



VISIONIAS
INSPIRING INNOVATION
ABHYAAS MAINS

सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2033)

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. : 289567

अभ्यर्थी का नाम/Name of Student : Akhijam Hazarika

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

19/12/21

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

केंद्र
Centre

Guwahati

Ajay Prasad

निरीक्षक के हस्ताक्षर
Invigilator's Signature

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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)					

	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 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 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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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.

भारत में कृषि प्रसार से सम्बद्ध मुद्दों का उल्लेख करते हुए, राष्ट्रीय कृषि अनुसंधान प्रसार प्रणाली को सुदृढ़ बनाने में कृषि विज्ञान केंद्रों (KVKs) की भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

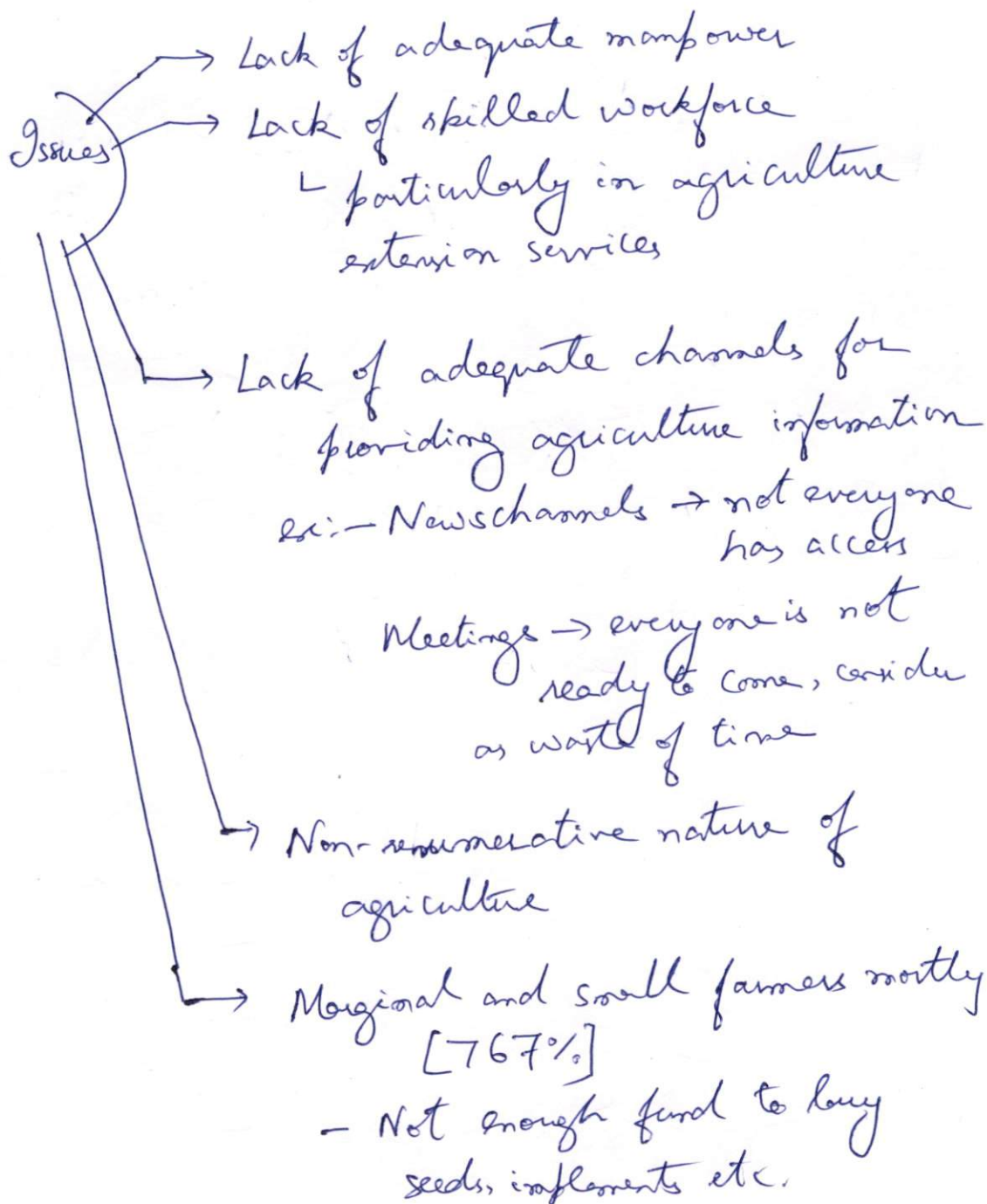
Stating the issues associated with agricultural extension in India, discuss the role of Krishi Vigyan Kendras (KVKs) in strengthening the national agricultural research extension system. (Answer in 150 words)

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

10

There are only ^{around} 800 agricultural extension workers in India per 1 lakh population

So, the extension services need strengthening



Krishi Vigyan Kendras

- Rde
- can increase production of farmers
↳ through innovative solutions
 - help in farm mechanisation
 - develop tools friendly for women
↳ as present tools are not women friendly and around 84% of them depend on agriculture
 - provide guidance regarding soil health, proper crops for particular place etc.

Agriculture ~~feeds~~ dependent population is around 46% in India and so needs to be emphasised.

2.

भारत में, खाद्य प्रसंस्करण क्षेत्रक मूल्य संबर्द्धन की अपार संभावनाओं के कारण एक उच्च संवृद्धि और उच्च लाभ के क्षेत्रक के रूप में उभर रहा है। चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

In India, the food processing sector is emerging as a high-growth and high-profit sector due to its immense potential for value addition. Discuss. (Answer in 150 words)

10

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

India is one of the largest producers of rice, wheat, dairy, sugarcane and many other products, but less than 1/5th of the goods are processed.

Potential due to value addition

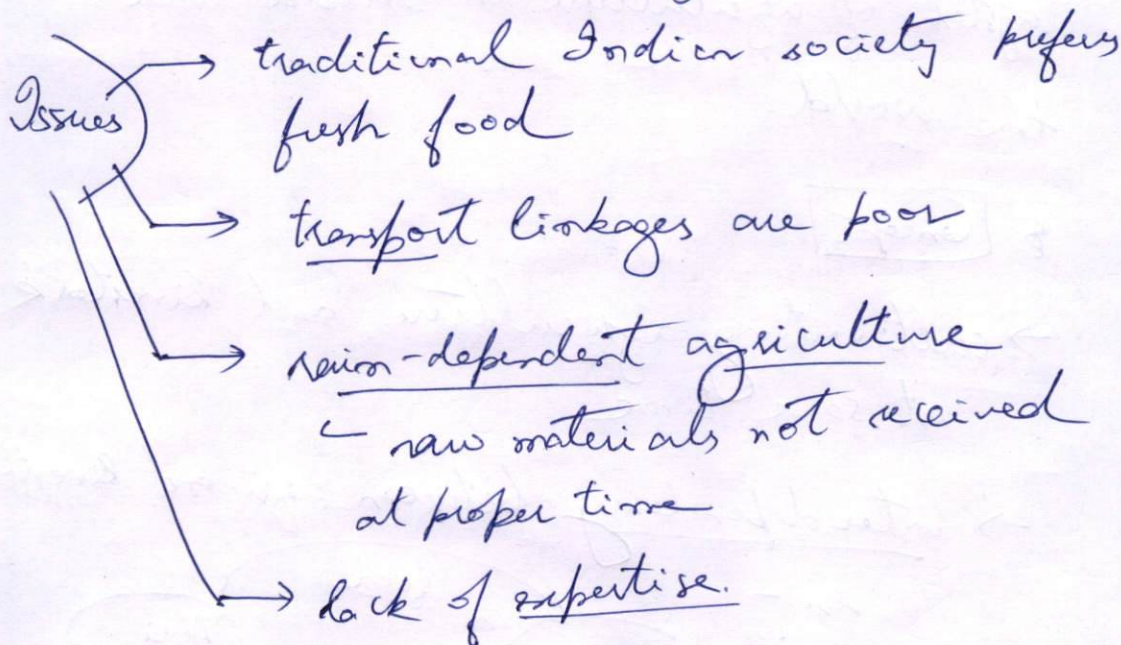
Food (or raw materials) can be processed ~~but~~ which has a large scope as

- Primary processing ex:- cut, peel etc
- Secondary processing - minor value addition
- Tertiary processing - various different kinds of raw materials combined together ex:- cake

Benefits

- Can increase our exports
 - ↳ have great demand outside India
- increasing demand in India
 - ↳ change in lifestyle ex:- nuclear family

- employment opportunities
- can increase shelf-life of goods
ex:- litchi can be stored upto
60 days



Keeping in view its potential, the food processing industry needs to be expanded by

- ↳ providing incentives ex:- PLI
- ↳ cold storage infrastructure ex:- Kisan Rail
- ↳ branding. ex:- Incredible Products of India Logo

3.

पशुधन आधारित एकीकृत कृषि प्रणाली (IFS) की अवधारणा की व्याख्या करते हुए, इसके लाभों पर चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

Explaining the concept of livestock-based Integrated Farming System (IFS), discuss its benefits. (Answer in 150 words)

10

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

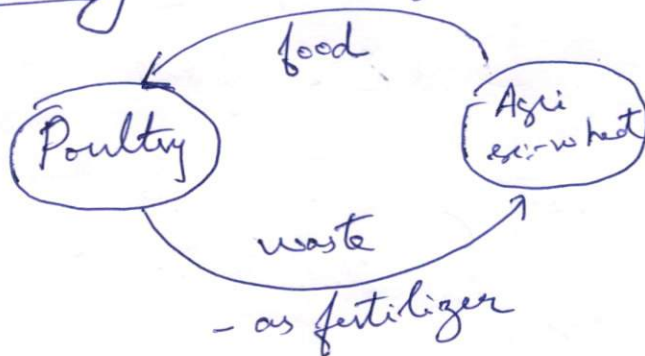
→ Livestock-based Integrated Farming System (IFS) has recently emerged as a growing system of agriculture in India and the world.

Concept

→ cultivating agriculture and livestock at same time

→ interdependency between agri and livestock

ex:-



Benefits

→ can help in increasing farmers income
↳ two sources of income

→ risk associated with bad agri season is lessened → income security

— Extra materials required like fertilizer can be made at one's own field through IFS.

— Can help in controlling inflation

↳ by increased productivity and supply of goods.

IFS based on livestock can go a long way in doubling farmers income by 2022.

4.

जहाँ भारतीय मूल के व्यक्ति (PIO) विश्व भर में उद्यमिता का नेतृत्व कर रहे हैं, वहीं भारत में अभी भी उद्यमिता दर सबसे कम है। चर्चा कीजिए। साथ ही, भारत में उद्यमिता की गति को बढ़ाने के लिए उठाए गए नीतिगत उपायों का भी उल्लेख कीजिए। (उत्तर 150 शब्दों में दें)

While Persons of Indian Origin (PIO) are spearheading entrepreneurship across the world, India still has one of the lowest entrepreneurship rates. Discuss. Also, state the policy measures that have been taken to increase the pace of entrepreneurship in India. (Answer in 150 words) 10

Recently, P Agawal was appointed as the CEO of Twitter which is another case of Indian origin people spearheading entrepreneurship across the world.

India still has one of the lowest entrepreneurship rates because:-

- less funding for research and development [GERD - 0.65% of GDP]
- Non-access of research material
- Mindset of Indian people
 - ↳ that Govt. job is the best
- Lack of adequate facilities :- Labs
 - ↳ so, people prefer to move outside
- Non-diversification
 - ↳ entrepreneurs confined to few sectors like education, health etc.

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

State measures

↳ Startup India scheme

↳ 3 out of first 10 years income
tax exemption

↳ easier loan taking norms

↳ MUDRA scheme

↳ to encourage low money entrepreneurs

↳ Stand Up India - SC/ST/women entrepreneurs

↳ NITI - Atal Tinkering Labs,
AIM, SETU

India's export policy envisaged
doubling exports to 500 Bn US\$, for
this to happen, India's entrepreneurship
ecosystem needs to be strengthened

5.

‘भूमि बैंक’ अर्थव्यवस्था को प्रोत्साहन देने और भारत में व्यापार सुगमता (ईज ऑफ डूइंग बिज़नेस) को बढ़ावा देने में महत्वपूर्ण भूमिका निभा सकते हैं। चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

‘Land banks’ can play a critical role in boosting the economy and promoting ease of doing business in India. Discuss. (Answer in 150 words)

10

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

WB suggests that countries that move 10 points up in EoDB index, create 60 more jobs per 1,00,000 population.

Land banks

- ~~is an emerging concept~~
- ~~banks have been established to manage land~~

उम्मीदवारों को
इस क्षति में
नहीं लिखना
चाहिए
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6.

वन संरक्षण अधिनियम (FCA) में प्रस्तावित संशोधन, न केवल वन अधिकार अधिनियम (FRA) के विपरीत हैं, बल्कि इनके कारण भारत को जलवायु परिवर्तन पर अपनी प्रतिबद्धताओं को प्राप्त करने में देरी होने की भी संभावना है। चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

The proposed amendments to the Forest Conservation Act (FCA) are not only antithetical to the Forest Rights Act (FRA), but are also likely to delay India achieving its commitments on climate change. Discuss. (Answer in 150 words)

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

Forest Conservation Act was initially passed in ~~1980~~¹⁹⁸⁰ for the conservation of forest resources in India.

FRA was passed in 2006 to safeguard ~~Amendments proposed~~ the rights of forest dwellers ex:- minor forest produce etc.

Amendments proposed

↳ will ^{make it} easy for industrial activities in forest regions

↳ affecting conservation of forests

↳ hamper the rights of forest communities
↓
by encroaching into their land, livelihood

↳ promotes industrial activities in forest areas
↓
increased emission of GHGs.

Thus, proposed amendments needs to be blocked in context of the harms that it cause on forest based communities and affect our climate change commitments under SDGs and Paris Climate Agreement.

उम्मीदवारों को
इस हार्जिए में
नहीं लिखना
चाहिए
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7.

शहरी क्षेत्रों में बाढ़ की समस्या न केवल नदियों के उफान के कारण है, बल्कि उन अनियोजित तरीकों के कारण भी है जो हमारे नगर, शहरीकरण की प्रक्रिया में अपना रहे हैं। चर्चा कीजिए। इस संदर्भ में, शहरी बाढ़ पर राष्ट्रीय आपदा प्रबंधन प्राधिकरण के दिशा-निर्देशों का उल्लेख कीजिए। (उत्तर 150 शब्दों में दें)

The problem of flooding in urban areas is not only due to overflowing rivers, but also the uninformed ways in which our cities are coping with urbanisation. Discuss. In this context, mention the National Disaster Management Authority guidelines on urban floods. (Answer in 150 words)

10

In most times, urban floods have emerged as a huge menace as observed in recent floods in Chennai

Reasons

→ Overflowing rivers

↳ cities in proximity to large rivers

ex:- Brahmaputra → Dibrugarh

→ Urban management issues

↳ excessive population increase

↳ improper drainage system

↳ occupation of wetlands

↳ no early warning system

Urban management is the major issue

Guidelines (NDMA)

→ Proper drainage management

↳ to drain out excess water

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

→ Rain water harvesting

↳ reduce surface run-off

↳ recharge water table

→ Rain gardens

↳ pores so that
water percolates
down

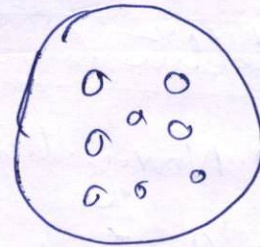


Fig:- Rain gardens

→ Response

→ Preparedness

→ Presence of early warning systems.

The I-FLOWS system introduced
in cities like Mumbai is a right step
in this regard.

8.

इसरो अब केवल उपग्रहों के प्रक्षेपण तक ही सीमित नहीं है, बल्कि यह वर्षों से विकास गतिविधियों में अपनी भूमिका को लगातार बढ़ा रहा है। विवेचना कीजिए। (उत्तर 150 शब्दों में दें)

ISRO is no longer confined only to the launching of satellites, but it has been constantly enlarging its role in development activities over the years. Discuss. (Answer in 150 words)

10

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

Since its inception, ISRO has proven to be one of the most efficient space organisations across the world.

Satellite launches

- ↳ Navigation ex: - IRNSS
- ↳ Remote sensing / earth observation ex: - EOS-01
- ↳ For other countries ex: - Argo-3
- ↳ Development of new technology
 - ↳ GSLV MK-III, HSTDV etc.

Developmental activities

→ Rural development

ex: - Village Resource Centres (VRCs) → Tele-medicine
→ Tele-education

→ Education

ex: - Edusat

→ Natural resources identification

→ Disaster management preparedness ex: - Bhuvan platform

- Civil aviation sector
ex:- GAGAN (using GSATs)
- Farming sector ex:- GEMINI
- Navigation to people ex:- NAVIC
- Pvt. sector collaboration
ex:- ANTRIX, InSpace etc.

Thus, ISRO has large contribution
also to developmental activities in India.

9.

राज्य और गैर-राज्य अभिकर्ताओं द्वारा महत्वपूर्ण सूचना अवसंरचना (CII) को लक्षित करने के पीछे उत्तरदायी कारणों को बताइए। साथ ही, भारत सरकार द्वारा अपने CII को सुरक्षित करने के लिए उठाए गए कदमों पर भी चर्चा कीजिए। (उत्तर 150 शब्दों में दें)

State the reasons behind targeting of Critical Information Infrastructure (CII) by state and non-state actors. Also, discuss the steps taken by the Indian government to secure its CII. (Answer in 150 words)

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

10

The infrastructure that is critical to the safety and working of the nation like dams, power lines, railways, atomic establishments are known as critical information infrastructure (CII)

Reasons for attacks

→ To disrupt the normal functioning of the country

ex:- Power grids jeopardised in 2020 allegedly by China

→ To create national security issues

ex:- hacking intelligence agencies data

→ To corner the Govt. to give sensitive information

ex:- used by non-state actors

Steps taken

- ↳ NCII PC creation in 2000s
 - ↳ protect critical infrastructure
- ↳ Establishment of NTRO (National Technical Research Organisation)
- ↳ National Cyber Security Policy
 - ↳ stop cyber attacks
- ↳ Intelligence agencies like RAW, IB

The recommendations of Indrajeet Rao and Gulshan Rai Committee like

- hosting servers in India
 - strengthening manpower
- can be utilised to further strengthen CII in India

10.

पूर्वोत्तर भारत के रणनीतिक महत्व के बावजूद, इस क्षेत्र को कई सुरक्षा खतरों का सामना करना पड़ता है। चर्चा कीजिए। साथ ही, क्षेत्र में शांति और स्थिरता सुनिश्चित करने के लिए सरकार द्वारा उठाए गए कदमों का भी उल्लेख कीजिए। (उत्तर 150 शब्दों में दें)

Despite the strategic significance of North-East India, the region faces several security threats. Discuss. Also, state the measures taken by the government to ensure peace and stability in the region. (Answer in 150 words)

10

North-East India has been a hotbed of insurgency and terrorist activities continuously since independence and continuing largely till date.

Strategic significance

→ Connectivity with South East Asia

↳ key for Act East Policy and Neighbourhood First Policy

→ To control drug abuse in country
LNE's proximity with 'Golden Triangle'

→ To safeguard Indian borders

↳ China, Myanmar, Bangladesh, Bhutan borders

Security threats

— Ethnic conflicts

ex: — Manipur → ^{Kuki} KRA, Meiteis etc.
Meghalaya → recent conflicts

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

→ Migration

ex - Assam → chances of conflicts

→ Immigrant groups

- want independence

ex:- NSCN (I-M) → Nagaland

ULFA → Assam

- Imposition of AFSPA

- conflicts with army → recently at
Mon, Nagaland

Measures

↳ Law and order

↳ strengthening BSF, Assam Rifles

↳ imposition of AFSPA

↳ legal → 6th Schedule (autonomy)

↳ Accords → Bodo Accord, 2020
→ Naga Peace Accord

↳ Developmental

↳ Infrastructure ex:- bridges

To ensure peace and stability, the
Winning Hearts and Minds (WHAM) approach
given by 2nd ARC can be very useful

11.

भारतीय रेलवे को लंबे समय से अल्प निवेश की समस्या का सामना करना पड़ा है, जिसने इसके परिचालन के प्रमुख क्षेत्रों पर प्रतिकूल प्रभाव डाला है। इस संदर्भ में, बुनियादी ढांचे के तीव्र निर्माण में रेलवे के समक्ष आने वाली चुनौतियों पर चर्चा कीजिए। साथ ही, इस संबंध में सरकार द्वारा उठाए गए कदमों का भी उल्लेख कीजिए। (उत्तर 250 शब्दों में दें)

Indian Railways has suffered from chronic under-investment, which has adversely impacted key areas of its operations. In this context, discuss the challenges faced by the railways in speedy creation of infrastructure. Also, mention the steps taken by the government in this regard. (Answer in 250 words)

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

15

Indian railways is the 4th largest in the world with a line length of more than 65,000 km

It ^{has} suffered from chronic under-investment because:-

→ Confined to public sector

↳ limited money to invest

→ shifting of focus from railways to other sectors of transport

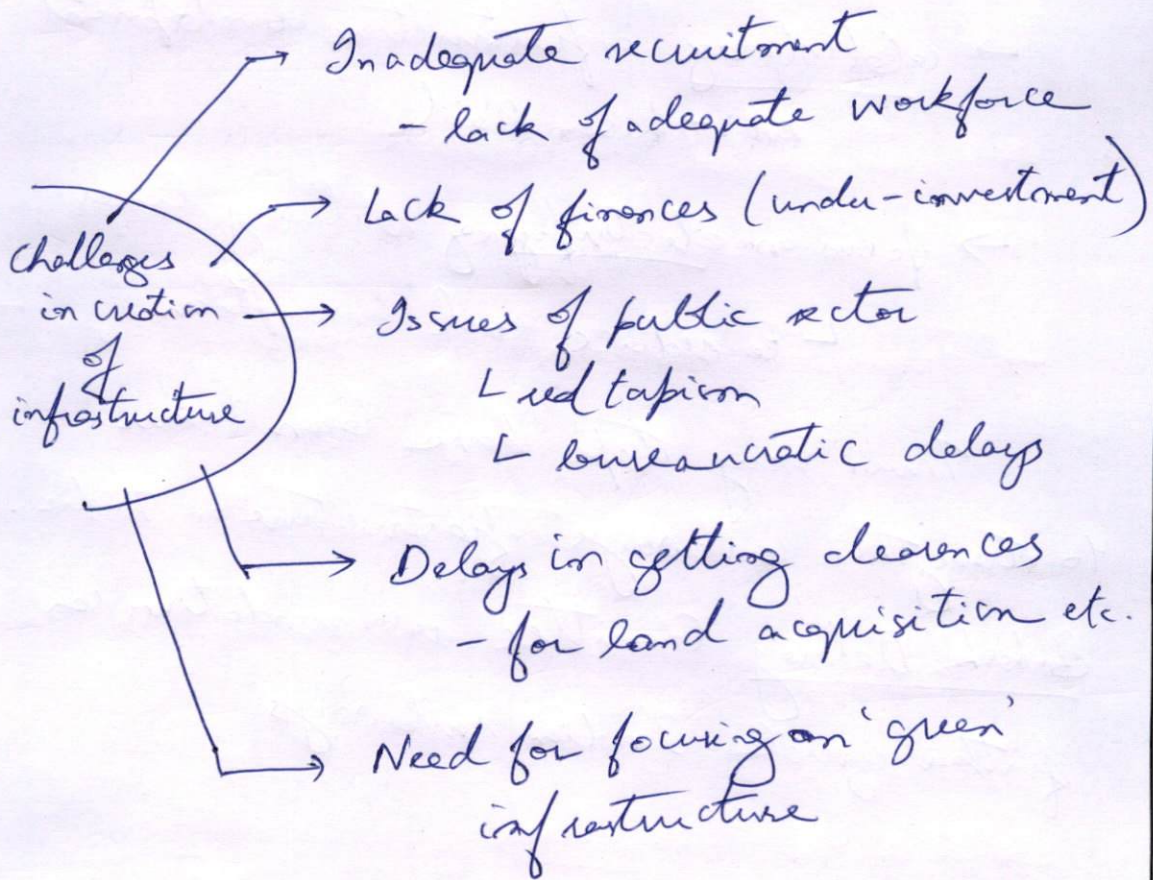
ex:- civil aviation sector ex:- UDAN scheme

Metros, Neo-metros, Metro-lite

→ losses faced in railway sector

↳ as cross subsidisation is done

~~Done~~



Steps

- ↳ Allowing entry of private sector in railways
 - competitiveness increases
 - more innovative steps
- ↳ Focus on 'green' infrastructure
 - green boundaries, green toilets
- ↳ Merging various services under railway
 - ↳ to increase efficiency of work

→ cold storage infrastructure development
ex:- Kisan Rail

→ focus on electrifying railway lines
↳ to reduce coal consumption

Thus, many steps have been taken
to strengthen railways infrastructure in India.
Bibek Debroy Committee recommendations can
further quicken Indian railways

12.

किसानों की आय को दोगुना करने के भारत के उद्देश्य को साकार करने हेतु कृषि प्रणाली के अंतिम बिंदु तक के दायित्वों पर ध्यान देने के साथ अनुसंधान और विकास (R&D) के लिए एक परिवर्तनकारी दृष्टिकोण आवश्यक है। विवेचना कीजिए। (उत्तर 250 शब्दों में दें)

A disruptive approach to research & development (R&D), with a focus on last mile obligations of the agricultural system is necessary to realize India's objective of doubling farmer's income. Discuss. (Answer in 250 words)

15

India's investment in agriculture R&D largely spearheaded by ICAR is very minimal.

Current scenario of R&D

→ Focus only ~~of~~ ^{on} cereals

ex:- Rice, wheat

- neglect of other products

→ Focus only on increasing quantity and not quality

→ Lack of expertise

- as agriculture is not considered as a good profession generally

→ Issues with administration

Young scientists go outside India

↳ due to less salary

↳ delayed promotions

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

Approach required in R&D

- Focus should be broad
 - on cereals, pulses, other cash crops
- Focus on improvement of quality of products
 - ↳ to increase shelf-life
 - ↳ pest-resistant, ex:- BT-cotton
- Performance based promotions and increased salaries of agri engineers
- Focus on innovations
 - ↳ women friendly equipments
 - ↳ farm mechanisation
- Services to farmers
 - ↳ ex:- extension → training
- Increased funding for R&D
- Developing cold storage infrastructure
- Developing seed banks.

Other steps: To double income

- Proper remuneration to farmers
 - ex:- MSP for vegetables can be explored

→ Adequate availability of loans
↳ PSL norms strengthening
↓
recently, increased to 10% for marginal
farmers

→ Insurance. ex:- PMFBY

→ Increase farm mechanisation

→ Make goods attractive for exports
ex:- branding

→ APMC, e-NAM reforms etc.

All these should go hand in
hand, then only we can realise doubling
farmers income by 2022

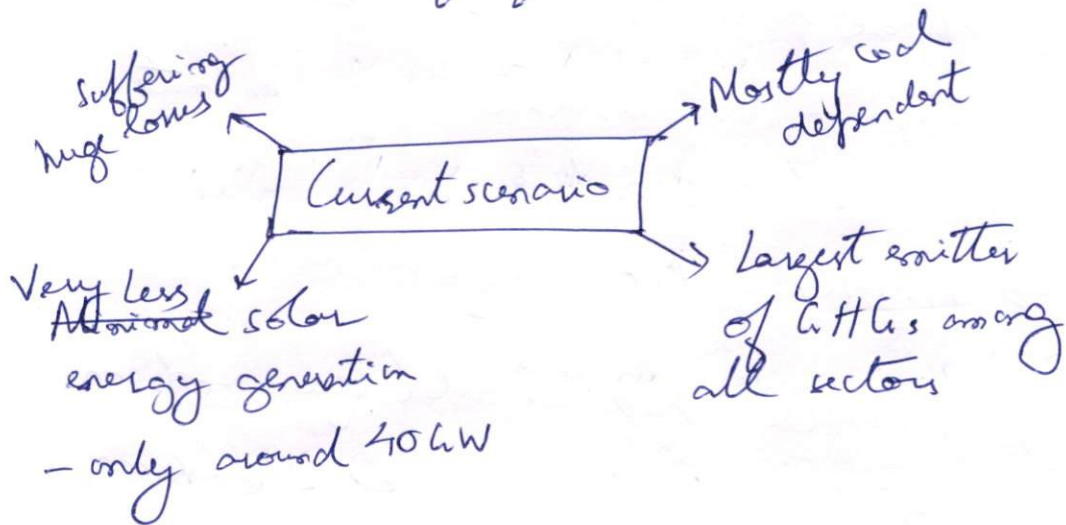
13.

भारत की विद्युत वितरण कंपनियों और विद्युत ग्रिड को जीवाश्म ईंधन से अक्षय ऊर्जा के अधिक संधारणीय रूपों में संक्रमण हेतु सुधारों से गुजरना होगा। चर्चा कीजिए। (उत्तर 250 शब्दों में दें)

India's power distribution companies and electrical grids must undergo reforms to transition from fossil fuels to more sustainable forms of renewable energy. Discuss. (Answer in 250 words) 15

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

The total thermal energy generation is India is about 235 GW of which around 86% is generated from coal which points to excessive use of fossil fuels.



Need for reforms

→ International commitments

SDGs → 40% generation from fossil fuels by 2030

→ 33% emission intensity reduction of GDP from 2005 level

→ Huge losses - faced by distribution companies

- owing to high cost of fossil fuels
→ To prevent climate change and global warming

→ Technical

↳ Solar connection to grid
- requires large expenditure

↳ overhauling of thermal energy sector
- to use renewable sources

↳ Capacity development of distribution engineers
- as solar, wind engineers

↳ reduce cost of renewable technology
through technology upgradation
ex:- geothermal energy

↳ increase production of renewable energy → so that distribution companies can rely on them

Steps by Govt.

→ Renewable purchase obligation (RPO)
↳ renewables mandatory

→ strengthening distribution companies

→ UJALA LED scheme

↳ reduce consumption of energy

→ Energy Conservation Building Code (ECBC)

→ Rooftop Solar scheme

→ Agriculture → PM-KUSUM scheme

→ Solar Wind Hybrid Parks

Keeping in view the Paris

Climate Target of keeping temperature rise
within 1.5°C , renewable energy is of
utmost importance

भारत में आगत-सघन (इनपुट इंटेंसिव) कृषि की प्रथा में, इसकी अस्थिरता और नकारात्मक परिणामों के कारण, बृहद पैमाने पर बदलाव की आवश्यकता है। इस संदर्भ में, निम्न बाह्य आगत संधारणीय कृषि (LEISA) के महत्व पर चर्चा कीजिए। (उत्तर 250 शब्दों में दें)

The practice of input-intensive agriculture in India needs a massive overhaul due to its unsustainability and negative consequences. In this context, discuss the significance of Low External Input Sustainable Agriculture (LEISA). (Answer in 250 words)

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

15

Agriculture contributes around 16% to India's GDP and around 46% of India's population is dependent on agriculture

Input-intensive agriculture

excessive use of inputs

→ water intensive ex:- rice, sugarcane

→ excess use of fertilisers ex:- urea

Need for reforms

→ Water table depletion

ex:- Punjab → due to cultivation of rice

- also for cane crop production,

India consumes 2-4% more water than countries like China, USA etc

→ Negative consequences

- ↳ salination of land - excessive irrigation
 - ↳ loss of productivity of land
 - ↳ excessive water use
 - ↳ alkalinisation of land
 - ↳ risk to income security of farmers
 - ↳ risk to food security of the nation
- Low External Input Sustainable Agriculture

Benefits

- can ~~decrease~~ water consumption
ex:- drip irrigation, soil irrigation.
- can reduce input cost
ex:- Zero Budget Natural Farming
- can help retain productivity of land
 - ↳ food security
- reduce harmful consequences on human health ex:- by excessive use of fertilisers

→ maintain soil parameters at desired level
ex: - N:P:K = 8:3:1

→ Can increase quality of products
ex: - Organic farming

→ Can double farmers incomes
ex: - Aquaponics ← aquaculture
+ hydroponics

Thus, LEISA can go a long way
in strengthening agriculture sector
in India

15.

हाल ही में जारी IPCC की छठी आकलन रिपोर्ट (AR6) – 2021 को मानवता के लिए 'कोड रेड' माना गया है। इस संदर्भ में, भारत पर विशेष ध्यान देते हुए इस रिपोर्ट में उजागर की गई विभिन्न चिंताओं की विवेचना कीजिए। साथ ही, इस रिपोर्ट द्वारा प्रदत्त उपचारात्मक उपायों को भी सूचीबद्ध कीजिए। (उत्तर 250 शब्दों में दें)

The recently released IPCC Sixth Assessment Report (AR6) – 2021 has been deemed as 'code red' for humanity. In this context, discuss the various concerns raised in the report with special focus on India. Also, enlist the remedial measures given by the report. (Answer in 250 words) 15

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

The concerns raised in the recently published IPCC (AR6) – 2021 is alarming for the human future.

Concerns

- cannot keep temperature rise below 1.5°C by 2100 of pre-industrial level
↓
more focus needs to be given especially by countries like India
- sea temperature rise in North Indian region
- rapid melting of glaciers in Himalayan region
- increased instances of natural disasters like extremely severe cyclones in India
- rise of sea surface level
- risk of climate distressed migration
↳ water scarcity etc.

Remedies

- focus on generation through renewable resources ex:- solar, wind etc.
- reduce emission of greenhouse gases
- increase forest cover
 - ↳ Afforestation
 - ↳ Reforestation
- capacity building of people
 - ↳ to tackle risks associated with climate change
- focus on carbon pricing technologies
 - ex:- ICP
- use modern technologies → CCUS, BECCS etc.

The measures need to be taken
at war footing to fulfil our international
commitments under SDGs and Paris
Climate Agreement

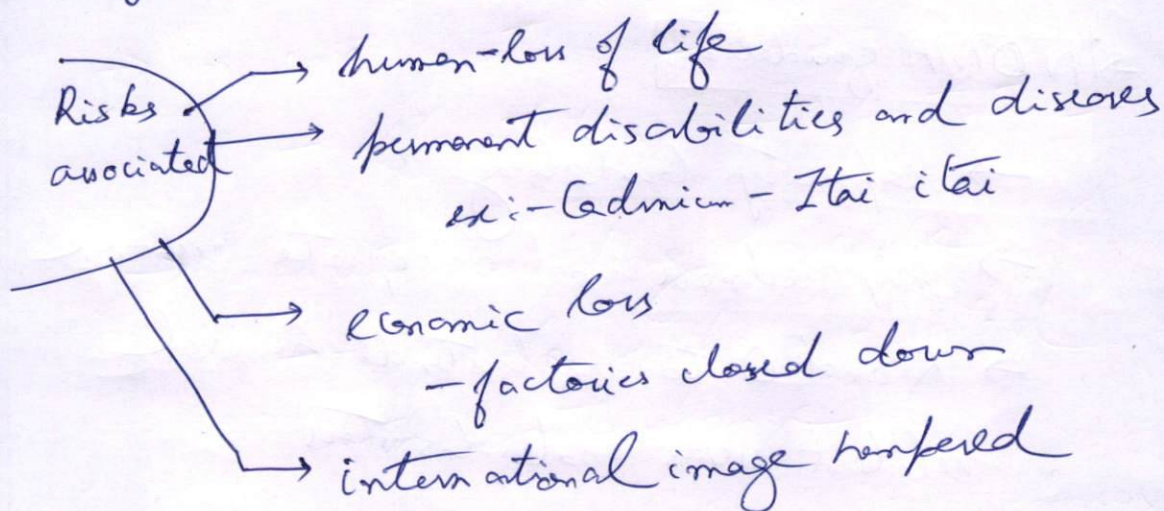
उम्मीदवारों को
इस ह्रासिए में
नहीं लिखना
चाहिए
Candidates
must not
write on
this margin

भोपाल गैस त्रासदी से लेकर विशाखापत्तनम में गैस रिसाव तक कई रासायनिक आपदाओं ने भारत में खतरनाक रसायनों (HAZCHEM) द्वारा उत्पन्न जोखिमों को ध्यान में लाया है। इसके दृष्टिगत, भारत में रासायनिक आपदा प्रबंधन (CDM) की तैयारियों के साथ-साथ इसमें व्याप्त कमियों की भी विवेचना कीजिए। (उत्तर 250 शब्दों में दें)

Multiple chemical disasters from the Bhopal gas tragedy to gas leak in Visakhapatnam have brought into focus the risks posed by hazardous chemicals (HAZCHEM) in India. In view of this, discuss the preparedness as well as gaps in Chemical Disaster Management (CDM) in India. (Answer in 250 words)

15

→ Hazardous chemical disasters have increased in numbers in recent times as seen from styrene gas leak in Vizag plant recently



Preparedness in chemical disaster management

→ National Disaster Management Plan, 2016

↓
includes chemical disaster as a man-made disaster

→ under NDMA, funds are provided to tackle chemical disaster

→ NDMA — NORF (Response Force)
↓
to provide response, recovery,
rehab in CDM

→ Mandatory inspection in hazardous industries

→ Prohibition of child labour in hazardous industries

→ NDMA guidelines

↳ capacity building

↳ preparedness and adequate response

↳ R and D to understand chemical related risks and disasters

↳ awareness generation among people

↳ proper safety guidelines need to be followed

Gaps in CDM in India

→ Non-implementation of rules and regulations

↳ safety guidelines not followed

↳ lax monitoring by Govt. agencies

- inadequate awareness about risks of chemical disasters
 - lacking preparedness to deal with chemical disasters
 - non-~~safe~~ recruitment of technical manpower in industries
 - ↳ handled by unskilled people etc.
 - no dedicated manpower to tackle C.D. in CRPF
- CDM is very necessary to prevent any chemical disasters in future and needs to be focused adequately.

17.

महामारी के समय सार्वजनिक स्वास्थ्य से संबंधित वस्तुओं और सेवाओं के उदारीकरण की बढ़ती मांग ने वर्तमान बौद्धिक संपदा व्यवस्था के संबंध में महत्वपूर्ण मुद्दों को उठाया है। विवेचना कीजिए। (उत्तर 250 शब्दों में दें)
 The growing demand for liberalisation of public health-related goods and services amidst the pandemic has raised critical issues with regard to the current intellectual property regime. Discuss. (Answer in 250 words)

15

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

~~India's total ^{Govt.} expenditure on health is only~~
 The recent COVID-19 pandemic has highlighted the vulnerabilities that the world faces regarding the pandemics and the faulty Intellectual Property regime.

Need for liberalisation

* Undeveloped countries

→ Non-affordability of the undeveloped countries — to cater to all its people
 ex:- vaccination

→ Lack technical expertise

— to develop sophisticated goods and provide service

* Supply chain hampered

* To ensure equity and social justice

ex:- 'Vaccine for all'

Issues → Non-willingness of developed countries to provide cheap vaccines to UOC

→ IPR

↳ Compulsory licensing :- although permitted under WTO, not agreed by developed countries → to safeguard their multinational companies (MNC)

↳ Patent pools

- disagreement between nations

↳ regions controlled by powerful countries

Steps taken

↳ Development of patent pools

ex:- GAVI alliance

↳ Vaccine donation and delivery to UOC

ex:- 'Vaccine Maitri' of India

↳ Technological advancements

ex:- mRNA vaccines

→ attempts to 'compulsorily license' vaccines

Way forward

→ overhaul of current IPR

↳ to bring all countries at equal footing

→ occasionally allow for 'compulsory licensing' during pandemics

→ create more 'vaccine pools'

The COVID-19 is a warning for all to fight collectively in wake of future pandemics

भारत में रक्षा प्रौद्योगिकियों के स्वदेशीकरण में उप-इष्टतम परिणामों के लिए उत्तरदायी कारणों पर प्रकाश डालते हुए, उन उपायों का सुझाव दीजिए जो रक्षा क्षेत्र में स्वदेशीकरण की गति को तीव्र कर सकते हैं। (उत्तर 250 शब्दों में दें)

Highlighting the reasons behind suboptimal results in indigenization of defence technologies in India, suggest measures which can accelerate the pace of indigenization in the defence sector. (Answer in 250 words)

15

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

India procures most of its defence equipments from USA, Russia and Israel, owing to suboptimal development of its indigenization of defence technologies.

Reasons

→ Economic

↳ developing country → less resources for defence sector

↳ less investment in Research and Development (GERD - 0.65%)

→ Administrative

→ bureaucratic delays - long time to get clearances for projects

→ non-autonomy of organisations like DRDO, ISRO etc.

→ Social

- lack of adequate skilled manpower
- migration of skilled people to outside India

→ Very less technology transfer agreements with foreign nations

Steps → Defence Acquisition Procedure
- ceiling for purchase of goods from outside

→ Increasing funding
- to DRDO etc.

→ Increasing efficiency
- through leaving administrative work to private sector

Measures

→ Increase technology transfer agreements
ex:- AK 47 (Kova) } Russia
Brahmos

→ Develop manpower in defense.

→ Overhaul administrative setup
↳ to reduce delay

→ Increase funding to organisations

→ Open up non-strategic aspects to private
sector

→ encourage PPP projects

→ provide incentives for indigenisation
of defence products
ex:- through PLI scheme

Defence indigenisation has become
very important in recent times owing to
geo-strategic battles in Indo-Pacific
and chances of supply chain disruptions

19.

अंतर्राष्ट्रीय सीमाओं की रक्षा के लिए विभिन्न केंद्रीय सशस्त्र पुलिस बलों की अवधारणा के पीछे के कारकों पर चर्चा कीजिए। साथ ही, भारत की सुरक्षा सुनिश्चित करने में इन बलों के योगदान पर भी प्रकाश डालिए। (उत्तर 250 शब्दों में दें)

Discuss the factors behind conceptualization of different Central Armed Police Forces for guarding the international borders. Also, highlight the contribution of these forces in ensuring security of India. (Answer in 250 words)

15

Recently, Integrated Theatre Commands have been proposed by Indian armed forces to better secure the international borders

~~Current border security scenario~~
Factors behind conceptualization of ^{different} CAPF for international borders:—

→ Current border security scenario

↳ Lack of unified command

↳ Lack of coordination among different border agencies

↳ ex:- BSF - Indo-Bangladesh border

Assam Rifles - Indo-Myanmar

ITBP - China border

↳ Lack of coordination among state forces and CAPF

→ Issues in CAPF

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- Promotion issues → top posts by ZPS officers

- Deployed by state forces

↓
shortage of manpower at borders

- Health issues

- less manpower

So, to rectify these issues a different
CAPF has been envisaged.

Contributions in internal security of India

→ Internal security

1) against Naxalites

↳ ex:- in Chintahal massacre,
75/76 killed were of CRPF

2) industrial security ex:- by CISE

3) disaster management ex:- CAPF

~~and~~ constitutes the NDRF

4) fighting insurgency in North-East

→ external security

- Border security
ex:- BSF → Indo-Pak and
Indo-Bangladesh border
- Border infrastructure building
- Border management
- Campaigns against insurgency
ex:- Operation All Clear in Bhutan

The contribution of CAPF is India's security immense and reforms are required to make it more effective and efficient.

20.

धन शोधन (मनी लॉन्ड्रिंग) गतिविधियों के लिए आभासी परिसंपत्तियों के दुरुपयोग के संदर्भ में, उनकी सुभेद्यता पर चर्चा कीजिए। साथ ही, उन सुधारात्मक उपायों का भी उल्लेख कीजिए, जो आभासी परिसंपत्तियों के उपयोग से उत्पन्न जोखिमों को कम करने के लिए अपनाए जा सकते हैं। (उत्तर 250 शब्दों में दें)

Discuss the vulnerability of virtual assets in terms of their misuse for money laundering activities. Also, state corrective measures that can be taken to mitigate the risks posed by the use of virtual assets. (Answer in 250 words)

15

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इस कक्ष में
नहीं लिखना
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With the advent of blockchain technology in recent times, the proliferation of virtual assets has increased manifold.

Vulnerability of virtual assets

→ Benefits of blockchain technology

↳ can't be traced - who is involved in transaction

↳ security - due to blocks being interlinked

↳ anonymity

→ evade taxes

→ foreign contributions from terrorist organisations

→ used by organised criminal groups

→ hawala transactions

Thus, there is immense potential for money-laundering activities.

Measures to be taken

- Legal
 - ↳ laws for regulation of virtual assets like cryptocurrency
- Strict imposition of acts like
 - ↳ FEMA
 - ↳ PMLA
- Capacity building of manpower
 - ↳ in new technologies like blockchain technology
- strengthen monitoring of transactions
- strengthen norms for foreign contributions
 - ex:- FCRA
- explore digital currencies
 - ex:- CBDC by China
 - to reduce craze for cryptocurrencies
- strengthen cyber security
 - ↳ to prevent infringement of national security

Steps Taken

- ↳ declared risks associated with crypto-currency - not legal tender
- ↳ banned use of cryptocurrency [later allowed by SC]
- ↳ Committee to study use of blockchain technology

Virtual asset is the 'new craze' in the world and proper understanding, R&D of benefits and associated risks is required