



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. : 962608

अभ्यर्थी का नाम/Name of Student : SHIVANG SRIVASTAVA

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

27/08/23

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

केंद्र
Centre

Gorakhpur

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>
1	<p>(क) अपना पंजीकरण सं. एवं अन्य विवरण केवल प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) में उम्मीदवार के लिए निर्धारित स्थान पर ही लिखें।</p> <p>(ख) इस पुस्तिका में अन्यत्र कहीं भी अपना नाम, पंजीकरण सं., मोबाइल नं., पता अथवा प्रश्न-सह-उत्तर पुस्तिका (क्यू.सी.ए.) संख्या न लिखें जिससे आपकी पहचान का खुलासा हो।</p>	<p>(a) Write your Registration Number and other details only in the space provided in the Question-Cum-Answer (QCA) Booklet for candidates.</p> <p>(b) Do not disclose your identity in any manner such as, by writing your Name, Registration number, Mobile number, Address, Question-Cum-Answer (QCA) Booklet No. etc. elsewhere in the Booklet</p>
2	<p>अपनी प्रश्न-सह-उत्तर पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तर के अतिरिक्त कुछ न लिखें जैसे कि कोई कविता/दोहा, अभद्र या अपमानजनक अभिव्यक्ति इत्यादि और न ही कोई ऐसा चिन्ह/निशान बनाएं जिसका उत्तर से सम्बन्ध न हो।</p>	<p>Do not write in the QCA Booklet anything other than the actual answer such as couplet, obscene, abusive expression etc., nor put any sign/mark having no relevance to the answer.</p>
3	<p>परीक्षक को प्रत्यक्ष/अप्रत्यक्ष रूप से कोई भी प्रार्थना/धमकी भरी बातें न लिखें।</p>	<p>Do not make any direct/indirect appeal/threat to the examiner.</p>
4	<p>उत्तर अस्पष्ट अथवा गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।</p>	<p>Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.</p>
5	<p>उत्तर स्याही में ही लिखें। उत्तर लिखने के लिए पेंसिल का उपयोग न करें, हालांकि आरेख, चित्र इत्यादि बनाने के लिए पेंसिल का उपयोग किया जा सकता है।</p>	<p>Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.</p>
6	<p>प्रवेश पत्र में उल्लेख किए गए माध्यम के अलावा अन्य किसी माध्यम में उत्तर न लिखें। अधिकृत और अनधिकृत की मिली जुली भाषा का भी उपयोग न करें।</p>	<p>Do not write answers in medium other than the authorized medium in the Admission Certificate. Do not use mixed language either i.e. authorize and unauthorized media together for writing answers.</p>
7	<p>प्रश्नों के उत्तर ठीक उसके नीचे दिए गए निर्धारित स्थान पर ही लिखें। निर्धारित स्थान के अलावा किसी अन्य स्थान पर लिखे गए उत्तर का मूल्यांकन नहीं किया जाएगा।</p>	<p>Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.</p>
8	<p>यदि आप अपने किसी उत्तर को रद्द करना चाहते हैं तो उसे पेन से काट दें तथा उस पर "रद्द" लिख दें, अन्यथा उसका मूल्यांकन किया जा सकता है।</p>	<p>If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.</p>

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

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

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



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Time Allowed: **Three Hours**

अधिकतम अंक: 250
Maximum Marks: **250**

प्रश्न-पत्र संबंधी विशेष अनुदेश

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

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

सभी प्रश्न अनिवार्य हैं।

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

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

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

प्रश्नों में इंगित शब्द सीमा की 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)

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

10

India's poor ranking in Global Hunger Index (107th) is a point of concern with regards to food security.

→ Different Dimension of food security

- ① Sufficiency of food
- ② Accessibility to food
- ③ Affordability of food
- ④ Nutritional security
- ⑤ Climate resilience of food production.

→ India's status with respect to these dimensions

- ① Sufficiency → Green Revolution made India sufficient in meeting domestic food demand.
- ② Accessibility → FCI godowns and transport infrastructure to ensure

transport of food in various parts
• Network of fair price shops (FPS)

③ Affordability → Public distribution System (PDS) through FPS, to deploy subsidised food grain.
• legal entitlement to food under NFSA Act, 2013

④ Nutritional security → Rice fortification
Challenges →
• Excessive focus on Rice & wheat
• Ignoring nutritious crops like millets in PDS.

⑤ Climate Resilience → focus on sustainable Agriculture through National Mission on Sustainable Agriculture → NMSA
Challenges
↳ rising climate change & extreme events eg. frequent droughts & disease prevalence

increasing food production, nutrition along with balancing ecological impacts on agriculture.
Rising population demand

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

Blockchain, a decentralised ledger technology and Chat GPT, an AI based generative technology, have potential application in agriculture sector.

→ Potential to transform agri-sector

① Blockchain

① Creation of Agri stack → record of farmers, land holdings, type of crops.

↓
Implication in Data driven Agricultural planning

② Promote better livestock management through creation of data framework to monitor vitals and productivity of livestock.

② Chat GPT

① Help promote automated agri-culture advisory services

- ② Promote better agricultural modelling ~~that~~ for → optimum space and input utilization
- ③ Connect farmers ~~are~~ with academia, scientists and government.

→ Challenges in use of such technology

- ① Lack of ~~DiTi~~ Digital literacy & farmer capacity to deploy these technology.
- ② Privacy concerns
- ③ Potential of misuse of ~~private~~ farmer data by technology companies.
for eg. → Agri Insurance → use of data to misuse farmer's vulnerability
- ④ Poor regulatory framework for such technology.

There is need for the government to evolve a regulatory framework for more structured deployment of such tech. in agriculture.

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

Dedollarization refers to the process of reduction in use of dollar by countries as a reserve money, credit and for international financial transactions.

→ Factors leading to dedollarization

- ① Rise of Emerging Countries (eg. China and India) → Challenge to Euro-American centrality in Global geo economics.
- ② Use of Dollar by USA → to distort global financial systems
- ③ Misuse of dollar to coerce countries through sanctions.
- ④ Use of Alternatives
eg. Russia-china → transaction in Renmin bi
India → Rupee transactions (Vostro accounts)

→ Will dollar loose its importance?

There would certainly be greater diversification of currency used for International transactions, due to above mentioned factors.

However, displacing dominance of dollar is difficult because:-

① Lack of alternatives

eg. China's Renminbi → not dependable → due to high opacity & closed economy of China.

② USA → would use its influence in IMF, WB → to challenge the trend of dedollarization

③ low acceptability of other currency. eg. Challenges face in Rupee trade between India and Russia.

Thus, dollar is here to remain, but, India should continue to diversify its currency reserves.

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

India was the first country to use (and continues to use) the escape clause, under Agreement on Agriculture of WTO, to safeguard its food subsidy program from challenge in WTO.

→ Merit in retaining policy support for poor

Challenges from developed countries

- Distortion of food market
- Breaching of Amber box clause
- Challenges to Indian exports in WTO due to domestic subsidy regime.

→ Merits in support for poor

- ① Secure food and nutritional support to poor.

- ② Secure livelihood of farmers through state procurement.
- ③ Current regime in WTO is ⁱⁿ favour of developed countries as it allows them support through Input subsidies.

↓
while same support is not provided for Developing world farmers in form of pricing support.

Thus India along with other developing groups should coordinate to secure their interests.

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

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

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

10

As per recent Ground water status reports, around 14% of Ground water 'aquifers' in India are in critical category. This reflects water stress in India.

→ Initiatives taken to address water needs

① Jal Jeevan Mission → piped water connectivity to households

② Jal Swaksha Abhiyan

③ catch the rain campaign

④ Atal Bhujal Yojna → focus on quality and quantity of Ground water.

⑤ Central Water Commission (CWC) and Central Ground Water Board (CGWB) → for policies related to water.

→ Issues of water availability & quality

Availability issues → Regional disparity
→ Overuse of Ground water in ↓

↓
urban areas and for
irrigation use

Quality
Issues

- Poor deployment of piped water
- eg. Mixing of drinking water supply & sewer lines.
- Natural leaching of harmful minerals like Arsenic.
- River water pollution

→ Prioritised Interventions

- ① Intervention needed in irrigation sector to improve water use efficiency & reduce wastage.
- ② Common effluent treatment plants.
- ③ Decentralised planning based on status of aquifers.
- ④ Sewage treatment plants, particularly along rivers.

Above intervention can help achieve Goal 6 of SDG to ensure secure water needs.

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)

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

The year 2023 has seen more than 20% of arctic glacial retreat, which is highest for any particular year!

→ Drivers of glacial retreat at arctic

- ① Climate change induced Global warming.
- ② Pollution leading to deposition of Black particulate matter on glacier → reinforce positive feedback loop of glacial warming.
- ③ Increased navigation along arctic due to newly open sea lanes → has further led to glacial melt.

→ Potential impact on ecosystems

① Raise global sea level

↓
· Inundation of Islands & Coastal areas → thus impact littoral and unique island biodiversity

② Reduce overall albedo of earth
→ further enhance global warming.

↓
impact on all biomes due to warming.

③ Arctic ecosystem → impact on unique biota like polar bear

④ Release of Green house gases trapped in permafrost → thus rise in atmospheric pollution.

There is need to cooperate for countries to mitigate and adapt to these changes at global levels.

7. अंतरिक्ष पर्यटन, जिसे सीधे तौर पर एक साइंस फिक्शन फिल्म के रूप में देखा जाता था, अब बिना किसी बाधा के वास्तविकता बन रहा है। अंतरिक्ष पर्यटन से संबंधित चुनौतियां क्या हैं? इन चुनौतियों से निपटने के लिए क्या उपाय किए जा सकते हैं? (उत्तर 150 शब्दों में दीजिए)

Space tourism, which was viewed as something straight out of a science fiction movie, is now becoming a reality albeit not without hindrances. What are the challenges associated with space tourism? What measures can be taken to address these challenges? (Answer in 150 words) 10

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Recent space tourism initiatives by private companies like space X, Blue origin, Virgin galactica have raised new possibilities along with challenges

→ Challenges with space tourism

- ① Concerns related to safety → particularly during launch & re entry
- ② May lead to rise in space debris
- ③ Lack of Regulation of space tourism
- ④ Lack of clarity on questions related to accountability enforcement related to accidents & actions in space.

- ⑤ High Green House Gas Emission due to frequent ~~launches~~ launches.
- ⑥ Risk of exacerbating existing inequalities, due to high cost of space tourism.

→ Measures to address challenges

- ① Evolve global framework to regulate space tourism
- ② Collaborative efforts to address challenge of space debris.
- ③ Efforts through R&D to use cleaner forms of fuel in space sector.
- ④ Define limits of space tourism & responsibility of operators.
- ⑤ Permanent base like ISS in space for tourists.

Space tourism must be based on safety, security and principles of global commons.

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 हार्शिए में नहीं लिखना चाहिए
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10

Recently, researchers proved the capacity of CAR-T cell therapy to kill cancer ~~to~~ tumor, which gives hope for better cure against cancer in future.

→ Benefits of CAR-T cell

- ① Improved procedure over chemotherapy which involves loss of healthy tissues
- ② ~~to~~ Targeted approach toward the ~~to~~ tumor cells, thus less invasive.
- ③ Help to ensure that body's own immune system is used in killing cancerous cells.

→ Overcoming limitation of CRISPR Cas technology

CRISPR CAS-9 → involves use of scissors to change DNA strand of stem cells to generate anti cancer immune response

CAR-T cell → use antigen receptor, that message the T cells within body to kill cancerous cells.

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

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इस हिसाब में
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Increased frequency of use of drones for attack and transfer of weapons, drugs etc by extremist organisations (e.g. from Pakistan to Punjab border), reflects threat posed by emerging-technology in irresponsible hands.

→ Risks posed

- ① use of AI & machine learning to identify more vulnerable targets.
- ② Use of ~~Chat GPT~~ generative technology for generating fake videos to fuel internal discord & violence.
- ③ Misuse of drones
- ④ Risks of nuclear proliferation resulting in such weapons in hand of terror outfits.

⑤ use of dark web for terror acti-
-vities.

→ Global efforts

- ① need to regulate flow of dual use technology and goods.
- ② Collaborative enforcement of Non Proliferation treaty.
- ③ Bilateral and Regional cooperation to address threats from such technology.
eg. ~~RATS~~ RATS under SCO.
- ④ R & D to innovate → to be able to counter threats posed.
eg. Anti drone technologies, network jammers.

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)

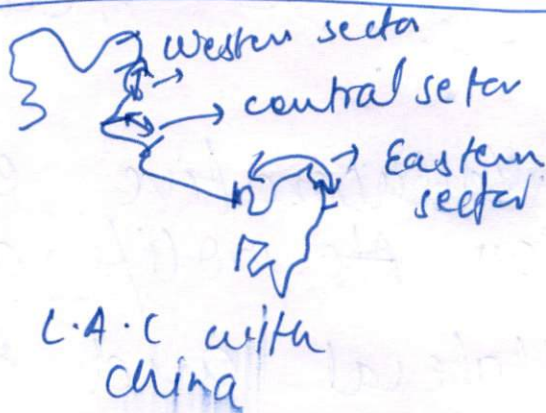
उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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ITBP plays a significant role with its deployment in the western, central and Eastern sector of ~~the~~ LAC with China.

→

Role of
ITBP



①

Manning of border regions with coordination of other security agencies like Indian army, Special Frontier force.

②

Role in gathering actionable on ground intelligence.

③

Building of infrastructure to improve connectivity to frontier regions, with ~~the~~ role of BRO.

④

Elicit cooperation of local people living in border areas with (LAC)

China.

→ Issues

- ① Frontier characteristics of Indo-China border, leads to confusion in demarcation of limits to patrol.
- ② Comparative lesser degree of infrastructure building when compared to Chinese side of frontier.
- ③ Language barrier to communicate with other side of the frontier.

There is need to provide sufficient resources for effective border management for ITBP.

11.

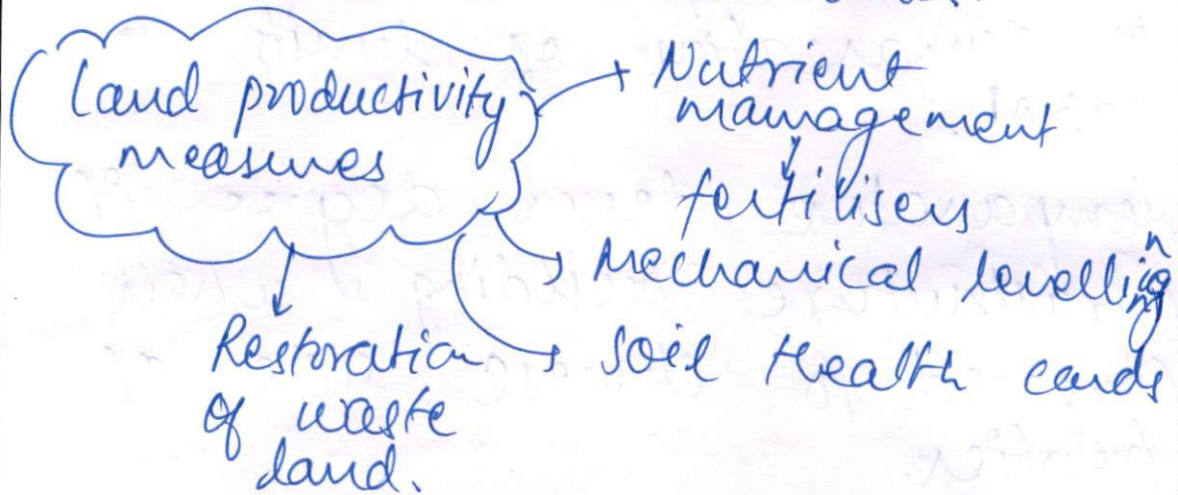
क्या आपको लगता है कि भारत को 'भूमि उत्पादकता' के सिद्धांत को छोड़कर 'सिंचाई जल उत्पादकता' के सिद्धांत को अपनाने की आवश्यकता है? अपने उत्तर का औचित्य सिद्ध कीजिए। यह बदलाव करने में कौन-सी चुनौतियां विद्यमान हैं? व्याख्या कीजिए। (उत्तर 250 शब्दों में दीजिए)

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 हार्शिए में नहीं लिखना चाहिए
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Productivity of land and irrigation in agriculture sector is inter-related to each other.



→ Need to shift from land to irrigation productivity

① Land productivity issues are manifestation of misuse of irrigation.

eg. Excessive Paddy cultivation and flooding of fields

↓
Salinisation and Alkalization of land in Punjab & Haryana.

② Improper irrigation → lead to run-off of top soil and nutrients from land.

③ Poor water use efficiency (WUE) in Indian agriculture, due to,
○ Individual pumps
○ Subsidy in irrigation electricity.

Need of
④ Integrated deployment of irrigation and nutrient. eg → Mixing of fertilizers with irrigation water.

→ Challenges in making this shift

① Difficult to change mindset
eg. Farmers accustomed to use excessive fertilizer for land management.

② Difficulties in deploying efficient micro irrigation techniques like → Drip irrigation, sprinkler irrigation.

Reason →
• High Cost
• Skills to use such
irrigation is missing.

There is need to treat
land and water/irrigation manage-
ment together as part of
Integrated watershed management
program.

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
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The Union Budget 2023-24 provided for a National Green Hydrogen mission, to promote the green energy security of the country.

→ Role of Green Hydrogen in Energy Security

- ① Clean energy → This would help India to achieve Net zero emission by 2070.
- ② Reduce dependence on import of fossil fuels like oil & Gas.
- ③ Promote more assured energy provision, ~~compa~~ compared to variability associated with other renewables like solar & wind.

(9) Help diversification of India's Energy Basket.

Indias Energy Goals

- Reduce import dependence
- Promote Clean Energy
- Meet the rising energy demand
- Industrial development.

→ Role of Green H₂ mission in meeting above needs

① Green H₂

↳ uses Renewable energy to fuel electrolysis

↓
thus → more clean than alternatives like Grey H₂ & Blue H₂.

② Mission incentivise research in commercialization of Green Hydrogen technology.

③ Promote transition of Industries from use of captive fossil fuel based energy to Green Hydrogen.
eg. For . Iron & Steel smelting
. Aluminium Industry.
. Fertiliser Industry

④ Cooperation with private sector for green energy research and deployment.

⑤ Green H₂ based energy → included as part of Renewable purchase obligation.

Green Hydrogen there-
fore has the capability to
clean energy generation &
deployment, but necessary steps
related to safe storage & profita-
-ble generation needs to be
supported.

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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While minimum wage is the wage necessary to access to bare minimum essentials of life like clothing, shelter, food, living wage, is a more progressive concept that include bare minimum essentials, as well as, other needs for a dignified living, eg. Health, education etc.

→ Benefits in adopting a living wage

- ① Help poverty alleviation measures
- ② Promote better Human resource development (HRD), through better access to → Health, education, skill development.
- ③ Signifies transition of India to a welfare democracy, rather than simply electoral democracy.

- (4) Improve choice of people → Thus greater economic empowerment
- (5) Ensures respect to Human Dignity, value of labour and equal pay.

→ Constraint in adoption

- (1) Difficulty in enforcing living wage, due to lack of capacity of state to enforce
- (2) May negatively affect employability, as employers may choose to limit worker, in light of new compliance.
- (3) Regional variability in cost of living → Thus a single living wage may not reflect such variability.
- (4) Difficulty to convince states, as matters related to labour, wage etc. are state subject.

Ensuring a living wage
is not just an economic impera-
-tive, but also an ethical and
Constitutional imperative under
Directive principles of state Respon-
-sibility.

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)

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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Article 112 provides for Annual financial statement i.e Budget, that provides for estimates of receipts and expenditure for almost every sector of the economy. Yet, the level of accountability, enforcement of budget policies & processes is low.

→ Reasons for poor public scrutiny of Budget

- ① Parliamentary scrutiny → is limited due to poor expertise of MPs, limited time to discuss budget, use of Guillotine motion etc.
- ② Focus more on estimates for ensuing year rather than

on performance as per previous year commitments.

③ Outcome budgeting done apart from the normal budgeting and absence of parliamentary discussions on it.

④ Gender Budgeting → lack of effective scrutiny due to less number of women MPs (14% in 17th Lok Sabha)

⑤ Budget seen more as a political exercise, rather than purely economic activity. → Thus leads to politicization of scrutiny process

→ Arguments against the proposition

① Various initiatives taken for better scrutiny based on public demand

- eg. • Performance budgeting - 1968
- Gender Budgeting → 2005
- Outcome Budgeting → 2008

- ② Criticism of Budgetary processes led to various reforms like,
- ① Merger of Rail and Normal Budget
 - ① Doing away with plan & non plan distinction
 - ① Advancing cycle of budgeting as per economic year cycle.

- ③ e-Governance → has led to more ready access to budget statement, revision of estimates as well as actuals → leads to better public scrutiny.

Thus, there have been measures taken for better public scrutiny but more needs to be done in terms of educating and building people's capability to enforce budgetary accountability.

15.

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

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

उम्मीदवारों को इस हार्शिए में नहीं लिखना चाहिए
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India is world's biggest milk producer, and also has largest cattle population as per livestock census. However, productivity of dairy animals is a cause of concern.

→ Issues & reasons for dairy productivity of animals

① low natural productivity

↳ World average → 4000 liters/lactation
↳ India average → 2000 liter/lactation

② Tropical climate cattle has lower productivity than temperate climate

③ Poor quality of feed and fodder provided.

- ④ Poor expansion services provided in form of veterinary support, vaccination, medication, farmer education etc.
- ⑤ High disease prevalence → affects productivity
- eg. Recent lumpy skin disease in cattle.
- ⑥ Poor farmers → thus lack of finances to improve productivity through steps like quality breeding.
- ⑦ Breeding → still traditional methods used. Absence of technology uptake.

→ Measures taken

- ① Rashtriya Gokul Mission
- ② National Animal Disease Control program
- ③ Breeding of high productivity breeds like Gir Sahi etc.

→ Measures needed

- ① Provision of ~~a~~ monetary and extension support to farmers, particularly in dryland agricultural regions.
- ② Feed improvement program with focus on fodder crop development
- ③ Quality control by restricting Pesticide use in livestock crop farming
- ④ Advanced breeding technology uptake
eg. Artificial insemination.

Proper implementation of above measure would help to ensure income security, as well as ^{address} disparity associated with livestock farming regions

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)

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इस दृष्टि में
नहीं लिखना
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Most projection on climate change hold, that with current level of climate action, we would fail to restrict global rise in temperature below 2°C by end of century.

This doesn't bode well for humanity, particularly agriculture sector.

→ Role of Climate change in Crop failure.

① Increased Global temperature
→ Greater risk of crop diseases
and pest attack

eg. locust attack in 2020.

② Risk of drought and associated crop failure.

eg. Horn of Africa → facing severe drought → due to triple dip
La Nina.

③ Rise in frequency of extreme events, like, Elnino, tropical cyclones, Heat waves → these impact crops directly & indirectly.

④ Changing pattern of rainfall → impact season cycle of agriculture.

eg. ~~change~~ unpredictability of western Disturbance → impact productivity of Rabi crops.

→ Role of agri-sector in climate change

① Contribution of Green house Gases

① through methane emission from livestock sector and paddy cultivation

② Farm mechanization →

Use of ~~no~~ fossil fuel based machines → emission of CO_2

③ Poor waste disposal → eg stubble burning

- (4) Use of pesticides → Ozone depleting substances.
- (5) Poor agri practices → eg. shifting cultivation

→ Strategy adapted under National Agri - Disaster mg management plan

- (1) Research and adoption of Drought resistant crops
- (2) Use of Agronomic practices
- (3) Focus on Sustainable Agriculture → Environment friendly inputs.
- (4) Agro ecological zoning of cropping.
- (5) Crop diversification.

There is need for the government to support and incentivise sustainable agriculture adoption by farmers, to balance economic and environmental concerns 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 हिसाब में नहीं लिखना चाहिए
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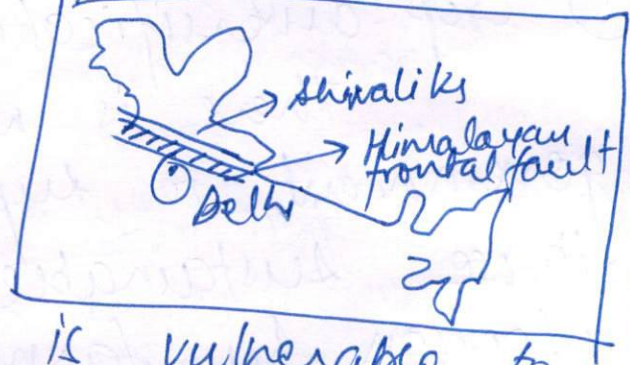
Recent disastrous earthquake at Turkey, should come as an eye opener for government & planner in Delhi, as the latter too has similar risks associated with earthquake.

→ Vulnerability of Delhi to Earthquake

① Located in Zone IV of Earthquake due to closeness to faultline like Himalayan frontal ~~front~~ fault (HFF)

② High seismic gap

↓
Researchers believe that North India is vulnerable to a major earthquake, due to long term seismic gap since last major earthquake.



- ③ High population density of Delhi makes it more vulnerable
- ④ Lack of structural resilience of permanent building and temporary quarters in slum areas
→ due to haphazard urbanization.
- ⑤ low capacity of local people in terms of awareness on mitigation, response and preparedness measures

↳ Institutional measures

- ① National Building Code (NBC) has incorporate E&D resilience measures.
- ② Bodies under Disaster management Act 2005,
 - National Disaster Management Authority (NDMA)
 - National Disaster Response force (NDRF) → for rescue and response measures.

(3) NDMA guideline on EQs.

(4) Disaster Risk reduction (DRR) measures
eg. Coalition for Disaster Resilience
Infrastructure (CDRI)

→ Gaps in existing framework

(1) Poor enforcement of Building Code.
↳ Most buildings in Delhi lack
Earthquake Resilience, fire
proofing etc.

(2) Focus more on response oriented
measures rather than prevention
and prepared-ness

(3) Lack of public involvement in
Earthquake resilience action.

→ Way Forward

- Structural audit & enforcement
for buildings
- Local capacity enhancement
- Balanced Urbanisation.

18.

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

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

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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Net energy gain refers to phenomenon when amount of energy generated by nuclear fusion reaction, is greater than, amount of energy deployed during the reaction.

It is a major breakthrough as it allows the potential utilization of Nuclear fusion reaction to generate electricity.

→ Advantages of Nuclear fusion based power

① Clean energy → as ~~by product~~ it doesn't release any ~~to~~ Green house gas. By product is water.

- ② Safe energy → as it doesn't generate radioactive wastes as in case of fission reaction.
- ③ low risk of Nuclear proliferation → as it utilizes non fissile raw material i.e isotopes of Hydrogen.
- ④ Higher amount of energy generation, if reaction is stabilised for long period of time.
- ⑤ low cost energy in long term.

→ limitations in using it at commercial scale

- ① Still research at initial phase.
- ② lack of net energy gain → in most of fusion reactors.
- ③ Risks of misuse of technology to create Nuclear fusion weapons

④ High cost associated with research and initial deployment.

India should continue to partner with countries in research related to Nuclear fusion. eg. ITER reactor at France, and also enable local research centre to explore possibility of future Nuclear fusion power deployment. eg. Plasma Research Centre at Pune.

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 हार्जिन में नहीं लिखना चाहिए
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Prevention of Money Laundering (PMLA) Act, 2002, is the central legislation to address the menace of Money laundering in the country.

Recent Amendments

→ Powers to attach property of offenders
→ Cross border Jurisdiction to investigate Money laundering crimes

→ make legislation more compatible with global AML/CTF agenda under FATF.

→ Efficacy of PMLA

① Positives

① Gave legal framework for investigation and action against money laundering.

② Addressed organised crimes which are inherently linked with money laundering activities

③ Curbing tax crimes.

④ Enhance recovery and attaching of property under Money Laundering Act.

⑤ Reduced financing of terror, particularly in J&K.

→ Negatives

① Difficulty in coordination with respect to cross border money laundering

② Taking up associated crimes like Drug smuggling, tax crime, in siloed approach from Anti-Money Laundering Act.

- (3) Allegations of misuse of PMLA law by using it against political opponents.
- (4) Pressure of tax haven nation that hinder action under the Act.

There is urgent need to bring greater cross country cooperation under FATF to bring better efficacy through PMLA Act 2002.

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)

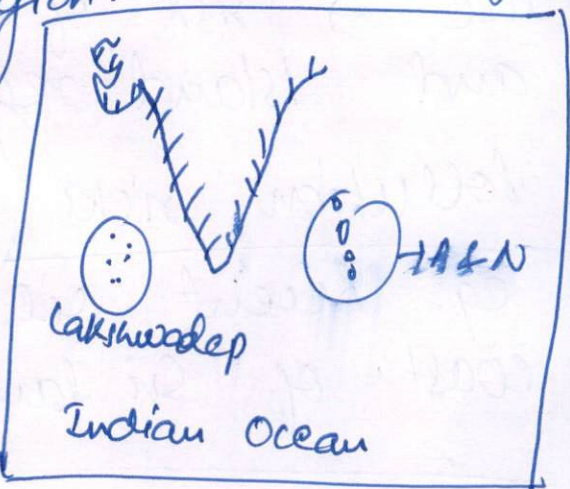
Discuss the security threats present in the Indian Ocean Region (IOR), which have a direct bearing on India's maritime border interests. Suggest a robust strategy to deal with these threats. (Answer in 250 words) 15

उम्मीदवारों को इस हार्जिए में नहीं लिखना चाहिए
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India has 7500 km long coastline which exposes it to, multi-tude of security threats, posed by Indian Ocean Region.

→ Conventional Security threats

① Military threat posed by adversory navies like Pakistan and china



② Piracy → most prevalent in the Horn of Africa Region

③ Terrorism → Infiltration of terror element through ocean
eg. 26/11 terror attacker took ocean route.



④ Rising belligerance of China to dominate IOR.

→ Unconventional security threats

- ① Disasters → in form of Tsunami, cyclone, sea storms etc.
- ② Climate change → induced sea level rise → risk of inundation coastal and island regions
- ③ Pollution risks
eg. Recent oil spill around the coast of Sri Lanka.

→ Bearing on India's border interests

- Impact on India's position as net security provider
- ^{climate} refugee crisis → due to inundation of islands
- Security threats due to border conflict eg. Sir Creek & Cori Creek.

→ Robust strategy

- ① uphold the long held principle of Indian ocean as 'zone of peace'
- ② Develop Naval capabilities → Blue Navy status
- ③ Cooperation with other states in Indian Ocean through various forums like IORA, IOPI etc.
- ④ Development of HADR capabilities
- ⑤ Coordinate with like minded countries to challenge influence of china eg. QUAD
- ⑥ Maritime Patrol → eg. CORPAT with Thailand.

IOR strategy should be driven by vision of SAGAR - Security & Growth for all in the Region.

SPACE FOR ROUGH WORK

Foreign strategy

upheld the long held principle of Indian economy as peace

Develop naval capabilities
Give high status

Cooperation with other states
in Indian Ocean through various forums like IORA, BRIC etc.

Development of HADR capabilities

Cooperate with like minded

countries to change influence of China in Indian Ocean

Maritime India 2020
with Thailand

our strategy would be driven by vision of security & prosperity for all in the region

