



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. : 1304965

अभ्यर्थी का नाम/Name of Student : SHIVAM KUMAR

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

27/08/2023

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

केंद्र

Centre code 011

RVA first degree college
Bengaluru

निरीक्षक के हस्ताक्षर
Invigilator's Signature

27/08/23

	महत्वपूर्ण अनुदेश 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।	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 से सम्बन्ध न हो।	Do not write in the QCA Booklet anything other than the actual answer such as couplet, obscene, abusive expression etc., nor put any sign/mark having no relevance to the answer.
3	परीक्षक को प्रत्यक्ष/अप्रत्यक्ष रूप से कोई भी प्रार्थना/धमकी भरी बातें न लिखें।	Do not make any direct/indirect appeal/threat to the examiner.
4	उत्तर अस्पष्ट अथवा गंदी लिखावट में न लिखें। इस प्रकार के उत्तर का मूल्यांकन नहीं भी किया जा सकता है।	Do not write answers in bad/illegible handwriting. Such answers may not be evaluated.
5	उत्तर स्याही में ही लिखें। उत्तर लिखने के लिए पेंसिल का उपयोग न करें, हालांकि आरेख, चित्र इत्यादि बनाने के लिए पेंसिल का उपयोग किया जा सकता है।	Write answers in ink only. Do not use pencil for writing the answers. However, pencil may be used for drawing diagrams, sketches, etc.
6	प्रवेश पत्र में उल्लेख किए गए माध्यम के अलावा अन्य किसी माध्यम में उत्तर न लिखें। अधिकृत और अनधिकृत की मिली जुली भाषा का भी उपयोग न करें।	Do not write answers in medium other than the authorized medium in the Admission Certificate. Do not use mixed language either i.e. authorize and unauthorized media together for writing answers.
7	प्रश्नों के उत्तर ठीक उसके नीचे दिए गए निर्धारित स्थान पर ही लिखें। निर्धारित स्थान के अलावा किसी अन्य स्थान पर लिखे गए उत्तर का मूल्यांकन नहीं किया जाएगा।	Write answer at the specific space (right below the question) only. Answers written elsewhere at unspecified places in the booklet shall not be evaluated.
8	यदि आप अपने किसी उत्तर को रद्द करना चाहते हैं तो उसे पेन से काट दें तथा उस पर "रद्द" लिख दें, अन्यथा उसका मूल्यांकन किया जा सकता है।	If you wish to cancel any work, draw your pen through it and write "Cancelled" across it, otherwise it may be valued.

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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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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 is ensuring the food available for every citizen in the country.

Dimensions of food security

- ① Availability of food → per capita sufficient food in each plate
- ② Accessibility of food to ~~downtrodden~~ and vulnerable sections
- ③ Accessibility of quality food.
↳ Decent & balanced diet with nutrition in it
↳ Diversified food
- ④ Absorption of food by body for growth

India's status in Food security

- ① Availability of food → ~~se~~
→ more than 300 mn Ton of food grains
→ Net exporter of food
→ Top in horticultural production

② Accessibility of food to every individual

→ P M ~~A~~ Garib Anna Yojan

→ National food security act 2013
and Public distribution system (PDS)

③ undernourished children are highest
in India

④ stunting, wasting and overweight
conditions are prevalent

⑤ Global hunger index India's rank
101/146

Impediments :-

① Quality Food
Need diversification

② Leakage in
PDS system
Shantakumar
committee
recommendations

③ Fortification of
food is required
Vitamin D, Iron, Zinc

④ WASH strategy
promotion

Recent steps of promotions of nutritious
and thorough Agriculture marketing
such challenges are being tackled

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

Industrial revolution 4.0 through Blockchain and AI based chatgpt
has immense potential to transform agriculture.

Use of Blockchain to make agriculture efficient & sustainable

- ① Incorporation of blockchain in seed supply system
quality of seed
- ② contract farming in agriculture through Blockchain based smart contract
- ③ IP in agritech can be protected using Blockchain
- ④ Decentralized agriculture marketing using Blockchain
- ⑤ AI tag protection and smart organic product protection

use of chatGPT in agriculture to
make it sustainable and efficient

- ① Farmer awareness →
integration with Kisan Suidha
application
- ② Scientific temper inculcation using
ChatGPT based awareness
- ③ Grievance redressal and query
resolution of Farmer
- ④ Bringing awareness about modern
technology through AI.

Along with this Blockchain & GPT
together can be used in
land reform → net digitization
land pooling and economy of scale

However, low penetration of digital
knowledge (25%) and digital divide
is major hurdle.

Smart agriculture provide alternatives
to solve many challenges.

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 ~~not~~ write on this margin

De-dollarization is ~~one~~ process of reducing hegemony of US dollar on world trade & transactions crossborder.

Factors that led to dedollarization

① Russia-Ukraine war and sanction

of trade with Russia

→ alternative mechanism are explored

→ Ruppee-Rubal trade

② USA dominance in fiscal consolidation

of nation and its impact on global inflation

↳ countries looking for decoupling

③ right policy of US Federal Reserve

↳ effect such as ~~to taper~~ global recession

④ USA unilateral sanctions on nations

→ IRAN, India, China

⑤ Countries looking ~~at~~ alternative to
Bretton Woods organization

Dollar will loose dominance?

Yes

① Increasing
regional trade

Such as
China - Russia
trade in yuan

② Demand from
global south.

③ Increasing demand
for BRICS
currency

④ weakening
western position

NO

① current 85% of world
trade in dollars

② one of most accepted
currency

③ USA economy is
worlds biggest

④ Dominance of dollar
in ~~fact~~ of
majority countries

⑤ most accepted
currency -
hard currency

However, ~~to~~ in recent years ~~the~~
dollar will not loose its
market but in long term more
alternatives will be available
in the global market.

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

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

continuous cases are heard against India in WTO for subsidies given to farmers and agriculture

eg Recent case of fisheries subsidy

eg sugarcane subsidy and PDS system related MSP.

India has ensured peace clause in WTO for subsidies continuation.

Merits in policy support for poor through Food Security

① It ensure food security in country

↳ wheat, rice production increased due to MSP regime

② WTO under Blue box and Green box allows non trade distorting subsidy.

③ In India Farmers income is much less compared to west → need support for inputs

⇒ Fertilizer subsidy on urea

④ Per capita Food subsidy in India is around \$45 but in USA it is \$700

⑤ Agriculture structural changes are possible with subsidy as low private investment

⇒ PM KUSUM scheme, orientation for organic farming

⑥ India's rank in global hunger Index (101/146) poor than west nation

⑦ DPSP calls for ensuring food security in countries.

Indian government should ensure avoidance of subsidies such as Farm loan waiver, and bring more structural change, through capital investment.

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

As per Notiaayog by 2030, half of India's water need will be unmet.

Government's steps in addressing water needs:-

- ① Jal & Jwan mission - Rural and urban for piped water availability
- ② River interlinking project to make water available in southern states
 ↳ Koshi - Michi Project
 Ken - Betwa project
- ③ Namami Gange programme - for river water cleaning of Ganga.
 → Aktha Ganga project
- ④ Integrated water management with world bank aid.
- ⑤ State level project such as Bihar's 'Har Ghar Nal se Jal'

However,

- 1) water is contaminated in most of rivers in India
- 2) around 30 lakh people do not get basic need of 4 Liter per capita per day water in India,
- 3) 30/100 most water stressed cities in world are in India.

Require Following measures

- 1) community participation in water management
- 2) Rain water harvesting sensitization
- 3) one water approach
 - ↳ waste water treatment → urban area produce 72 lakh liter per day waste water
- ④ mandatory zero discharge ~~to~~ policy in industries
- ⑤ Promotion of behavioural change through life campaigning → water wastage is major issue.

Clean and safe drinking water is universal right under UNHCR principles

6.

आर्कटिक में हिमनदों के पिघल कर संकुचित होने के लिए उत्तरदायी कारक क्या हैं? पारिस्थितिकी तंत्र पर आर्कटिक हिमनदों के पिघलने के संभावित प्रभाव का वर्णन कीजिए। (उत्तर 150 शब्दों में दीजिए)

What are the major drivers of glacial retreat in the Arctic? Describe the potential impact of the retreat of Arctic glaciers on the ecosystem. (Answer in 150 words)

10

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

Arctic anomaly refers to fast melting of glacier in arctic region compared to other areas.

Reason for retreat of glacier in Arctic :-

① Increase impact of global warming
→ IPCC report → Arctic is at tipping point

② black carbon emission and deposition in arctic glacier.

Black carbon → reduces albedo
↓
more warming

③ Pollution and increase in sea surface temperature due to oil spill in arctic ocean

④ more human intervention in Arctic exploration

④ weakening polar vortex causing
Arctic retreat.

Potential impact of Arctic retreat

① Biodiversity loss → local biodiversity
is at threat

→ Polar bear population
declining

② Permafrost thawing → release of
harmful microorganisms → Threat
to local system

③ Increase in sea level → submergence
of arctic ecosystem.

④ Further weakening of polar vortex -
Viscous cycle of glacier melting

⑤ submergence of nearby island such
as. Iceland, Greenland

To prevent such retreat, immediate
efforts on controlling global warming
is required.

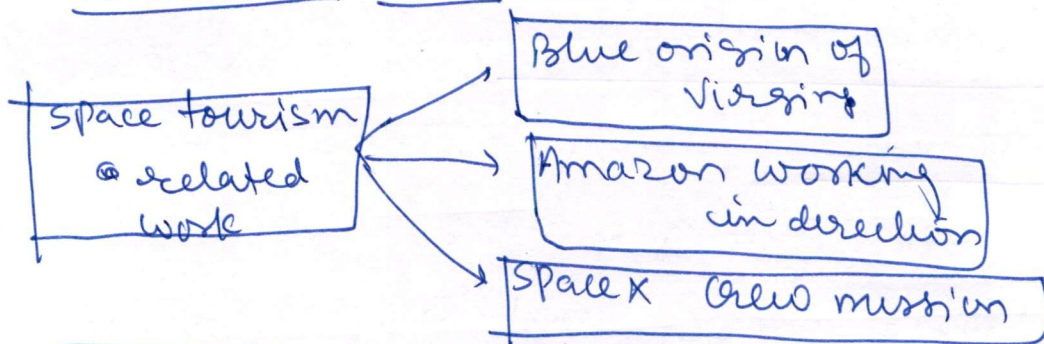
Threat to ecosystem at one place
is threat to ecosystem everywhere

7.

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

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

Space tourism taken new beginning with Virgin ~~and~~ Aerospace, finally took three ~~customers~~ civilians to outer space tour.



Challenges to Space tourism

- ① Extremely costly activity → affordable to only few
- ② Chances of loss of life of crew member due to any miscalculation
 → loss of life in earlier trial
- ③ more and more commercialization of space will take place
- ④ chances of increasing space

Pollution due to these flights

⑤ Space debris is becoming major concern

↳ Kessler syndrome will become reality

To deal with such challenges: -

① Development of proper space tourism code:

2) Reusable space vehicle technology development

3) legal responsibility of debris clearance on companies

④ Adoption of clean space fuel to avoid pollution

⑤ Mechanism to prevent militarization of space in wake of space tourism.

⑥ ~~Clear~~ clear laying down the legal responsibility space mishaps.

Space tourism has become reality and opens a new domain of commercial interest in it.

8.

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

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

10

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

CRISPR-Cas9 technology is related to gene editing to bring changes in DNA of genome.

CAR-T deal with changes at base pair

~~the~~ limitation of CRISPR-Cas9

① Require many inputs such as Cas9

② Require target detection
precision

③ costly and not effective in cancer treatment

Role of CAR-T is widely discussed due to

Increase in effectiveness

- ① It uses ~~from~~ T-RNA to transfer code information to immune cell.
- ② Development of antigen at the input site
- ③ Then injection of such powerful DNA Antigen to fight with cancer cell.

Advantage :

- ① No external Foreign agent included
- ② Protection of safe & healthy cells.
- ③ effective treatment process

This is reason why CART is discussed as alternative to deal with limitation of CRISPER CAS-9 technology.

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

Technology related intervention by extremist organizations have become major threat.

In
Deployment of Technology by extremist organizations:-

- ① Use Drones For remote attack
for Attack on envoy in JK
- ② using Darknet to smuggle drugs
↳ nexus between organized crime & Terrorism
- ③ using cryptocurrency for financial transaction
- ④ cyber attack on national critical infrastructure → ransomware attack
- ⑤ cyber bullying, cyber threat

These require immediate attention:-

due to following :-

- ① increasing capability and damage potential of such extremist activities
- ② Anonymity and of tracks are increasing
- ③ difficult to trace them with cryptocurrency use.
- ④ use of Drone to remote attack make them more vigilant

To deal with such increasing use of advance Tech by extremist organization :-

- ① ~~to~~ Augment defence capability
- ② Protection by Air Firewall on critical system
- ③ Advance technology in national cyber cell
- ④ Increasing manpower in cyber cell
- ⑤ decentralization of regulation

Need to increase adoption in security measures at same rate.

10.

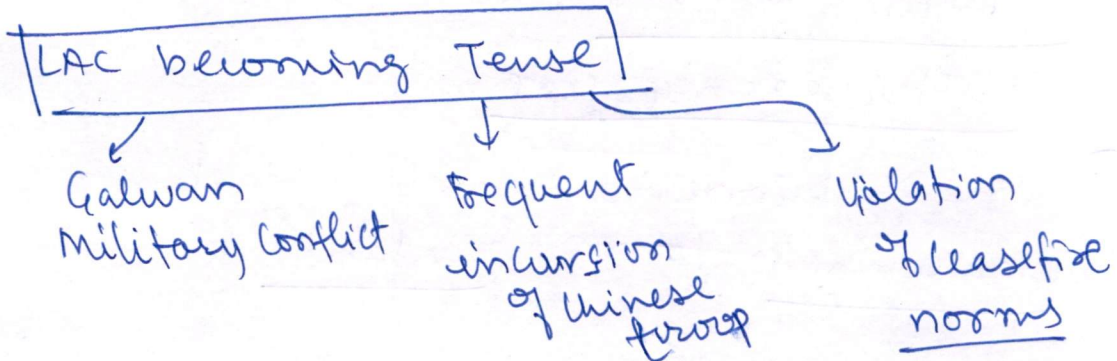
गलवान और यांगस्ते की घटनाओं के बाद वास्तविक नियंत्रण रेखा (LAC) पर तनाव बना हुआ है तथा भारत एवं चीन दोनों सीमावर्ती क्षेत्रों में अपने बुनियादी ढांचों को सुदृढ़ कर रहे हैं। इस क्षेत्र में ITBP द्वारा निभाई जाने वाली भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए)

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

10

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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Line of actual control (LAC) is
ceasefire location in western
boundary of India and Pakistan.

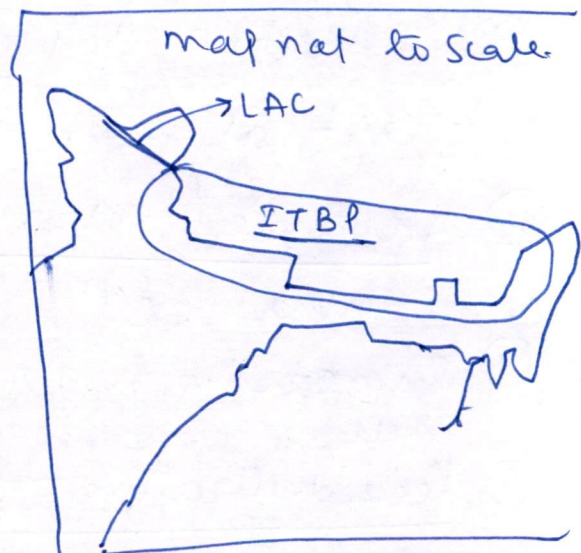


ITBP → Indo-Tibetan Border Police

is paramilitary force with
responsibility of guarding India
China Border.

Role of ITBP

- ① Safeguard the International border with China



- ② Secure the trade based on
rules across borders
- ③ Provide security to prevent
smuggling and to cross passing
across border.
- ④ Maintenance of ceasefire agreement
across LAE
- ⑤ In case of Conflict, protect the
border
→ Doklam & Galwan issue
- ⑥ Helps in development of intra new
international border under
Border area development Plan (BADP)
- ⑦ ~~ITBP~~ ITBP coordinate with SSB
and Assam rifles for better
coordination
- ⑧ ITBP engages with local to
increase trust in these regions.

Recent initiative of development of
Vibrant village Program will be
successful with help of 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)

15

Land productivity is system where agriculture productivity is measure based on output per acre.

Irrigation or water productivity (IPW) is based on output per unit of water used in production. IPW is based on outcome based on input.

Issues with 'land productivity' based assessment

① Unscientific agriculture practices
↳ more irrational use of inputs
such as fertilizers, water -

② Land productivity is narrow approach.

③ India 80% land is small & marginal
So, this system is inefficient

④ Do not provide actual structural issue in agriculture

Need for "Irrigation water productivity"

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

- ① current irrigation system efficiency ~~is~~ around 34-35%.
- ② Ground-water exploitation 80% due to agriculture
- ③ water wastage and low efficiency of water
- ④ water stressed condition in India
→ many cities such as Bengaluru water crisis.
- ⑤ Contamination of lake and river water due to excessive use.

Challenges in making the shift to ~~IP~~ IWP.

- ① lack of availability of water meter ~~are~~ in farm sites
- ② unregulated groundwater utilization
↳ no means to measure it
- ③ Absence of hydrological data availability
- ④ Silo based approach in water management

- ⑤ Resistance from farmers to
used efficient irrigation system
↳ High cost of drip irrigation
- ⑥ low awareness among farmers
- ⑦ around 48% of land is drained
in India
↳ assessment difficult
- ⑧ Lack of electricity / affordable electricity
system in rural areas.

Measure to increase effectiveness.

- ① promotion of 'per drop more crop'
campaign
- ② Training of farmers on scientific
use of water
- ③ Integrated Pesticide management &
Fertigation (Fertilizer + Irrigation)
to farmers
- ④ Financial support for microirrigation
system.

Increasing water efficiency in
agriculture will move it on
step closer to sustainable agriculture.

12.

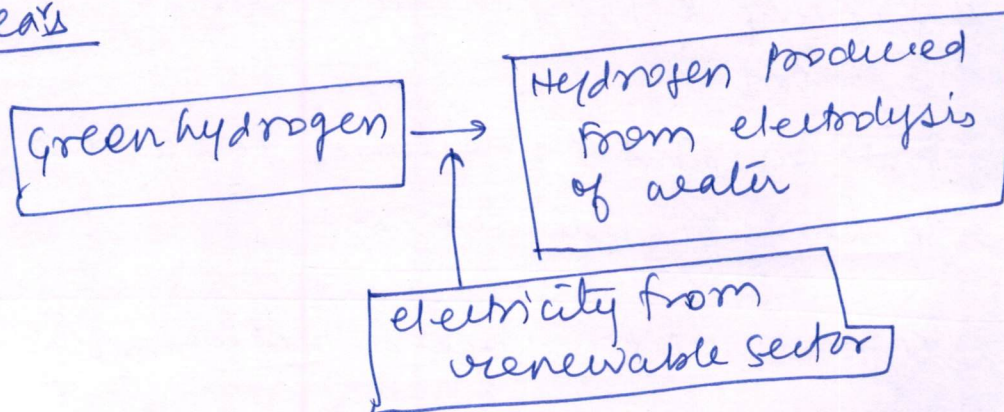
भारत की ऊर्जा सुरक्षा प्राप्त करने में हरित हाइड्रोजन की भूमिका का परीक्षण कीजिए। राष्ट्रीय हरित हाइड्रोजन मिशन, भारत की अपने ऊर्जा लक्ष्यों को प्राप्त करने में किस प्रकार मदद कर सकता है? (उत्तर 250 शब्दों में दीजिए)

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

15

Government has launched national green hydrogen mission (NGHM) with outlay of 19000 crore for next five years



Green hydrogen in in energy security in India

① Hydrogen fuel & hydrogen cell efficiency
is higher compared to fossil fuel.

➤ IC engine based vehicle → efficiency around 30%.

hydrogen fuel cell → more than 60%.

② energy storage system to utilize
1000 GW + potential of solar
energy in India

- ③ Transportation of energy from long distance is cost effective with green hydrogen
- ④ ~~Not~~ Green hydrogen will be reducing dependence of fossil fuel imports
→ 80% of oil demand met through imports
- ⑤ emission and transition towards green energy system.

Challenges with green hydrogen leading to energy security

- ① high cost of production of hydrogen in electrolysis
- ② unavailability of large electrolyser capability in India
→ import dependence
- ③ water wastage and water security dilemma
- ④ Hot water post Electrolysis is contaminated
- ⑤ lack of adoption in industries

Role of NQHM in achieving such energy goal

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

- ① Industrial push for electrolyser production in India
- ② Integration of sustainable mechanisms in supply chain of green hydrogen
- ③ Aim of adding 50 GW to renewable capacity by 2030.
- ④ Reduction of price of ~~gas~~ production
→ current price is more than 500 Rs per kg to below 300 Rs per kg
- ⑤ Mobilizing international finances in green hydrogen production
- ⑥ Increasing awareness with respect to green hydrogen

NQHM aims to deal with present challenges and provide financial and Technological thrust. It successful will help in fulfilling SDG goal of clean energy and Panchamukha target.

13.

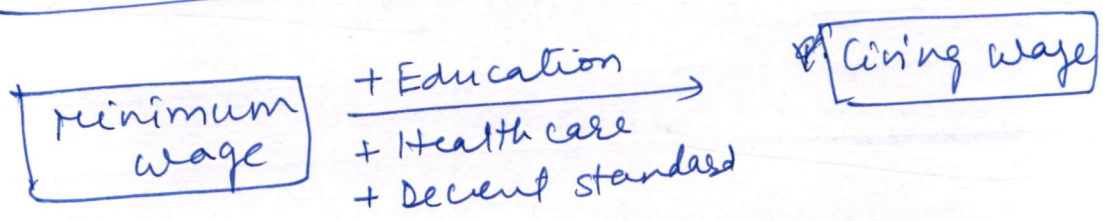
हाल के दिनों में, सरकार न्यूनतम पारिश्रमिक की जगह जीवन निर्वाह पारिश्रमिक को अपनाने पर विचार कर रही है। भारत में जीवन निर्वाह पारिश्रमिक को अपनाने के लाभ और इसमें विद्यमान बाधाएं कौन-सी हैं? (उत्तर 250 शब्दों में दीजिए)

The government has been weighing a transition from minimum wage to living wage in recent times. What are the benefits and constraints in the adoption of living wage in India? (Answer in 250 words)

15

Minimum wages are those ~~ba~~ basic wages that are required for a substance and fullfill basis minimums need such as food. shelter & clothing.

Living wages are minimum wage in addition with affordability of decent standard of living such as healthcare, education etc.



Need for transition to minimum living wage

① DPSP calls for state to ensure decent standard of living

② Traditional definition of poverty

require minimum wage.
but multidimensional poverty address

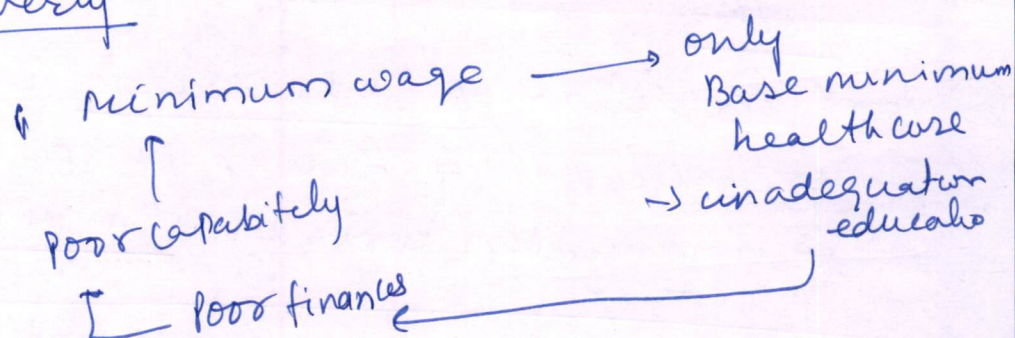
require living wages.

- ③ cost of living has increased due
to associated expenditure
→ Housing inflation

Benefits of living wage assurance

- ① Provide financial security in
long term

- ② Breaks the vicious circle of
Poverty



- ③ will reduce inequality in
Urban areas

→ Oxfam says top 10% population
has 68% wealth -

- ④ Dignified life will be ensured

- ⑤ will address the challenge of
relative poverty

constraints in adoption of living wage

- ① no legal mandate on companies
- ② ease of doing business will be hindered
- ③ Financial burden on government to provide subsidy to organizations
- ④ Informal nature of economy.
→ 90% of workforce is in informal sector
- ⑤ poor condition of MSME sector
↳ challenge of dwarf MSME
↳ Financially constraint MSME

Measures to deal with constraints

- ① Increase social security coverage
↳ current Insurance penetration below 5%.
- ② Upskilling, reskilling of workers to increase increased productivity
- ③ legal mandates on organizations for living wages
- ④ Formalization of economy through digitization.

In this way, more adoption of living wage can be ensured.

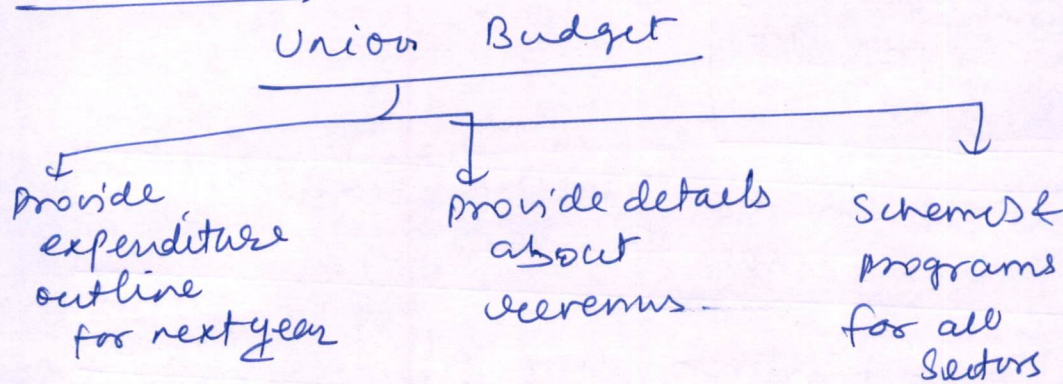
केंद्रीय बजट भारतीय अर्थव्यवस्था के लगभग हर क्षेत्र को प्रभावित करता है, फिर भी न तो बजटीय प्रक्रियाएं पर्याप्त सार्वजनिक जांच के दायरे में आती हैं और न ही बजट नीतियां। क्या आप इस कथन से सहमत हैं? अपने उत्तर का औचित्य सिद्ध कीजिए। (उत्तर 250 शब्दों में दीजिए)

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

उम्मीदवारों को इस हाशिए में नहीं लिखना चाहिए
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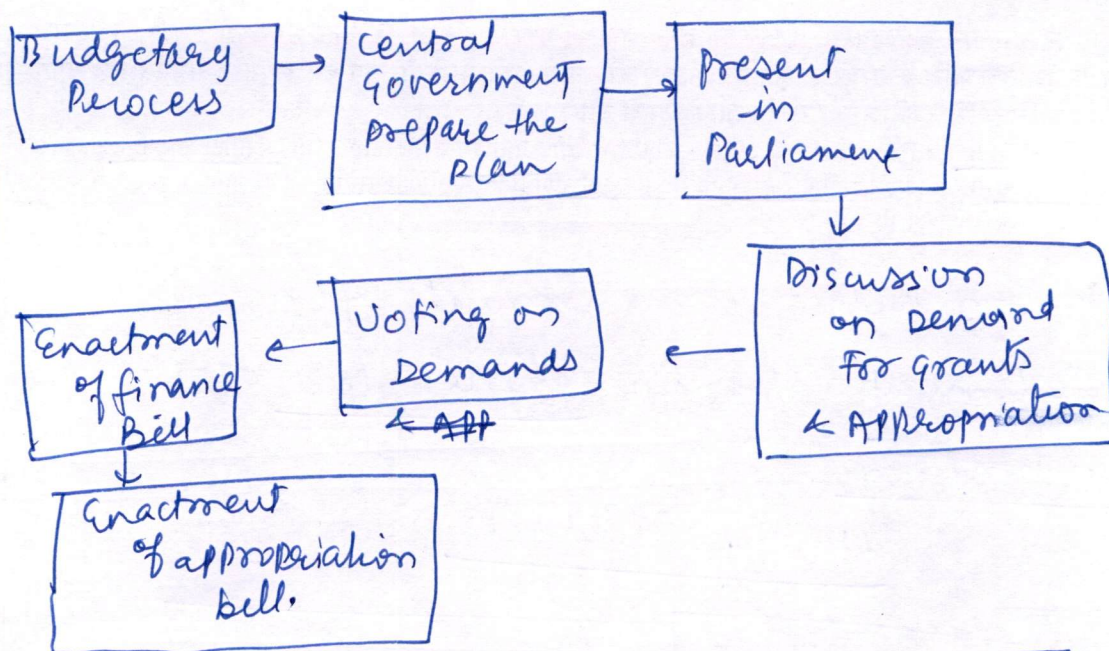
15

Union Budget is annual financial statement under article 108 of constitution.



Union Budget affects all sector of economy

- ① Direct provision for agriculture
 ➔ Budget 2023 → PACS provision
- ② Education section scheme for regulating ed-Tech in 2023
- ③ Taxation corporate and personal.
- ④ Green growth, energy provision in Budget 2023
- ⑤ Inclusive growth and programs for MSME.



Budget is not direct scrutiny of people

- ① Budget is an legislative affair
- ② Details of budgets are revealed directly on day of budget announcement
- ③ Limited pre feedback taken from public
- ④ General public cannot object some government schemes if not agreed.
- ⑤ Discussion and deliberation among Parliamentarian
- ⑥ 70% budget in last 10 years passed without discussion — PRS survey data

⑦ Gulating Process is used at end.

Provisions of Public Scouting

- ① Citizen can put opinion about the schemes & initiatives
- ② Representative of Public (MP) are there to debate on concerns

Measures to make it more Substantial

- ① Citizen's Feedback of Scheme launched
- ② Incorporation of public opinion in Parliamentary debates
- ③ Proper market assessment about the benefits of scheme and disclosure of data in public domain.
- ④ Involvement of Pressure groups and civil society organization in organizing public debates

Budget 2023 provisions were discussed by Prime Minister through several webinars. Such initiative promotes more 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 हाशिए में नहीं लिखना चाहिए
Candidates must not write on this margin

15

India is presently the largest milk producer in the world.

Transition from milk deficit to milk largest producer.

- ① operation white revolution
to boost cattle care and productivity
- ② corporate movement is successful in milk business
 - ↳ Nandini in Karnataka
 - Amul in Gujarat
 - Sudha in Bihar
- ③ Separate animal husbandry ministry
- ④ Promotion of financial support to farmer in livestock raising.
- ⑤ Technological advancement such as cross breeding
- ⑥ Dairy infrastructure fund and Rashtriya Ki Gokul mission.

However the productivity is
major concern : — Reason: —

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

- ① one of lowest compared to other
leading nations
→ New Zealand productivity
- ② Economy of scale in livestock
rearing is less
- ③ ~~corper~~ cooperatives are confined
to few areas.
↳ lack of availability in north
eastern, eastern states
- ④ challenge of livestock diseases
such as Anthrax,
- ⑤ use of excessive fertilizer in
in feed crops reducing
productivity.
- ⑥ unscientific means of rearing
causing long term impact
→ use of banned oxytocin
- ⑦ non availability of adequate
→ livestock monitoring system

To Boost the productivity : →

- ① using medical care on line of one health approach
- ② increasing number of veterinary doctors.
- ③ quality feedstock availability
- ④ promotion of cattle/Animal Adhar to have more data driven approach
- ⑤ Scientific approach awareness among farmers about livestock rearing
- ⑥ Integrated agriculture approach
- ⑦ increasing financial support to farmer through Kisan Credit Card (KCC)
- ⑧ Increasing outlay under Dairy Infrastructure development fund

Increasing productivity of cattle will ensure more income and help in doubling farmer's income - Ashok Dalwai committee -

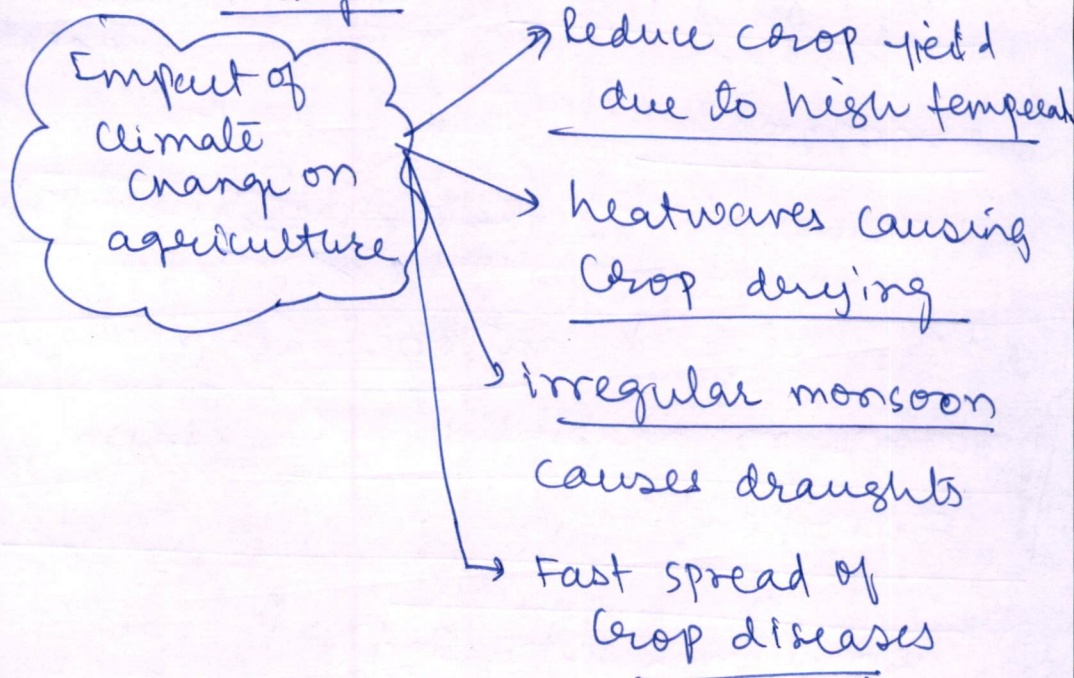
16.

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

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

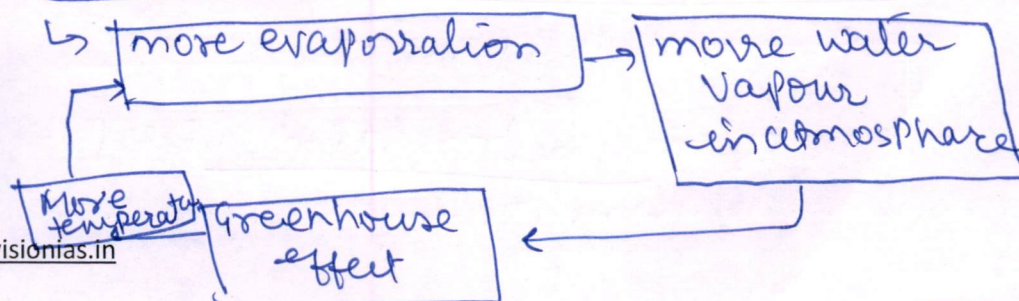
15

Ipcc sixth assessment report highlighted the vulnerability of agriculture due to extreme climate change



Agriculture practices are also causing & contributing to extreme climate events:-

① Increasing use of excess water



- ② Practice such as stubble burning in western India causes Pollution and increase in carbon levels
- ③ excessive use of fertilizer disturbs the natural geological cycle and cause green house effect due to global warming potential
- ④ clearing of forests causes climate change
- ⑤ monocropping is responsible for accelerating the drought impacts

In this regard national agriculture
Disaster management plan takes
Following steps:-

① Prevention & mitigation →
strategy

↳ Increasing crop insurance coverage

↳ currently only 30% are covered

↳ climate resilience crops such
as millet's promotion

↳ use of microirrigation, Drip
irrigation

Preparedness step

- 1) Providing information related to disaster with early warning system
- 2) Plastic mulching, natural mulching ~~para~~ Practices for heat stress of crops.

Response mechanism

- 1) Providing water for irrigation under drought condition
- 2) Provision for financial help to farmer community
- 3) Scientific agriculture practices for sustainable agriculture

Recovery mechanism

- 1) Providing insurance amount to farmer's damage
- 2) Providing financial aid.

Making agriculture resilience with National Agriculture disaster management Plan will help in ensuring Food Security.

17.

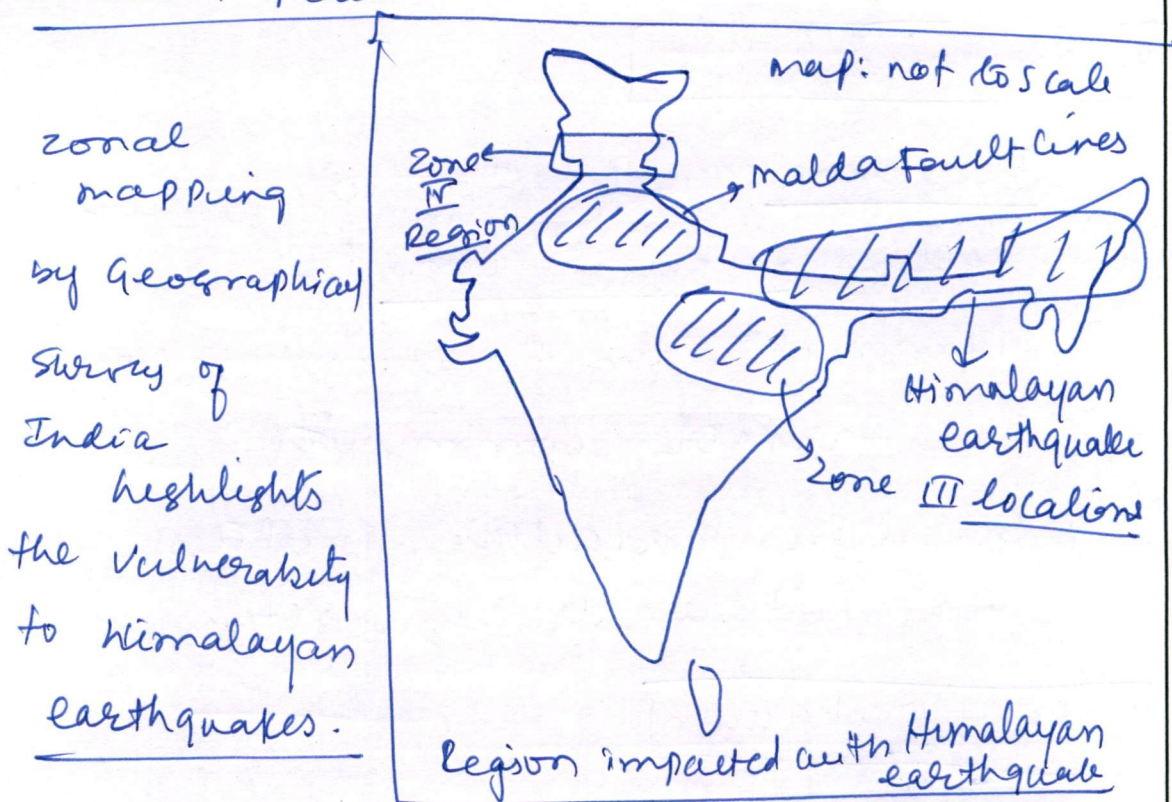
दिल्ली सहित भारत के कुछ क्षेत्र हिमालय में आने वाले भूकंपों के प्रभाव के प्रति अत्यधिक संवेदनशील हैं। विवेचना कीजिए। भारत में भूकंप से होने वाली हानि को कम करने के लिए कौन-से संस्थागत उपाय किए गए हैं? क्या आपको लगता है कि कुछ उल्लेखनीय कमियां अभी भी मौजूद हैं? (उत्तर 250 शब्दों में दीजिए)

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 हाशिए में नहीं लिखना चाहिए
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Earthquakes are due to shaking of tectonic plates and India lies on confluence of Eurasian plate and Indian Plate.

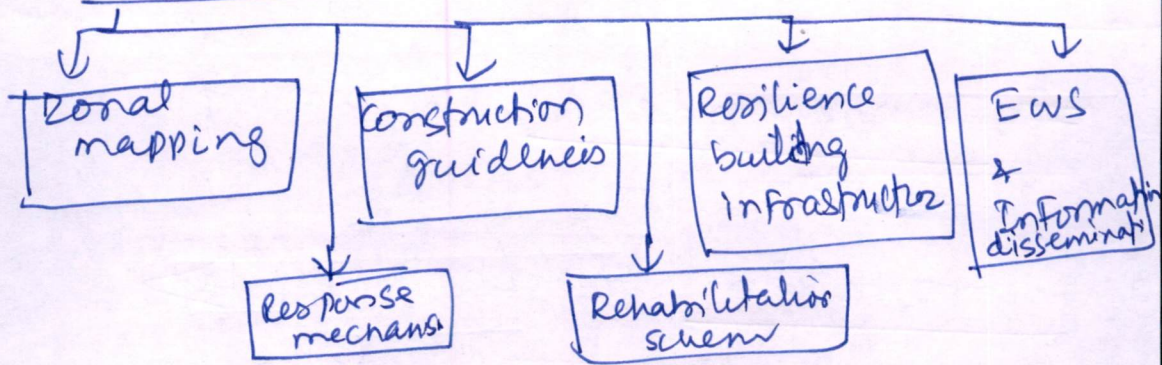


Institutional measures taken for this

- ① Early warning system with incorporation of seismology technology

② NDMA Guidelines For Earthquakes

6 Pillar guidelines



③ BIS standards For Buildings in vulnerable areas.

④ Sustainable Tourism and development of Himalayan areas.

Lacunas in institutional measures

- ① Inadequate capacity building as per NDMA guidelines
- ② Non strict implementation of BIS codes in building
- ③ Lack of incorporation of technology in response
- ④ community awareness missing

⑤ community participation required

measures to fill the gaps

① Gap Tan Bhagidari in DM of
earthquakes

② Incorporation of technology $\Rightarrow$
AR-VR use for simulation.

③ capability augmentation of local
bodies

$\hookrightarrow$ Providing Proves, training at
Panchayat Levels

④ community awareness to boost
response and vulnerability reduction

$\hookrightarrow$ School level campaign for
earthquakes

⑤ Implementation of BIS Building codes
strictly.

⑥ Sustainable tourism in Himalayan
region

Disaster = Hazard + Vulnerability

we cannot control hazard but adequate
measures can be taken for vulnerability
reduction.

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)

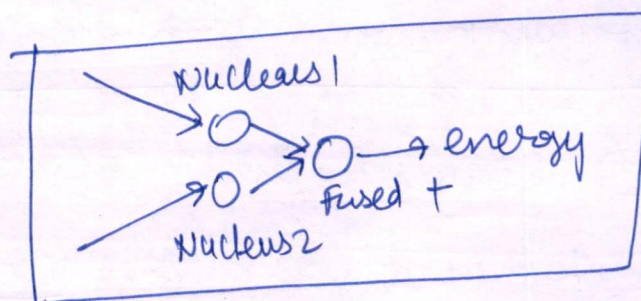
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Recently scientists in USA has announced successful generation of nuclear energy through fusion.

Apart from this Thermonuclear (TEFR) reactor initiative is there worldwide.

Advantage

Nuclear Fusion based energy process.



Advantage of nuclear Fusion based energy

- ① No threat of nuclear disaster such as Fukushima or chernobyl.
- ② No release of nuclear radiation as in nuclear fission process
- ③ Controllable unlike nuclear fusion fission

④ Clean source of energy → Potential
Solution of Clean energy

⑤ No requirement of radioactive
material

⑥ Help nation in achieving 2050-2070
net neutrality target

However there are Challenges with
nuclear energy generation through
Fusion on commercial scale:-

① Requirement of very high
temperature to conduct Fusion
of nuclei

② Input requirement for fusion
to take place is more than
the output received at present
level.

③ require high thermal performance
material to withstand the
temperature, near to sun like
condition.

- ④ Requirement of high amount of capital for establishment
- ⑤ Technology still at underdeveloped stage.
↳ done in laboratory in USA
- ⑥ negative sentiment with respect to nuclear energy is a hinderance
- ⑦ Absence of expertise in nuclear power
- Only few nations have the knowhow

To make nuclear energy through Fusion Process will also solve challenge of proliferation of nuclear weapon in name of enrichment of uranium.

India has around 1.7% share from nuclear energy. Such non-conventional & clean energy sources should be explored further.

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 हाशिए में नहीं लिखना चाहिए
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Prevention of money laundering act

(PMLA) 2002 aims to deal with illegal movement of money and conversion of black money.

Money laundering is process of legitimizing the illegally earned money and routing the same in formal transaction system.

Efficacy ~~Success~~ of PMLA act

- ① Provide power to enforcement directorate_(ED) to initiate cases of money laundering.
- ② Act as deterrence for those involved in such process.
- ③ Empower ED to attach confiscate the property of accused.
- ④ Recent amendment increased its application with incorporation.

of Politically exposed person

- ⑤ Any politically exposed person will be subjected to PMCA guidelines
- ⑥ PMCA provide framework that led to incorporation of know your customer (KYC) & AML (Anti money laundering guidelines)
- ⑦ Mandates ~~bank~~ banks to report the fake currency cases.
- ⑧ Recent amendment included provision for disclosure of all the digital transaction in crypto.
- ⑨ Crypto exchanges are required to initiate KYC as well.

There are some challenges to

PMCA effectiveness

- (1) Low conviction rate in Financial crimes

↳ ED has conviction speed very slow only 2% cases are disposed.

- ② ED cannot issue Sue moto cases.
- when CBI or other agency finds Financial angle
↳ ED is roped in
- ③ ~~lack of~~ Lack of availability of Financial transaction data
- ④ Infrastructure issue & manpower issue
- ⑤ Political parties and donations are under limited scouting

To increase PMCA 2002, Following measures required:-

- ① Independence of ED & transparency in appointment of ED director
- ② Providing integrated data availability
- ③ Increasing manpower and infrastructure

Financial crime of money laundering has links with organized crime.

Curbing ML will reduce organized crimes

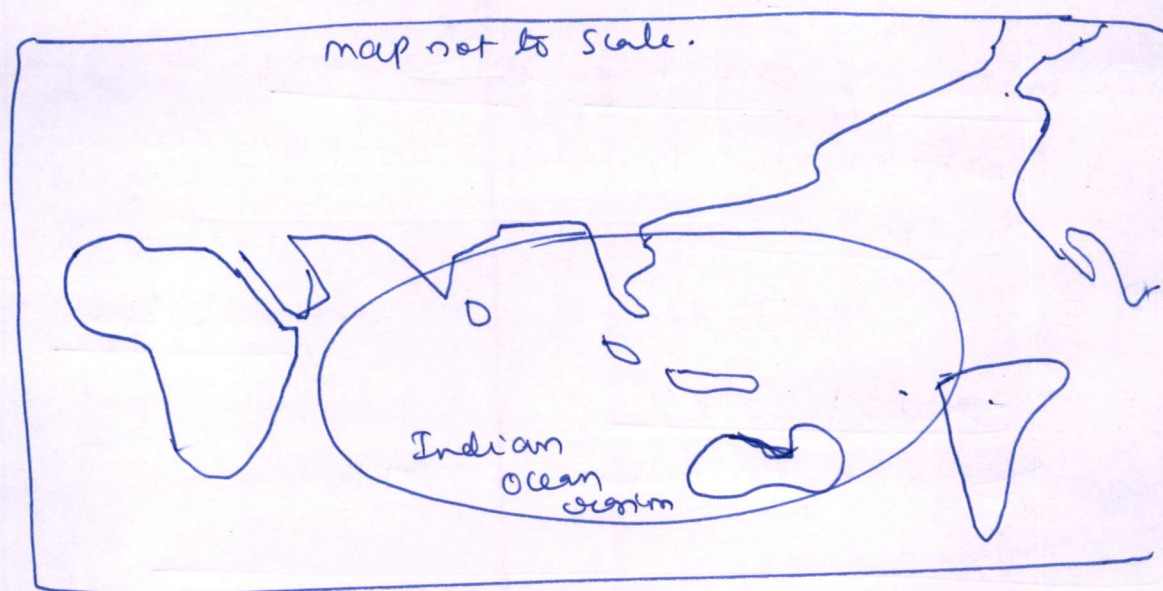
हिंद महासागर क्षेत्र (IOR) में मौजूद उन सुरक्षा खतरों पर चर्चा कीजिए, जिनका भारत के समुद्री सीमा संबंधी हितों पर सीधा असर पड़ता है। इन खतरों से निपटने के लिए एक मजबूत रणनीति सुझाइए। (उत्तर 250 शब्दों में दीजिए)

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)

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उम्मीदवारों को इस हाथिए में नहीं लिखना चाहिए
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Indian ocean region (IOR) is a geopolitical construct comprising regions from Indian ocean and western Pacific ocean.



Security threat in IOR region

- ① Maritime Piracy : region near horn of Africa is hotspot of maritime Piracy
- ② China's 9-dash line dispute in South China Sea - between Vietnam, Philippines and Indonesia.

③ Increase Chinese dominance of on
Sea line of communication through
Belt and road initiative

↳ string of pearls with Hambantota
in myanmar, port in colaba.

④ militarization of IOR region - Threat
to 90% of India's trade happening
through IOR.

⑤ malacca strait dilemma :-
chances of possible blockage due
to conflicts.

⑥ Exposure of Indian 7500 km coastlines
to terrorist attack.

→ 26/11 Bombay attack

Measures to deal with such threat

① counter string of pearls with
India's Neckline of diamond strategy

→ ports chain of India

② strong presence at andaman
& nicobar to guard interest
at malacca straits.

- ③ Increasing patrolling with Indian Coast Guards (ICG)
- ④ Increasing technology incorporation in coastal security.
 - ↳ coastal border management through technological sensors and surveillance
- ⑤ Improving connectivity through Sagarmala Project to reach with ease
- ⑥ Increasing white shipping agreement with IOR nations to differentiate in commercial & military ships
- ⑦ Maritime privacy agreement with island nations near Madagascar such as Reunion, Seychelles, (Assumption) island.
- ⑧ Increasing strength and reach of Indian Ocean Naval Symposium (IONS)
Indian needs to workup with National maritime strategy and framework to effectively deal with such threats.

SPACE FOR ROUGH WORK

$$\begin{array}{r} 2 \times 19 \rightarrow 22 \\ 7 \times 6 \rightarrow 42 \\ \hline 1264 \end{array}$$

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