



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. : 114 111

अभ्यर्थी का नाम/Name of Student : G. ARSHAY DEEPAK

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख

Date

27/08/2023

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

केंद्र
Centre

Hyderabad

निरीक्षक के हस्ताक्षर
Invigilator's Signature

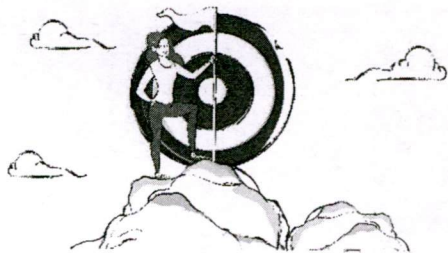
27/8/23

	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.

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)					



सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2424)

निर्धारित समय: तीन घंटे
Time Allowed: **Three Hours**

अधिकतम अंक: 250
Maximum Marks: 250

प्रश्न-पत्र संबंधी विशेष अनुदेश

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

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

सभी प्रश्न अनिवार्य हैं।

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

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

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

प्रश्नों में इंगित शब्द सीमा को ध्यान में रखिए।

प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गए कोई पृष्ठ अथवा पृष्ठ भाग को पूर्णतः काट दीजिए।

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are **TWENTY** questions printed both in **HINDI** and in **ENGLISH**.

All questions are compulsory.

The number of marks carried by a question/part is indicated against it.

Answers must be written in the medium authorized in the Admission Certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in a medium other than the authorized one.

Answers to Questions No. 1 to 10 should be in 150 words, whereas answers to Questions No. 11 to 20 should be in 250 words.

Keep the word limit indicated in the questions in mind.

Any page or portion of the page left blank in the Questions-cum-Answer Booklet must be clearly struck off.

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

1.

खाद्य सुरक्षा के विभिन्न आयाम क्या हैं? इन आयामों के मद्देनजर खाद्य सुरक्षा सुनिश्चित करने के संदर्भ में भारत की स्थिति का परीक्षण कीजिए। (उत्तर 150 शब्दों में दीजिए)

What are the different dimensions of food security? Examine India's status in terms of ensuring food security with regard to these dimensions. (Answer in 150 words)

10

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

According to Global Hunger Index, 2022
India ranks 107/122 showing the dismal
state of food security and hunger in the
country.

But with acts like NFSA, 2013
the food security was beneficial to
reach the poor, vulnerable and down trodden
sections of the population.

Dimensions of food security

① Accessibility and availability of
grains to the vulnerable section
of the population.

Eg: tribals

② Nutritional security - Early interventions
to reduce stunting (35%), undernutrition (32%)
- NFHS-5

③ Last mile reach of services

Eg: BIMARU states, migrant workers

④ Reduced leakages, diversion and corruption

⑤ Awareness generation among people making it
a JAN ANDOLAN

⑥ localised Approach according to needs of population

India's status in terms of food security

(i) covering a population of 75 rural and
50 crore urban population (67 crore)

(ii) Prices of Rs 3.21 of grains
and cereals

(iii) Coordination with the states in ensuring
delivery at central issue price

(iv) Involvement of FCI in procurement and
storage

(v) Presently we have ~~55~~ 74 million tonnes
of rice and wheat way above the

Thus implementing Janakumar Committee
recommendations of decentralised procurement and involvement
of private sector is the need of the
hour

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

modern technologies are gaining greater footprint due to the greater internet connectivity reach. (IAMA - 759 million in India).

Blockchain and Chat GPT - New and emerging technologies
- revolution

Transform Agriculture into efficient and sustainable sector.

① Improved Productivity

• quality inputs in desired information about fertilizer usage and banking their effect.

② Effective supply chain management

• preventing wastage of products and reduce leakage.

③ Awareness generation

on the best practices across the world

Eg: korapot farming - indigenous.

④ Water and nutrient use efficiency

at a time of decreasing water table of
0.4m/year.

⑤ Integrated pest management

right use of NPK in form of 4:2:1

⑥ market intelligence and choice of crops

⑦ Promote entrepreneurship in the agricultural sector.

Challenges

- Digital illiteracy in agriculture
- fragmented land holdings.
- low investment
- lack of private sector participation
- Digital Apartheid.

Thus utilising the help of KVK and
State Agriculture universities can help in addressing
the challenge through schemes like ARYA and
READY 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 are not to write on this margin

The de-dollarization of economy involves moving away from dollar based payments for international trade and demand and supply for import and export.

Factors leading to De dollarisation

- ① weaponisation of Finance by USA against Russia by freezing its assets.
- ② Rising global footprint of countries like China, Russia, India in a
multipolar world order.
- ③ Prevent spread of crisis like
2008 global crisis
Eg: signature bank collapse - disruption to markets

④ Reduce the inflation caused due to supply chain disruption post Russia-Ukraine war.

⑤ Fragmentation of world order

- BRICS - dedollarisation
- Anti USA grouping.

Decreasing dominance of dollar.

- (i) reduced footprint of USA in world geopolitics
- (ii) uncertainty and political instability of USA and its policies
- (iii) Diversification of SDR Basket.

Prominence of Dollar and will stay for a while.

- (i) India's share - 1.2% of global trade settlement
- China - 4% (v) Good credit rating
- (ii) Acceptance by countries
- (iii) trust in USA dollars
- (iv) Developed country

Need for internationalisation of rupee through Rupee Double Vostro account, capital

Account convertibility is need of hour.
Recent VAT - Pay now of long term + step in right direction.

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

The debate about food subsidy has reached WTO and a centre of hostility with no common ground.

India - retain its policy support

① Food Security

Around 35% - suffer from undernutrition
22

(NFHS - 5)

② Livelihood opportunities

44% depend on agriculture.

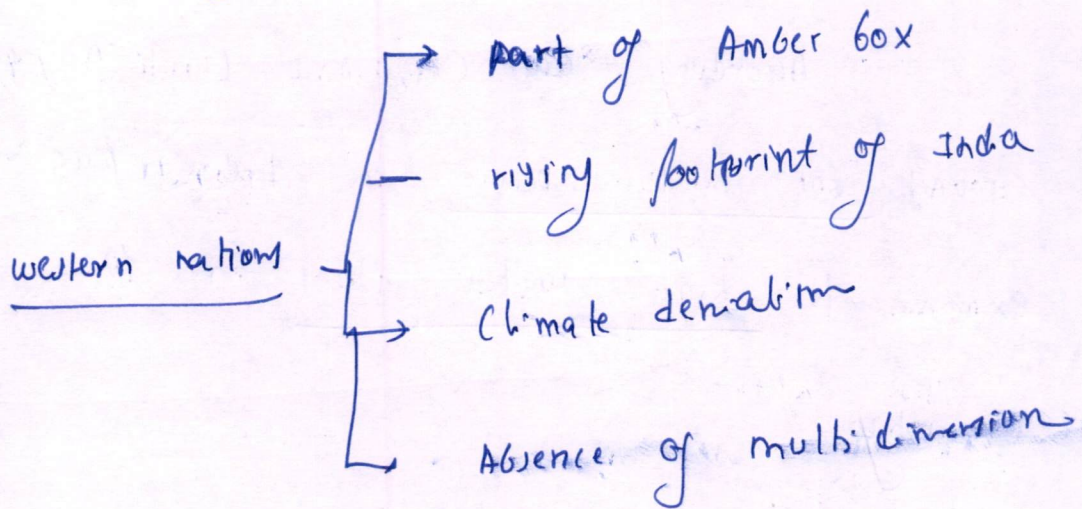
③ Income and security (capability Enhancement)

④ reduce poverty levels

22.9 crore under poverty
- most

⑤ Box shifting by developed nation

⑥ Subsidy burden on government



way forward

- Safeguards mechanism & Approach
- Doha Agreement like in WTO.
↓
Common but differentiated responsibility
- Finance by western nations
helpful in 3Zero of world
Zero poverty Zero emissions and
Zero unemployment

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)

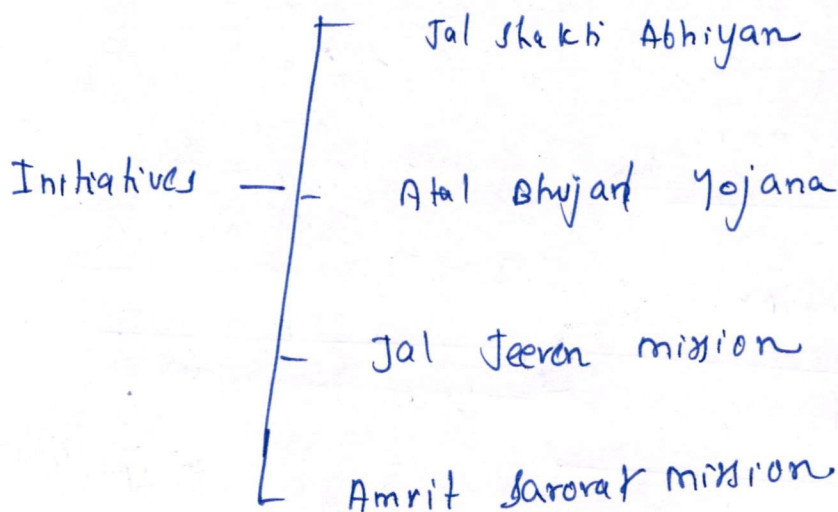
Several initiatives have been taken by the government towards addressing India's water needs, but the issues of water availability and water quality still warrant prioritised intervention. Discuss. (Answer in 150 words)

10

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

According to CAWMI (Niti Aayog)

around 600 million people in India face
extreme to high water stress in the
country.



Issues of water availability

(i) Around 75% of Indians do not have access to drinking water

(ii) decreasing ground water table

— 0.4 m per year

(iii) Decentralised nature - excess usage.

(iv) Climate change - drought - reduced availability

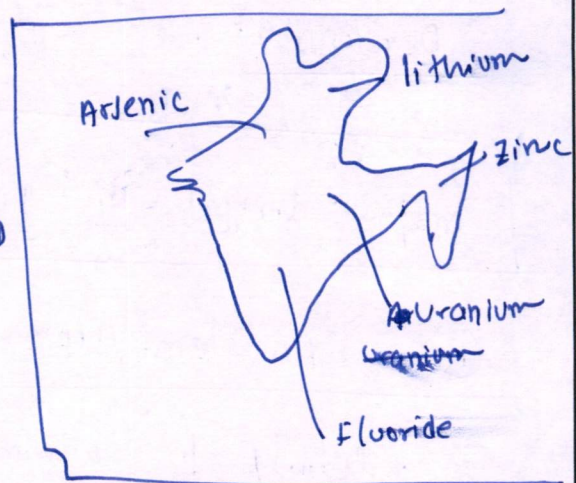
Issues of water availability

(i) Presence of Uranium, Arsenic

(ii) groundwater pollution due to development

projects - mining

(iii) landfills and other
percolation of heavy metals
from e-waste.



(iv) sea water rise and

Fig: Contamination

(v) man made events : floods. causing deterioration

of availability of water

modern By law
↓
water regulation
Authority

way forward

water use Associations

social Audit
of

pricing
ministry that committee recommendations

of National water Commission promoting
Bairn Approach is the need of the hour.

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
Candidates must not write on this margin

According to IPCC, around 23% of
glaciers of Arctic are under the risk of
melting in an era of Anthropogenic
Development.

major drivers of glacial retreat ~~now stop~~

① GHG emission

· leading to warming of earth.

IPCC: 1.09°C rise since industrial times.

② Climate changes

· changes in polar vortex and associated warming

③ Fossil Fuel Based Economy

contributing to emissions — circulating

④ changes in planetary winds and direction

Eg: Labrador current → warmer '16

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

with greater footprint of major countries
in the space sector, space tourism is indeed
becoming a reality.

challenges associated with space tourism

- ① Space Debris : which is increasing due to activity and can lead to collisions and changes in orbital velocities.
- ② Kessler Syndrome : chain reaction involving all space object, leading to destruction.
- ③ Space Colonisation : leading to capture and competition.
- ④ Space as a domain of warfare.
5th dimension of warfare.

⑤ safety and related threat to life.

⑥ money spent on training and standard operating procedure.

⑦ lack of global coordination on utilising space as a global common

measures can be taken

① Global coordination : Through signing of Artemis Accord.

② Common Training Program (GAGANYAN AND NASA, Russia)

③ Remove Debris mission (University of Surrey)

④ Standard operating procedures in space domain

⑤ Signing of Outer Space Treaty & preventing militarisation of the zone for vested interest

Elon Musk: Space tourism can be a game changer and indeed a true reality generating revenue for people involved 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 हाशिए में नहीं लिखना चाहिए
Candidates must not write on this margin

The CAR-T cell therapy (Chimera Antigen Receptor) can be a game changer in the field of genetic study for the betterment of human life.

Game changer in treatment of cancer

- utilising own body cells to fight
- T-cell immunity response
- Primary & Secondary

Limitations of CRISPR-Cas-9

- ① introduction of unknown gene
- ② side effects of the interventions
- ③ Immune response of the body

④ unintended consequences

Eg: Hi Jiankui - did use this to create babies
resistant to HIV but was not successful.

CAR-T overcoming the limitations

- ① Case Detection: at an early stage
- ② Control of diseases: with greater success rate
- ③ targeted Approach: without any foreign antigen introduction
- ④ no damage to neighbouring cells
- ⑤ Problem of unintended consequences can be avoided

Challenges — ethical: have to have not
— Absence of qualified specialist
— racial segregation
— inequality.

Thus need to keep in mind Gandhiji's
sin of science without humanity is a sin
and avoid it for benefit of mankind.

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 use of blockchain, AI, quantum, crypto, ml etc by extremist organisations is leading to challenges in the internal security for India.

Rising Deployment of new technologies

① use of satellite phone and satellite communication for information dissemination.

② utilisation of AI Drone technology in supply of drugs and materials across the border regions

③ supply of weapons and material for coordinated tactical operations

④ media - money laundering and financing

④ utilisation of 3D printing

— new weapon technologies • fake currency

⑤ social media as a tool (recruitment)

• fake news spread • urban terrorism

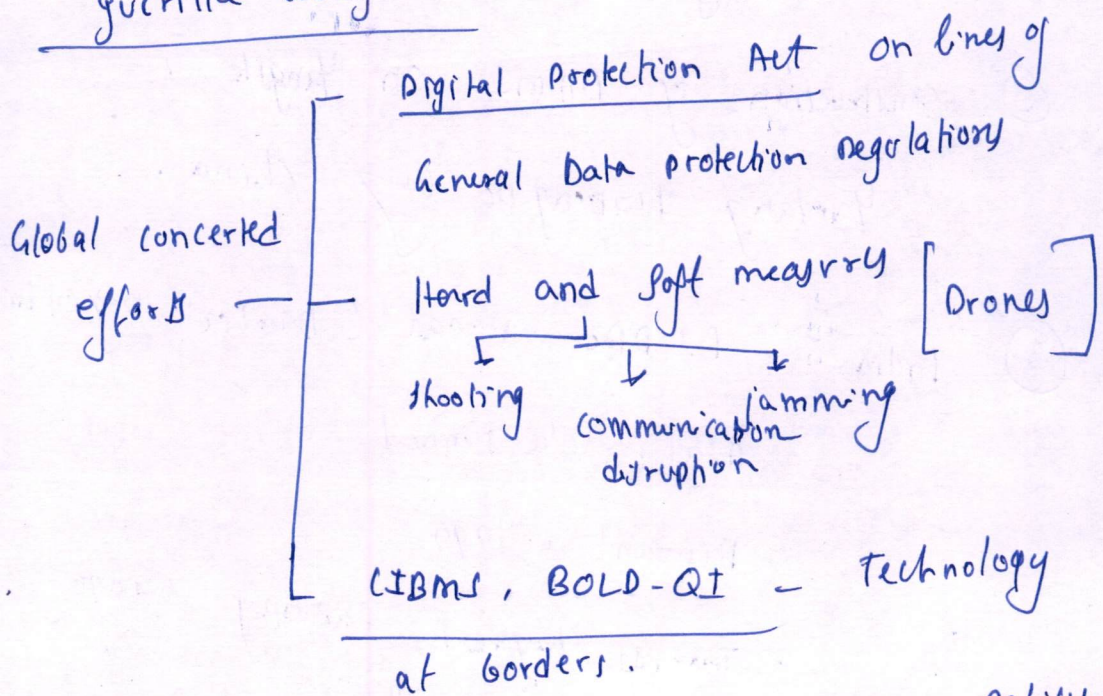
mitreloft study: 64% people exposed to fake news in India.

⑥ targeting critical infrastructure

• defence establishments • CRPF convoy

⑦ technology (AI) to detect sensors

and use underground passages. and use guerrilla warfare.



Thus R&D and new cybersecurity policy 2023 along with information in national security doctrine is the need of the hour.

10.

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

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

10

Recently the 17th level military level talks were held between India and China to diffuse the tense situation existing at the borders.

Ramping up infrastructure in border Areas

- ① Construction of roads, railway and highways
- ② Construction of Dams on Yangste / Yarlang tsangpo by China.
- ③ India -
 - D.D.O road (Daulat Beg Oldie)
 - Atal & Sela tunnel
 - Vibrant villages
 - world's highest railway bridge in Baramulla.

Role that ITBP plays

- ① protecting territorial integrity and sovereignty

② Building integrated check posts and command centres

③ regular surveillance of border areas through technological utilisation

④ Intelligence gathering: with the help of locals

⑤ Coordination with RAW, IB for proactive actions including countries like USA

⑥ regular military exercises

⑦ development of border areas

protection to critical infrastructure.

Issues

Diversion of ITBP to internal security challenges

Technological deficiency

lack of unified command

porosity of border

Sakami string by China. - Aggression

poor working condition.

need to utilise Kargil Review Committee

of theatre and mobility through small size

battle groups is the need of hour

11.

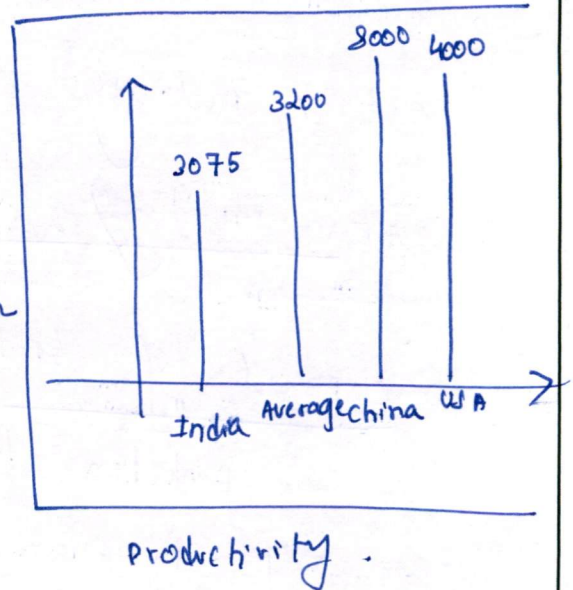
क्या आपको लगता है कि भारत को 'भूमि उत्पादकता' के सिद्धांत को छोड़कर 'सिंचाई जल उत्पादकता' के सिद्धांत को अपनाने की आवश्यकता है? अपने उत्तर का औचित्य सिद्ध कीजिए। यह बदलाव करने में कौन-सी चुनौतियां विद्यमान हैं? व्याख्या कीजिए। (उत्तर 250 शब्दों में दीजिए)

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

According to reports, India's land
productivity stands at 3075 per hectare
in comparison to 3200 of world Average.

land productivity
will ensure



- ① effective land utilisation
- ② economies of scale
- ③ reduced cost of inputs
- ④ Greater profits.
- ⑤ Good ~~go~~ cropping intensity and coverage
ration.

Shift from land productivity to irrigation water
productivity

- ① Reducing water table in dry areas

Eg: Barkitand : 10m in 2013
8m in 2019

② UNESCO : Agriculture sector uses 86% of groundwater usage in India. and water from reservoirs

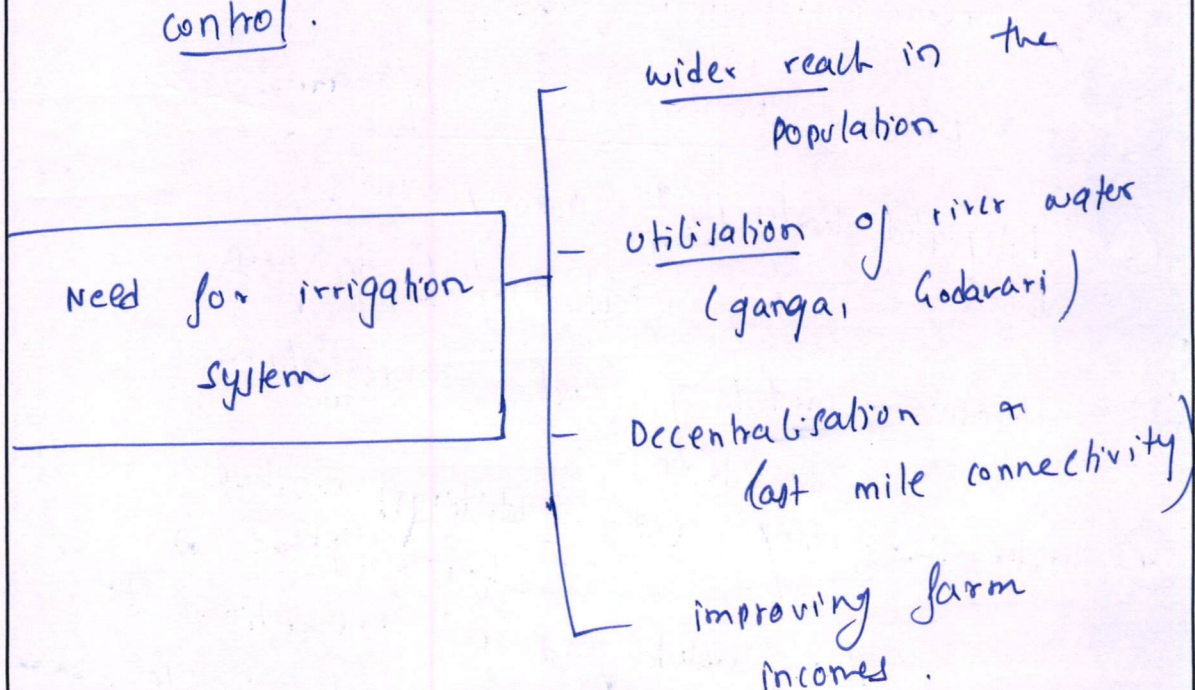
③ Agricensus, 2015 : irrigation efficiency of 38%.

④ High cost of irrigation projects

⑤ Desertification due to irrigation.
Eg: Aralkum desert due to Soviet projects.

⑥ Water evaporation and reduced seepage.

⑦ Displacement of locals and centralised control.



Challenges in making the shift

- ① land and labor's requirement
- ② concretisation and contribution to GHG emission
- ③ Ecological changes in river patterns.
- ④ Electricity needed in the change
- ⑤ Awareness and capacity building.
- ⑥ Cost of transition ⑦ Fragmented Land Holdings.
⑧ ~~low~~ Gov. - rainfed

way forward

- ① micro irrigation and Drip and sprinkler system - Krishi Sinchai Yojana.
- ② Integrated watershed management
- Neeranchal project of WB
- ③ Jhaohwa model of water conservation
- checkdams
- ④ water harvesting and traditional methods
- tanka, johad

This would ensure promotion to

12.

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

Examine the role that green hydrogen can play in unlocking the energy security of India. How can the National Green Hydrogen Mission help India in achieving its energy goals? (Answer in 250 words)

15

The budget has announced the target of 5 mmt of green hydrogen production by 2030. showing a need for transition to clean energy.

Role in unlocking energy security

- ① production of green energy
 - reduced emissions
 - combating climate change.
- ② Reduced dependence on fossil fuels and help ~~fight~~ put climate effort
- ③ Reduced current account deficit and growth in foreign exchange reserves
- ④ Energy efficiency and more amount of heat generated.

⑤ Provision to the Infrastructural
needs of the country.

Eg: fuel for NIP, Gati Shakti

⑥ Affordable and Quality energy for the
poor

⑦ constant supply through grid integration

⑧ last mile reach of mountainous regions
due to transportation in pipelines

Eg: 300 million without energy.

Challenges

① Cost of production is high in initial stages

② lack of big market players

③ Heavy utilisation of water for
processing

④ Risk in transportation due to
it being flammable material.

⑤ technological deficiency to ensure effectiveness and efficiency

⑥ lack of skilled labour

National Green Hydrogen mission in energy goal

① "Energy for All" [Jawahar scheme]

· poor and vulnerable

② Energy diversification

· reducing reliance on fossil fuels

③ Energy Transformation to clean energy

④ Energy equity - for every region

⑤ Energy integration in the grid

⑥ Reduce AT&C losses, reformation of

DISCOMS

Thus the NHTM will endorse a GRID Approach (Green Resilient Inclusive Development) growth pattern.

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

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

The minimum and living wage are quite substantial especially when there is high inflation in the economy.
(adv. by Arjun Sen Gupta Committee)

minimum wage - Floor level wages for survival

living wage - basic Amenities.

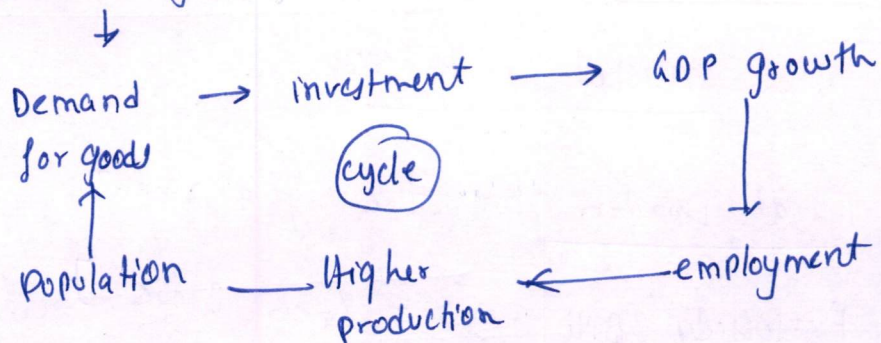
Benefits of living wage

① Access to basic necessities : like food, clothing and inflation

② Productivity of people : can be improved

Eg: Spending on health.

③ multiplier effect on the economy



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

④ women empowerment

For women / are domestic violence - un women

⑤ Promotion of Inclusive growth.

Exam: 1% of population corner 5% of wealth.

⑥ Fight the effects of inflation

Eg: CPI - 7.01% (retail inflation - 2022)

⑦ Reduce rural-urban divide and act as a buffer against unemployment

Eg: CMIE - 6.86% unemployment

Constraints

① living wage can be inflationary creating supply demand mismatch

- ② moral Hazard : spending on wasteful items
like Alcohol , tobacco
- ③ Fiscal Burden on the government
[subsidy Bill : 2.7 lakh crore]
- ④ Decreased LFPR (sitting at home)
- ⑤ Dynamic pricing and setting a living wage
- ⑥ Coordination between centre and state
- ⑦ Uniformity in policy

Way forward

- ① Partha mukhopadhyay committee
- repository of migrants
- data

- ② Anoop Satarathy Committee
↓
- different for rural & urban
- Approx 20000

Thus living wage can act as a good social security net and lead to capability enhancement as said by Amartya Sen in capability Approach.

14.

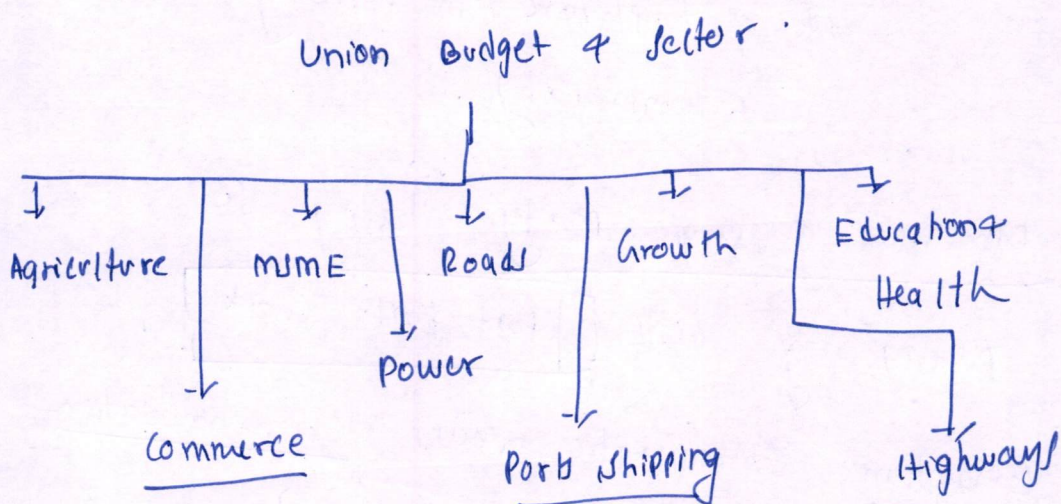
केंद्रीय बजट भारतीय अर्थव्यवस्था के लगभग हर क्षेत्र को प्रभावित करता है, फिर भी न तो बजटीय प्रक्रियाएं पर्याप्त सार्वजनिक जांच के दायरे में आती हैं और न ही बजट नीतियां। क्या आप इस कथन से सहमत हैं? अपने उत्तर का औचित्य सिद्ध कीजिए। (उत्तर 250 शब्दों में दीजिए)

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

15

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

The Union Budget is placed as the Annual Financial Statement under Article 112 of the constitution consist of receipts and expenses of the government.



Budgetary process - various stages passing through

readings and finally voting after scrutiny by parliamentary committees.

Budget policies: welfare of the people.

not come under substantial public scrutiny

- ① utilization of experts : in form of standing committees for review.
- ② lack of people participation and adequate domain knowledge in the sector.
- ③ Following of representative democracy in India.
↓
role of legislature in ensuring accountability.
- ④ Dominance of single party leading to passage of bills [Post Facto check]
- ⑤ Corruption, Bureaucratic nexus, Criminalisation of politics [43% criminal records].
- ⑥ Quid pro quo - Crony capitalism in the economy

Substantial public scrutiny through

- ① standing committees
 - expert opinion
 - Deroid of party bias

• time bound manner

• indepth Analysis

② Financial Committee

• efficiency and effectiveness of expenses.

③ Public opinion - put under public domain

Eg: mygov.in

④ Utilization of intellectual

Bhikshna Committee - Data Protection Framework

Cybersecurity ←

Way forward

① NCRWC: refer every bill to standing committee

② Public opinion

③ Decentralised decision making

④ Principle of subsidiarity and localised knowledge.

Thus proper budgetary scrutiny

need of hour can be done through Performance

15.

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

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

15

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

The White Revolution the brainchild of Verghese Kurien was the reason for transformation to the world's biggest milk producer.

Transform through the strategy of

- ① formation of cooperatives
- ② better bargaining capacity - loans
- ③ financial inclusion
- ④ Quality of service
- ⑤ Economics of scale
- ⑥ reduced role of middlemen in the sector.
- ⑦ zero corruption in the sector and absence of bureaucratic hurdles.

Productivity of dairy Animals - A concern

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

- ① Inadequate fodder of good availability in the country [poverty — covid — no money — no fodder]
- ② Informalisation of the sector leading to low productivity
- ③ wastage of produce and availability of milk.
- ④ Ineffective utilisation of local breeds (Indeginow)
- ⑤ Anti microbial resistance (AMR) among ~~the~~ bulls and buffaloes, cows.
- ⑥ Bacterial infections and health of animals leading to lowering productivity.

Benefits of dairy sector

- employment to women
- nutritional sector, security
- food and income security
- export opportunities
- effective net against climate change.

way forward

- ① Niti Aayog : Bulk milk chilled
: decentralised procurement
- ② Technology : Embryo transfer technology
↓
exotic and indigenous
- ③ M. Swaminathan : Genome clubs for better
productivity
: R & D in sector
: Bull mother farms.
- ④ Use strategy of ARR (Avoid Reduce and Reverse) for AMR.
- ⑤ Capacity building and Training of better trainers
: use of lemon grass in Sonbhadra of U.P.

These steps would ensure reaching
the target of \$60 billion agricultural
exports by 2025 and soabka soath
soabka rikaar soabka ruhwa

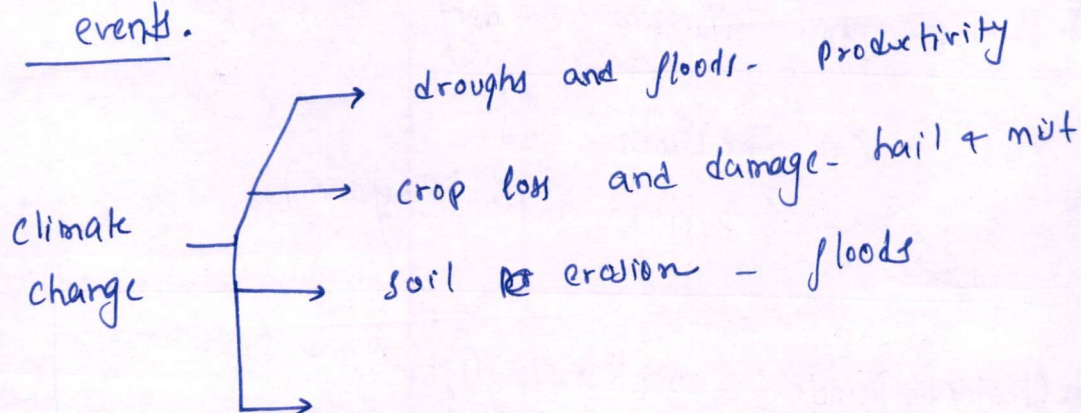
16.

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

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

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

According to NABARD, agriculture sector contributes around 18% to GHG emissions showing its responsibility for extreme weather events.

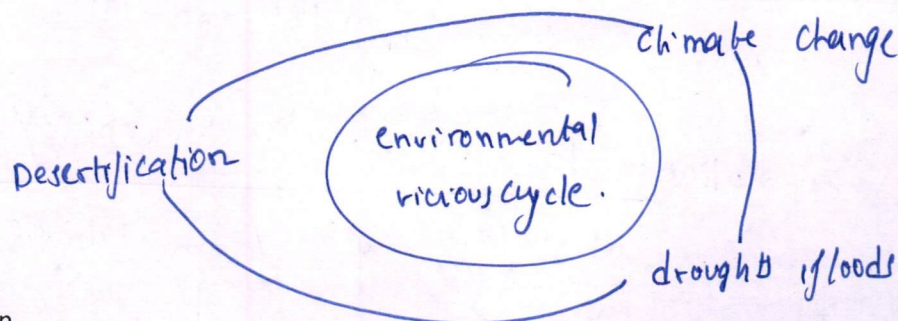


Agricultural sector contributing to climate change.

① Inadequate choice of crops

• decreased groundwater

↓
Desertification



② unsustainable practices

- flooding of field for rice - CH_4 emission.

③ Animal Husbandry

- mulching of Animals - GHG emissions

④ Use of diesel generators for pump water ↓ SO_2 , NO_2 emissions.

⑤ Crop and stubble burning and forest fire ↓ CO_2 emissions and CO (Punjab and Haryana)

Strategy under National Agriculture Disaster management plan

- ① Reduced wage of shifting Agriculture
as done in Chotagrapur.

- ② Agro-climatic regionalisation
· right choice (millets in m.p., Rajasthan)

- ③ Promotion to bio circular economy
· utilisation of farm waste
↓
compost

④ Technological interventions

- Sustainable rice initiative (minimal flooding)

⑤ Using grid connected solar energy

- Eg: Sukhthi scheme + PM KUSUM.

⑥ Promoting Agriculture startups in availability delivery of services

- Eg: Rythu Bhavosa of Andhra Pradesh
- capacity building
- Advisory services.

Challenges

- Poor Awareness
- upfront cost - happy seeders.
- freebies culture by government
 - electricity
- lack of diversified diet
 - focus on rice and wheat
- inadequate MSP

utilization of MS Swaminathan Committee

and ~~upto~~ new technology of LEISA (Low external
input Sustainable Agriculture is the need of
the hour)

17.

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

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

15

According to Gst, around 57% of Indian region is earthquake prone and located in seismic zones.

- regions ~~are~~ like Delhi are located in Zone IV and Zone V of earthquake prone

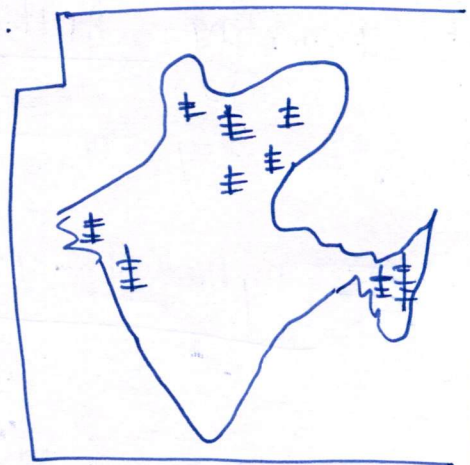


Fig: earthquake prone

Impact of earthquakes originating in Himalayas

- ① Liquefaction of land and soil reducing its holding capacity
- ② land subsidence and landslides due to release of bent up energy
- ③ changes in land use patterns destruction of buildings

④ Damage to critical infrastructure like
power lines and internet

⑤ Access to basic amenities like food, shelter
gets disrupted

⑥ Secondary impacts : fire, water leakage
and loss of life.

Institutional measures taken to mitigate.

① National Disaster Management Authority
• planning, organisation

② NDRF and SDRF
• decentralised and swift response

③ Proactive Approach and Role clarity
of various stakeholders

④ Utilisation of local governance institutions
and NGOs in disaster relief.

⑤ Role of media in digital and disaster ethics

⑥ Utilisation of Hazard zone mapping by GIS
and inter-coordination

Significant gaps

- ① Absence of proper targett in policy like in Sendai frame work.
- ② Role of Corporate sector is not streamlined
- ③ Funding deficit to deal with disaster
- ④ Delayed response on reaching disaster str.
- ⑤ Absence of proper awareness and mock drills among people
- ⑥ Adherence to Modern Building laws not being followed.

Way forward

- ① Disaster resilient infrastructure - Sendai framework
- ② Utilisation of NIP to meet funding and infrastructure
- ③ ARC - incorporation of local institutional emergency response plan
- ④ Capacity Building and Awareness
This will lead to ensuring full proof infrastructure in line with SDG 9 i.e. disaster resilient infrastructure.

18.

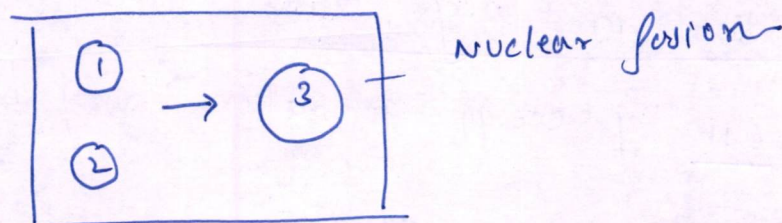
हाल ही में, वैज्ञानिकों ने परमाणु संलयन अभिक्रिया में निवल ऊर्जा लाभ की घोषणा की है, जिसे स्वच्छ ऊर्जा के भविष्य के लिए एक बड़ी वैज्ञानिक सफलता माना गया है। परमाणु संलयन आधारित विद्युत उत्पादन के क्या लाभ हैं? व्यावसायिक स्तर पर विद्युत उत्पन्न करने के लिए इसके उपयोग की क्या सीमाएं हैं? (उत्तर 250 शब्दों 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 हाशिए में नहीं लिखना चाहिए
Candidates must not write on this margin

15

nuclear fusion involves the combining of unstable nuclei like deuterium etc which has potential to generate enormous amount of energy which can promote a clean energy with in an era of climate change.



Advantages of nuclear fusion

- ① Reduced emissions and GHG
not causing pollution
- ② Fight against climate change.

According to IPCC - need to be net zero by 2050 to avoid drastic effects.

③ Diversification of energy

reduced dependence on oil

④ Energy security and Transformation reaching

⑤ Hedge against inflation due to oil prices and fluctuation

⑥ not much radioactive waste and very safe

⑦ pollution of groundwater - not there as in fusion

Limitations in using nuclear fusion

① Cost of energy generation way higher
than input energy

② Problem of use of moderators and
fission material

③ Chain reaction and control of energy

④ Heavy utilisation of raw materials

⑤ Displacement of local people

Eg: Kudankulam

⑥ Capital intensive and long gestation needing
adequate land and environment clearance.

Way forward

① R&D in nuclear fusion sector.

② Utilisation of renewable energy - Global Re-invest

③ Global collaborations

- Tokamak

- Artificial sun

{ chain reactions

④ Energy Diversification

Thus the breakthrough is imminente

and can benefit in the form of
reaching around 300 million people who
lack electricity in India aggravating

this multi dimensional poverty.

19.

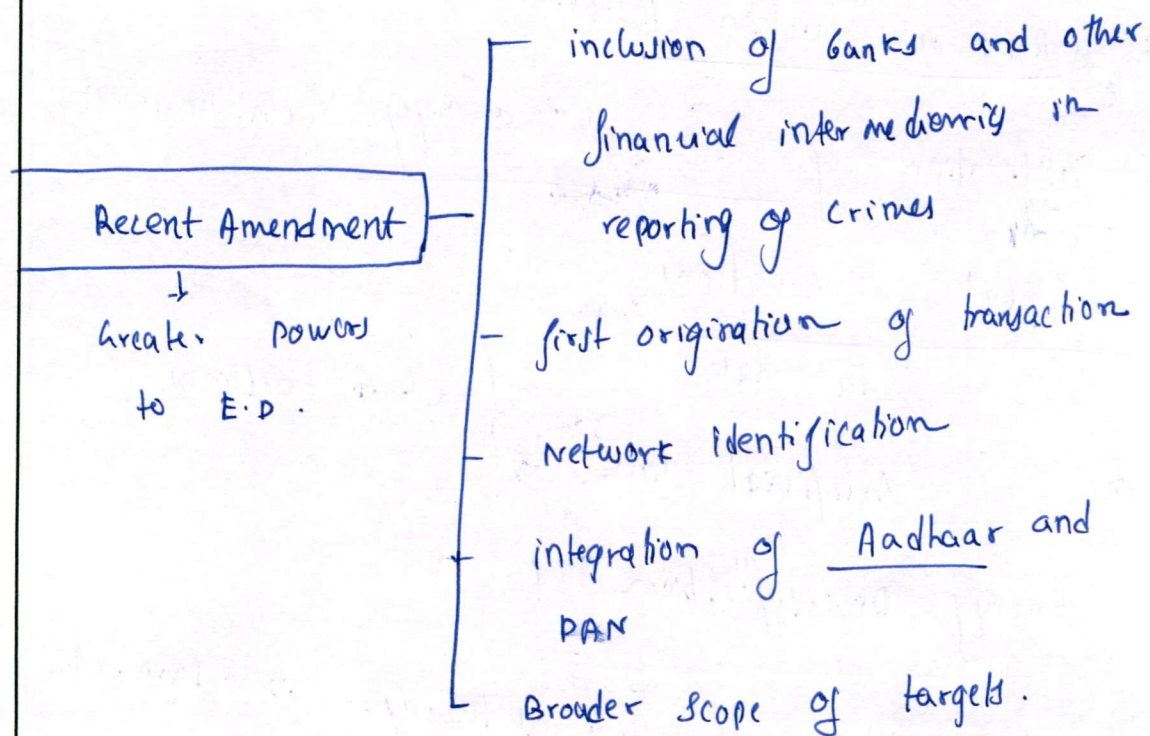
हालिया संशोधन को ध्यान में रखते हुए, भारत में धन शोधन (मनी लॉन्ड्रिंग) के खतरे से निपटने में धन शोधन रोकथाम अधिनियम, 2002 की प्रभावकारिता का परीक्षण कीजिए। (उत्तर 250 शब्दों में दीजिए)
Keeping in view the recent amendment, examine the efficacy of the Prevention of Money Laundering Act, 2002, in tackling the menace of money laundering in India. (Answer in 250 words)

15

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

the recent amendment of PMLA, 2002

was adapting itself according to the changing times and way of money laundering.



PMLA, 2002 in tackling money laundering

① Reducing cross border data and money flow
through unaccounted means

Eg: W.D predicts the global rate of money

laundersing is close to 2-5% of GDP and anywhere between \$800 million to \$2 billion.

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

- ② Immediate confiscation of property and assets within a time bound manner
- ③ Standard operating procedure to deal with cross border flow of data
- ④ International coordination through agencies like interpol and Financial intelligence unit
- ⑤ Adequate powers of agency officers to take up raids.
- ⑥ utilisation of local intelligence, and agencies like CERT-In, etc for greater detection
- ⑦ curbing predatory pricing & fake invoicing

Challenges

- ① lack of global coordination in the issue.
Eg: Mauritius - Safe heavens

- ② Black Hole Syndrome.

- ③ Anonymity of transactions and decentralised role of participants
- ④ Cyber-negligence and emergence of newer aspects of
- ⑤ Utilisation of Cryptocurrency and dark web
- ⑥ Inadequate institutional setup and funding, skilled professional

Way forward

- ① 3 layer Approach — Placement stage
— layering stage
— integration stage
 - ② Proper implementation of law — PMIA, Bearmi
transactions Act
 - ③ OECD Global minimum corporate tax and GARA, MTA (mutual taxation Agreement)
 - ④ Digitalisation of transactions — Better Accounting
- Utilisation of Parathasarathy Joint Committee recommendation can reduce money laundering

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 has a vast coastline of around 7517 km and its strategic location is posing serious security threats in the region.

Security Threats in IOR.

① Policy of Aggression by China
 · violation of rule of law - South China Sea

② Encirclement of India
 · string of pearls

③ Traditional challenges like drug and human trafficking

④ Porosity of borders
 · leading to terrorism related activities.

Eg: 26/11 Attacks.

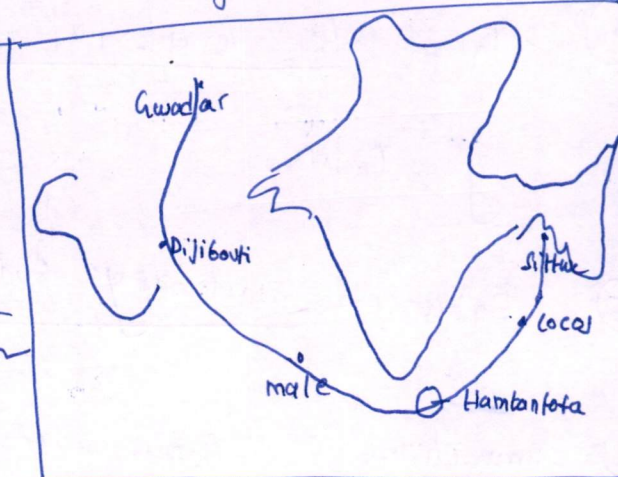


Fig: encirclement of India.

⑤ Surveillance of Indian ocean

· Eg: Yuang wang of China.

⑥ militarisation of the zone

· AUKU and China's exercise

Impact on Indian Interest

① Threatening its role as a net security provider.

② Damaging the critical infrastructure such as ports.

Eg: wannacoy attack on JNPT port

③ Diplomatic difficulty in negotiating with neighbours

④ Threat to territorial integrity and sovereignty of India

⑤ Enhanced military budget and spending

⑥ Promotion of Arms race in the region.

⑦ Fragmentation of world order.

Robust strategy to deal with threat

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

① Indegritation of defence maritime equipment

Eg: AkhmanirGhar Bharat

② Diversification of fleet

frigates aircraft carrier destroyers corvettes.

③ Intelligence coordination and reformation.

NATGRID, IFC - IOR (international fusion centre)

④ National maritime Domain Awareness
through QUAD collaboration.

⑤ Strategic partnerships for technology transfer

Eg: Scorpene class - India France

⑥ maritime exercises for greater exchange

Eg: malabar.

This would ensure a fair, just transparent and peaceful Indo-Pacific.

Recent IACS Vinodhyagiri in navy

is a step in the right direction in realisation of

ourselves as a net security provider

SPACE FOR ROUGH WORK

AL