरुद्ध संगठित एवं ठोस वैश्विक प्रयासों की आवश्यकता क्यों है। (उत्तर 150 शब्दों में दीजिए)

Discuss why the rising deployment of new and emerging technologies by prominent violent extremist organizations demand concerted global efforts. (Answer in 150 words)

10

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

New & Emerging technologies (NET) are technologies that are currently being developed & commercialized which are cutting-edge over current tech.

* NET uses by extremist organizations

→ 1] Cryptocurrency to buy weapons, bombs.

→ 2] Blockchain to ensure secure, illegal funding.

→ 3] Metaverse, AR/VR to plan attacks in real-time.

→ 4] AI to predict their plan of action

* Need for concerted global efforts.

1] Creates unequal warfare in extremists favour.

2] Difficult to predict & anticipate.

3] May lead to large-scale violence.

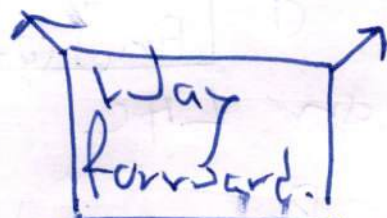
4] Compromises security infrastructure.
e.g. Drone from Pakistan in Jammu.

5] Restrict funding channels
for global action.

6] Maintain peace & stability.
ISDG-16

FATF to modify
lists.

Regulating source
of funding.



Increase counter
technologies - like
drone shooting.

Global cooperation
to come up with
plan.

PM's SECURE is vital to ensure
Sabka Saath, Sabka Vikaas, Sabka

Vishwas in this globalized world.

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)

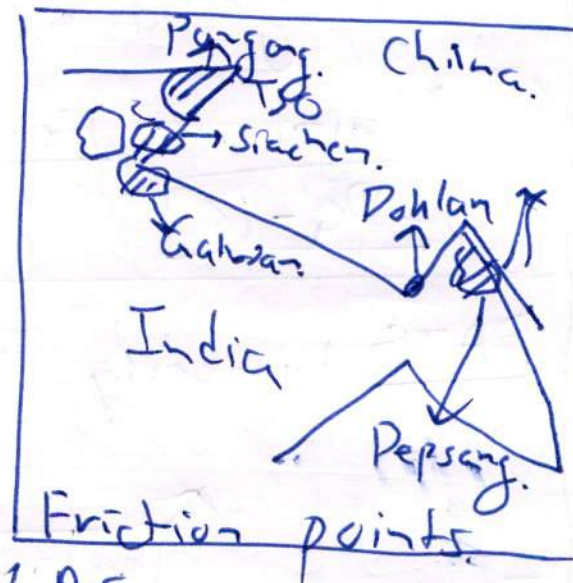
With the Line of Actual Control (LAC) remaining tense after the Galwan and Yangste incidents and both India and China ramping up infrastructure in the border areas, discuss the role that ITBP plays in the region. (Answer in 150 words)

10.

Recently, China-India had border stand-off in Pepsang plains. This is one of many such events

★ LAC tense

- Increasing militarization.
- ~~Non-agreeing~~ No mutual agreement on LAC.
- Increasing Power imbalance.



★ Role of ITBP.

- 1] To maintain Peace & Security in Tibetan-contiguous area.
- 2] Promote village development

at Borders ~~eg~~ Vibrant Village
programme.

3] Create infrastructure - road for
tank mobility.

4] Provide surveillance & border
checks at flash points.

5] Regulate illegal trade of
arms, cattle, smuggling.

6] Cooperate with other armed
forces to create an offensive

7] Defend India against any
cross-border movement of
troops.

8] Ensure safety & sense of
security in border-residents.

Role of ITBP is thus to
ensure Unity, Integrity & Stability
of India.

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

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

India occupies 1.7% of Landmass & 2.5% global population but extracts 25% of global groundwater. Irrigation penetration remains low.

★ Need to shift from 'land productivity' to 'irrigation water productivity'

1] Increasing groundwater exploitation & receding water-table.

☞ Agriculture utilizes 90% of GW.

2] Losing fertility & soil erosion.

3] Rising extreme-weather events like droughts, heatwaves increases vulnerability. ☞ 16% of land drought-prone - G.I.S.

4] Climate change & global warming exacerbating issue.

5] Monocropping & fertilizer excess reducing soil quality.

6] 30-1. of India's land degraded.

* Challenges in this shift.

1] Limited freshwater availability & access.

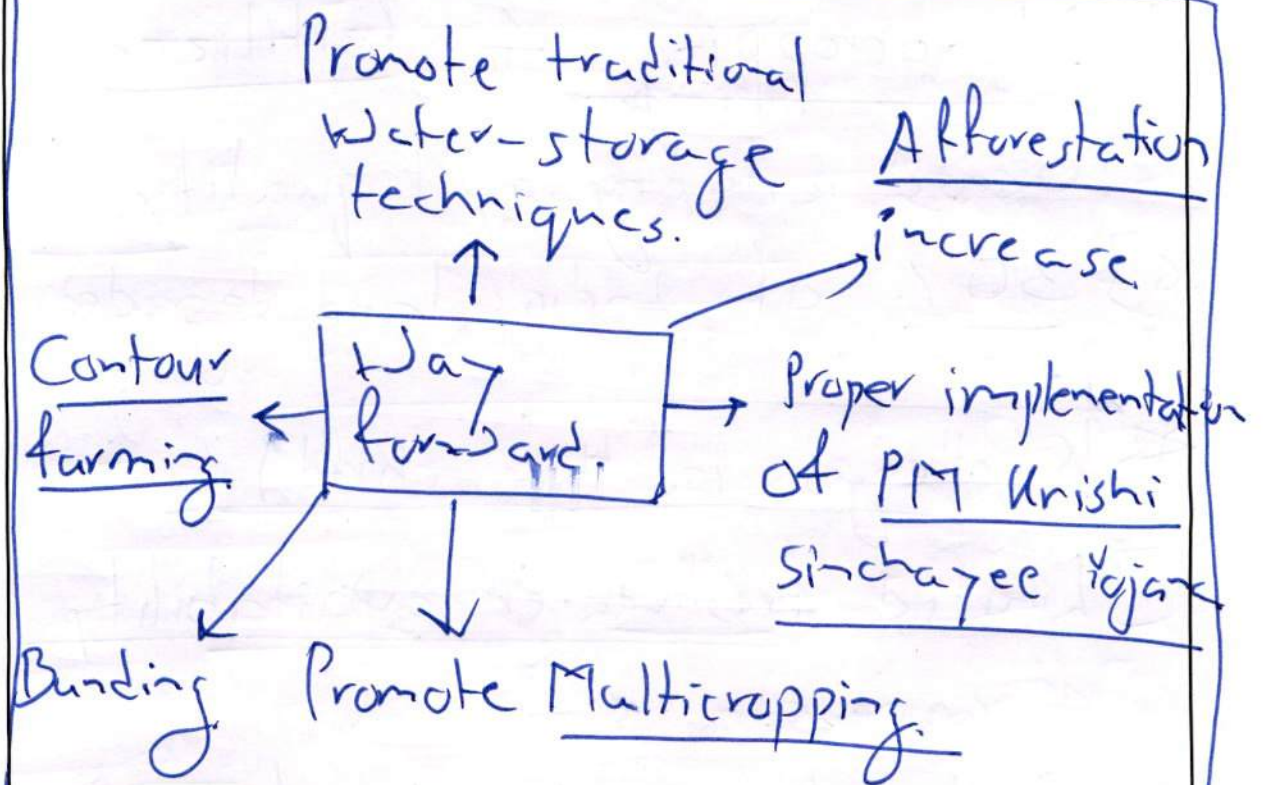
2] Reduced importance of traditional water storage like Ahar-Pynes.

3] High exploitation of soil organic carbon due to fertilizer excess.

4] Low investment in Agricultural technology upgradation.

5] Small land-holding in Agriculture.
↳ 80% farmers < 2ha land

6] ~~The~~ Subsidy of electricity, pump leads to exploitation of GW.



Improving land productivity will help in doubling farmers income by 2024 also fulset India towards SDG-1, 2 path's fulfillment.

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

Green hydrogen (GH) is hydrogen obtained by electrolysis of water which is powered by Renewable energy. Target of 5 Million mt is set by 2030.

* Role of GH in energy security.

1] Power iron & steel, containers transport, mobility, etc.

2] Provide alternate fuel for industry.

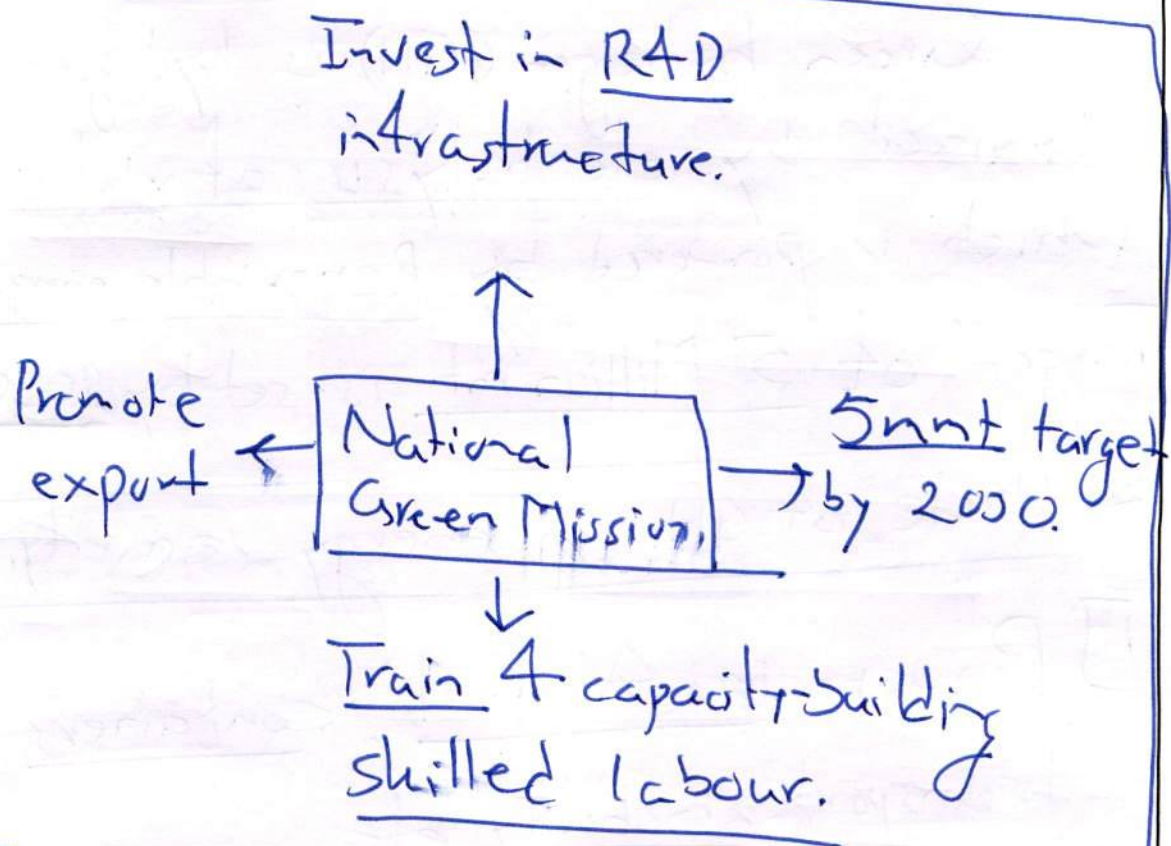
3] Work towards SDG-7 - Clean & Affordable Energy.

4] Reduce dependence on Coal for power generation.

5] Reduce external dependence

for energy security from West Asia.
6] Provide Green jobs & green growth.

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



★/ NGHM help achieve energy goals.

1] In line with India's Panchamrit at COP-26.

2] Increase non-fossil-fuel energy. Target is 45%.

3] Provide energy security & affordability.

4] Help in 'Phase-down' coal
& 'Phase-out' oil strategy of
India.

5] Complement Nuclear, Solar, Wind
power to promote diversified basket
for India.

6] Help in forex accumulation by
sell & export of GH.

7] Power to industries will be
cleaner & safer.

Challenges → Hydrogen is explosive &
flammable E.g. Hindenburg.
→ High investment needed.
→ Lack skilled labour.

GH provides an opportunity for
Economic, Environmental & social
development of India towards

Net-Zero by 2070 } target

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

15

Minimum wage ^(MW) is ~~deage~~ decided to provide minimum basic livelihood to all. & whereas, living wage ^(LW) is wage for proper livelihood for all.

★ Benefits of MW to LW.

1] Provide respectable livelihood opportunity. - Article 21 - Right to Life

2] Boost to economic growth by increased consumption in post-pandemic recovery.

3] Faster poverty alleviation -

22% in census 2011 Tendulkar Committee

4] Safeguard health burden of poor. 62% out-of-pocket expenditure.

5] Women empowerment as financial security ensured.

6] Help reduce government burden on subsidy, pension, schemes.

* Constraints in adoption of LW.

1] Coming up with an data-backed amount to fix LW. Always politically debated.

2] Expenditure increases burden on exchequer & government.

3] Possibility of exit of labour from market.

4] Gandhiji warned of 'Wealth without work' as a social sin.

5] Fuel inflation which is already 6.4% in 2021 - breached MPC target.

6] Targeting, identifying 4 mission concerns.

Way forward

→ 1] Census - 2021 data to be analyzed for wage disparity.

→ 2] Focus on skilling & capacity building E.g. PM Kaushal Yojana

→ 3] DBT promotion by industry to pay wages

→ 4] Setting up expert panel to examine issue.

→ 5] Rationalizing subsidy burden

Thus, LW is a positive idea to guarantee Financial security to all as India enters into Annuit haal @ 75

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)

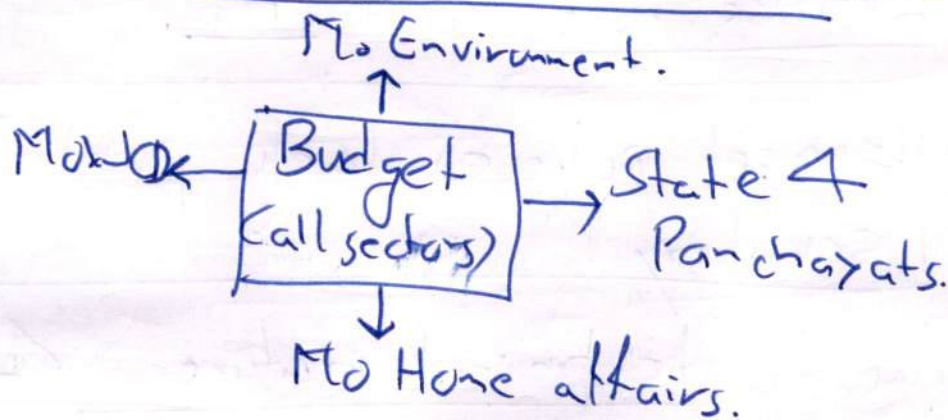
Ans. 280 118

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

15

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

Budget or Annual Financial Statement is provided as Central government's prerogative under [Art. 118]. This is done on Finance Commission's recommendation.



★ Budgetary process lacks public scrutiny.

- 1] Hurriedly done by government without public inputs.
- 2] Bypassing technical scrutiny of Parliamentary committees.

3] Bypassed major part without discussion using Guillotine. e.g. 17th Lok Sabha - 80% budget passed without discussion

4] Lack of discussion by opposition over expenditure.

5] Limited role of CAG.

★ Budget policies lack public scrutiny

1] Due to technical nature & ignorance by public.

2] Is passed without Impact Assessment of funds.

3] Indulgence in Freebies culture to promote political gains.

4] Lacks public participation in decision making.

5] Restricted entry in process limits participation.

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

→ 1] Conducting 'Budget Impact Assessment' pre-budget.

→ 2] Detailed draft & rationale to be published & made available to all

Way forward

→ 3] CAG to scrutinize the economy & technical nature

→ 4] Finance Commission to conduct public-participation forums

→ 5] Use of economy & savings to be the principle.

Proper allocation & public participation will increase faith of public & promote Subka saath, Subka Vihaas, Subka Vishwaas

15.

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

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

15

Milk is currently part of Allied sector of Agriculture & essential for financial, nutritional, social security of farmers & women.



Transformation:
Milk deficit
to surplus.

- 1] White Revolution by Verghese Kurien.
- 2] Promoting AMUL model of cooperitivation.
- 3] Empowered SHG by loan availability.
- 4] Eliminate middlemen by consumer-producer connect.
- 5] Exporting promotion of cheese, butter.

* Concerns on animals productivity

उम्मीदवारों को
इस हार्शिए में
नहीं लिखना
चाहिए
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- 1] Yield of Gir, Sahiwal remains low vis-a-vis Jersey, Holstein cross breeds.
- 2] Presence of diseases like Bruceellosis (Cattle), Peste-de-petits (Goats).
- 3] Low quality fodder reduces nutrition & quality of milk.
- 4] Drought areas of Maharashtra, Rajasthan have low output of crop.
- 5] Yak milk still undiscovered potential
- 6] Sanitation issues at gaushalas affect quality.
- 7] Dual-use for agriculture &

milking reduces yield of cattle.

* Way forward.

- 1] Implementation in conserving indigenous breed & R4P.
e.g. Gadhal Mission - insemination.
- 2] Availability of good fodder by designated grazing area.
- 3] Provide supplements of vitamin in cow's feed.
- 4] Vaccination drive & Veterinary care to reduce disease burden.
- 5] Credit availability for increasing productivity.

Allied sectors contribute 25% to Agricultural GDP. In this light, Milk promotion ensures [Sahkar] [se Samruddhi] in India.

16.

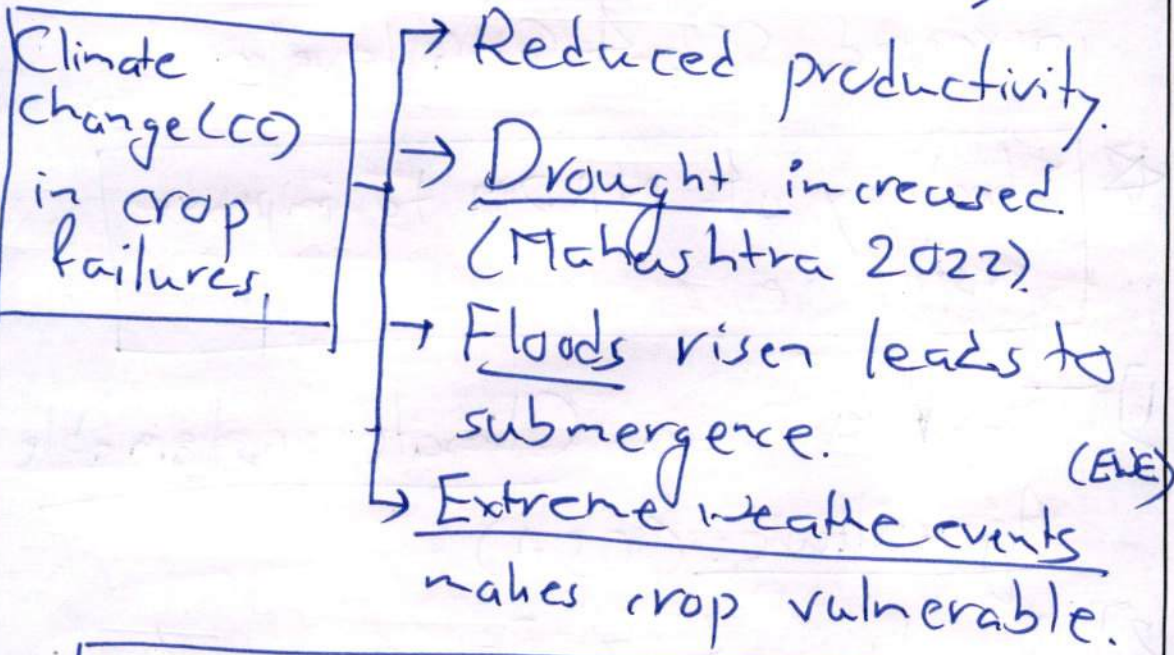
जहाँ एक तरफ जलवायु परिवर्तन, फसल की विफलता के लिए जिम्मेदार है, वहीं दूसरी तरफ चरम मौसमी घटनाओं के लिए कृषि क्षेत्रक स्वयं आंशिक रूप से जिम्मेदार है। विवेचना कीजिए। भारत में कृषक समुदाय की प्रत्यास्थता को सुदृढ़ करने के लिए राष्ट्रीय कृषि आपदा प्रबंधन योजना के तहत क्या रणनीति अपनाई गई है? (उत्तर 250 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 हाशिए में नहीं लिखना चाहिए।
Candidates must not write on this margin

15

Global warming has reached 1.1°C of pre-Industrial revolution level (IPCC-6th AR). This poses a threat to Agriculture & food security.



* Agriculture responsible for EWE

- 1] High methane emission from Agriculture. E.g. Rice fields.
- 2] Practice of stubble burning

increases CO₂ level.

3] Outdated tractor, Pump add diesel-based pollution like PM, CO₂, NO_x.

4] Extreme GW exploitation makes agriculture vulnerable to draughts.

5] Deforestation for Agriculture has increased CO₂ & GHG levels

★ Strategy of NADM to improve resilience.

1] To focus on Climate sustainable Agriculture. (CSA)

2] Promotion of ZBNF, Organic farming

3] Improve zonation mapping & Early Warning systems to predict ENEs.

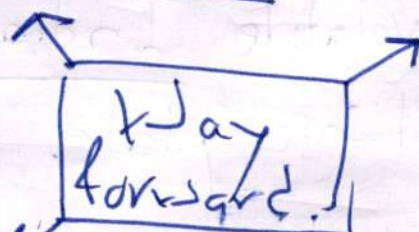
4] Focus on education & awareness generation.

5] Promote best-practices across nations. e.g. Below-sea-level fields in Odisha

6] Increase Research & Development in Crop-resilience.

Promote judicious use of fertilizers

Use of traditional Water-storage technique



Invest in Agri-universities

Extend PM Fasal Bima Yojana

Promoting Agricultural health is vital towards India's Panchpran of a develop economy having important role of Agriculture.

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

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

12% of India's landmass is prone to earthquakes - GIS. This is distributed in 5-zones based on Seismic activity.

★ Reasons for high vulnerability of Delhi region from Himalayas.

- 1) Meeting of volatile Indian & Eurasian tectonic plate.
- 2) Repeated northward movement of plate.
- 3) Leads to many earthquake & aftershocks. E.g. Nepal in 2014.
- 4) Presence of deposition of glacial silt makes land subsidence easy.

5] Damages infrastructure & loss of lives.

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

* Institutional measures to mitigate.

1] NDMA guidelines on Earthquake
preparedness & response

2] Hazard Zonation Mapping
using satellites by GIS.

3] Presence of contingency fund to
provide rebuilding economy.

4] Response by police, army to
deploy.

5] Role of NDRF, SDRF in
earthquake action.

* Significant gaps existing.

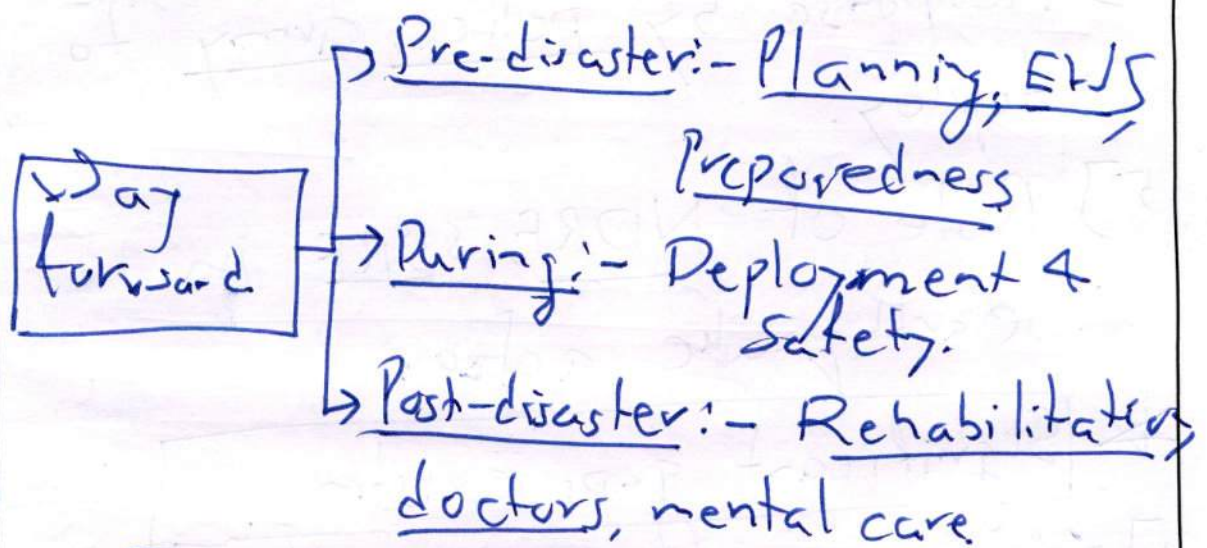
1] Measures are largely responsive
& not preparedness-oriented.

2] Lower awareness among people,
NGOs who act as first responder
(2nd ARC) report - Crisis management.

3] Lack of trained personnel in
operations thus deployment of
police forces.

4] Lack of activity plan & its
promotions to panchayats in case
of earthquake.

5] Lacks EWS systems.



Sendai Framework ~~of~~ needs to
be adhered to along with PM's
10 point agenda for resilience.

18.

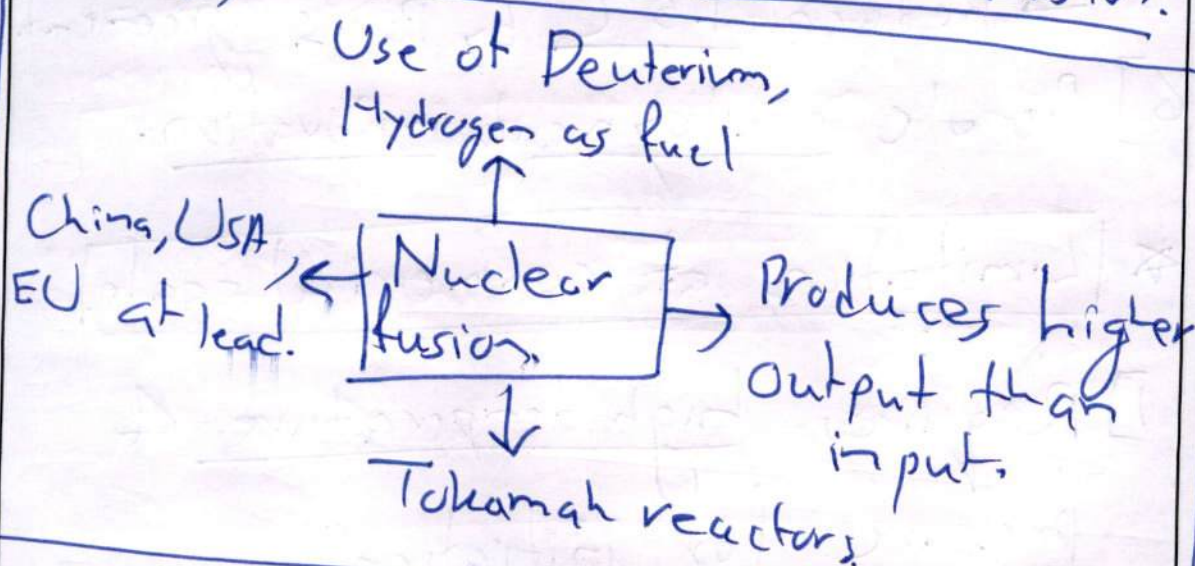
हाल ही में, वैज्ञानिकों ने परमाणु संलयन अभिक्रिया में निवल ऊर्जा लाभ की घोषणा की है, जिसे स्वच्छ ऊर्जा के भविष्य के लिए एक बड़ी वैज्ञानिक सफलता माना गया है। परमाणु संलयन आधारित विद्युत उत्पादन के क्या लाभ हैं? व्यावसायिक स्तर पर विद्युत उत्पन्न करने के लिए इसके उपयोग की क्या सीमाएं हैं? (उत्तर 250 शब्दों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

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

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Nuclear fusion reactors offer great potential today when global players rely on fission. India's 11.5% energy comes from Nuclear fission.



* Advantages of Fusion based power generation

1] 100% clean power with no radioactive waste like fission.

2] Completely safe since no possibility of Meltdown.

3] High energy output from low resource consumption.

4] Power can be utilized for industries, transportation, etc.

5] Green energy increases India's contribution in Panchavrik targets.
↳ Reduce 1.5°C by Paris agreement.

6] Provide employment, innovation.

* Limitations at commercial scale.

1] Requires high temperature & pressure for initiation.

2] Costly equipments to sustain the reaction.

3] Still in research & academic phase.

4] Anti-nuclear protests & de-nuclearization move in some countries. E.g. Germany

5] Lacks skilled labour & innovation to operate it.

6] Competition from GH, Solar, Methanol, etc. energy.

- Jay Forward.
- 1] Promote collaboration with global leaders.
 - 2] Utilize Atal Innovation Mission to promote research.
 - 3] Increase R&D expenditure. (0.65% currently)

Nuclear fusion offers hope when world is moving towards Net Zero carbon emission to ensure energy security & environmental protection

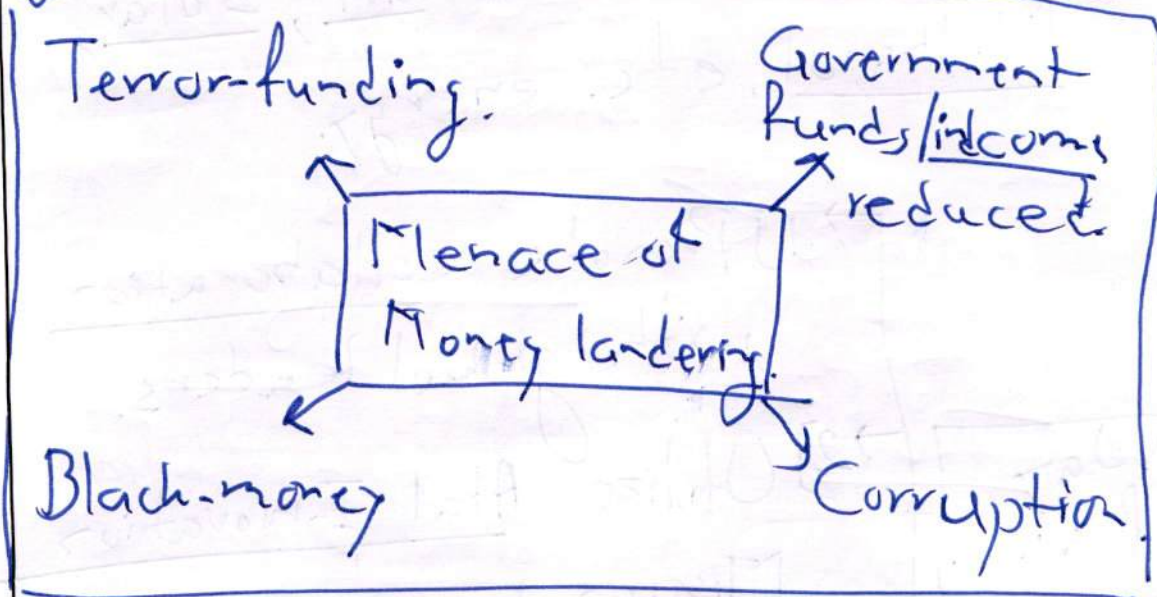
19.

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)

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उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Prevention of Money Laundering Act is established to punish, lay guidelines & control individuals & groups involved in Money laundering.



* Efficacy of PMLA

A) Effective

1] By creating a preventive framework.

2] International cooperation

to try cross-border laundering.

3] Punishment 4 jail-term creates sense of fear.

4] Empowers investigation 4 police to examine 4 implement act.

5] In line with FATF rules.

B] Inefficiencies in Act.

1] On ground implementation is lacking.

2] Is reactive not preventive.

3] Limited in scope since doesn't holistically look at terror financing.

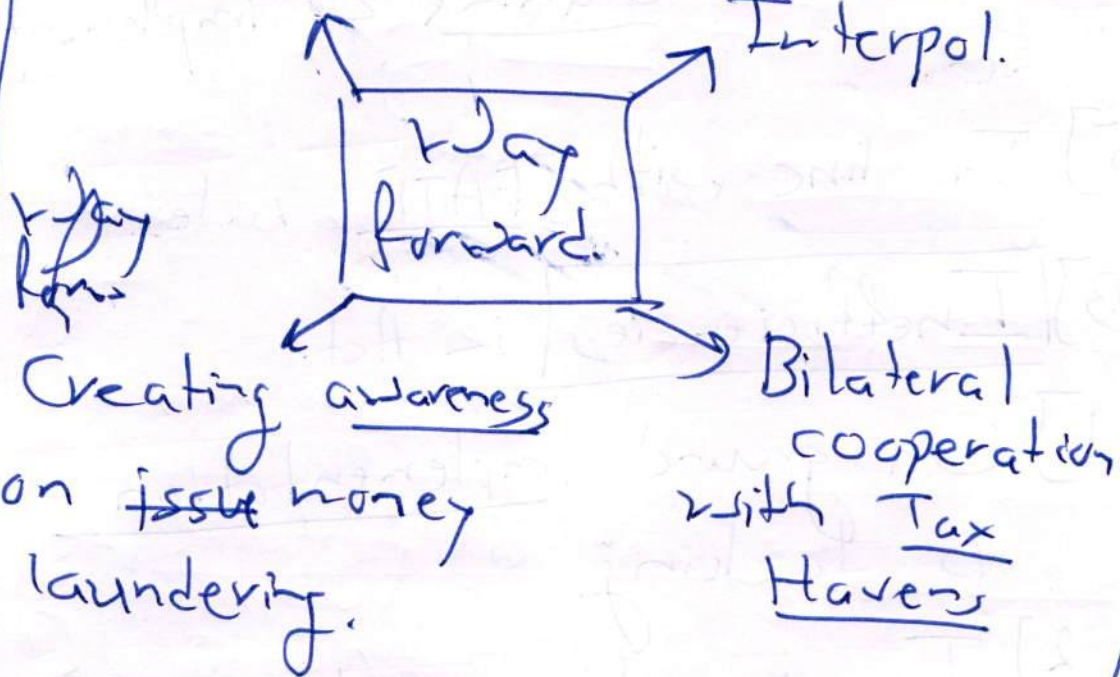
4] Legal loopholes present exploited by individuals.

5] International cooperation still undermined.

उम्मीदवारों को इस छवि में नहीं लिखना चाहिए
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Bringing FATF's recommendation.

Empowering Police to cooperate with Interpol.



Money laundering poses threat to economic, political & social fabric of society & thus requires appropriate implementation in letter & spirit of PMLA

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

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

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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India has 7500 Km coastline
With IOR & region from Africa's
East to Australia's West is IOR
according to Indian interpretation.

★ Security threats having bearing on India's border interests.

- 1) Piracy:- Originating in Horn of Africa threatens maritime trade.
- 2) IUU fishing:- reduces fishing opportunities.
- 3) Illegal trawling in EEZ:- threatens security by collecting data. e.g. China's vessels.

4] Chinese expansion :- via String of Pearls theory in neighbourhood.

5] FONOP operation :- Freedom of Navigation operations conducted.

6] Collecting data of India's coastal fleet by monitoring, observing.

7] Illegal trade of narcotics, ammunition from sea.

★ Strategy to deal with threats

1] Using NAVIC satellite for monitoring maritime space by intelligence agencies.

2] Cooperation with IOR countries at IORA, BIMSTEC, SAARC, etc.

3] Upgrading Coastal guard's CC intelligence & fleet.

- 4] Better coordination between intelligence & CG authorities.
- 5] Utilize global platforms like UNSC, WTO to raise IUU issues.
- 6] Strategic Police escort to containers going via piracy-prone areas
- 7] Multilateral cooperation to increase India's presence.
- 8] Cooperate with Vietnam, Indonesia, Iran to counter China.

Ensuring maritime security
is vital for SAGAR - Security
& Growth for All in the Region.

SPACE FOR ROUGH WORK

4] Better

Intelligence of A & C authorities

5] Utilize global platforms like

UNSC, WTO, ILO, etc.

6] 2nd Police escort to container

giving in border-zone areas

7] Multilateral cooperation to

increase Indian presence

8] Cooperate with Vietnam, Thailand

Tan to counter China

Ensuring maritime security

is vital for [SARAR] - Security

A guarantee for all in the Region

AL