



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. : 0834009

अभ्यर्थी का नाम/Name of Student : Aditya Srivastava

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

27/8/23

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

केंद्र
Centre 11SE, Lucknow

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>	<p style="text-align: center;">Important Instructions</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
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)					



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

Food security in India has been ascertained through the National Food Security Act, 2013

Different dimensions of food security

- Accessible food
- Affordable food
- Right to food.
- Less food inflation
- Strategic buffer stocks.

NFSA, 2013

- 1) Right to food
- 2) wheat, rice @ ₹ 1, 2 per kg
- 3) 35kg cereals to Antyodaya.

India has been fairly successful

- 1) NFSA, covers 80 crore Indians ⇒ right to food to poor.
- 2) Accessible food via PDS and fair price shops.

- 3) Affordable food @ 1, 2 per kg as shown in box
- 4) Strategic buffers for price stability & check food inflation.
(Eg) OMSS scheme.

However, there have been challenges

- 1) High food inflation recently
(Eg) Tomato @ ₹ 200/kg.
- 2) Overflowing buffer stocks @ 200% of needed
- 3) Inclusion & exclusion errors due to ration card → not accessible
- 4) Lack of coverage due to technological glitches — (Eg) 2016 Punjab wheat crisis

Way ahead

- 1) Need here is to provide end to end digitization.
- 2) Uphold the GPS tracking to prevent leakage — Tamil Nadu model

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

The recent ChatGPT revolution and blockchain based smart contracts have opened reform options.

Potential to transform agriculture

→ by blockchain

- 1) Peer to peer lending can solve issues around credit
- 2) Smart contract can help bring contract farming ⇒ new technology
- 3) Cryptocurrency have help to simplify the input costs due to no cascading

→ by ChatGPT

- 1) Better prediction of market price & demand → Using Generative AI.

2) Better extension services due to inf interface.

3) Can provide necessary knowledge about best practice like Harit Dhara

However there are challenges

1) Lack of digital penetration only 42% internet (NSSO data)

2) Digital illiteracy — only 10% digitally literate in rural (NSSO data)

3) Challenges of technology

⊕ can lead to biases

⊙ Not traceable cryptocurrency
→ can lead to money launder

Way ahead

1) Need to customize the tech usage — link with soil health card

2) Promote digitization — ramp up BharatNet.

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 हार्शिए में नहीं लिखना चाहिए
Candidates not write on this margin

The recent payment by India for UAE ~~to~~ oil in rupees shows the acceleration towards de-dollarization.

Reasons/factors behind this acceleration to de-dollarization

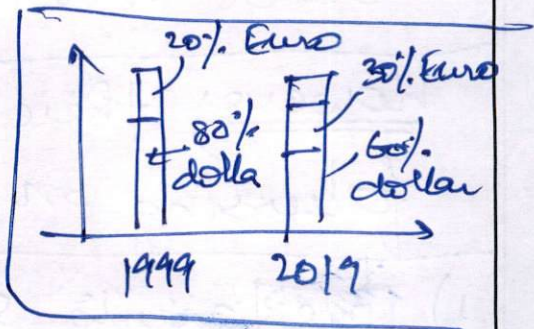
- 1) Russian war in Ukraine & weaponization of trade in dollar
↳ SWIFT ban
- 2) Power of manipulation with the dollar US \rightarrow freeze assets
- 3) Promotion of own infrastructure
↳ VPI in France
- 4) Dollar loosing its value - lost value quickly during 2021 [10% fall]
- 5) high cost of sterilization

However complete de-dollarization is not possible at the moment -

- 1) Dollar hegemony → more than 70% reserves of all country in dollar
- 2) Mark to market → all currency exchange rate based on dollar
- 3) Large trade volume of dollar ⇒ easily exchangeable
↳ unlike Russian cancellation of Indian rupees for oil.

Yet, there are signs of alternative in long term

- 1) Brics meeting gold backed currency
- 2) Decreasing dollar reserves as shown for India



- 3) Increasing Chinese push for Yuan. (eg) India paid for Russian oil in Yuan.

Yet, we need to be wary of the new currency emerging since it can lead to trade slowdown.

4.

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

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

10

Recently USA filed a complaint in WTO regarding the rice subsidy of India exceeding 10% (Amber box)

Reasons for pressure from developed country

- 1) Distorts international trade
- 2) Goes against agreed norms (10% Amber)
- 3) Leads to violation of rules based order in WTO.

However there are merits in focussing on policy support for poor

- 1) MSP grants security to farmer from market fluctuations
- 2) Food security of 80 crore people in India depends.
- 3) In line with the agreed Bali Peace clause.

4) Supports the differentiated responsibility of developed vs developing country.

5) Uphold Article 38 - welfare state

6) Uphold the right to food of poor
→ reduce malnutrition (SIDG-2).

Yet, there needs certain change

1) Need → MSP becoming fiscal burden (Economic Survey 2021)
↓
Distorting cropping pattern to wheat/rice
high fertilizer → soil having N:P:K = 8:3:1
and urea

Way ahead → PM KISAN WTO compliant

1) Move to direct transfer of difference in price. Eg MPS

2) Decentralize the Bhavantar Bhugtan
MSP → Agro climatic agriculture

This would help to make agriculture robust while uphold our domestic and international responsibility

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

Composite water management Index tells that by 2030, India's water demand would be twice the supply. (NITA Aayog)

Several initiatives taken

- Atal Bhujal Yojana - groundwater
- Jal Jeevan Mission
- Har Ghar Jal - Jal Shakti
- Per drop more crop - PM Krishi Sinchayi.

Yet, the issues of water availability & quality remain

- only 42% households have 24x7 water availability.
- pollution → Blue baby syndrome
→ river like Yamuna.
- groundwater → 17% aquifer critical (GWB data)

Reasons for this

- 1) Power subsidy as in Punjab \Rightarrow over exploited groundwater
- 2) Salinization due to capillary action.
[Eg] Reh in Punjab/ Haryana.
- 3) Overuse of subsidized urea
 \rightarrow nitrogen runoff \Rightarrow eutrophication

Way ahead to address these issues

- 1) Better storage and management of Monsoon - learn from Gujarat (Sauri Yojana)
- 2) One Water approach
- 3) Circular water economy \rightarrow use phytorid wastewater treatment
- 4) People campaign \rightarrow learn from the Niranga campaign of Maharashtra

This would help uphold the value of water and uphold SDG-6 of clean water and sanitation.

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 हाशिए में नहीं लिखना चाहिए
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The Arctic glaciers are melting at twice the global average called Arctic amplification.

Drivers of glacial retreat in Arctic

- 1) Climate change & global warming.
- 2) slowing of Atlantic Meridional Overturning circulation.
- 3) Recent atmospheric river phenomenon in Alaska.
- 4) Black carbon deposition \Rightarrow low albedo.
- 5) Feedbacks $\begin{cases} \nearrow \text{meltwater feedback} \\ \searrow \text{ice albedo feedback} \end{cases}$.
- 6) Cutting of glaciers by Russian ships.

This is having huge impacts on the ecosystem

- 1) Rising sea levels \Rightarrow inundation of

land. Eg Jakarta sinking

- 2) Changing \Rightarrow jet stream \Rightarrow weak Rossby waves \Rightarrow cold wave in Canada
- 3) Permafrost melting
 - Forest fire in Russia.
 - Carbon emission in atmosphere.
- 4) Shifting of earth poles as noted by a study \rightarrow polar drift can impact climate.
- 5) Loss of biodiversity \rightarrow coral loss as in Manila \rightarrow linked to glacier melt \rightarrow more water \rightarrow inundated.
- 6) Loss of polar bears \rightarrow 2/3 lost.

Way Ahead

- 1) Human effort to stick to Paris deal - provide climate finance.
- 2) Refreeze the Arctic - civil society efforts
- 3) Damming of glaciers \Rightarrow learn from Jacobshavn glacier effort.

This would help to mute the impact of Arctic melting

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

The recent success of Chandrayaan

3 drew the remark —

"Chanda Mama doorke → Chanda
Mama tour ke"

In this light, space tourism is becoming a reality

- 1) Galaxtus, a private company providing space vacations.
- 2) lowering cost of space travel.
↳ Chandrayaan 3 @ half the budget of Interstellar movie
- 3) Reusable vehicles ⇒ can take human and then bring back.
↳ SpaceX tested it recently.
- 4) Increasing demand for space travel is driving the sector.

Albeit, it comes with hindrances

- 1) Space debris issue → Kessler syndrome is a challenge
- 2) Lack of adequate technology to ensure 100% human survival.
- 3) High cost of travel → lead to inequity
- 4) High disparity in space capacity
↳ India only 4th to land on moon.
- 5) Lack of two-way vehicles.

In this, following measures can help

- 1) Rationalize space tourism via self-destructive debris
- 2) Catch the debris via collaboration
- 3) Reduce costs via research and development
- 4) Outer Space Treaty overhaul to meet current demand & dynamics
- 5) Symmetry in powers, via nation to nation collaboration (Eg- LUPEX - Ind-Jap.)

This would help in accessible & space sensitive tourism

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)

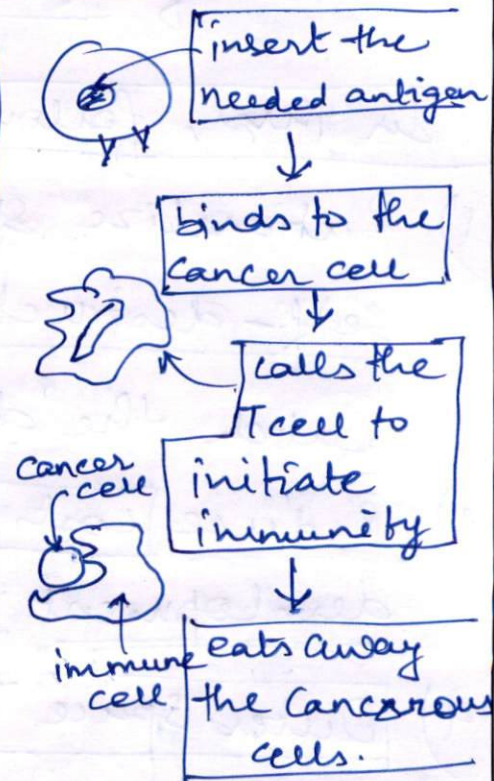
उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
Candidates must not write on this margin

10

CAR-T cell therapy (chimeric antigen receptor - T cell) has been the breakthrough which can provide targeted cancer treatment.

Can be a game changer in cancer treatment

- 1) Reduce or eliminate side effects of chemical therapy.
- 2) No induced cancer as happens with radiotherapy.
- 3) Long lasting immunity due to memory of T cell
- 4) Reduce the duration of treatment
- 5) Increase the 5 year survival probability by upto 50%



It can overcome the limitations of CRISPR-Cas9 technology

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

1) Provide boost to innate immunity
↓
not given by CRISPR

Críspr = molecular scissors

Cas9 = nuclease protein & guide

2) No side effects by CAR-T cell →

cannot cause genetic mutations

~~and~~ → CRISPR can cause changes in host DNA.

3) CRISPR needs repetition and arduous procedure to correct each cancer cell DNA

↳ CAR-T cell just needs to activate some T cells → then they produce own copies.

4) CRISPR has higher rate of errors due to lack of efficacious targetting by CAS9 protein

↳ CAR T cell more accurate → uses body internal mechanism.

Thereby CAR-T cell therapy needs revamp to uphold right to life.

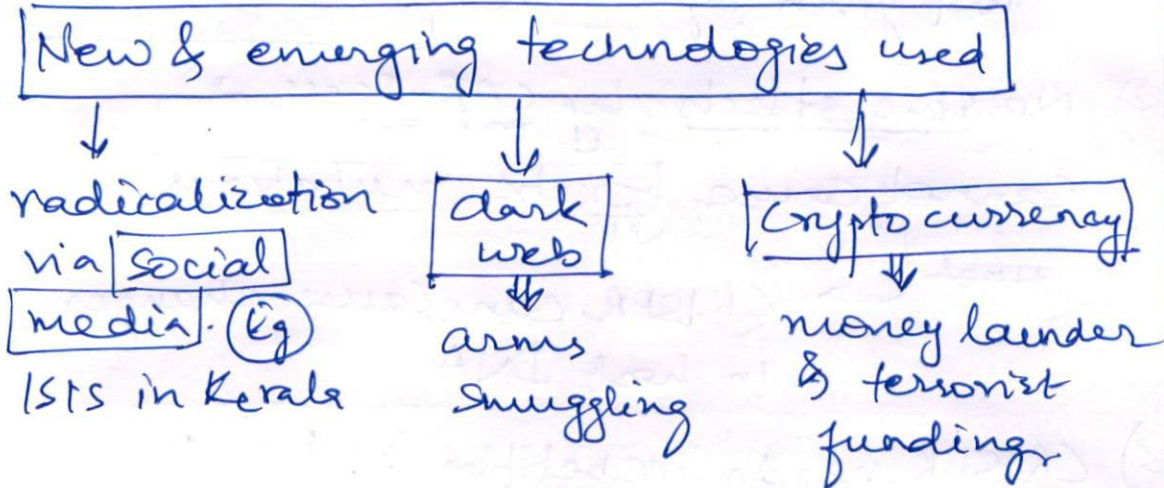
9.

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 चाहिए
Candidates must not write on this margin

The recent Kerala Story movie throws light at the role of extremist organizations and their expanding domain



Yet, not possible to tackle this by one country

- 1) Transnational reach of all technology
- 2) VPN and other technology is difficult to curb by one country
- 3) Lack of clarity about role of foreign intermediary
 - crypto exchanges.
 - Facebook/whatsapp.
- 4) Sites working threatens all as the organized crime is collaborating.
(Eg) D Company.

Therefore, there is a need to join hands and collaborate for global effort

- 1) FATF action for sanction effectiveness via global agreement.
- 2) Globally agreed norms for internet usage ⇒ curb social media misuse
- 3) signing of Budapest convention by all to secure cyberspace.
- 4) sharing of critical intelligence to bust online networks.
- 5) Policing the cyberspace to curb dark web → get TOR experienced work force
- 6) Catching extremist content via collaboration of government, social media and people Tt Vishwanathan Comm

This would help to ensure root eradication of terrorism while upholding cyber-surakshit Bharat

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

The Galwan, Tawang and Yangtse incidents have kept the temperature high on LAC since 2020.

Here we have seen ramping up of border infrastructure

China building roads ⊕

Settlements near Arunachal border

India building "vibrant villages"

and strategic roads [22/73 completed
- CAG reports]

Yet, role of ITBP is very important in this light due to

- 1) Important to man the border on foot → check infiltration
→ hold border → don't shift
- 2) Ears to ground approach & collaborate with locals.
- 3) Capability to fight unarmed as seen

in Galwan.

- 4) Hiring locals ⇒ genetic ability to live in low oxygen levels.

Yet, there have been Challenges hindering ITBP role

- 1) Lack of adequate cold wear equipment → as seen with Galwan deaths.
- 2) Lack of strategic roads ⇒ caught slow moving.
- 3) Lack of adequate ammunitions and logistic support → multiplicity of forces

Way ahead

- 1) Give PPP mode road building beyond BRO capacity Shekhar Comm
- 2) One border one force ⇒ give assam rifle power to ITBP. Madhar Godbole Comm
- 3) Better training & equipment → give oxygen masks.

This would help to uphold sovereignty & See eye to eye with Chinese aggression

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)

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

15

The productivity of agriculture has been low at 60% of that in China ⊕ only 130% cropping intensity.

Land productivity focus has not led to gains

- 1) Due to lack of irrigation as 45% areas are rainfed.
- 2) overirrigation leading to runoff and evaporative wastage.
- 3) 62% well and tubewell irrigation → groundwater crisis.
- 4) Degraded lands like in Chambal or in Vidharba.
- 5) Irrigation related water wastage
↳ India has 4% world freshwater for 18% population.

6) Land productivity has not been a panacea — 86% farmer small & marginal.

Therefore, need is to move from land productivity to irrigation water productivity for

- Efficient water usage → via micro irrigation
- promoting water as an asset
- water costs down due to circular water approach.

Challenges associated with irrigation water productivity shift

- 1) High cost of technology → installing micro irrigation takes 2-3 lakhs per hectare
- 2) lack of adequate technology for one water — phytonid tech missing
- 3) water related disputes — as seen due to forest deficit in Warabandi scheme

4) Irrigation bias → tends to promote rice cultivation ⇒ distort cropping pattern

5) Irrigation productivity can increase
inequality ⇒ don't benefit small/marginal farmer.

In this light, following measures needed -

- 1) Separate agriculture feeder as in Gujarat ⇒ prevent groundwater exploitation
- 2) Farmer producer organization based micro irrigation ⇒ distribute costs.
- 3) Pani panchayats to solve disputes.
- 4) Scheme strengthening - expand PM Krishi Sinchayi Yojana
- 5) Provide adequate credit → leverage Fintech revolution

This would help to ensure that irrigation water isn't misused and helps promote water sensitive agriculture.

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

15

Recently Budget 2023 saw the launching of ₹ 19700 crore Green Hydrogen Mission.

Examination of role of Green Hydrogen in energy security

Pros

- 1) Reduce import bill by almost \$100 billion by 2047
- 2) Reduce dependency on oil import \rightarrow atmanirbhar.
- 3) 2.5 times more energy density \rightarrow more km per kg of hydrogen vs petrol.
- 4) Promote use of

Cons

- 1) Highly inflammable
 \downarrow
storage & transport issue.
- 2) Import dependence on electrolyzers.
- 3) High cost of new tech \rightarrow energy intensive electrolysis
- 4) Lack of adequate policy/incentives \rightarrow slow adoption.

renewables →
uphold Panchamrit
goals.

2) Indigenous
Capability → can
export for FOREX

3) No institutional
mechanism to
track various
types of hydrogen
in economy

उम्मीदवारों को
इस हार्शिए में
नहीं लिखना
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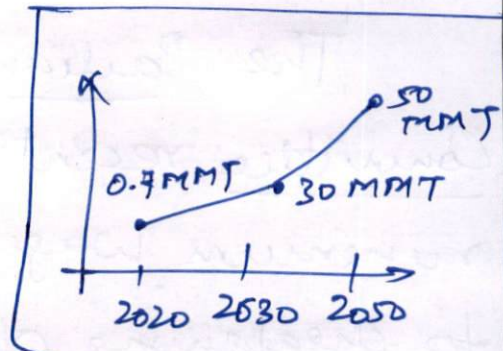
The National Green Hydrogen
Mission can help to achieve energy
goals as —

- 1) Help to move faster towards
50% renewable energy and 500 GW
non-fossil energy (Panchamrit)
- 2) Bring in ₹ 8 trillion investment
→ green economy.
- 3) Generate 6 lakh green jobs.
- 4) 50 MMT additional Carbon
emissions are forgone.
- 5) Build indigenous capability for
atmanirbhar & energy goals.

In this light, we need to promote

Green hydrogen to fulfil its true potential as follows—

1) Have a strong PLI for electrolyser manufacturing



2) Impose Pigovian tax for all the GHG emissions =

3) Strengthen the carbon trading and carbon credit
↳ have green hydrogen norms.

4) Promote HCNG as by Delhi

5) Tax incentive on green hydrogen run vehicles.

This would ensure hydrogen from renewable sources becomes the driver for Amritkaal 2047

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
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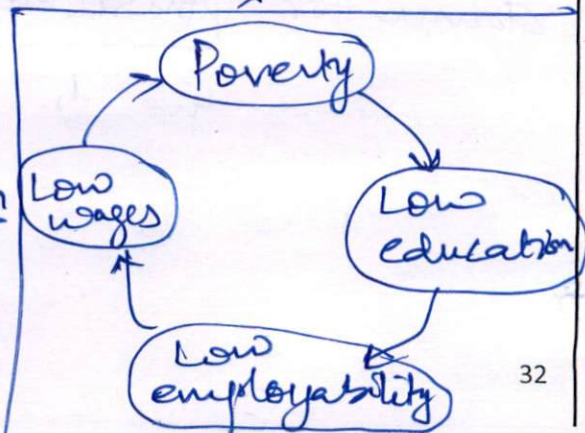
The Parliamentary Standing

Committee recently observed that the minimum wages in India are leading to cheapening of labours - too low

In this light, there is a need to transition from minimum wage to living wage for following benefits

- 1) Uphold the Constitutional morality of Article 41 → provide good standard of life.
- 2) Eradicate poverty → still at 22% (MPI report) ⇒ achieve SDG-1
- 3) Build human capital by breaking the cycle of deprivation ↓

- 4) Promote a good access to health & education as per Tendulkar Committee



- 5) Lead to better social capital and eventually demographic dividend
- 6) Reduce government expenditure on welfare \Rightarrow more capital investment

however, there are numerous challenges

- 1) Backlash from private players due to increase in costs.
- 2) Reducing investment \Rightarrow can lead to FDI outflow
- 3) 90% informal labour segment \Rightarrow rarely follow the guidelines \Rightarrow hire at minimum wage only
- 4) Expanding Gig economy \Rightarrow blurring the lines \Rightarrow daily to hourly or per ride wages.
- 5) Lack of government enforcement machinery \rightarrow very few inspections.
- 6) Lack of budgetary bandwidth to support the transition.

In this light, the following steps

can help improve living conditions :-

- 1) Urban employment guarantee scheme
↳ learn from Odisha MUKTA scheme
- 2) Expand social security to all
↳ leverage RAISE framework of NITI Aayog.
- 3) skilling of all labour (Sharada Prasad Comm)
- 4) Job creation via MSME reforms (UK Sinha Comm)
- 5) Living wages via collaboration with platforms in Gig economy.
↳ govt can provide difference wages.
- 6) More labour and employer on ASEEM portal

This would help to improve the living conditions as we move to \$5 trillion economy

14.

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

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

15

The Union Budget through its Saptrishi in 2023* has the ability to impact the present as well as future generations.

Yet, there has been limited public scrutiny

- 1) No power to public to raise issues
⇒ not put in public domain
- 2) Weak opposition ⇒ no debates or deliberation.
- 3) 2023 budget passed by guillotine
- 4) Lack of public participation ⇒ top down approach.
- 5) The concerns of many NGO/
pressure group/society not considered
↳ MSP legalization asked ⇒
no clarification given.

Yet, the scrutiny of Budget in the representative democracy happens according to the process —

- 1) Representatives in Parliament represent people's demands (by MP)
- 2) Budget based on previous year expenditure ⇒ scrutiny by media on MNREGA reduced allocation.
- 3) Represents the interests of larger public. (Eg) ₹13 trillion Capex due to NK Singh committee
- 4) Implements the suggestion of various civil society. (Eg) Green growth segment shaped by Greenpeace report
- 5) Scrutiny by public as the election process ensured direct accountability — in 2024 next.

Yet, there is scope to widen

the ambit of the public scrutiny:

- 1) Can provide draft budget online for suggestions → just like done for Data Protection Bill.
- 2) Zero base budgeting for better accountability to emergent needs.
- 3) Active role of Parliamentary Committee → need to expand its timely scrutiny
- 4) Public representative in Rajya Sabha need more power
↳ give them power to vote on some segments of budget.
- 5) Budget exercise needs to be done more holistically → restrict extra-budgetary borrowings
This would help to make the budget more robust for the needs of developed India by 2047.

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

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India has the largest number of livestock in the world @ 40 crore and has highest dairy production.

India has achieved this feat due to following reasons —

1) Cultural reasons

- ⊙ Cow as sacred.
- ⊙ Milk important in diet ⇒ high demand.

2) Economic reasons.

- ⊙ Low cost of production due to cooperative. [Eg] Amul.
- ⊙ Large no. of dispersed farmer ⇒ tough competition.

3) Government

- ⊙ Policy like white revolution
- ⊙ Promotion of dairy via schemes

like the Harit Dhara.

Yet, challenges remain to the low productivity of our animals.

- 1) Desi breed of cow (Bos indicus) produces 3-4 times less milk than jersey breeds.
- 2) Low fodder availability \rightarrow low nutrition \rightarrow low milk output.
- 3) Fodder scams as in Bihar.
- 4) Lack of economies of scale \rightarrow almost 75% milk farmer have only 2-3 cows/buffalo.
- 5) Issues around GHG (methane) emissions from livestock.
- 6) Lack of timely milk procurement \rightarrow souring of milk.
- 7) Lack of adequate processing \oplus cooling infrastructure.

In this light, the following can

help to increase productivity and overall farmer income —

- 1) Research and better breeding to increase milk output.
- 2) Formation of FPOs — 10,000 envisaged in budget
- 3) Post milking infrastructure
 - ⊙ Leverage PPP based cold storage.
 - ⊙ Cooperative based sorting/grading
- 4) Hait Dhara and use of fodder via channelizing advanced maize from USA. (Co-0238)
- 5) Promote the export of A2 milk from Bos Indicus,
↳ in demand abroad due to better gut health.

This would help make the dairy sector more lucrative and help it lead to place India on global milk map as MILK FACTORY of world.

16.

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

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

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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Climate change is driving various extreme weather events (IPCC report) and India is 7th most vulnerable to these climate extremes.

Climate change causing crop failures

- 1) Untimely rains destroy crops.
 (Eg) February rains → destroy wheat in North India (2023)
- 2) Droughts due to heat dome as in March → impact Rabi crop
- 3) Locust attacks as in 2020 due to general global warming
- 4) Monsoon variability due to stronger El Nino as in 2010, 2023
 ↳ reduced 18% sugarcane output in India, 2010.
- 5) Fires in crops due to various

heating and lightening:

6) Disturbed western disturbances cause floods as seen in Himachal 2023.

Yet, it's a two way relation as agriculture too impacts climate change

- 1) Land fallowing converts land into carbon emitter from sink.
↳ Vidharba region.
- 2) Flood irrigation causes methane emission. ↳ rice transplantation method.
- 3) Nitrogenous fertilizer like urea → cause N_2O release → exacerbate climate change.
- 4) Pesticides lead to anti-microbial and anti-pest resistance
↳ stronger locusts.
- 5) Use of diesel motor and generator for tubewell irrigation
 - ⊙ reduces groundwater level
 - ⊙ causes CO_2 emission.

In this light, National Agricultural
Disaster Management Plan can help

- 1) Create resilience among farming community due to better information
- 2) Create capability via mock drills and alternative farming technique.
(eg) SRI technique for rice.
- 3) Regular disaster audits to mute the impact of flood/drought.
- 4) Promote climate resilient crops.
(eg) Bihar has dragonfruit.
- 5) Have mobile vans for quick support — save lives and crops
via providing $\begin{cases} \text{water in drought} \\ \text{gypsum in minor floods.} \end{cases}$

This would help to promote disaster resilient agriculture via a paradigm shift in agriculture.

17.

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

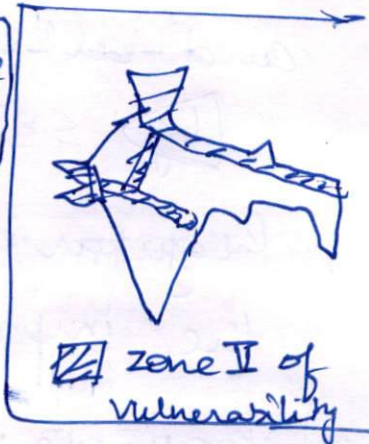
Some regions in India, including Delhi, are highly vulnerable to the impact of earthquakes originating in the Himalayas. Discuss. What institutional measures have been taken to mitigate earthquake losses in India? Do you think there are significant gaps that still exist? (Answer in 250 words)

उम्मीदवारों को इस हाशिये में नहीं लिखना चाहिए
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15

The recent earthquake of 7.8 magnitude in Turkey drew the attention to this looming disaster.

Delhi is vulnerable along with other regions as -



- 1) Moving Himalayas due to moving Indian plate @ 1cm/year
- 2) Delhi lies on the fault line stretching from Aravallis
- 3) Gujarat lies on the intersection of 3 plates just like Turkey
- 4) High population density even in zone II of earthquake vulnerability
- 5) closeness to the Himalayas \Rightarrow tremors felt even in UP, Bihar
- 6) High vulnerability due to lack of

compliance to building codes.

In this light following measures have been taken

- 1) Earthquake early warning system being developed for Target G of Sendai
- 2) "India Quake" app for better information dissemination.
- 3) NDMA guidelines for holistic management of earthquakes.
- 4) Disaster resilient infrastructure being promoted — CDRI initiative

Yet, there are significant gaps in the earthquake management

- 1) Early warning not accurate due to technology issue
- 2) Lack of SDMA capability ⇒ slow response.
- 3) Tourism beyond carrying capacity

2) impending disaster

Vikram Saraswat
committee

4) Lack of disaster resilient infrastructure
due to low funding & audit/enforcement

Way ahead

1) Need to build comprehensive disaster plan with clear targets -
time bound.

2) Network of dedicated clinicians
for timely treatment \rightarrow save lives.

3) Less stress on Himalayas \rightarrow use
TSA assessment for sustainable
tourism - Vikram Gaur panel

4) Harmonious infrastructure in
Himalayas - (Nari Chopra comm.)

This would help to mute the
impact on earthquakes and
promote safe recovery & minimum
losses.

उम्मीदवारों को
इस हिसाब में
नहीं लिखना
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this margin

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

The recent tokamak reactor of China helped to produce net positive energy from nuclear fusion and set the path for artificial sun.

Advantages of nuclear fusion

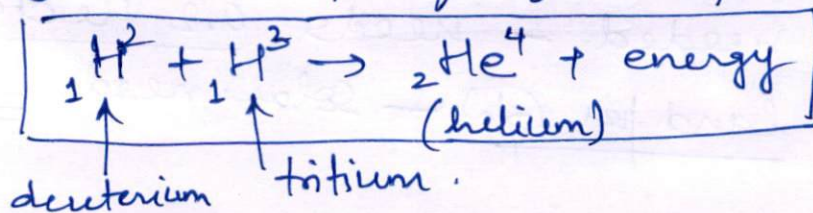
- 1) Over Conventional Energy
 - ⊙ Not polluting - less GHG emission.
 - ⊙ Reduce import dependency
↳ currently \$120 billion on oil.
- 2) Over solar/wind/other renewables.
 - ⊙ No duck curve challenge
↳ available at night
 - ⊙ Large land acquisition not needed - needs 0.2 hectare land per GW - solar needs 20ha

3) Over nuclear fission

- ⊙ No radioactive waste ⇒ no uranium / plutonium.
- ⊙ No risk of accidents like Chernobyl ⇒ automatically stops on disturbance.

Yet, there are challenges to Nuclear fusion itself —

- 1) Very high initial cost ⇒ tokamak reactor costs in multi-billion dollar.
- 2) slow return on investment ⇒ long profit cycle.
- 3) Supply only base load ⇒ cannot be switched on/off at will.
- 4) High temperature — millions of centigrade ⇒ need heavy equipment.
- 5) Nascent level of technology ⇒ only reached proof of concept.



In this light following steps can help.

- 1) More investment in R&D & develop local capability
- 2) Partnership by leading countries to disperse the cost of production.
- 3) Promote skilled manpower ⇒ have a Senicon like scheme to build workforce.
- 4) Build tokamak reactor in PPP basis for better management & technology.

This would help to power the world at perpetually low cost of power and reduce the environment impact leading to clean energy in SDG-7.

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 हार्शिए में नहीं लिखना चाहिए
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Recent amendments to the Prevention of Money Laundering Act have led to strengthening of Enforcement Directorate to deal with money laundering

Amendments SOME

- ED not police → can arrest without warrant
- ECR is not FTR → no need to disclose contents.

PMMLA has been effective in tackling money laundering to some level

- 1) Various perpetrators caught
 (Eg) Recent Pooja Singhal Case.
- 2) Stopped black money routing into the system.
- 3) Curbed hawala transactions via various raids.
- 4) Helped bring information to the law enforcement due to better networking

Yet, it has shown only little progress until now due to following —

Placement
↓
Layering
↓
Integration

Money Launder

- 1) Weakness in PMLA — not in line with FATF model law — Predicate offence not covered
- 2) hawala transactions used by legitimate businesses. [Eg] Angadias of Gujrat.
- 3) Lack of Tax information exchange agreement with key country like Bahamas
- 4) Corruption in public life
- 5) Lack of trained manpower & lack in digital age of
 - ⊙ Cryptocurrency.
 - ⊙ Dark web.

In this light, following can help strengthen the PMLA and money laundering framework

- 1) Implement FATF recommendations?

Customer Due Diligence - consider requirement

- 2) DR Mehta committee - have centralized database to track suspicious transaction.
- 3) Sivaraman Comm - give statutory backed STT in PMLA - coordinate functioning of agencies.
- 4) Venkaswami Comm - public awareness to curb money laundering and tax evasion.
- 5) Give rational powers to ED to prevent its misuse while allowing it to tackle money laundering menace.

This would help to ensure clean economy while upholding our economic sovereignty and curb all parallel economy.

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

India wants to be a net security provider and first responder in the Indian Ocean region.

Yet, it is facing numerous challenges in the IOR.

1) Chinese inroads

⊙ String of pearls theory

⊙ Coco Island allegedly seeing Chinese buildup.

⊙ Chinese spy ships near Indian maritime borders. (Tianwen I)

2) Piracy related issues as in Somalia ⊕ terrorist infiltration (26/11 attack)

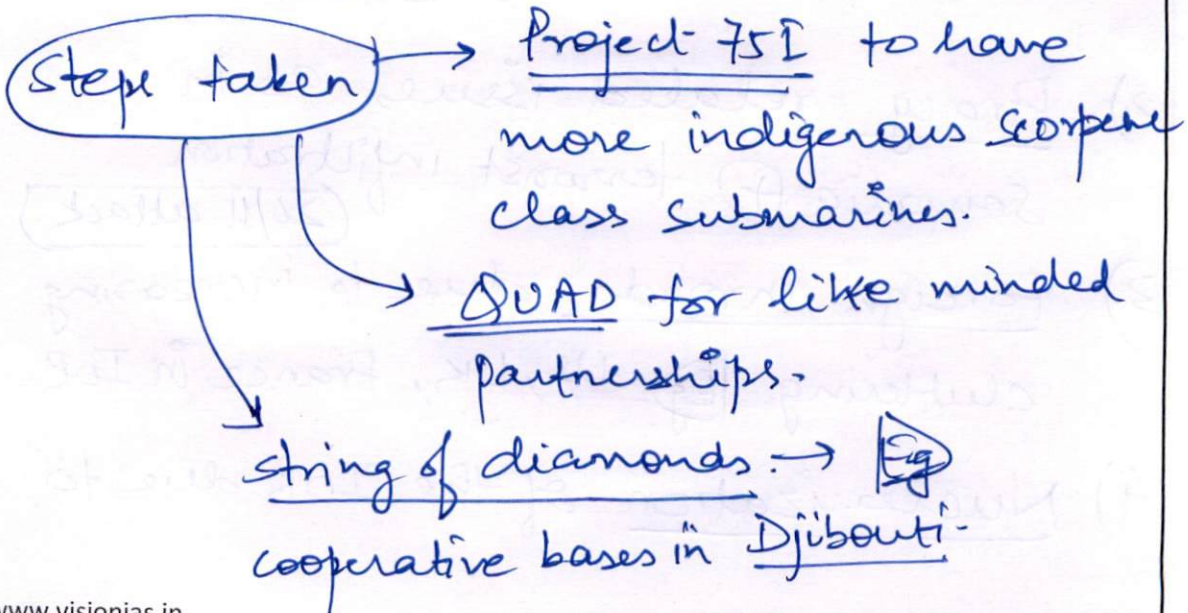
3) Foreign inroads due to increasing cluttering. [Eg] US, UK, France in IOR.

4) Nuclearization of the IOR due to

deals like AVKUS.

They have a direct bearing on India's maritime border interests

- Relegate India to demoted place in own neighbourhood.
- Chinese threats in event of 2 front war → navy ~~to~~ challenge
- Challenge partnerships as foreign inroads take away partner
- Unsafe border as spying can steal critical information
- Piracy threatens free and open trade of India.



Yet, need more to have comprehensive security in maritime IOR

- 1) Apex committee to coordinate all maritime operation [Kargil Review committee]
- 2) Drone surveillance - to catch any infiltration.
- 3) AI based allocation of resources.
↳ threat perception based.
- 4) Laser walls for riverine border and sea based border (Madhukar Gupta Comm)
- 5) Manning of borders via use of night vision & other tech.

This would help to uphold the theme of ~~the~~ maritime Surakshit Bharat for heightened internal security.

SPACE FOR ROUGH WORK

Let us start to have confidence
a very important top

After committee to coordinate all
executive operation [committee]

There are several things to consider
in this area

(1) [AI] based allocation of resources
is based on performance based

(2) Also need to increase border
[border] (border)

(3) Learning of border is not
right now & other things

Two ways to help to reduce
the level of [border]

Search for [border] of [border]
[border]

AL