

Time Allowed : Three Hours
समय : तीन घंटेMaximum Marks : 250
अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	DEEPALI MAHTO		
Roll No./अनुक्रमांक	1910070904	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र		Date/दिनांक	01/08/2025

*Center Code : For Online - 1900 / Delhi : Karol bagh - 1901, ORN - 1902, Mukharji Nagar - 1903 / Patna : Boring Rd. - 2001 / Hyderabad : Jawahar Nagar - 2101

INDEX TABLE / अनुक्रमणिका			INSTRUCTION / अनुदेश	
Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक	1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet. कृपया उत्तर-पुस्तिका में नाम, ईमेल, रोल नंबर और मोबाइल नंबर भरें।	
1			2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory. उत्तर पुस्तिका में अंग्रेजी/हिंदी में बीस प्रश्न दिए गए हैं, सभी प्रश्न अनिवार्य हैं।	
2			3. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के लिए निर्धारित अंक उसके सामने अंकित किए गए हैं।	
3			4. 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. उत्तर प्रवेश पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो कि दिए गए स्थान में इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवर पर स्पष्ट रूप से लिखा जाना चाहिए।	
4			5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off. प्रश्नों में शब्द सीमा, यदि निर्दिष्ट हो, का पालन किया जाए। प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गये किसी भी पृष्ठ या पृष्ठ के भाग को स्पष्ट रूप से काट दें।	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Total/कुल अंक	250		For Student Only / केवल परीक्षार्थी प्रयोग हेतु	
Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय : 3:00	End Time/समाप्त करने का समय : 6:00
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input checked="" type="checkbox"/> Offline/ऑफलाइन <input type="checkbox"/>
*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy. मूल्यांकन कर्ता का विवेक अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग, फ्लोचार्ट, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आयी के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
			ECN CODE/ ईसीएन कोड :	Evaluation Date/ मूल्यांकन तिथि :
			① ② ③ ④ ⑤	

Note: Students are expected to incorporate suggestions from the feedback provided in the answers. Discussion classes for the tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good copies of the tests and learn from them. You can also discuss your copy with a Mentor and discover ways and means to improve your answers, or if you have any issues with this test / copy. Ask specific questions, to get specific answers.

EXAMINER'S REMARKS

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand of the question gets you an objectively fair score. It is examiner's perception if you have understood the question and if you know the answer in the first place. Creative answer writing, sometimes missing the core demand, may fetch very high or very low scores, and exposes your answer to the subjectivity of the examiner.
2. **CD & VA = Content Density & Value Addition.** Examiner will evaluate the quality and quantity of your content in the answer. In the same word limit and space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggestions, ideas, quotes, flowcharts, diagrams, facts and figures, data etc. This affects objective components of assessment.
3. **S & F = Structure & Flow =** Whether you have structured your answer properly or not. Whether the answer has been broken into parts and sub-parts and each part has been addressed appropriately or not. Whether the flow of the answer is maintained. Affects both subjective and objective components of assessment.
4. **P & R =** How your answer performs on the criteria of **presentation, ease of read, clarity and apparent effort** in writing the answer. This affects the subjective components of assessment.

Instructions: All questions are compulsory. The number of marks carried by a question/part is indicated against it. Quality of the answer is more important than the length of the answer.

निर्देश : सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न द्वारा धारित अंकों को उसके सामने इंगित किया गया है। उत्तर की गुणवत्ता उत्तर की लंबाई की तुलना में अधिक महत्वपूर्ण है।

Q.1) The Union Budget 2025-26 outlines a shift towards the 'debt-to-GDP ratio' as the fiscal anchor starting from FY 2026-27. Discuss the rationale behind this shift. (10 marks, 150 words)

केंद्रीय बजट 2025-26 में वित्त वर्ष 2026-27 से राजकोषीय आधार के रूप में 'ऋण-से-जीडीपी अनुपात' की ओर बदलाव की रूपरेखा तैयार की गई है। इस बदलाव के पीछे के तर्क पर चर्चा करें। (10 अंक, 150 शब्द)

Q.2) Why does India need to transition from a 'build to print' to a 'build to design' model in manufacturing? What steps has been taken by the government in this regard? (10 marks, 150 words)

भारत को विनिर्माण में 'अनुसारी निर्माण' (Build to Print) से 'डिजाइन आधारित निर्माण' (Build to Design) मॉडल की ओर संक्रमण की आवश्यकता क्यों है? इस संदर्भ में सरकार द्वारा कौन-से कदम उठाए गए हैं? (10 अंक, 150 शब्द)

Q.3) Explain the concept of a nutrition-sensitive food system and suggest strategies to achieve it in the country. (10 marks, 150 words)

पोषण-संवेदनशील खाद्य प्रणाली की अवधारणा को समझाइए तथा देश में इसे प्राप्त करने के लिए रणनीति सुझाइए। (10 अंक, 150 शब्द)

Q.4) Give a brief overview of the 'Digital Agriculture Mission'. How can it benefit the agriculture sector? (10 marks, 150 words)

'डिजिटल कृषि मिशन' का संक्षिप्त विवरण दीजिए। इससे कृषि क्षेत्र को क्या लाभ हो सकता है? (10 अंक, 150 शब्द)

Q.5) Rare earths are not just elements; they are foundational inputs that act like 'seeds of technology'. Elaborate. (10 marks, 150 words)

दुर्लभ मृदा तत्व (Rare Earths) केवल रासायनिक तत्व नहीं हैं; ये प्रौद्योगिकी के 'बीज-तुल्य' मूलभूत निवेश हैं। सविस्तार वर्णन कीजिए। (10 अंक, 150 शब्द)

Q.6) Why retrofitting Electrostatic Precipitators (ESPs) in Indian thermal power plants is a more viable and effective option compared to the installation of flue gas desulfurization (FGD) systems? (10 marks, 150 words)

भारतीय तापीय विद्युत संयंत्रों में फ्लू गैस डिसल्फ्युराइजेशन (FGD) प्रणालियाँ लगाने के बजाय विद्युत-अवक्षेपकों (ESPs) का पुनर्संयोजन क्यों अधिक व्यवहार्य और कारगर विकल्प है? (10 अंक, 150 शब्द)

Q.7) 'The Environmental Impact Assessment (EIA) regime in India remains weak and is often reduced to a procedural formality.' In light of this statement, examine the key challenges in EIA implementation and suggest reforms. (10 marks, 150 words)

'भारत में पर्यावरण प्रभाव आकलन (EIA) व्यवस्था कमजोर बनी हुई है और अक्सर इसे प्रक्रियात्मक औपचारिकता तक सीमित कर दिया जाता है।' इस कथन के आलोक में, EIA कार्यान्वयन में प्रमुख चुनौतियों का परीक्षण करें और सुधारात्मक उपाय सुझाएँ। (10 अंक, 150 शब्द)

Q.8) Plastic pollution is emerging as a serious environmental threat in India. Discuss the various mitigation measures to address this problem and also the government's initiatives in this regard. (10 marks, 150 words)

प्लास्टिक प्रदूषण भारत में एक गंभीर पर्यावरणीय खतरे के रूप में उभर रहा है। इस समस्या से निपटने के लिए विभिन्न शमन उपायों और इस संबंध में सरकार की पहलों पर चर्चा करें। (10 अंक, 150 शब्द)

Q.9) Amid evolving threats, there is a need to blend private sector capabilities with India's current internal security architecture. In this context, elaborate on the ways in which the private sector can contribute to strengthening internal security. (10 marks, 150 words)

उभरते खतरों के बीच, भारत की मौजूदा आंतरिक सुरक्षा संरचना के साथ निजी क्षेत्र की क्षमताओं को जोड़ने की आवश्यकता है। इस संदर्भ में, उन तरीकों पर विस्तार से चर्चा करें जिनसे निजी क्षेत्र आंतरिक सुरक्षा को सशक्त करने में योगदान दे सकता है। (10 अंक, 150 शब्द)

Q.10) 'Radicalisation in Jammu and Kashmir is driven as much by socio-economic factors as by external influences.' Discuss how education and youth engagement can play a role in countering radicalisation in J&K. 10M. (10 marks, 150 words)

'जम्मू और कश्मीर में कट्टरपंथ सामाजिक-आर्थिक कारकों के साथ-साथ बाहरी प्रभावों से भी प्रेरित है।' चर्चा करें कि शिक्षा और युवा भागीदारी किस प्रकार जम्मू और कश्मीर में कट्टरपंथ का मुकाबला करने में भूमिका निभा सकती है। (10 अंक, 150 शब्द)

Q.11) Outlining the key characteristics of the care economy, discuss how India can better integrate the value of unpaid and underpaid care work into its economic framework. (15 marks, 250 words)

देखभाल अर्थव्यवस्था (केयर इकोनॉमी) की प्रमुख विशेषताओं को रेखांकित करते हुए चर्चा कीजिए कि भारत किस प्रकार अवैतनिक और अल्प वैतनिक देखभाल कार्य के मूल्य को अपने आर्थिक ढांचे में बेहतर ढंग से एकीकृत कर सकता है। (15 अंक, 250 शब्द)

Q.12) 'The rapid advancement of artificial intelligence (AI) presents both unprecedented opportunities and significant challenges for India's labour market.' Examine. Also suggest strategies to align AI adoption with inclusive and resilient labour market outcomes. (15 marks, 250 words)

'कृत्रिम बुद्धिमत्ता (AI) की तीव्र प्रगति भारत के श्रम बाजार के लिए अभूतपूर्व अवसर और महत्वपूर्ण चुनौतियाँ प्रस्तुत करती है।' परीक्षण करें। साथ ही, समावेशी और तन्यशील श्रम बाजार परिणामों के साथ AI अपनाने को संरेखित करने की रणनीतियाँ भी सुझाएँ। (15 अंक, 250 शब्द)

Q.13) Why does India's agricultural export performance remain weak despite high production levels? What measures would you suggest to improve agri-export competitiveness? (15 marks, 250 words)

उच्च उत्पादन स्तर के बावजूद भारत का कृषि निर्यात प्रदर्शन कमजोर क्यों है? कृषि-निर्यात प्रतिस्पर्धात्मकता में सुधार के लिए आप क्या उपाय सुझाएँगे? (15 अंक, 250 शब्द)

Q.14) "The agricultural subsidy regime in the country needs reforms to address the distortions it causes." Comment. (15 marks, 250 words)

देश में कृषि सब्सिडी व्यवस्था में सुधार की आवश्यकता है ताकि इससे होने वाली विकृतियों को दूर किया जा सके। टिप्पणी करें। (15 अंक, 250 शब्द)

Q.15) How can biomanufacturing transform today's consumptive manufacturing paradigm to the one based on regenerative principles? Also discuss how BioE3 Policy (Biotechnology for Economy, Environment, and Employment) aims to foster biomanufacturing in the country. (15 marks, 250 words)

बायोमैनुफैक्चरिंग आज के उपभोगात्मक विनिर्माण प्रतिमान को पुनर्योजी सिद्धांतों पर आधारित प्रतिमान में कैसे बदल सकता है? यह भी चर्चा करें कि बायोई3 (BioE3) नीति (अर्थव्यवस्था, पर्यावरण और रोजगार के लिए जैव प्रौद्योगिकी) का उद्देश्य देश में बायोमैनुफैक्चरिंग को बढ़ावा देना है। (15 अंक, 250 शब्द)

Q.16) The future of digital innovation depends on self-reliant, domain-specific AI capabilities. In this context, bring out the key considerations in developing indigenous AI models and tools. Suggest measures to build an enabling ecosystem for AI innovation in India. What initiatives have been taken by the government in this regard? (15 marks, 250 words)

डिजिटल नवाचार का भविष्य आत्मनिर्भर, डोमेन-विशिष्ट AI क्षमताओं पर निर्भर करता है। इस संदर्भ में, स्वदेशी AI मॉडल और उपकरण विकसित करने में प्रमुख विचारों को स्पष्ट करें। भारत में AI नवाचार के लिए एक सक्षम पारितंत्र बनाने के उपाय सुझाएँ। इस संबंध में सरकार द्वारा क्या पहल की गई है? (15 अंक, 250 शब्द)

Q.17) Marine oil spills are a form of environmental disaster, with far-reaching consequences for biodiversity and coastal livelihoods; however, India's preparedness to prevent such incidents and mitigate their impact has significant gaps. Analyze. (15 marks, 250 words)

समुद्री तेल रिसाव एक प्रकार की पर्यावरणीय आपदा है, जिसके जैव विविधता और तटीय आजीविका पर दूरगामी परिणाम होते हैं; हालाँकि, ऐसी घटनाओं को रोकने और उनके प्रभाव को कम करने के लिए भारत की तैयारियों में महत्वपूर्ण अंतराल हैं। विश्लेषण करें। (15 अंक, 250 शब्द)

Q.18) 'The United Nations has declared 2025 as the International Year of Glacier Preservation.' Bring out the ecological and socio-economic significance of glaciers. What are the key challenges in preserving them? What measures have been taken at national and international levels towards preservation of glaciers? (15 marks, 250 words)

'संयुक्त राष्ट्र ने वर्ष 2025 को अंतर्राष्ट्रीय ग्लेशियर संरक्षण वर्ष घोषित किया है।' ग्लेशियरों के पारिस्थितिक और सामाजिक-आर्थिक महत्व को उजागर करें। उन्हें संरक्षित करने में मुख्य चुनौतियाँ क्या हैं? ग्लेशियरों के संरक्षण के लिए राष्ट्रीय और अंतर्राष्ट्रीय स्तर पर क्या उपाय किए गए हैं? (15 अंक, 250 शब्द)

Q.19) What are the determinants of insurgency in the north-eastern region of India? What strategy should the Government of India, civil administration and security forces adopt to counter the threat in the affected areas? (15 marks, 250 words)

भारत के उत्तर-पूर्वी क्षेत्र में उग्रवाद के निर्धारक तत्व क्या हैं? प्रभावित क्षेत्रों में खतरे का मुकाबला करने के लिए भारत सरकार, नागरिक प्रशासन और सुरक्षा बलों को क्या रणनीति अपनानी चाहिए? (15 अंक, 250 शब्द)

Q.20) Unmanned Aerial Vehicles (UAVs) have become an integral aspect of modern conflict and warfare, employed by both state and non-state actors. Discuss its implications for India's security architecture and state the measures being taken to address them. Also suggest other steps to tackle the threats emanating from UAVs. (15 marks, 250 words)

मानव रहित हवाई वाहन (UAVs) आधुनिक संघर्ष और युद्ध का अभिन्न अंग बन गए हैं, जिनका उपयोग राज्य और गैर-राज्य दोनों ही प्रकार के अभिकर्ता करते हैं। भारत की सुरक्षा संरचना के लिए इसके निहितार्थों पर चर्चा करें और उन्हें संबोधित करने के लिए किए जा रहे उपायों का वर्णन करें। UAVs से उत्पन्न होने वाले खतरों से निपटने के लिए अन्य कदम भी सुझाएँ। (15 अंक, 250 शब्द)

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

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

The union budget 2025-26 Aim
at shifting of the financial
anchor from fiscal deficit to.

Debt to GDP ratio 50 ± 1 % by 2030

Rationale behind

i) Debt to GDP ratio will give
more accurate - borrowing of the
government \rightarrow Transparency

↳ a) the off budgetary borrow.
of the government will reduce.

↳ 1) FCI - expenditure.

b) the aim to reduce the

Debt to GDP from $\frac{57.17}{50}$ (2025)
 \downarrow
50 (by 2030)

ii) reliable indicator of past, present
and future \rightarrow expenditure

↳ long term fiscal consolidation
↳ global practice of Fiscal health

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

(ii) Operational flexibility :
especially with the change in
global geographic

↳ Black swan events } 2020 Pandemic
} war

(ii) Debt sustainability | this will
allow the fiscal space to
invest in the productive
investments

↓ 9 3.5% limit of FRBM Act
open expenditure } facilitate crowding
in
↳ welfare schemes.

Challenges → (i) the target will require
decade to achieve → delays
fiscal commitments

(ii) shift away from fiscal
deficit (4.4%) → will reduce the space
for the private players

the shift allow for flexible
fiscal target approach for economic
development to which \$1 million
economy by 2030.

27]

Indian manufacturing sector is more pivoted towards the build to print that is (manufacturing according to specification of MNC) rather than build to design

When the design, model and innovation lies with Indian companies

Need for build to design

(i) low GVA of manufacturing sector (18% GVA)

(ii) promote innovative in the designing and assembly.

ii) semiconductor fabrication

(iii) will lead to more employment current only 22% of workforce employ.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

iii) to integrate itself in the global supply chain
Cons [2.8] of export

v) will lead to better macroeconomic stability
i) CAPEX expenditure
ii) FOREX reserve

vi) become self reliant in the busin.
to design
i.e., economi.
movement outward of Apple plant in India

Government Initiative
i) skilling focus - to improve specialists. Skill India
ii) IPR regulation to recognize the industry.

iii) DLI scheme to facilitate.

iv) 3D additive printing.

v) Designs in India mission.

By shifting to design in India the Indian economy can integrate itself to global value chain.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

(Please do not write anything except the question number in the space provided for same.)

Candidates must not write on this margin.

3]

Nutritional sensitivity is the concept that the food is nutritionally sufficient in macro & micronutrient that enable holistic growth of population.

Need of Nutritional sensitivity

- (i) global hunger index 105
- (ii) NHHS - 5 - 33% of women anemic
- (iii) 14% wasting in children NHHS - 5

CONCEPT - (i) the nutrition sensitivity focuses on our food to be nutritious from farm to fork

(ii) includes food fortification e.g. golden rice that has vit A

(iii) incorporation of balanced diet

↳ PDS - food security

↳ KOSHAN - 20 that focuses on hidden hunger

(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

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

c) Aspirational district program
↳ focus on nutritional outcome -
by Anganwadi, AASHA - use
of local produce 1) Jagdalu (Millet)
Ladoo (Uttarakhand)

STRATEGIES TO
ACHIEVE
THEM

i) Availability of the
nutritional food
ii) Shree Anni cultivat.

iii) Horticulture and
vegetable to fight the vitamin
deficiency 1) Apple, strawberry
CHAMAN
ii) R2D in food to increase the
nutritional value

1) ICAR - rice fortification
iv) the expansion of PDS to include
nutrition 1) Pulsey - protein
↳ folic acid tablet, (Anemia)

v) Affordable - natural food through.
↳ indigenous practice 1) Red Ant center
nutritional security and sensitivity is
essential to achieve SDG-3 Health
of people.

1) Digital Agriculture Mission Aims at establishing digital, comprehensive ecosystem that enhances transparency, efficiency and informed decision making.

eg) AGRISTACK

BENEFIT THE AGRICULTURE SECTOR

(i) Farmer - in making informed decision.

a) eg) FASAL app to check the excess climate, rain.

b) the Online register of farm to get access to schemes.

1) PM KISAN.

c) increase transparency, reduce leakages and promote the doubling of farmer income.

[ASHOK DHALWAT
COMMITTEE]



(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

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

ii) it reduces the distress selling of Agriculture goods, facilitates bargaining power

ENAM
ENWDR

to get the best possible remuneration

iii) Digital land record to get access to credit - DLRM, Bhoomi-Karnataka

iv) Marketing of the produce through
social media App
promote Agripreneurship

e) Kisan connect

v) promote Precision Agriculture

use of AI

(e) Saggu Banu in Telangana

vi) Kissii Decision Support System to facilitate the farmer in taking the decision of the crop to be grown

vii) Soil health care for judicious use of fertiliser, irrigation

This will benefit in comprehensive utilization of resources to improve the income of farmers.



Please do not write anything except the question number in this space.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस खण्ड में नहीं लिखना चाहिए।
Candidates must not write on this margin.

5

Rare earth minerals are group of 17 elements that form the backbone of industrial revolution.

due to its use in $\begin{cases} IT \text{ sector} \\ \text{Electronic} \\ \text{Clean energy} \end{cases}$

They are foundational inputs

(i) seed of technology due to their unique properties $\begin{cases} \text{electrical} \\ \text{magnetic} \\ \text{optical} \end{cases}$

(ii) e) Yttrium, Lanthanum.
They have high density, high melting point, high conductivity and high thermal conductivity.

use (i) Permanent magnets \rightarrow Neodymium

is permanent magnet \rightarrow
- used in Automobiles, auto lock brakes,
computers hard discs.



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

can be used in power steers, electric window or audio

(i) Electrical - this one used in displays of smartphones, camera.

LED
1) Lanthanum - set of camera lens.

(ii) Green technology - Nickel based batteries are made up of lanthanum based alloy

- Cerium for catalytic converter

(iv) Petroleum refineries - lanthanum catalyst

(v) Health care - REE based MRI

is used for diagnosis

(vi) Water purification

(vii) Defense - dual technology of Barium cobalt for drone

Here rare earth mineral act as the catalyst of solar technology

(Please do not write anything except the question number in this space)
कृपया इस स्थान में केवल प्रश्न संख्या ही लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस स्थान में नहीं लिखना चाहिए।
Candidates must not write on this margin.

8]

The 97% of the energy demands of the country is met by.

Thermal power plant.

And the causes of Air pollution in industries by 57%.

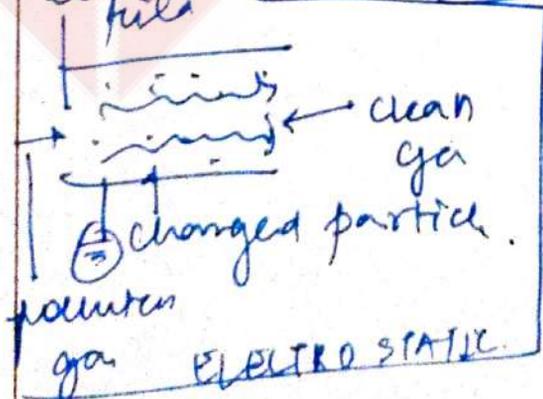
Thermal power plant → release CO_2 , NO_x , SO_x
→ $PM_{2.5}$, 10.0 μm .

(ii) CO, fly ash

hence they require.

Electrostatic precipitators → they use the electric signal to remove the particulate matter

electric field → PM 2.0, 10.0



→ it is very efficient in reducing the particulate matter major source of pollution

(iii) According to WHO particulate matter can cross barrier



(Please do not write anything except the question number in this space)
कृपया इस स्थान में केवल प्रश्न संख्या ही लिखें।

UPSC

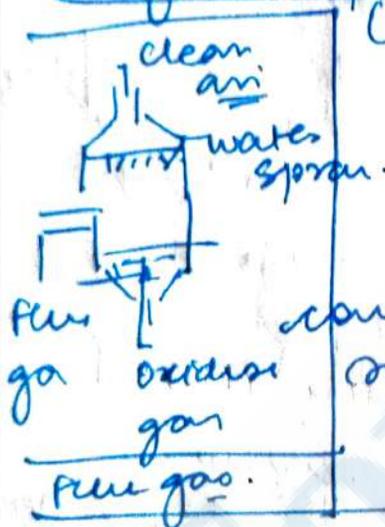
Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस स्थान में केवल प्रश्न संख्या ही लिखनी है।
Candidates must not write on this margin.

and enter lung, blood vessels → impact on Health (1092 deaths)

(ii) major cause of pollution in the city (14/130 cities that are most polluted)

Flue gas sulphurisation



(i) they focus on removal of the SO₂ gas.

(ii) they help in reduce compounds that cause acid rain, smog & respiratory problems

Advantage of Electrostatic precipitator

over flue gas | can remove both dry & wet partic [99+]

(i) SO₂ is not the major concern of polluter.

(ii) low cost

(iii) can clean large amount of gases.

The



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

Please do not write anything except the question number in this space
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

प्रश्नसंख्या को इस स्थान में नहीं लिखना चाहिए।
Candidates must not write on this margin.

7)

Environment Protection Act 1986 introduced the Environment Impact Assessment (EIA) for review of environmental impact of the development projects.

COMPONENTS OF EIA

i) Screening of the project.

ii) Scoping
= identify the key environmental issues

iii) Base line data collection of the project

iv) Public discussion

CHALLENGE in EIA Implementation

- the Grade B2 industries do not require the EIA - Exemption

- lack of coherence EIA + SEA (social impact assessment of the area)

- lack of credible source (disregard to indigenous knowledge)

- the EIA amendments year 2020 have made

(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस हार्जिए में नहीं लिखना चाहिए।
Candidates must not write on this margin.

gram sabha ineffe
c) Midem coal progr
on CH no publi
discussio tal

v) monitoring
of the process

- lack of involvement
of NGO, ESO in the
data, feedback mechanism.

vii) mitigation
measures

- lack of follow
up of the last acquisition
and rehabilitation Act

2013

G alienation of
tribal e) Sardar Sarovar
Dam

WAY
FORWARD

i) increase transparency
in data collection

ii) inclusion of stakeholders,
anthropologists in the
EIA [XAXA Committee]

iii) find alternative land that
causes min impact on
the tribal and environ

Gadgil Committee - Ecosensitive zone
should be protected.

EIA is essential for the distributive justice
and sustainable development

(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

अधिकतम 50 शब्दों में ही प्रश्नों का उत्तर लिखें।
Candidates must not write in this margin.

8)

India produces 4.2M tonne of plastic waste annually. accor to PAE report

It is a serious threat to environment

- (i) leaching of plastic can be microplastic pollution
- (ii) accumulation of plastic in the ecosystem
↓
non biodegradable
↓
bioamplification
- (iii) can cause CO₂ and harmful gas release due to open burning
↳ Benzene, SO_x
- (iv) 90% of the waste is informally treated only 10% is collected.

Measures taken to combat plastic pollution

- (i) Plastic waste management rule 2016
↳ restrict the use of single use plastic
- (ii) Plastic waste management rule 2022



(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet For Practice Purpose Only)

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

b) emphasises Extended Producers Contribution to fix accounts

c) the SPCB is responsible for monitoring of the plastic manufacturing plants

d) increase thickness of plants to 120µm

e) PWM rule 2024 focus

on local body to assess the use

f) solid waste management rules focus on segregation and recycle of the waste.

CHALLENGES REMAIN

i) the local body lack fund & functionary to monitor the waste

(ii) lack of alternative to plastic

WAY FORWARD

- Bio-degradable plastic innovation & adoption.

(iii) SBM 2.0 should be implemented with plastic in mind.

Plastic is a menace for clean environment hence require atrocious policy to curb it.

Please do not write anything except the question number in this space.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस कॉपी में नहीं लिखना चाहिए।
Candidates must not write on this margin.

9) This is the era of hybrid warfare that is change in face of conflict from on ground to digital (4th interface of warfare)

Evolving threat [i) cyber attack
ii) money laundering
iii) ^{shell} cryptocurrencies, NPT
iv) cyber warfare - TORZAN
v) information warfare

This requires the private player

i) can help in improving technology ii) startup in the defense sector. - DRONE

ii) counters the narrative buildup
↳ counter warfare - u

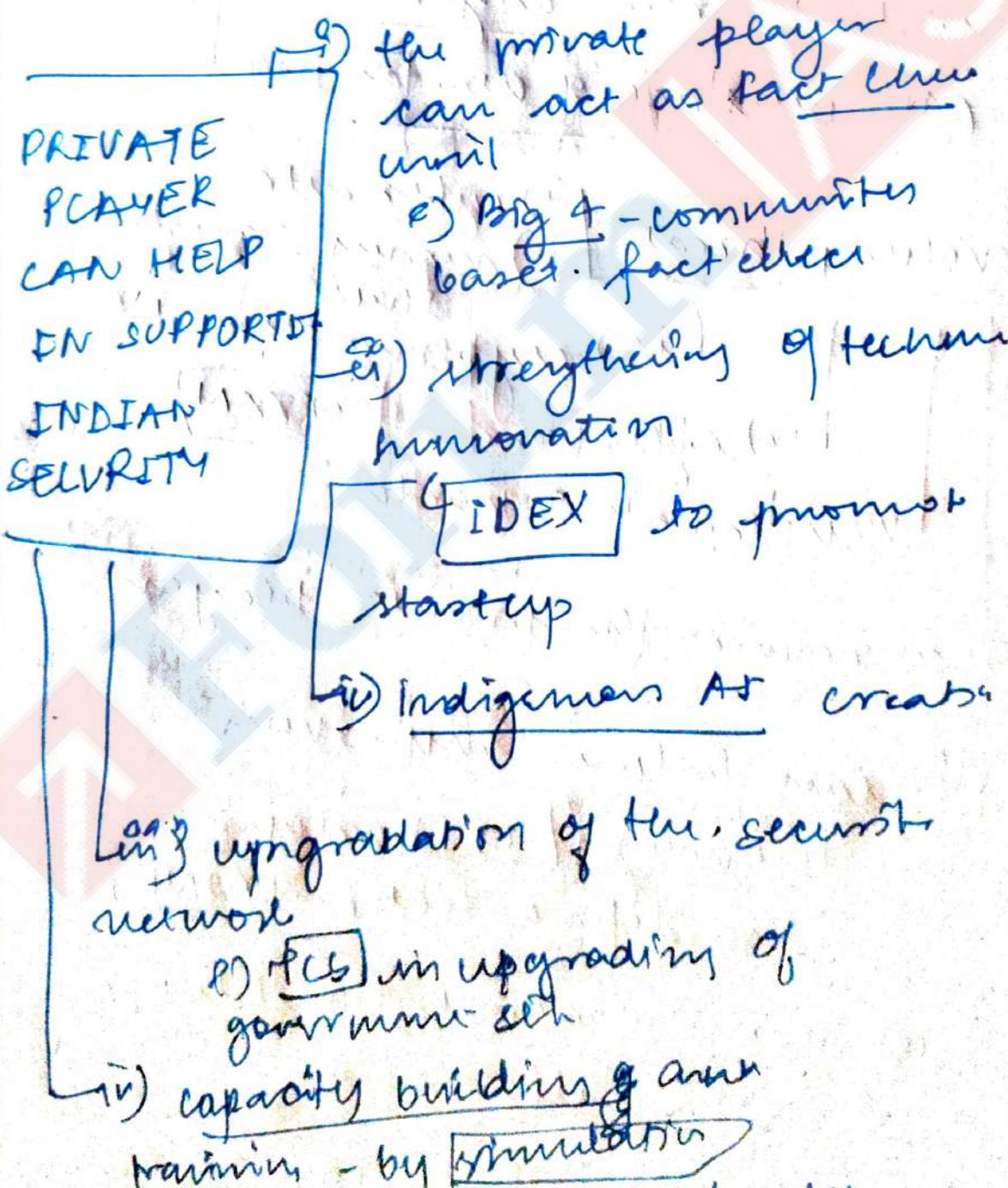
iii) cyberattacks can be counter by use of special and technology

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

upgradation

↳ ethical hacking to check the loopholes



Private player can act as facilitator in the new scenario

(Please do not write anything except the question number in this space)

UPSC

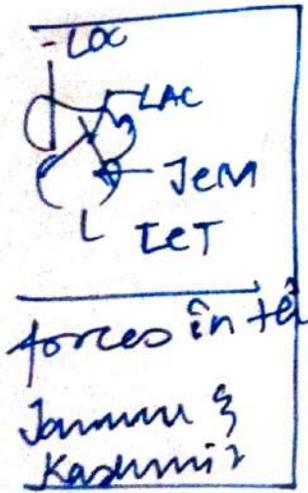
Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को प्रश्न संख्या में ही लिखना चाहिए।
Candidates must not write on this margin.

10]

Radicalisation and militancy are the reality of the Jammu Kashmir since its inception

↳ can be seen from recent PHALGAM ATTACK



Radicalisation in the Jammu Kashmir

↓
Socioeconomic causes } i) the lack of development due to infrastructure deficit.

- i) Baramulla.
- ii) lack of education institute as college only III Shikhar, Jammu.
- iii) health and drug addiction is high in youth.
- iv) lack of employment } opportunities.

(Please do not write anything except the question number in this space)

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

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

- due to
- (i) enormous industries
 - (ii) constant internet shutdowns
 - (iii) crisis in the 1990-2010
 - (iv) evade the Jammu Pandit
were extracted from their home

EDUCATION
CAN PLAY
AN IMPORTANT
ROLE

- (i) economic oppoort
due to new startups
- (ii) startup firm or e-commerce
- (iii) deradicalisation of youth and can stay away from TGW due to awan
- (iv) new service sector can open up
a) allow bats to export to international market
- (v) increased representation in government job - IAS, IPS

education can act as a tool to achieve peace in SDG-17 Jammu Kashmir region

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

Please do not write anything except the question number in this space and you have to write the answer in the margin.

कृपया केवल प्रश्न संख्या ही इस स्थान पर लिखें। उम्मीदवारों को इस स्थान पर उत्तर लिखना नहीं है।

11

care economy is the economy that focuses on the therapy, care and wellbeing of children, elderly and patients

Key characteristic (i) focuses on the care of young, older and women

(ii) gender collaborative as the concentration of women is high. (70% ELD)

(iii) non monetised economy - (30% min. spend by women on unpaid work (time survey) - double burden on female..)

(iv) lack of skilling { only 5% trained. stat. } (ILO)

(v) lack of bargaining power (90% remain outside formal employment.)



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को
इस कॉपी में
कोई लिखना
नाहीं।
Candidates
must not
write on this
margin

v) absence of the social security

-) material benefit Act,
EPFO, insurance

vi) lower tier focus of AASHA,
Aryamvadi work

↳ lack of proper way

e) protest by Kerala AASHA work
for remuneration

vii) they are visible invisible de

to being outside the economy

↳ lack of GDP contribution
↳ high opportunity cost

India can integrate the value of
unpaid & underpaid care work

i) formalisation of the workforce
by the use of startup

e) urban cap maid services

ii) Access to social security benefits

Please do not write anything except the question number in this space.
कृपया इस स्थान में केवल प्रश्न संख्या ही लिखें।

UPSC

उम्मीदवारों को इस इतिहास में नहीं लिखना चाहिए।
Candidates must not write on this margin.

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

- i) Atal pension yojana
- ii) rajshiksha Bharosa con

iii) skilling and certification of the women (current $\leq 5\%$ \rightarrow 50%)

↳ better bargaining power
PM kaushtik vikas yojana

iv) focus on grey economy

geriatric care

↳ employment of nurses in hospice, geriatric day care centre

↳ community engagement

effort to increase the know.

v) Data driven Policy making
↳ Time survey, PPS,

to create National Care Policy

vi) infrastructure development to facilitate mobility

↳ smart city project.

monetisation of core economy can lead to increase in female LFP from 42% to 50% and lead to economic growth.



(Please do not write anything except the question number in this space)

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

Candidates must not write on this margin

12]

According to ILO Artificial Intelligence is said to affect 45M job across the globe

AI technology as opportunity in the Indian market

- (i) New avenues of employment -
 - 1) Data mining, data science
- (ii) can help in agriculture to improve precision agriculture
 - ↳ 25% export → 10% more capture.
- (iii) In industries can lead to employment of AI for market analysis
 - ↳ Better value addition to food processing industries.
 - ↳ 20M job create



(Please do not write anything except the question number in this space)

UPSC

Candidates must not write on this margin

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

1) AI can help in industries like IT, and automobile manufactures
↓
Semi-conductors for designing, fabrication

ii) service based industries
According to ASSOCHAM - 40% employment opportunity to open up in Banking, Finance, Insurance

↳ reduce impact in people facing industries
1) education - better productivity

CHALLENGES TO LABOUR MARKET

1) It can wipe out 40% of the white collar jobs due to automation

ii) the service industries to be hit due to
a) customer care being replaced by chatbot
b) robotics in the industrial m.

iii) lack of skill among 65% of graduate employable - NITI



(Please do not write anything except the question number in this space) कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis. (Specimen Answer Booklet - For Practice Purpose Only)

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

iv) layoff due to AI provides alternative cheap foster solutions

e) TCI-21 layoff.

v) replacement of low skill con uge workers

vi) erosion of traditional business model (retail stores, small scale manufacturers).

e) zepto competing with retail grocery

STRATEGIES TO ALIGN WITH AI ADOPTION

- i) skillin, upskillin & reskillin of the poorly
- ii) PM kaural vikas yojna
- iii) PM intenship sch

iv) promote ethical use

of AI - Human at center

↳ DPDP act to protect person

iii) collaboration with the international to promote ethical AI

iv) enlarge the social security net

AI can be facilitator of employment but require skill and government support



(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस इतिहास में नहीं लिखना चाहिए।
Candidates must not write on this margin.

13]

Indian agricultural export form 2.87 of the global export (Economic Survey 2021)

High dependence level India is largest producer of milk, rice.

(i) 2nd largest of meat, cotton, fish, infrastructure

(ii) employ 1477 of the workforce

(iii) diverse ecological spread comprises of 477 of Net sown area

Weak export performance

(i) lack of value addition to the product only 117

(ii) high wastage of the good 1167

↳ due to absence of infrastructure like old supply chains

(iii) low 190 in the promotion of trade

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

iv) Fragmented land holdings
50% < 1 Ha of land (2011 census)

v) Phytosanitary tariff due to
use of GM crop
↳ pesticide above the
required limit

eg) USA rejected Alphonso Mango.

vi) Lack of formalisation of SHG, FPO
↳ low input and output value
addition. →

vii) Government policies - a) Essential Commodities Act.

↳ minimum export price.
↓
discourage the exporter
b) onion marketing

MEASURES REQUIRED

i) land consolidation and farmer
to increase production

1) Gujarat - to grow potato.

ii) use of new technology } CASHOK GULATI

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को इस प्रश्न में नहीं लिखना चाहिए।
Candidates must not write on this margin.

Please do not write anything except the question number in this space.
कृपया इस स्थान में केवल प्रश्न संख्या ही लिखें।

127

- Blockchain to track the products
- IoT to reduce the wastes
- AI to promote precision farming
- (ii) market analysts
- (iii) value addition

(ii) Push Agriculture - Startup in agriculture - Better market Access
1) Country Delight

(iii) Handholding - APEDA, MPEDA to facilitate international law and standards

(iv) Government subsidies - (i) to create FPO & SHG
(ii) APF, AIMF to create the food processing infrastructure
RODTEP - as the facilitate of exp.

Sahayani co of in village could increase export by govt. support - policy help - GI tag to oncom - cold chain - handholding - skilling of worker
Agriculture

Agri export is essential for increasing farm income. CASHOK DHALWAT COMMITTEE



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

उत्तरों में
शब्दों की
संख्या
अधिक
नहीं
करनी
है।
Candidates
must not
write on this
margin

14) The agriculture subsidy form 2% of GDP according to Budget 2025-26

The agriculture subsidy cause distortion

i) land - the salinity of land cause distortion to use of water, pesticide, & fertiliser

ii) injury highly acidic soil

iii) lower subsidy affecting the groundwater level.

+ According to CGWB critical groundwater level in Haryana

iv) fertiliser subsidy causing

[60.5% of GDP increase in the debt burden as dependent on import]

v) crop diversification is reduces due to NASP as it focus more on the cereals

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को
इस इतिहास में
कोई लिखना
नाहीं
Candidates
must not
write on this
margin

especially in UP, Haryana, etc.

(iv) the KISAN scheme only helps
the land owners and not the
tenants and sharecropper

(v) the agricultural output is reduced

(vi) the pressure on the FCI to
procure the MSP crop

out budget
borrowing

wastage
CAG report 2Mton
grain

(vii) distorts the market price and

impact the consumer
 $CPI \times B$ due to food
inflation

REFORMS REQUIRED

(i) promote water use efficiency.

↳ subsidies to micro irrigation
(drip pipes)

↳ water bill to promote behaviour
change

(Please do not write anything except the question number in this space)
कृपया इस स्थान में प्रश्न संख्या को अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

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

ii) Promote crop diversification
↳ through PM AASHA scheme - Anna

↳ horticulture promotion and value addition

iii) promote agriculture and allied sector

↳ intensive agriculture

↳ livestock farming, circular economy
M.PEDA - marine (matija sampade)

iv) promote technology usage

↳ CASIOK GULATI → AGRISTACK

↳ soil health care

v) promote FPI through food mega park
↳ PM APPE, PM Kisan Sampade Yojna

vi) promote skilling of the workforce

↳ Agripreneurship

vii) rationalise of subsidy - to

↳ check leakage and judicious use
↳ function in research can reduce

the subsidy burden by (1% → 2.5%)
JCAR

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Paranthesis
(Specimen Answer Booklet - For Practice Purpose Only)

Please do not
write anything
except the
question number
in this space!
Space for
writing answers
is given on
other pages.

उम्मीदवार को
प्रश्न लिखने में
यहाँ लिखने
की जगह
नहीं देनी
है।
उम्मीदवार
को उत्तर
लिखने के लिए
अन्य पृष्ठों पर
जगह दी है।

15]

bio manufacturing is the process of
use of the biological components
like animal, plant and microorganism.
in the manufacturing process
increasing its economical value

Bio manufacturing
as the transform-
of today's unsustainable
manufacturing.

1) altering the seed
to make it more
resistant -
to pest control

ii) increase the
nutritional security
1) golden rice - vit A

iii) energy :- through the biofuel
- JIVAN initiative

iv) reduce the carbon footprint
promote the circular economy

v) Goordhan project 10.
use the low margin

(Please do not write anything except the question number in this space) कृपया इस स्थान में प्रश्न संख्या के अतिरिक्त कुछ न लिखें।

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

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

iv) In line with the Paris Agreement goal of 15% of renewable energy

v) bio enzymes are chemical manufacturing therapeutic
1) insulin manufacturing using gene therapy

vii) marine ecosystem: protection and regeneration

viii) e) promote for coral

carbon capture and utilization

to reduce the air pollution.

CAGS of 14/30 is very poor

clean Air survey

BioE3 faster biomanufacturing

ii) economic growth from 30M to 800M by 2030

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

सहितम् नो
पुनः लिखे
नहि शक्यम्
सर्वत्र
Candidates
must not
write on this
margin

(i) creation of Bio manufacturing
sub. 8) Serum Institute, Bharat.
biotech
to create vaccine.

(ii) capture of the new market
1) cultured meat / vegan meat.

(iii) in therapeutic and medical.
foundations
1) diagnosis of disease
2) treatment of disease
3) ~~diagnosis~~ therapeutics

(iv) promoting interministerial coordination
1) GMO crop with Agriculture,
Environment.

(v) streamlining of the approval
procedure

(vi) BIO AI hub to synergize
AI with the genomics, proteomics

biotech manufacturing can lead to
sustainable, self-reliant and bio-
enabled economy in line with
Vision Bharat @ 2047

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

16) AI in the new normal in the period of industrial revolution 4.0

AI in future of digital innovation

i) facilitate the innovation through data analysis

ii) creation of cost effective

video, image through

Generative AI

iii) can affect the labour sphere

ITSM job at risk
ILO

NEED OF DEVELOPING INDIGENOUS AI TOOL & AI MODEL

i) protection of data that can be weaponised → privacy protects

ii) misuse of AI to create propaganda

e) information warfare - satellite



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को
इस कॉलम में
कोई लिखना
नाहिए।
Candidates
must not
write on this
margin

- (ii) AI need to be domain specific
- its facilitates development of all span.
 - e) IT, electron.
 - (iii) facilitate social growth
 - e) Education, health.
 - (iv) to capture the heterogeneity diversity of India

CHALLENGES OF DEVELOPING INDIGENOUS AI

- i) lack of skilled workforce
Only 50% of graduate employable (ES-24)
- ii) lack of capital req.

- (iii) infrastructure constrains
GDP require
- (iv) dependence on the import of semiconductors.
- (v) the policy like DPDPA 2023 that were developed late.

(vi) first mover advantage to the developing nations.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

iii) literature constraint as the existing AI is trained on western data. / Biases, stereotyping.

↳ Copyright violation

↳ New York Times suit against CHAT GPT

Government steps to counter them

fi) Bharat Gen AI project indigenous LLM models

↳ India AI project

↳ to develop the computer infrastructure
↳ semiconductor tie up with Nvidia

↳ AI Kosh to develop Indian

dataset → multiple layers.

↳ that can help the Indian startup

iv) Global collaboration through ethical AI
↳ GPAS conference

Thus indigenous AI is necessary to gain Atmanirbharata in digital sphere

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उत्तरों में
प्रश्नों में
दिए गए
शब्दों
के अंदर
लिखें।
उम्मीदवार
यहाँ पर
लिखें।
Candidates
must not
write on this
margin

14) Recent ship sinking near the Kochi coast has again brought focus on marine oil spill.

MARINE OIL SPILL
It is a natural disaster

i) can impact the marine ecosystem.
↳ marine hypoxia

ii) Alter the

food chain of marine organisms
iii) impact the livelihoods of the marine dependent population
↳ fisherman

iv) Affect the trade routes.

v) alter the quality of water?
cause pollution of the groundwater -> backwash water farming

vi) the bioaccumulation of the toxic products can impact the health of human & bioorganism.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

(iii) can lead to destruction of water coastal barriers like coral, mangroove.

↳ bleaching of coral due to

hypoxia

↓
increase the vulnerability to the disaster to the coastal commn.

The government policies in plan

(i) National oil spill disaster contingency Plan (NOSDCP) 1993. by coastal

(ii) Merchant shipping act to

control ship board pollution.

(iii) MARPOL provides for the prevention of pollution from sea.

(iv) LONDON convention to control the ballast water pollution of ship.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

But the
lacunas
remain

- (i) lack of legal binding sanction
- (ii) lack of liability
fixation if the spill occurs
in the EEZ
- (iii) no timely legal sanction.
NGT verdict can be late.
- (iv) lack of trained community
as workforce to combat the
disaster.
- v) weak polluter pay principle
for compensation
- vi) Pragmatism of the policy
at various state level.

WAY FORWARD

- (i) legal binding sanction
- (ii) use of oil zappers
to control the spill
- (iii) capacity building.

The comprehensive marine oil spill
policy is need of hour for blue
economy

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

10]

UNEP's CO report reveals the global glacier loss of 9.4 million tonnes since 1975

Hence the UN has declared the 2025 as the International year of Glacier Preservation

- GLACIER SIGNIFICANCE
- a) ECOLOGICAL
 - a) temperature regulation due to high albedo effect
 - b) control the climate after the pressure of environment that maintain climate.
 - c) Biology and food chain the glacier support the terrestrial ecosystem
↳ home of flora fauna like polar bear, penguin.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को
प्रश्न हल करने में
यहाँ लिखना
नहीं है।
Candidates
must not
write on this
margin.

d) reservoir of carbon sequestration
in permafrost.

e) regulate the ocean circulation

↳ ocean current weaken.
(Arctic meridional oscillation)

↳ increase of the sea level by
15mm

socio economic → i) Affect the fisher
population.

↳ ii) decline of fishing ground
↳ iii) the urban cities are at the

edge of getting submerged.

↳ IPCC - Mumbai, Chennai.

↳ iv) can cause extreme weather
event

↳ Tsunami
↳ Flood
↳ forest fire

↳ v) water stress due to hydrological
cycles getting alter.

↳ vi) genetic flood plan
will be appear.

(Please do not write anything except the question number in this space)

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

सहितमर्यादा
के अन्दर ही
उत्तर लिखें।
Candidates
must not
write on this
margin

v) the trade route will be affected - 90% of world trade by roads.

MEASURES TAKEN AT NATIONAL AND INTERNATIONAL LEVEL

(i) National - i) National convention on protection of Himalayan ecosystem (NAPCE)

ii) PANCHAMRIT goal to reduce the CO2 emissions.

iii) shift toward the renewables energy (IIT - Ministry of Power)

International - i) convention to protect the habitat of Snow tiger

ii) Paris climate action plan

iii) Adaptation fund to combat climate change.

iv) SE Asia network to protect Hindu Kush

glacier conservation require sustainable international cooperation



UPSC

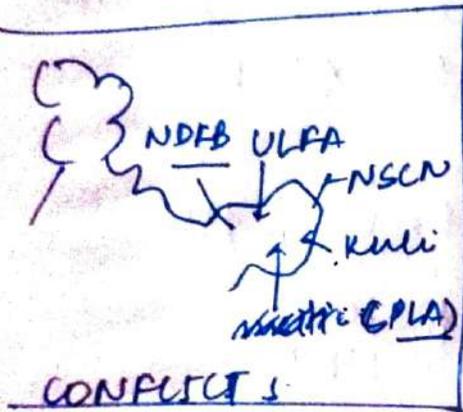
Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

Please do not write anything except the question number in the space given for that.
कृपया केवल प्रश्न संख्या ही इस स्थान पर लिखें।

उम्मीदवारों को इस स्थान पर केवल प्रश्न संख्या ही लिखनी है।
Candidates must not write on this margin.

17

The Metic Kuki conflict reached the 2 year since its onset!



DETERMINANTS OF INSURGENCY

- 1) Geographical Isolation due to thickets
- 2) neck corridor [25 km] unalign

b) the different terrain due to eastern Himalaya [Kuki in hill area].

ii) ethnic (i) 200 ethnic group presen- in the area

(ii) multiple linguistic group that reside

(iii) inter ethnic clashes (1) [Mizo - Kuki]

(iv) international ties (2) free border movement regions with Mayamou

Please do not write anything except the question number in this space.

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parentheses (Specimen Answer Booklet - For Practice Purposes Only)

iii) Historical - the '60s-1990s / Act of the dead to non integration of North East

iv) International - a) the Chinese presence in the AP' border

(ii) the large heavy presence due to porous border
a) Bangladesh - ULFA

b) trafficking of drug, arms, human and cattle

STRATEGY REQUIRED in the conflict area

GOVERNMENT - Economic development of the north east.

a) De VINE - urban village initiative

b) Infrastructure construction

c) Agartala Rajmura gaitheer

d) BBSTI Bangalore

e) Kalandan



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

उम्मीदवारों को
इस इतिहास में
कोई लिखना
नाहीं।
Candidates
must not
write on this
margin.

(i) community participation to improve
trust → act as at least 3
times
of the government.

(ii) Government - decentralisation
Schedule 6 to the tribal.
once
cultural preservation

CIVIL ADMINISTRATION (i) including Subordinate
cum rehabilitation

(ii) policy for the tribal
justice sensitization reduce
AFSA area only in
limited can

(iii) capability development through
Education, health care, SHG

SECURITY FORCES (i) International cooperation
like rehabilitation summit
with Mayanmar

(ii) fencing of border areas
(iii) integrated comprehensive border
surveillance system.

Thus by adopting the above step the
Government will be able to achieve
6th Bharat Shreebhag Bharat

(Please do not write anything except the question number in this space)

UPSC

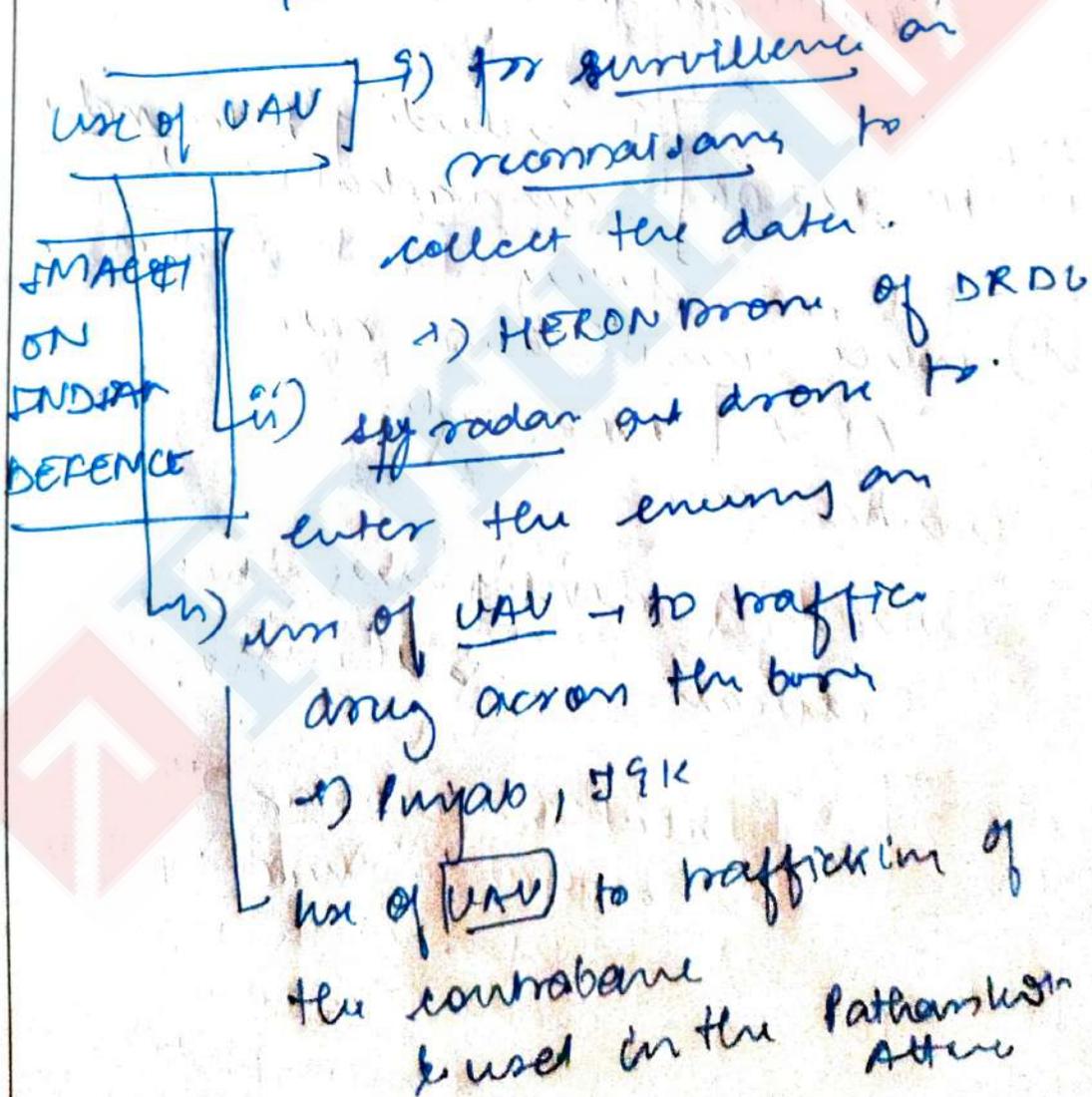
Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
(Specimen Answer Booklet - For Practice Purpose Only)

अभ्यर्थी को केवल प्रश्न संख्या ही लिखनी है।

(Please do not write anything except the question number in this space)

20)

The use of UAV (unmanned Aerial Vehicle) in the operation and control by Pakistani forces. showcase the modern conflict shift of warfare.



UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

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

(iv) interference in the Indian Airspace
use of Israeli drone by
Pakistan

(v) UAV used to attack the leader
(Precision Attack)
(eg) USA to attack the
Iran leader.

(vi) the critical infrastructure will
be at risk due to stealth drone
(a) Air defence bases in Indian
territory

Measure taken by the Indian government

(a) Drone rules 2021 to regulate
the comprehensive use of
drone in India.

- a) creation of no fly zone
- b) registration of UAV

(b) Drone import regulation to
restrict the dependence on
Chinese product

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis
(Specimen Answer Booklet - For Practice Purpose Only)

- iii) Development of Indian startup in boone
↳ INDEX summit.
↳ defence indigenisation.
- iv) international collaboration
↳ small input of Kanishka drone
- v) DRDO anti boone system.
↳ an development of Air defence system (Agnibaan)
- Integrated Air command & control system (IACCS) of Indian Airforce
- vi) MSP - mineral supply group and focus on R&E mineral to develop indigenous production.
- UAV poses multi layer challenge that require multidimensional control and technological innovation to counter it