



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. : 1138117

अभ्यर्थी का नाम/Name of Student : Archit Dongre

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख

Date

27th August, 2023

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

केंद्र
Centre

Bhai Joga Singh Public
School, Faiz road
Delhi

निरीक्षक के हस्ताक्षर
Invigilator's Signature

<p style="text-align: center;">महत्वपूर्ण अनुदेश</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>		Important Instructions
		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 में 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 स्थाही 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.

कार्यालय के प्रयोग हेतु
For Official Use

कार्यालय के प्रयोग हेतु
For Official Use

परीक्षक के हस्ताभर
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 (च्यू.सी.ए.) पुस्तिका के मुख-पुष्ट 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 पुष्ट 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.

VISIONIAS

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

India's production of feedgrains exceeds 300 Metric million Tonnes yet there is high prevalence of Hunger as per Global Hunger Index (107th Rank).

food security

(1) dimensions

Agriculture → need effective & efficient production of grains as strategic reserves & buffer stocks

→ People oriented → PDS, TPDS, NFSA etc are oriented to promote foodsecurity

→ Storage - need storage facilities to store grain for distribution

Markets → efficient markets for effective procurement of grains

India's Status

- (1) Agriculture
- over dependence (48% workforce)
 - but only 18% of GDP.
 - poor soil health - NPK ratio 8:4:3
 - highest producer in some areas like ~~horticulture~~ horticulture etc.
- (2) People oriented - problem of "hidden hunger" to much emphasis on coarse grains
- (Wasting - 19%, Stunting 39% & Undernutrition 32%)
- {NFHS-5 report}
- (3) Storage - only 50% of produced grain can be stored - poor warehouse conditions
- (4) Markets - APMC defects, information asymmetry fluctuations in price, "cobweb effect"
- (5) Farmers
- monsooning prevalent.
 - avg income of household ₹ 10,000
 - majority small farmers (85%) less than 2 hectare land

Way forward

- Need to increase storage status using innovative measures like NWL (Negotiable warehouse receipts)

- Social Security & Contract farming.

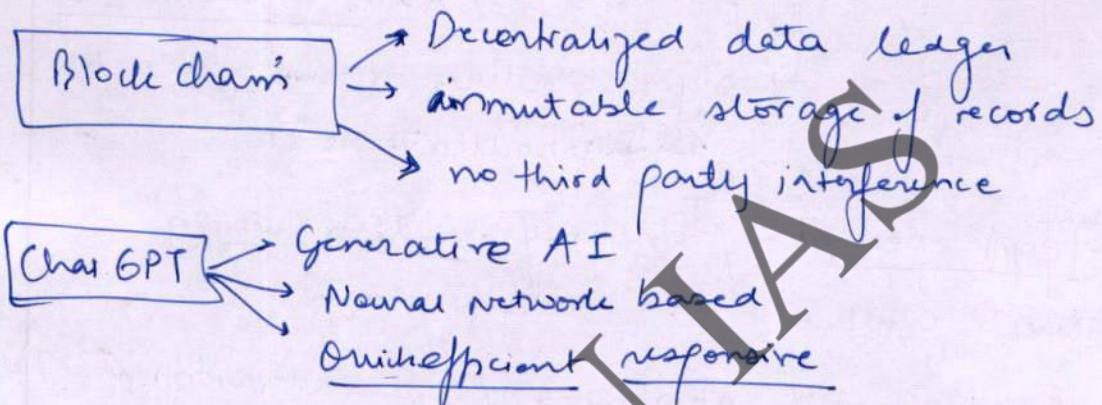
- Charkha Kumar Committee Report - Private Procurement enabled

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

Blockchain & Chat GPT are the 2 important aspect of IR 4.0.



Potential to Transform India
(Agriculture)

(1) Blockchain

- Storage of records & land holding records (eg DILRMP)
- efficient & transparent storage of beneficiary information under schemes eg PM Kisan eliminate "ghost beneficiaries"
- Storage & tracking of fertilizer, food & other subsidies (40% fertilizers in black market)

- Storage of insurance & crop management records eg PM Fasal Bima Yojana.
- reduce litigation & land holding disputes & facilitate land consolidation etc.
(as per World Bank 66-1. covt case on land problems)

Chat GPT

- Trained in vernacular language to answer farmer queries eg Chat Bot
- Predictive analysis on weather, crops, soil quality etc
- facilitate farmer grievance, & dispute help in terms of legal matters

Challenges

- low digital literacy (10%)
- Infrastructure & computers very less prevalent.
- Blockchain - high power used not eco-friendly
- Chat GPT - limited to data trained on. Not possible to give advanced info & niche criteria

Way forward

- Common service centres for farmers increase & incentivize uptake of technology
- improve digital literacy levels of m Kisan

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

With the change in world order
 from unipolarity to multipolarity
 & Washington Consensus to New Washington Consensus, dedollarization has been desired.

Factors accelerated dedollarization

- (1) Rise of global south → Emerging economies
 eg India, China (Beijing Consensus)
- (2) Russia - Ukraine War
 SWIFT removal of Russia - led to rubble trade, currency swaps etc.
- (3) Exposed dollar as weak currency
 ↳ effect of "fed tapering", "Operation twist"
 led to effects on domestic economies
 Try to reduce dependence on dollar

- (iv) "Weaponization of trade" → Countries sought to reduce trade dependence on dollar → strategic autonomy
(86% of import/export happens in dollar)

- (v) Desire to trade with Iran, Russia, Venezuela - under sanctions from USA hence to find alternative means use domestic currency eg India purchased deep discounted oil from Russia

Possible soon - Yes

- (1) Chinese & Russian Interbank systems can make it possible i.e. alternative to SWIFT eg China's CIPS.
- (2) Bilateral agreement & Currency swaps eg India - Russia agreement.
- (3) Nostro-Vostro Accounts for trade to facilitate dedollarization.
- (4) Demand for inclusion of rupee in SDR basket - "internationalization of rupee"
- (5) Rise of alternate mechanism - Cryptocurrency Bonds, NFTs etc

4.

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

Despite significant pressure from the developed countries to alter its food subsidy regime, there is merit in India trying to retain its policy support for the poor in the country. Discuss. (Answer in 150 words)

10

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

Under the agreement on Agriculture (AOA) India's PDS & MSP falls under the Amber Box category, hence they are considered as "price distorting"

Pressure from developed countries

- Debate & deadlock on "peace clause" - Doha agreement still pending.
- De-minimis level for developed countries are higher - unfair advantage
- Sugar prices pressure from Brazil, Australia & USA
- MSP considered higher than market price makes farmers richer compared to other countries for more products¹² - has led to objections

Merit in retaining

- 67.1% population covered under NPS is needed for food security (16%. NPS poor in India)
- high degree of stunting (39%), wasting (19%) & undernutrition (32%)
- 50% + women suffer from anaemia.
- farmers are largely small scale (85%) & lack social security.
- Need healthy population to reap benefit of demographic dividend of 37 yrs (2018 - 2055)
- In line with our goals of SDG 1 & SDG 2 (poverty & hunger)
- Midday meal & ICDS necessary for foundational & early nutrition requirement - reduce IMR to 1 as per National Health policy (currently 1.03 per lakh).

Hence, India should gradually move towards a more market based approach but first ensure social security & nutrition security for population.

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

उम्मीदवारों को
इस शीर्ष पर
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

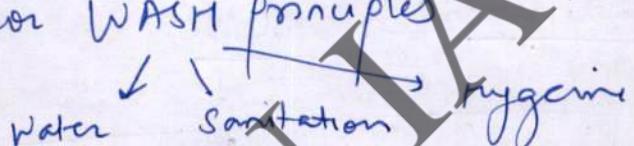
India has 17% of world populations
2.4% of land & very less percentage
of fresh-water sources.

16% of our ground water sources in
districts are over exploited (CGWA report)

Initiatives to address water needs

- (1) One Water Policy → Grey water recycling
→ reuse (HR purpose)
→ water as "public good"
- (2) Han Ghar Jal mission
& Jal Abhiyan, - 55L of FHTC
Jal Teeran mission per day to all houses.
- (3) National Hydrological Mission - map lake & ground water sources.
- (4) Cleaning rivers & lakes of Yamuna
ganga programme
& Swach Bharat abhiyan

Wantnt interventions

- (1) large number of over exploited & critical ground water resources
- (2) Ground water pollution & stressed resources.
- (3) droughts due to climate change
eg Latur in Maharashtra.
- (4) Issues of poor WASH principles


Steps / Intervention could be taken

- Large scale harvesting & conservation efforts
- More of an "lifecycle approach" with water
- Purification centres - technology & infrastructure upgrade
- R&D emphasis - Recently Water Ocean Salination plant constructed.

Hence, with better technology & community efforts we can address problem of ¹⁵ water scarcity.

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

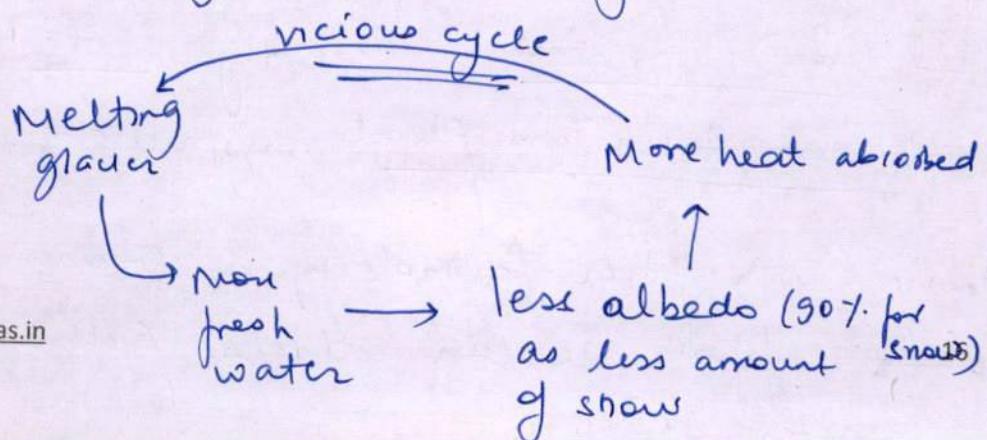
उम्मीदवारों को
इस शीशीए में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

Glacial Retreat in Arctic refers to the gradual melting of Arctic glaciers & subsequent implications on global temperature, ocean conditions & life.

drivers for glacial retreat

- (1) Global warming & climate change
- increased temperatures due to Green house effect & less of ozone

- (2) Influx of more fresh water due to melting
- vicious cycle created



(3) Reduced efficiency of ocean conveyor belts to transport water from equatorial region to poles i.e. weakened AMOC

(4) Weakening of polar vortex causing warmer conditions in the Arctic region & cold waves in USA etc.

(5) decreased precipitation levels & fluctuations in amount of snowfall.

Impact

- Rising ocean levels → subsidence of vulnerable Island states & low level areas
- Loss of biodiversity
- Increased chances of flooding & ocean incursions - reduced coastline (erosion)
- Disruption of ocean ecosystem due to ocean current disruptions - El Niño (prevalent) etc

Way forward - Adhere to NDCs in spirit of COP21

→ Life approach (PM Modi)

→ green energy prioritized.

7. अंतरिक्ष पर्यटन, जिसे सीधे तौर पर एक साइंस फिक्शन फ़िल्म के रूप में देखा जाता था, अब बिना किसी वाधा 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 प्रश्न पर
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

Many new companies like Blue Origin (Jeff Bezos), Virgin Galactic, SpaceX are considering commercial space tourism which will be a reality in coming times.

Hindrances & challenges

- (1) Difficulty in developing uniform policies & standards - eg safety standards, permission etc
- (2) High Cost of tourism - unaffordable to most.
- (3) Technological challenges - designing of new safety module, Cabin conditions etc.
- (4) Problems of Health - eg loss of bone density in space (osteoporosis)

(f) Questions of who will regulate space tourism sector

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

Measures to address challenges

- figure out cheaper & more affordable alternatives for space tourism.
- Research & development should be prioritized - operational safety norms in place & rigorous testing for human safety.
- evolve uniform & multi-stakeholder based policy to regulate space tourism sector.
- emphasis on safety standards & emergency protocols must be in place.

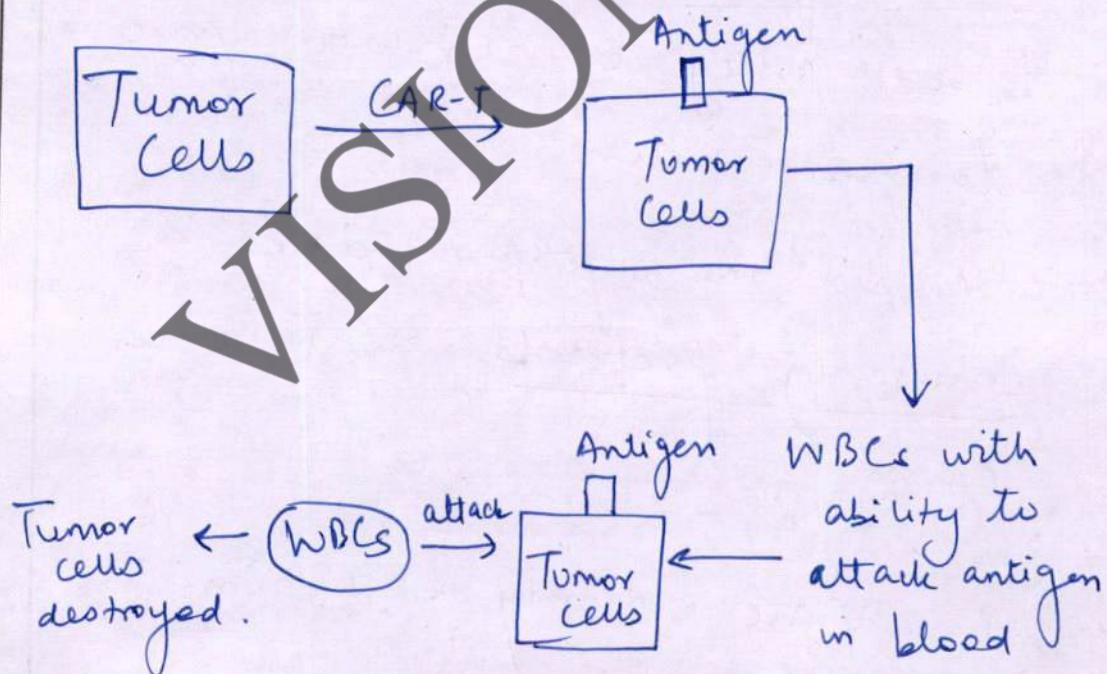
Hence, space economy & tourism is the new front for discovery & exploration.

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 व्यापक 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 प्रश्न पर जवाब देने की अनुमति नहीं।
Candidates
must not
write on
this margin

Chimeric Antigen Receptor Therapy

(CAR-T) has been regarded as a new way to treat cancer by using bodies immune response against artificially placed antigens.



Game changer & overcome CRISPR defects

→ Ensures body destroys tumor cells based on natural immune response

No need for painful chemotherapy & radiation treatment

→ CAR-T needs to be only given once to the patient.

No need for repeated visits & continuous blood transfusions.

→ prevents the chances of regrowth of tumor cells — WBCs will attack them by their own accord.

→ more cost effective than expensive CRISPR-Cas9 methodology

Challenges

- ↳ difficult to come across expertise & ability of CAR-T
- ↳ relatively new technology need more R & D efforts.

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

India in the UNSC Delhi Declaration
against counter terrorism raised
voice for universal definition of
terrorism & need to come together
to combat cyber terrorism

Prominent technology being used

- Gaining lobbies for recruitment
(Anonymous & difficult to track)
- Dark & Deep web - e.g. Silk road
for purchase of guns, arms etc
Dark web also known for propaganda
- Social Media - "echo chambers"
reinforce extremism, fanaticism,
- Metaverse - ability to carry out
simulated violent activities.

Need concentrated efforts

- Cross border violence requires cooperation. (e.g) SCO KATS, UNSC etc
→ UNPKF (peacekeeping force)
- Terrorism & Extremism called as "problems without passports" - need active involvement of all
- Issues of safe havens to terrorists contradict global efforts by Palustans safe haven for terror.

Steps

- Regulate in cooperative manner of upcoming technology e.g Metaverse, Social media, AR, VR etc
- International platforms used to disseminate idea of harmony & peace
- Global Best practices adopted (e.g)
EU's digital Services Act
Control fake news, deep fakes & propaganda
- Hence, technology must become a ²³ boon & not a bane.

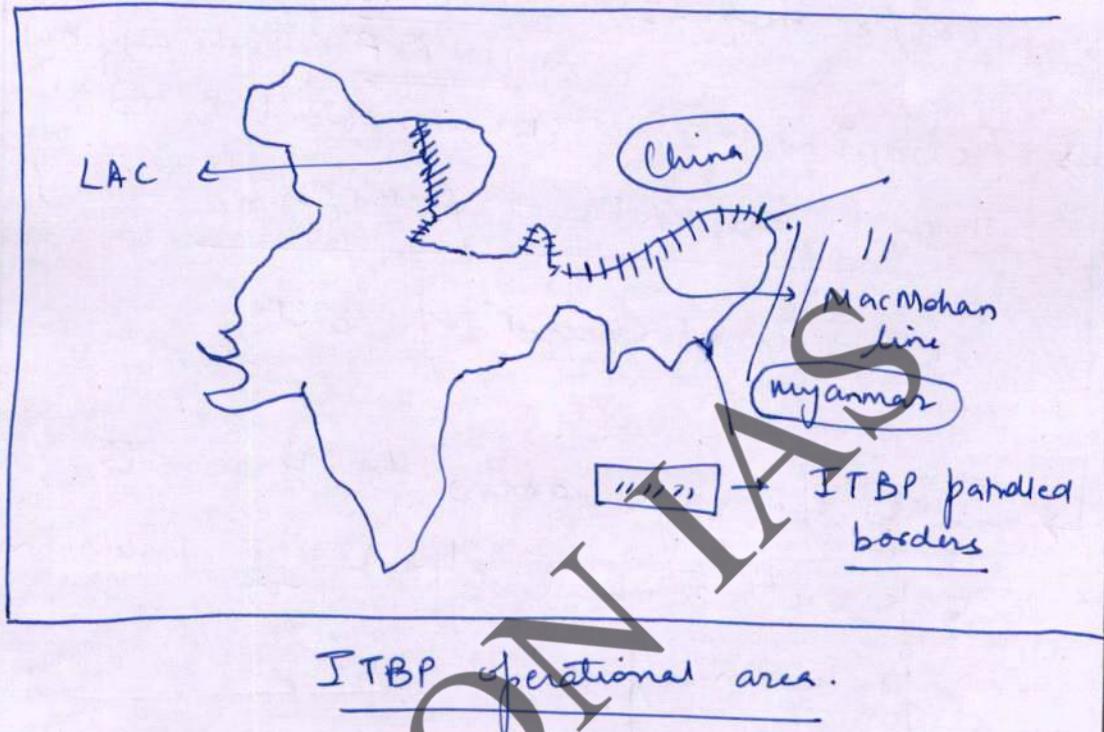
10.

गलवान और यांगस्टे 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 प्रश्न पर
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin



ITBP role & functions

→ Chief border patrolling force for the Indo-China border (2nd largest border for India)

→ Keeps Chinese border excursion &
② I → Infiltration in check
→ Incursions

→ Chinese policy of "Salamislicing" countered using Tibetan force

- as major recruits are ethnically tibetian
- counter claims historical folly
- Other aspects like providing security to foreign delegates in Afghanistan also done by JTBP.

Ramay in border Area

- BRoad overhaul — more capital & better infrastructure.
(Shetkari Committee)
recmd.
- Vibrant Villages programme — "first line of defense" — as per Home Minister
- Infrastructure development & connectivity initiative of IMT highway, Atal Tunnel etc.
- Better modes of communications & satellite technology in place.

Hence, with ITBP the Indo-China border remains largely protected to prevent loss of Indian soil.

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

Irrigation Water productivity refers to focussing on the output derived per unit of water given to irrigation in a bid to draw attention to sustainable & effective use of our water resources.

Need to shift

- Water scarcity & over stressed ground water resources (16% over stressed)
- Climate change effects - large scale drought etc
- Irrigation to be shifted to better water use practices e.g. drip, sub-surface, micro, sprinkler irrigation etc.
- Land productivity - stagnated due to

Challenges

- 55% of area is under rainfed agriculture - also subsistence level
- Around 40% area under irrigation need to increase irrigation on scientific lines.
- Infrastructure & affordability bottlenecks eg difficult to access equipment for drip irrigation etc.
- environmental concerns regarding the process of river interlinking eg Ken-Betwa Panna reserve getting submerged

Way forward

- Per drop more crop initiative.
- Water Harvesting practices traditionally eg Zing (Ladakh), Ahar Pyres (Bihar) etc. - promoted
- Scientific irrigation & conservation of soil moisture eg Solarization, vertical farming

Shift from land productivity, However
should not be exclusive :-

(1) Land resources are chief source
of soil nutrients

↳ need to effective combine land
productivity & water productivity
eg using fertigation, subsurface
irrigation, soil moisture conservation

(2) Climate resilient policy initiatives

Should be emphasized -

NMSA (National mission for sustainable
Agriculture), composting, zero tillage

& innovative measures like
zero Budget Natural Farming

↳ Tira Amrit
↳ Bija Amrit

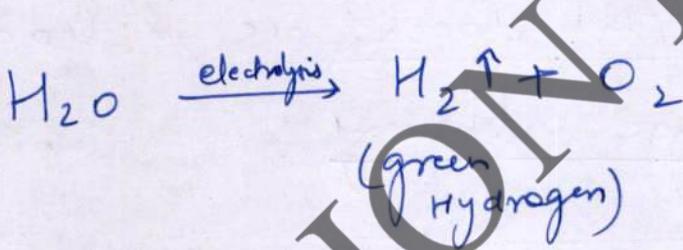
12.

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

Green Hydrogen is produced from electrolysis process thereby leading to production of no harmful GHGs as a clean source of energy



Role in unlocking energy security

- (1) 85% of crude oil & 50% of natural gas is imported
 ↳ High trade deficit with West Asian countries (\$ 66 Billion)

- (2) Complement India's Panchamit & NDCs in fight against climate change → 500 GW of clean energy by

2030 & 45 % reduction in emission
(2005 level) by 2030 will be
enacted

- (3) Lead to innovation & technology
revolution in vehicles, industry
etc.
- ↳ Already Green hydrogen tried to
be implemented in Steel industry
- (4) Reduce import dependence & lead
to strategic autonomy.

National green hydrogen Mission

- Make India global hub of Green H₂ manufacture
- Export hub of Green Hydrogen
- Innovation, R&D, and production linked incentives
- Export promotion & credit guarantee on capital equipment for H₂ production.

- Employment of around 6 lakh jobs to be generated.
- Reduce current account deficit by reducing energy import
- Facilitate FDI & ease of doing business by upgrading Logistics policy (8% cost targeted)

Challenge

- Storage of H_2 difficult need low temperature & explosive in contact with air
- Technology in nascent stage need more R & D to increase vehicles on H_2 combustion fuel cells
- Production of Green H_2 itself uses electricity coming from conventional sources (polluting) (need to be phased out).

Way forward → Active policy support & facilitation of technology uptake can lead India to be a global hub of H_2 manufacture. ³¹

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 बाधाएँ 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

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

Minimum wage is the legally mandated wage that must be given below which it would be regarded as bonded labour (Asiad case)

Living wage → It's the wage provided that ensures a fulfilling life for a worker taking into account not just sustenance but recreation as well

Transition

→ Most developed countries have proceeded to living wage transition eg finland, Norway (Scandinavian model)

→ leads to better human development & human resource parameter

(India 132nd rank in UNDP HDI)³²

- Japanese model of work also focus towards higher wages & worker well being - sleeping in workspaces is legally allowed in Japan
- New demands for living wage, 4 day week etc.

Benefits

- Improve workers well being & multifaceted personal development can be ensured.
- Better ability to spend on food & diversified nutrition sources
→ address problems of hidden hunger
- lead to better ranking on global human resource indicators like HDI, Global Happiness Index etc
→ global perception improve
- lead to more saving → more money with banks → more lending
↓
Higher GDP ← more capital expenditure

Constraints

- Inflation can reduce value of higher wage value in real terms
- Higher expenditure & wage-inflation spiral can be cause of concern
- Employers forced to pay more reduce ability for other expenditures eg capital goods, expansion etc.
- Higher tendency of Households to keep money in cash (80% prefer) → not aid banks ability to lend.

way forward

- Effective monetary policy mechanisms in place - credit rationing, repo rate etc
- promotion of small saving schemes by govt → help mobilize capital.
- Increase insurance & pension participation penetration (6%)

14.

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

The Union Budget affects almost every sector of the Indian economy, yet neither the budgetary processes nor the budget policies come under substantial public scrutiny. Do you agree? Justify your answer. (Answer in 250 words) 15

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

Article 112 of the Annual Financial Statement & budget is the government's annual expenditure plan disclosed to the public.

Affects every sector

- funds are distributed to each ministry as vote of grant — Hence all aspects of public policy accounted for
- ↳ line item budgeting for specific schemes, services ensure funds to every sector.

Not under scrutiny

- Budget plans & fund allocations not disclosed to anyone before announcing of policy.

- limited time of few months to debate, deliberate & vote on funds & demands
- DSCCs (departmental standing committees) have no binding say can only give recommendations
- Public largely passive participant in budgetary process
- parliamentary committees not used effectively. Recent report said on 11% consultations made in 17th Lok Sabha

But some mechanisms are in place :-

- Public opinion & some days for feedback are given by government.
- Shift towards impact based & outcome based budgeting in recent times

- Public platforms like My GOV.in, Google Hangouts (used in 12th FYP) used to ask for public opinion.
- Media actively involved in budget analysis, discussion, criticism etc. (4th pillar of democracy)
- New approaches like Banbell approaches, capabilities approach, decentralization of fund expenditure plans to panchayats increase participation.

Ways to enhance

- Gender Budgeting should be enhanced to increase women participation in budgeting process.
- Propriety audits by CAG to be published for public information
- Active involvement of civil society organisations is desirable in budgeting activities

Hence, budget is a powerful symbol of public policy to industry & investors & must be used as an effective tool

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

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

India accounts for around 24% of global milk production. It is also one of the highest exporters of dairy products of milk, cheese etc.

deficit to largest producer

(1) Efforts of D. K. Patel led to cooperative based movement in Anand (Gujrat)

↳ formation of AMUL replicated elsewhere also of NIDHI

(2) Large population of buffaloes in India → longest population of buffaloes in India

- (3) Support to mixed farming (India being agrarian economy)
- (4) Effective government interventions for milk efforts e.g. providing milch animals vaccination, breeding centres, markets for sale of animals.
- (5) Export promotion of dairy sector due to competitive prices in India (lower) as compared to New Zealand, Europe etc.

Productivity concern

- Extinction & loss of indigenous breeds of dairy cattle e.g. Gir, Rathi, Red Sagi (Sindh), Nagari (cow breeds)
- Quality of feed is poor — poor nutritional levels of cattle lead to poor quality milk
- outbreak of diseases like e.g. Lumpy Skin disease & foot-mouth disease.

↳ overuse of cattle for multiple purposes
of ploughing, cart pulling, milking
reduced capacity to produce milk.

Way forward

- Initiatives like NPBDB (National programme for Bovine Breeding & dairy development)
- Initiatives like Rashtriya Gokul Mission,
e-pashudhan Maitri (marketplace)
National Gvadhyog Patra (Animal Health)
- Technologies like artificial insemination,
bovine breeding centres
- Protection of indigenous breed as they
are hardy & resistant to disease
& climate factors.

Hence, with better policy interventions
India can dominate global dairy
exports.

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 प्रत्यास्थिता 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

उम्मीदवारों की
इस शीर्षक में
नहीं लिखना
चाहिए।
Candidates
must not
write on
this margin

Agriculture sector is itself a massive emitter of greenhouse gases along with mixed agriculture / farming practices that involve animal related emissions as well.

~~VISIONIAS~~ Agriculture Sector partly responsible

- Rice fields & methane emission from these fields are the 2nd highest source of CH₄ emissions after wetlands
- animal faeces & emissions also contribute to global warming
- over use of fertilisers like urea, led to skewed soil ratio → cause ground water contamination

→ clearing of farms for farming & lands lying fallow — lead to degradation, desertification & soil erosion causing landslides, rockslides etc.

→ Impact of pesticides & herbicides affect ecosystems — domino effect on overall climate.

National Management

National Agriculture disaster mgmt plan

- sustainable agriculture practices
- reasonable use of resources i.e. water, fertilizers etc.
- Way to deal with hazards & risk management mechanisms.
- food security to be taken care of in case of failure of agriculture.

way forward

- Agriculture practices to be sustainable
eg Organic farming (Parampaangat Yojna)
zero budget natural farming, zero Tillage
- Harm Dhure feed to animals leads
to lower emission of methane from
animals
- Not keeping land submerged under
water instead use - drip irrigation
minirrigation etc.
- Practices like Rain water harvesting,
agroforestry, intercropping etc
used to maintain soil &
prevent desertification.
- rational use of fertilizers & use
Nano urea (80-90%) more effective

Hence, sustainable agriculture is in our
NCAP (National Climate Action plan). &
www.visionias.in must be prioritized for policy
interventions.

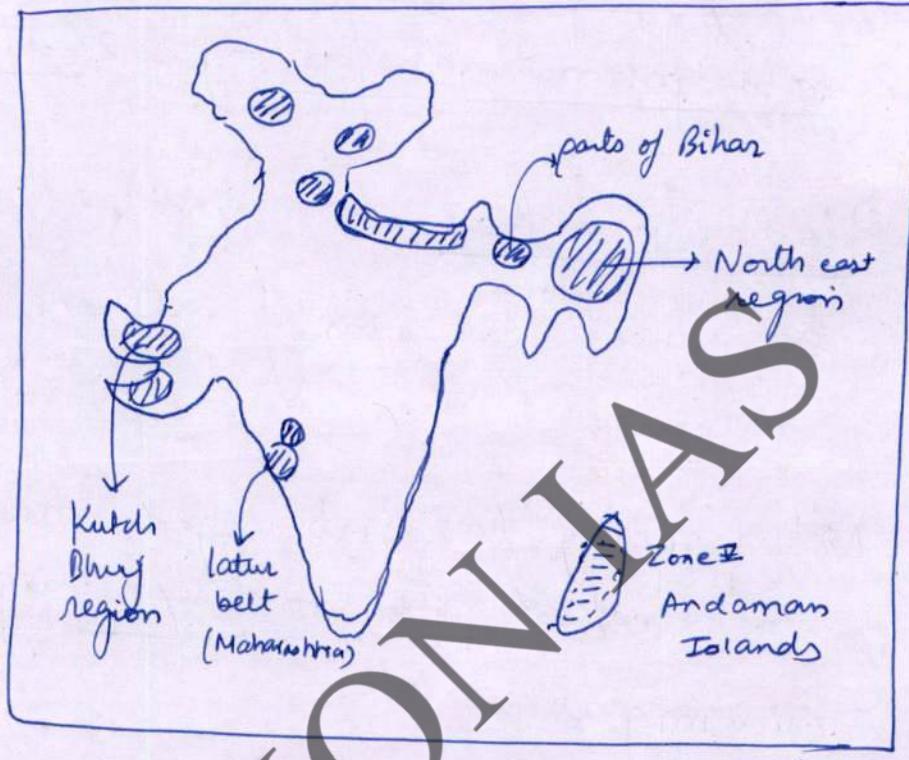
17.

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

उम्मीदवारी के
इस लाइने में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin



Highly earthquake prone areas. (active)

Himalayan region is on the trans-alpine
fault between the interactions of the
Eurasian plate & Indo-Australian plate

Therefore, due to tectonic activity
the surrounding regions of Delhi, Haryana,
J&K are vulnerable to high
levels of seismic activity.

Institutional Measures & NDMA guidelines

- Organisational, Information systems in place - e.g. Hazard mapping, Zonal maps
- Seismic zone mapping & monitoring of seismic activity across regions.
- Information systems & satellite communications mechanisms in place in case of loss of communication post earthquake
- National Institute of seismology - created application (mobile) for real time data update
- collaborations with international community on information sharing & early warning systems
- Seismographs & instruments to monitor activity in place along with Standard operating procedure (SOP) in case of earthquake
- Awareness raising - e.g. don't use lift, under the table

significant gaps

- More of "firefighting approach"
than preventive approach
- focus on sustainable construction
practices eg learn from
Japan → light weight construction
techniques
- Sendai framework to cater for
least protected & most vulnerable
- evacuation protocols & better
coordination between multiple
agencies.
- lacking provisions for rationing of
food, medicines, health centres
etc - should be done for every
small unit of district ~~etc~~.

Hence, preparatory measures to tackle
disasters should be based on
agile principles.

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

Net energy gain in nuclear fusion reaction is when a fusion reaction produces more energy than it consumes.

Major breakthrough → Will complement global efforts to combat climate change

Advantage of Nuclear fusion

- (1) Produces around 10 times more energy than a fission reaction
- (2) Elements needed i.e. Tritium etc. are easily available
- (3) By products of the reaction i.e. Helium, water etc. are not harmful - no risk of contamination

(4) products & elements used are not radioactive, even tritium (isotope of H₂ is not radioactive))

↳ no risk of nuclear proliferation

(5) reaction is self sustaining & produces more energy than it consumes

(net positive energy production)

Limitations at commercial scale

(1) High temperatures needed to start the reaction.
around 10 million °C.

(2) Instruments e.g like Tokamak & high powered magnets are extremely expensive & difficult to construct.

- (3) Huge facilities & no. of reactors would be required to satisfy commercial demand.
- (4) Highly skilled workforce would be required in large quantity for maintenance, construction, production etc

Way forward

- More R&D should be promoted to figure out more cost effective means
- Increase nuclear energy production of India currently 1.2% of Total produced power
- MoUs & International research projects ITER, CERN etc for better understanding.

19.

हालिया संशोधन को ध्यान में रखते हुए, भारत में धन शोधन (मनी लॉंड्रिंग) 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

उम्मीदवारी को
इस छापे में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

Recent amendment to PMLA

the ED (Enforcement directorate) was empowered by Govt & the Supreme Court has upheld the amendment calling Laundering as a "serious offense" & corruption as "art of terrorism".

Recent amendment

- ED power to attach, seize, search offices & property.
- ECL report not on FIR & need not be supplied to defendant.
- PMLA provision made bail more stringent only given if judge feels it appropriate.

- Omis on accused to prove his innocence - reversal of principle of "innocent until proven guilty"
- stringent penalized provisions & increased sentences for offences

Menace of money laundering still prevalent

- FICN - fake Indian currency notes
- Tax haven - shell companies [round tripping]
- Hawala transactions & Bawami transactions
- "Cash for favours model"
- Poor land records - money in exchange for forged ownership

way forward

- Improved surveillance network against fraud & currency crime NITSC, NIA etc
- PMLA provisions supported by ITC eg tracking of digital trail etc
- KYC norms enforced, uncover shell companies, improved audit & surveys

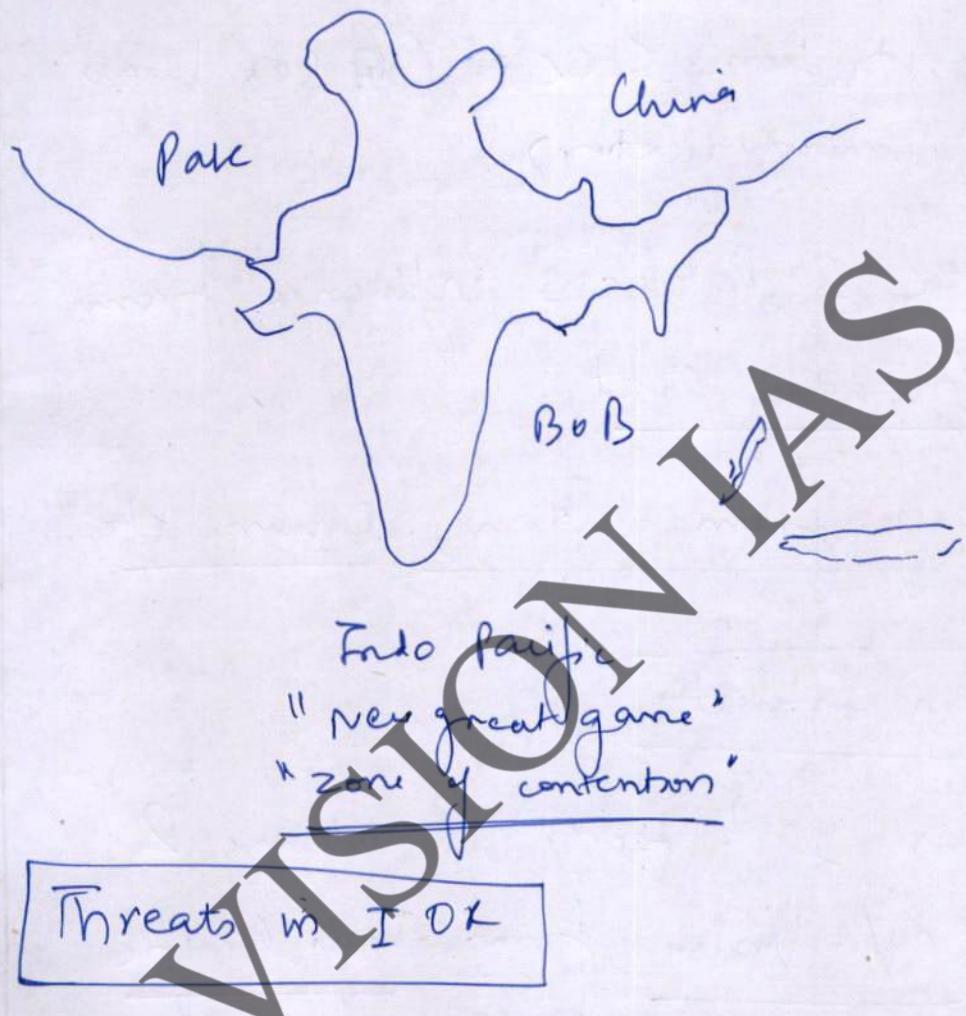
20.

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

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

15

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



- (1) Non-traditional threats → piracy
→ smuggling
- (2) China angle → "string of pearls" strategy
→ blockade policy
→ wolf warrior diplomacy

(3) Andaman Security dilemma

- ↳ Chinese aggression with
Mallaca strait
- ↳ obstruction SLOCs (~~at~~ See lanes
of communication)
- (4) QEC & Pakistans influence from
↳ Gwader port
↳ Piracy from Sudan, Oman etc

Indian Interest

- Our 90% trade by volume &
20% value from Indo pacific
- Poly metallic nodules, resources,
minerals (our EEZ)
- open trade & free & open
Indo pacific

उमीदवारों को
इस प्रश्नपत्र में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

- Measures
- ↳ Sagamala
- ↳ Quad

VISION IAS

SPACE FOR ROUGH WORK

VISION IAS

AL