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सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2930)

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. : 01101662

अभ्यर्थी का नाम/Name of Student : Abhishek Singh

माध्यम: हिंदी/अंग्रेजी
Medium: Hindi/English

English

तारीख
Date

25/08/2024

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

केंद्र
Centre

Karol Bagh
DRN

निरीक्षक के हस्ताक्षर
Invigilator's Signature

Dr. D. S. Singh

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

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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)					



सामान्य अध्ययन (प्रश्न पत्र-III)/GENERAL STUDIES (Paper-III) (2930)

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 प्रसंस्करण उद्योग का तीव्र विकास किस प्रकार भारत में खाद्य सुरक्षा संबंधी चुनौतियां उत्पन्न कर रहा है?

(उत्तर 150 शब्दों में दीजिए)

How is the rapid growth of the food processing industry leading to food safety challenges in India? (Answer in 150 words)

10

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

Food Processing Industry provides employment to 11.2% of total employment provided by manufacturing sector of India. (Economic Survey 2024)

Rapid growth of FPI sector

① Growth due to strong forward & backward linkages.

② Increasing demand of hygienic & processed foods.

③ Agriculture dominance in Indian economy (17% of GDP)

④ Strong export growth (> 50 Billion \$)

⑤ Policy initiative / thrust of government.

⑤: PM Kisan Sampada Yojana.

Food Safety Challenges : Rapid Growth

- ① Lack of monitoring of by FSSAI
Eg: MDH case
- ② Lack of Quality testing lab (QTL)
- ③ Poor certification standards adopted by Ministry of Food Processing
- ④ Lack of oversight and dominance of bureaucratic hurdles.
- ⑤ Corruption is prevalent in enforcement.
- ⑥ Lack of cold storage infrastructure.
- ⑦ Poor & decentralized network of retail stores.
- ⑧ Most FPI industries still in unorganised sector.

FPI industry growth is imperative for inclusive growth (PM Modi), hence challenges arising out of it should be appropriately tackled.

2.

भारत की सार्वजनिक वितरण प्रणाली के अंतर्गत उचित मूल्य की दुकान (FPS) का प्रारंभ एक विकासशील प्रक्रिया है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)
Under the Public Distribution System of India, the Fair Price Shop (FPS) transformation is an evolving process. Discuss. (Answer in 150 words)

10

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

According to Shanku Kumar Committee, PDS system is full of bottlenecks and needs to continuously evolved & upgraded to increase its efficiency.

Transformation of FPS under PDS

- ① Digitization of procurement & distribution of FPS shop.
- ② Biometric authentication of beneficiaries to reduce leakage
- ③ Social audit of FPS by local PRI's and ULB's
- ④ Infrastructure upgrade of FPS

⑤ Smart card enabled uptake of provision grains

⑥ One nation One ration card interoperability at FPS → helps migrants.

Shortcomings - existing in FPS

① Centralised nature of procurement of grains → should be decentralised

② Irregular arrival of food grains - mismatch with cash cycle.

③ Leakage & diversion → still high.

④ Nexus between local administration & FPS → corruption & bribery

⑤ Lack of involvement of community & citizens in its functioning.

∴ According to Martek Singh Ahluwalia

FPS should be dismantled in the long run and should be replaced by DBT.

3.

भारत में एग्रीटेक स्टार्ट-अप्स किसानों की कृषि उत्पादकता एवं बाजार पहुंच बढ़ाने में किस प्रकार मदद कर रहे हैं? (उत्तर 150 शब्दों में दीजिए)

How are agri-tech startups in India helping farmers in enhancing farm productivity and market access? (Answer in 150 words)

10

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

Agri-start up fund of 10000 Cr

introduced in Budget (interim) of FY 25

in February, gave impetus to growth of startups in this field.

Agri-Tech Startups: Enhancing Productivity

① Increased efficiency of fertiliser & pesticide use.

② Choosing crops according to soil type

③ Irrigation support: micro irrigation

& drip irrigation intervention

④ Precision Farming: low use of inputs

⑤ Farming technique to be practised

⑥ Drone based surveillance of crops / field.

⑦ Extension service like climate & weather update insurance facilities, etc

Agri-startups → Market Access

- ① Inverse link to farm strategy
- ② Increasing availability of farmers produce to varied consumers (platform)
- ③ Help in export growth.
- ④ Value addition of produce → ↑ income.
- ⑤ Packaging, grading, measurement support
- ⑥ Access to cold storage & supply chain ↑ shelf life
- ⑦ Transportation & contract farming → ↓ cost of production of farmers.

∴ Development of Agri-startups is crucial for doubling farmers income
(Ashok Dalwai committee)

4. भारत में भूमि सुधारों के प्रभावी कार्यान्वयन में भूमि अभिलेखों के डिजिटलीकरण की भूमिका पर चर्चा कीजिए। (उत्तर 150 शब्दों में दीजिए)
Discuss the role of digitization of land records in the effective implementation of land reforms in India. (Answer in 150 words)

10

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

'Project Bhoomi' by Karnataka government aims at digitizing the land records with ownership details.

Role of Digitization → effective implementation of land reforms.

- ① Land Holding Pattern would be known → policy input.
- ② land consolidation would be easy given records. → economies of scale.
- ③ land ceiling act could be carried out effectively → any equitable distribution
- ④ Benami properties would be distributed among weaker groups.

- 5) Better targeting of government schemes like PM KISAN, PM KUSUM
- 6) Rights of sharecroppers & tenant farmers would be recognised
- 7) Landless labours (agriculture) exploitation would reduce.
- 8) Regulation of agricultural land ^{rent} → efficient and under oversight of state.
- 9) Will increase social-economic equality by distributing holding (land)
- 10) Solve problem of capitalist farming → suitable to Indian economic structure.

∴ Project Swamitva launched under Ministry of Rural Development is key to digitize land records → land reform.

5.

भारत को अपने जनसांख्यिकीय लाभांश का पूर्ण उपयोग करने और आर्थिक विकास में तेजी लाने के लिए एक विनिर्माण-केंद्रित विकास मॉडल को अपनाने की आवश्यकता है। विवेचना कीजिए। (उत्तर 150 शब्दों में दीजिए)

To fully exploit its demographic dividend and accelerate economic growth, India needs to adopt a manufacturing-led growth model. Discuss. (Answer in 150 words)

10

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

Manufacturing has the highest employment elasticity, greater than 1 according to Niti Aayog's Manufacturing (Mfg) in India Report.

Mfg. led growth: Exploit Demographic Dividend

- ① Highest employment potential (ILO Report)
- ② UNFPA → India 37 years demographic dividend period. (2018 - 20 ~~55~~)
- ③ Women employment → inclusive growth.
- ④ Absorb semi-skilled workforce displaced from agriculture.
- ⑤ Scheme like Make in India & Skill

→ ↑ng supply of semi-skilled workforce.

Mfg. led growth: Accelerate economic growth.

① Manufacturing - low and middle end

manufacturing → High export potential.

② PLI scheme → accelerated contribution to GDP

③ Adds to increased supply of goods to economy → ↑ GDP

④ Diversifies industrial base of the country

⑤ Capital intensive and engineering goods increase capacity of the economy

⑥ Increased employment & balanced regional growth → ↑ed demand → ↑ GDP.

∴ UK Sinha committee recommendation must be implemented to increase India's mfg. base.

6.

जलवायु परिवर्तन के परिणामस्वरूप बढ़ते प्राकृतिक खतरों से निपटने के लिए भारतीय तटीय समुदायों की प्रत्यास्थता को किस प्रकार मजबूत किया जा सकता है? (उत्तर 150 शब्दों में दीजिए)

How can the resilience of Indian coastal communities be strengthened to tackle the growing natural hazards resulting from climate change? (Answer in 150 words)

10

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

75% of India's coastline is vulnerable to cyclones and tsunamis (IMD) while 40% of coastline face coastal erosion due to action of waves (INCOIS)

Resilience of Indian Coastal Communities

(A) Structural Measures

- ① Preparation of barrier bars along coastline
- ② Early warning radar system using coastal surveillance network.
- ③ Hazard zonation at district level
- ④ Embankments around area of high population density.

⑤ Hazard resilient infrastructure creation
around coastal regions.

Non structural Measures

- ① Proper implementation of Coastal zone
Regulations
- ② Capacity building of local response team
to hazards.
- ③ Community participation in response &
rescue efforts.
- ④ Disaster appropriate preparedness and
training of coastal population.
- ⑤ Awareness campaign using civil society
organisation and NGOs.
- ⑥ Strengthening capacity of PRI's and Urban
local body → preparedness, response & recovery.

∴ Growing extreme activities due to
climate change need holistic action to

achieve SDG 13 (Climate Action)

7.

भारत में अधिक संधारणीय पर्यावरण को बढ़ावा देने के लिए ग्रीन क्रेडिट प्रोग्राम किस प्रकार कार्बन प्रबंधन से कहीं अधिक विस्तृत है? इसके कार्यान्वयन के संबंध में विभिन्न चिंताएं क्या हैं? (उत्तर 150 शब्दों में दीजिए)

How does the Green Credit Programme extend beyond carbon management to promote a more sustainable environment in India? What are the various concerns about its implementation? (Answer in 150 words)

10

Green Credit Programme aims at promoting sustainable production and consumption in Indian economy, launched in Budget of AY 24.

Green Credit Programme (GCP) → Beyond C-management

- ① Reduced green washing efforts
- ② Makes corporates more env. sensitive
- ③ Increases transparency and accountability
- ④ Policy input to future regulation
- ⑤ Not compulsive but based on self need.

Concerns

① Might not translate into action

②

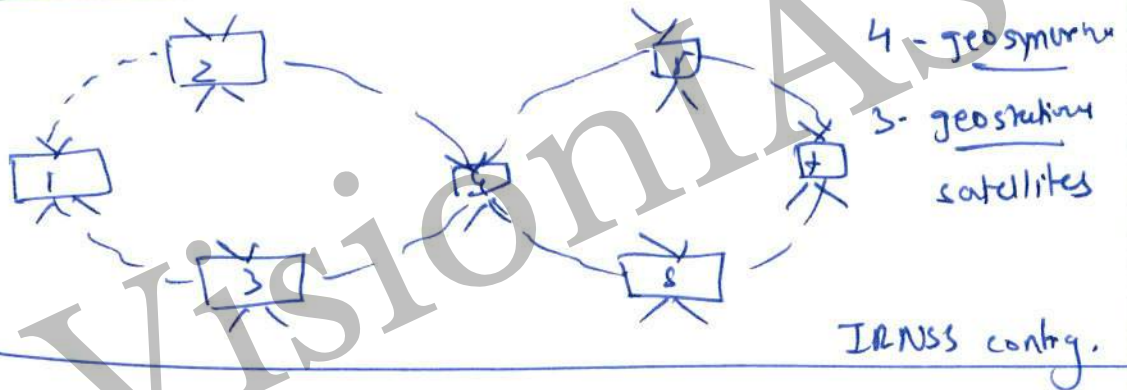
VisionIAS

8. जब पहले से ही अन्य उपग्रह नेविगेशन सिस्टम उपलब्ध हैं, तो NavIC की आवश्यकता क्यों है? (उत्तर 150 शब्दों में दीजिए)
 What is the need for NavIC when existing satellite navigation systems are already available?
 (Answer in 150 words)

उम्मीदवारों को इस हाथिए में नहीं लिखना चाहिए
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Navigation through Indian Constellation
 (NavIC) is an indigenous satellite navigation
 system based on IRNSS satellite
configuration.



Need for NavIC

- ① Suitable to Indian subcontinent needs.
- ② Can't be configured to suit military as well as civilian usage.
- ③ Reduced dependence on global service → GPS, etc.

- ④ Saves valuable foreign exchange of the country
- ⑤ fosters innovation and research in field of remote sensing
- ⑥ Stride for India at global stage
- ⑦ Outsource technology to other countries
- ⑧ Control of over local data which might be sensitive and can be misused -
- ⑨ Pillip to Spatial Data based industry in India - growing at 20% p.a.
- ⑩ Indigenous manufacturing of allied industry. (Help in space industry)

NAVIC demonstrates a great leap by India in remote sensing technology.

9.

साइबर-सक्षम वित्तीय अपराध वैश्विक धन शोधन (मनी लॉन्ड्रिंग) के नए क्षेत्र के रूप में उभरा है। चर्चा कीजिए। सरकार इस मुद्दे का समाधान किस प्रकार कर सकती है? (उत्तर 150 शब्दों में दीजिए)

Cyber-enabled financial crime has emerged as the new frontier of global money laundering. Discuss. How can the government address this issue? (Answer in 150 words) 10

उम्मीदवारों को इस कक्ष में नहीं लिखना चाहिए
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According to World Cybercrime Index, India is ranked 10th globally as cybercrime hotspot.

Cyber-enabled financial crime → Money laundering (Reasons)

- ① Development of Cryptocurrency based on blockchain technology
- ② Decentralised nature of transaction
- ③ Anonymity of user facilitating the transaction
- ④ Mostly transnational - outside jurisdiction of single country.
- ⑤ Use of modern, rapidly evolving tech.

⑥ lack of global cooperation and standards to deal with crypto.

Ways → Government can address issue

- ① Formulation of crypto governance framework - under RBI, SEBI
- ② Implement the policy & legislation involving cybercrime led money laundering.
- ③ Investment in technical capability enhancement of cyber fraud architecture.
- ④ Training of skilled human resource to detect and prevent money laundering.
- ⑤ Creating a dedicated taskforce - combining CERT-in & ED officials.

Government should prevent misuse of cyber tech for money laundering by ratifying Budapest convention.

10.

इंडियन आर्मी वर्ष 2024 को 'प्रौद्योगिकी समावेशन वर्ष (Year of Technology Absorption)' के रूप में मना रही है। इसके आलोक में, स्पष्ट कीजिए कि भारत के रक्षा क्षेत्रक में प्रौद्योगिकी के समावेशन की आवश्यकता क्यों है। इस पहल में भारत को किन चुनौतियों का सामना करना पड़ सकता है? (उत्तर 150 शब्दों में दीजिए)

The Indian Army is observing the year 2024 as the 'Year of Technology Absorption'. In light of this, explain why there is a need for technology absorption in the defence sector of India. What challenges can India face in this initiative? (Answer in 150 words)

उम्मीदवारों को इस दृष्टि में नहीं लिखना चाहिए
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Rapid progress made by global military giants like USA and China in Defence Technology → imperative on India to improve its technical capability.

Need for technology absorption

- ① Increasing geopolitical tension & global race for autonomy.
- ② Rising stature of India economically around the world (5 Trillion \$ economy)
- ③ SAGAR Doctrine → being the net security provider in IOR.
- ④ Humanitarian and Disaster Response (HAAR) capabilities can be augmented.

⑤ Regional instability → Pakistan, Bangladesh etc

⑥ Hostile neighbourhood : Skirmishes with China & Myanmar refugee crisis.

Challenges faced by India in Tech Absorption

① Lack of funds → low budget of defence spending

② low investment in defence R&D

③ Poor private participation in defence production

④ Unsatisfactory performance of institutions like DRDO (K. Rajhavan Committee)

⑤ Import dependence → very high in critical and emerging tech.

∴ Shankar committee recommendation of increasing defence budget to 2.5-3% of GDP is vital for tech. absorption.

11.

भारत के पूर्वोत्तर क्षेत्र (NER) में व्यापार एवं उद्योगों के विकास में किन समस्याओं का सामना करना पड़ा है? इन समस्याओं से निपटने हेतु किए गए उपायों पर टिप्पणी कीजिए। (उत्तर 250 शब्दों में दीजिए)
What are the issues faced in the development of trade and industries in the North-Eastern Region (NER) of India? Comment on the measures that have been taken to tackle these issues. (Answer in 250 words)

15

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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In the budget of FY 25,
the government has made special emphasis on development in North Eastern Region. (NER)

Issues faced in development of trade and industries in N.E.R

- ① Insecurity in the region due to insurgency, cross border terrorism, etc.
- ② Difficult and treacherous terrain
→ difficult development of infrastructure.
- ③ Geographical isolation → chickens neck corridor (Siliguri) → 32 km
- ④ Historical neglect → underdevelopment of the region.

⑤ Hostile neighbourhood : China &

Myanmar → support insurgent groups

⑥ Inner line Permit and 6th schedule

↳ reduce outreach of government development programmes.

Measures Taken : N.E.R's development

① UNNATI Scheme → Budget FY 25

② Ministry of Development of North East Region - (MoDNER)

③ North Eastern Regional Council under Home Minister → involving Governors.

④ Aspirational District Programme (ADP) to increase human capital.

⑤ National Mission on Oilseeds - Oil Palm
↳ to increase oilseed cultivation.

∴ according to 2nd ARC, N.E.R represents a stable anarchy, which requires continuous govt support for development.

Other connectivity and infrastructure projects : Undertaken

① IMT → India - Myanmar and Thailand Trilateral Highway → increasing connectivity.

② Kaladan Project : To connect Kolkata and Manipur via Myanmar's Sittwe port bypassing Bangladesh.

③ BBIN Project : Motorway connecting Bhutan - India → Bangladesh.

∴ N.E.R being a bridge between India and ASEAN → holds importance for international trade & cultural exchange.

12. जलवायु परिवर्तन और बढ़ते जल संकट के युग में, सूक्ष्म सिंचाई प्रणालियां भारत में संधारणीय कृषि पद्धतियों में किस प्रकार योगदान दे सकती हैं? (उत्तर 250 शब्दों में दीजिए)

In the era of climate change and growing water scarcity, how can micro-irrigation systems contribute to sustainable agricultural practices in India? (Answer in 250 words) 15

Micro-irrigation, according to a study by Ashok Gulati and Suni, is vital to improve climate-resilience of Indian agriculture ^{caused} due to climate change led water scarcity.

Climate change → Growing water scarcity

- ① Increased frequency of droughts
- ② Erratic monsoon → less availability of water → drying up of lakes (El-Nino)
- ③ Global warming → drying up of aquifers
- ④ High pollution → unfit nature of available water

(5) low Ground water recharge → less availability in non-monsoon months.

Micro-irrigation → Sustainable Agri Practices

(1) leads to precision agriculture → low utilisation of water

(2) Can be used for fertigation.
low demand for fertiliser → ↓ soil pollution

(3) Dryland farming can be taken up easily in area of low rainfall

(4) less reliance on monsoon and ground water availability.

(5) low consumption of power used to draw underground water

(6) Increased productivity of crops → ↑ farmer's income.

⑦ Practices of unsustainable practices like Flooding will be removed → ↓ salinisation, ↓ alkalinisation of soils.

Steps to increase Micro-irrigation adoption

- ① Infrastructure status to micro-irrigation industry. → (↓ cost of credit)
- ② Capital subsidy to low and marginal income farmers for adoption.
- ③ Demonstration effect by adoption by PPOs and cooperatives → Red confidence
- ④ Awareness about cost reduction & increased productivity due to micro-irrigation.

Increased extreme events (IPCC AR6)
due to climate change makes it necessary for small and marginal farmers to adopt micro-irrigation systems → inclusive growth in agriculture.

13.

भारतीय रेलवे में माल परिवहन से संबंधित समस्याओं का समाधान करने तथा घरेलू माल ढुलाई में इसकी हिस्सेदारी बढ़ाने के लिए कौन-सी रणनीतियां अपनाई जा सकती हैं? (उत्तर 250 शब्दों में दीजिए)

What strategies can be adopted to overcome the issues pertaining to freight transportation in the Indian Railways and increase its share in the domestic freight? (Answer in 250 words) 15

उम्मीदवारों को इस कक्ष में नहीं लिखना चाहिए
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Indian Railways share in freight transportation has been consistently decreasing ($\downarrow 25\%$), while that of road transport is increasing.

Issues Pertaining to Freight Transportation by Railways

① High cost of freight due to cross-subsidisation of fares

② low operating ratio of Railways
i.e. around 98%.

③ Congestion & delay in freight transportation due to under capacity and over-utilisation.

④ Increased derailments → loss of human lives & goods in transportation

⑤ Poor quality of delivery → loss, reduction in quality of goods / consignment.

Strategies adopted to overcome issues in freight transportation. ↓ ashore in domestic freight

① Dedicated Freight Corridors Project

→ ↓ congestion and delay → ↓ cost

② Modernisation of wagons & fleet

→ better service experience

③ Upgradation of railway tracks &

doubling of tracks → ↑ ed capacity of transportation.

④ Multimodal connectivity Projects. →

increased supply chain involvement.

⑤ Running double decker freight

trains → "Sheshnag" ⇒ ↑ed delivery

⑥ Upgrading of engines → ↑ed Power

and ↓ng C-footprint.

⑦ Capacity building and training of
workforce

⑧ Increased coordination between
railway zones → ↑ed efficiency.

⑨ Rebuilding signalling system → to reduce
delay in operation

∴ Bibek Debroy committee recommendation
on upgrading railway infrastructure is
key to increase domestic share of
railways in freight.

14.

उन कारकों पर चर्चा कीजिए जिन्होंने नवीकरणीय ऊर्जा क्षेत्र में प्रभावशाली प्रगति करने और वैश्विक नवीकरणीय ऊर्जा परिवर्तन में अग्रणी के रूप में स्थापित होने में भारत की सहायता की है। (उत्तर 250 शब्दों में दीजिए)

Discuss the factors that have aided India in making impressive strides in the renewable energy sector and establishing itself as a frontrunner in the global renewable energy transition. (Answer in 250 words)

उम्मीदवारों को इस हार्डिप में नवी लिखना चाहिए
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According to Ministry of Power and

Niti. Aagogs NDC dashboard, Renewable (R.E)

energy[†] in India comprises 42% of the

power mix, about to increase to 50%

by 2030.

factors : Strides in R.E

① Physical / Geographical features

→ Abundant solar & wind energy potential

→ sub-tropical country.

Solar : 19% ; Wind : 10.2% (Power mix)

② Agriculture based economy →

huge potential for biofuels

③ Coastal area.

- ③ Huge middle class population →
increasing demand for cleaner fuel.
- ④ large reserves of Thorium → development
of Nuclear Energy (3rd stage)
- ⑤ International Solar Alliance Initiative
↑ adoption of solar energy
- ⑥ Green Grid Initiative : One world
One Sun, one Grid initiative
- ⑦ Global Biofuel alliance : At UAE
COP 28 → red usage of Biofuel in
economy
- ⑧ GobarDhan scheme : to increase decentralised
production of natural gas in rural
areas.

9) Commitment at Paris Agreement (COP 21)

↳ NDC's to be met by 2030

10) Panchamrta Declaration by PM-Modi at Glasgow summit

11) Climate change responsible country →
India → increased commitment.

12) Increased government and policy support
through initiatives like: National Solar
Mission / National Hybrid Policy.

13) Green Hydrogen Mission: 19,200 cr
in Budget of FY 2024

14) PM - Surya Ghar Muft Bijli Yojana
increase solar rooftop adoption.

∴ Both national and policy led
factors help India achieve strides in
global renewable energy transition.

15.

उर्वरकों और कीटनाशकों से युक्त कृषि अपवाह पर्यावरण प्रदूषण में किस प्रकार योगदान देता है? कृषि अपवाह के प्रभाव को कम करने के लिए क्या उपाय अपनाए जा सकते हैं? (उत्तर 250 शब्दों में दीजिए)

How does agricultural runoff containing fertilizers and pesticides contribute to environmental pollution? What measures can be taken to mitigate the impact of agricultural runoff? (Answer in 250 words)

15

Agricultural runoff containing fertilizers and pesticide is a common feature among Indian Agriculture scenario, leading to severe environmental pollution.

runoff → Env. pollution

- ① Eutrophication of water bodies due to increased concentration of nutrients. (Sodium, Potassium, Nitrogen, Phosphorus)
- ② Ground water contamination : due to leaching of fertilizers and pesticides
- ③ Soil pollution : ↑ alkalinity and salinity → creation of hard pans.

④ Bioaccumulation and bio magnification
into the tissues of animals

⑤ Air pollution : release of SO_x and
NO_x from soil → due to action of
bacteria & denitrific organisms.

Measures Taken: Mitigate impact of
Agriculture

- ① Climate Smart Agricultural Practices (CSAP)
- ② Carbon Farming → ↓ use of fertilisers.
- ③ Integrated Farming System
- ④ Zero Budget Natural Farming
- ⑤ Organic Farming of produce
- ⑥ Proper use of irrigation → micro
& drip irrigation
- ⑦ Growing agro-climatically suited
crops.

- ⑧ low mSP on water guzzling
crops.
- ⑨ Reduction in support (price) to urea
and Nutrient Based subsidy.
- ⑩ Bio-input resource centres to be
made - 10,000 (Budget ₹ 25)
- ⑪ Creation of Nano Urea and Nano DAP
→ ↓ usage of fertilisers
- ⑫ PM-PRANAM initiative; reduce dependence
on industrial fertilisers and pesticides.

∴ Deregulation of fertilisers
industry along with increasing adoption
of natural farming will lead to
mitigating impact of agri. runoff.

16.

हिमालयी राज्यों में पर्यटकों की बढ़ती संख्या ने उनके पारिस्थितिकीय समावेशन क्षमता को पार कर लिया है, जिसके कारण बड़े पैमाने पर मानव-जनित आपदाएं उत्पन्न हुई हैं। संधारणीय पर्यटन को बढ़ावा देते हुए ऐसी आपदाओं को रोकने के लिए क्या उपाय किए जा सकते हैं? प्रासंगिक उदाहरणों के साथ चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए)

The growing influx of tourists in Himalayan states has breached their ecological carrying capacity, leading to significant man-made disasters. What measures can be implemented to prevent such disasters while promoting sustainable tourism? Discuss with relevant examples. (Answer in 250 words)

उम्मीदवारों को इस वॉशिंग में नहीं लिखना चाहिए
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The 2023 Floods of Himachal Pradesh leading to overflowing of Beas river and destruction of Pandoh Dam due to cloudburst → example of man-made disaster.

Influx of Tourist → Man Made Disasters.

- ① Unsustainable land use - especially in hills → overloading (Joshimath subsidence)
- ② Rampant construction & developmental activities - (G) Char Dham Project.
- ③ Collapse of Silkyara Tunnel in Uttarakhand → removal of support

④ Deforestation of mountain slope →
reduced support to rugged terrain

⑤ Shift of land for hotel construction
from forest → landslides

eg: Chomoli landslide.

⑥ Increased water demand → excessive
water extraction → instability of hills

Measures ^{to be} Implemented: Sustainable Tourism

① Reduction in tourist influx → mg
fee of entry into hill states

② Regulating land use pattern →
avoiding construction of slope $> 30^\circ$

③ Implementing measures of NDMA
according hazard zonation maps.

- ④ Green development and nature based solution to infrastructure development
- ⑤ Reforestation and stabilization of hill slopes → geo engineering
- ⑥ Clearance of encroached river valleys and beds
- ⑦ Reviewing Hydro-electric project sustainability in seismic zone ▽
- ⑧ Regulating tourism in monsoon season & developing early warning system for hazards.

Himalayas represent and ecologically sensitive zones which need to be protected from human induced changes.

17.

सुपरकंडक्टर्स विज्ञान एवं प्रौद्योगिकी के विभिन्न क्षेत्रों में नवाचार को किस प्रकार बढ़ावा देते हैं? उदाहरण सहित स्पष्ट कीजिए। (उत्तर 250 शब्दों में दीजिए)

How do superconductors fuel innovation in diverse fields of science and technology? Illustrate with examples. (Answer in 250 words)

15

उम्मीदवारों को इस हिसाब में नहीं लिखना चाहिए
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Superconductivity is the ability of a medium to transfer electric energy w/o any appreciable loss in transmission.
(Mostly seen/observed at -273°C)

Superconductors: Innovation in Science & Technology

उम्मीदवारों को
इस कक्ष में
नहीं लिखना
चाहिए
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VisionIAS

18.

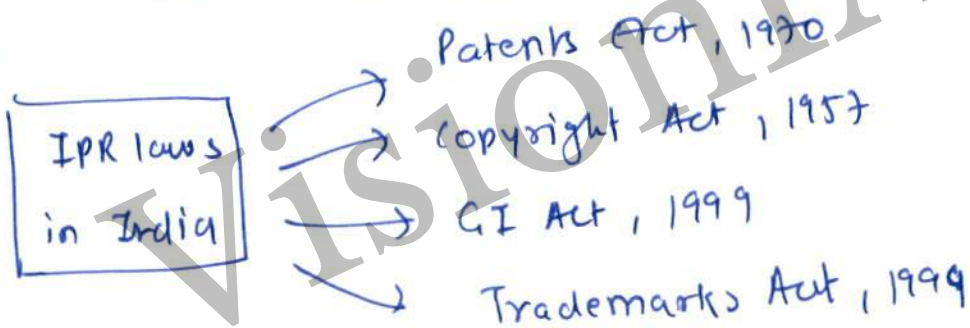
यद्यपि भारत में लगभग सभी प्रकार के बौद्धिक संपदा अधिकारों को कवर करने वाले कानून मौजूद हैं, फिर भी अनेक प्रवर्तन संबंधी, विनियामक और प्रशासनिक चुनौतियां भारत में बौद्धिक संपदा अधिकारों के व्यावसायीकरण में बाधा उत्पन्न करती हैं। सविस्तार वर्णन कीजिए। (उत्तर 250 शब्दों में दीजिए)

While India has laws covering almost all types of intellectual property rights, numerous enforcement, regulatory and administrative challenges hamper the commercialisation of IPRs in India. Elaborate. (Answer in 250 words)

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

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United States Chamber of Commerce
puts India in list of "Doubtful Countries"
with respect to protection of IPR
and implementation of TRIPS Agreement.



Enforcement Challenges: Commercialisation

- ① large presence of informal economy
- ② Dependence of population on cheap copies.
- ③ lack of enforcement wing network

- ④ Poor training of enforcement workforce
- ⑤ lack of awareness of IPR in small & micro producers.

Regulatory Challenges: Commercialisation of IPR

- ① Conflict between public welfare and private IPR interest
- ② Provision of compulsory licensing → conflict with Tech giants. (Section 84, Patents Act, 1970)
- ③ Evergreening of Patents → especially in medical / pharma field.
- ④ Nexavar issue.
- ④ Conflict of jurisdiction and slow process of approval of IPRs
- ⑤ lack of human capability to understand and approve IPR's.

Administrative Challenges : Commercialisation

- ① Huge pendency of IPR applications
- ② Misuse of traditional knowledge
- ③ Non-equitable sharing of benefits arising out of genetic resources use (Nagoya Protocol)
- ④ Lack of IP professionals → enforcement & approval.
- ⑤ Poor coordination → different IPR laws and regime in different countries
- ⑥ Acts like PPV & FR, 2001 circumvents IPR framework. (Eg: Prieto lay A-5 Pokoto case)

Strong IPR regime is vital for targetting FDI in high end manufacturing industry of India.

19.

एकीकृत थियेटर कमान का निर्माण करने में सामना की जाने वाली चुनौतियों को ध्यान में रखते हुए, परीक्षण कीजिए कि कमानों का थिएटराइजेशन किस प्रकार तीनों सेनाओं के बीच जनशक्ति और संसाधनों के बेहतर एकीकरण और युक्तिकरण को बढ़ावा दे सकता है। (उत्तर 250 शब्दों में दीजिए)

Keeping in view the challenges in creating integrated theatre commands, examine how the theaterisation of commands can lead to greater integration and rationalisation of manpower and resources among the three services. (Answer in 250 words)

15

Andaman & Nicobar was the only integrated command that existed before plan for theaterisation of commands project was initiated.

It plans to create 3 more theatre commands

→ Northern command
→ Western command
→ Eastern command.

Challenges: Creating integrated theatre commands

- ① Lack of coordination among tri-services (Army, Navy, Air Force)
- ② No previous historical experience of the action.

- ③ Successful experience of current setup in past wars and conflicts.
- ④ Economic cost of the plan is too high
- ⑤ It would be a time taking and cumbersome process.
- ⑥ The head of integrated command may not have expertise of other two services
- ⑦ Troops morale may go down
- ⑧ Transition phase → increases India's vulnerability to regional forces

Ways for Greater Integration & Rationalisation

- ① Office of Chief of Defence Staff (CDS) can create harmony and coordination
- ② Better utilisation of resources under a single command

- ③ Joint action would be holistic and well coordinated.
- ④ Need and demand for new equipment and technology can be better assessed.
- ⑤ Modernisation of forces can be carried out easily
- ⑥ Economies of scale in procuring while importing arms & equipment.
- ⑦ will reduce redundant and under used resources → ↓ cost. of operation.

∴ Integrated theatres are a need of current regional circumstances.

Proper coordination among tri-services is key for implementation.

20.

सीमावर्ती गांवों को न केवल भौगोलिक दृष्टि से बल्कि सुविधाओं के मामले में भी प्रथम गांव मानना, सीमा सुरक्षा बढ़ाने की एक प्रमुख रणनीति हो सकती है। विवेचना कीजिए। साथ ही, इस संबंध में सरकार द्वारा किए जा रहे उपायों पर भी प्रकाश डालिए। (उत्तर 250 शब्दों में दीजिए)

Treating border villages as first villages not just geographically but also in terms of facilities can be a key strategy for enhancing border security. Discuss. Also, highlight the measures being taken by the government in this regard. (Answer in 250 words) 15

Recently, Sela Tunnel was inaugurated by PM Modi in Arunachal Pradesh to boost connectivity in border villages.

Border Villages: facilities → Enhancing
Border security

① First line of defence against war and aggression

② Acts as eyes and ears about of the country — adversary's actions.

③ Prevents alienation among the border citizens

④ Misuse by non-state actors is considerably reduced.

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

⑤ They are strong & central part
of India's foreign policy

⑥ Tourism potential → scenic
beauty and world heritage sites

⑦ Check on insurgency, cross border
militants, etc

⑧ Supports army infrastructure and
defence needs in border areas.

Measures Taken By Government

① Vibrant Village Programme

— 4600 (or (Budget 23)) : to boost basic

civic amenities in 4 Border states
villages.

② Bhoralmala Project : Increased
connectivity of frontier villages

③ BRO → Road / Border roads → project
→ including mountain & valley roads.

④ Border Infrastructure and Management
Programme (BIM) — 13000 Cr
investment until FY 26

⑤ BOLT-QIT project across borders
to improve security and safety to
citizens.

⑥ Aspirational District Programme : to
increase health, education & sanitation outcomes

∴ Border villages are important
not only as centres of cultural excellence
but also for enhancing border security.

SPACE FOR ROUGH WORK

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VisionIAS