

TEST CODE 8 1 3 4 1 1

MGP 2025

Time Allowed : Three Hours
समय : तीन घंटे

ForumIAS

Maximum Marks : 250
अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	ADITYA PATHAK		
Roll No./अनुक्रमांक	1910159534	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	KAROL BAGH	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			
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20			
Total/कुल अंक	250		

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।

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।

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।

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।

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।

For Student Only / केवल परीक्षार्थी प्रयोग हेतु

Examiner's Discretion/मूल्यांकन कर्ता का विवेक :	Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
	2:05	5:05
Total Marks/कुल अंक :	Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input type="checkbox"/> Offline/ऑफलाइन <input checked="" type="checkbox"/>

For Office Use Only / केवल कार्यालय प्रयोग हेतु

*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, तालिकाएँ, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आये के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।	ECN CODE/ ईसीएन कोड :	EG/ईजी :	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

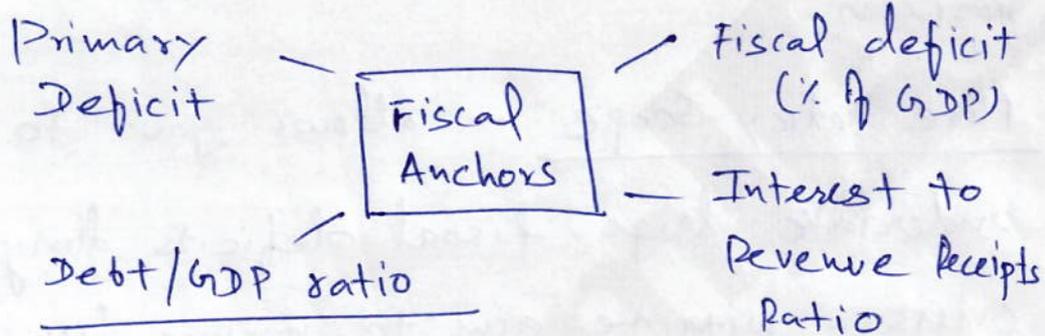
CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

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.

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)

Fiscal anchor - refers to a fiscal variable that governments target to achieve macro-economic stability



Shift to debt-to-GDP

- Currently GoI targets Fiscal deficit as the primary anchor & debt-to-GDP ratio as secondary anchor - as per N K Singh Committee recos
- UB: 2025-26 - GoI announced shift to debt-GDP ratio

Rationale behind shift to debt-GDP ratio

- More comprehensive measure - Debt includes current & past fiscal deficits
- More Long-term view - targeting debt allows govt to plan for a longer horizon
- More Policy Scope - allows govt to undertake large fiscal deficits during crisis - with the aim to nurture fiscal ~~def~~ surplus during booms
- Sustainability - debt is sustainable as long as growth rate - interest rate differential is positive
- Predictability in Capital Markets - Investors or bond-holders would know the govt's borrowing programme & react accordingly

Thus, debt-to-GDP ratio would allow GoI to undertake counter-cyclical policy measures to ensure high growth/employment rate

Feedback

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#	G	A	P
AWIS			
CD & VA			
S & F			
P & R			
Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

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)

The National Manufacturing Policy aims to increase manufacturing's share in GDP from ~16% to ~25% to achieve sustainable growth.

Need to transition from 'build to print' to 'build to design'

- Higher value Addition - printing adds only a small value ($\leq 20\%$) - design gives access to IPR & greater value addition ($\geq 50\%$)

L (Ex) Apple's share in China made iPhones is ~80%

- Spillover Effects - designing boosts R&D which has positive spill-overs to other sectors \rightarrow \uparrow in productivity across the value chain

- Expansion of manufacturing sector - allows a country to transition from low value assembly, testing, packaging (ATP) to high-value manufacturing
- Diversification - manufacturing different kinds of products based on simple changes in design → greater consumer satisfaction

Govt Measures

- Design Linked Incentive (DLI) - sub-Component of India Semiconductor Mission
- PLI schemes - incentives tied to value addⁿ
- Promotion of Atal Tinkering Labs
- Skill development Initiatives → Chips to Startup

Thus a design-led manufacturing ecosystem would help in creating a sustainable & resilient manufacturing sector

Feedback

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TOTAL MARKS			

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)

Nutrition-sensitive Food System - an agri-food system that puts high emphasis on the nutritional needs of the various segments of population.

- Features

- Balance between calories & nutrition
- balance between macro & micro nutrients
- incentives to grow nutrition-dense foods - millets, pulses etc.
- subsidies to access nutrition-rich foods - PDS, MDM, SNS etc.
- Support for bio-fortification of foodgrains - (Ex) Rice
- Assistance for R&D in climate / pest-resistant crops
- social security - PMGKAY

Strategies to achieve Nutritional Security

- Reform in Food Subsidies - away from rice/wheat/sugarcane - towards millets, legumes
- Reform in PDS, - more specific targeting using technology - distribution of fortified & nutrition-rich foods -
(Ex) Minimum procurement standards for Millets
- Resilient Supply Chains - building warehouses, certification facilities, testing infrastructure etc.
- Demand-side - extending social security to informal sector to boost purchasing power
- Awareness generation

Thus an inclusive & nutrition-sensitive food policy would ensure SDG 1/SDG 2 & lead to human capital formation

Feedback

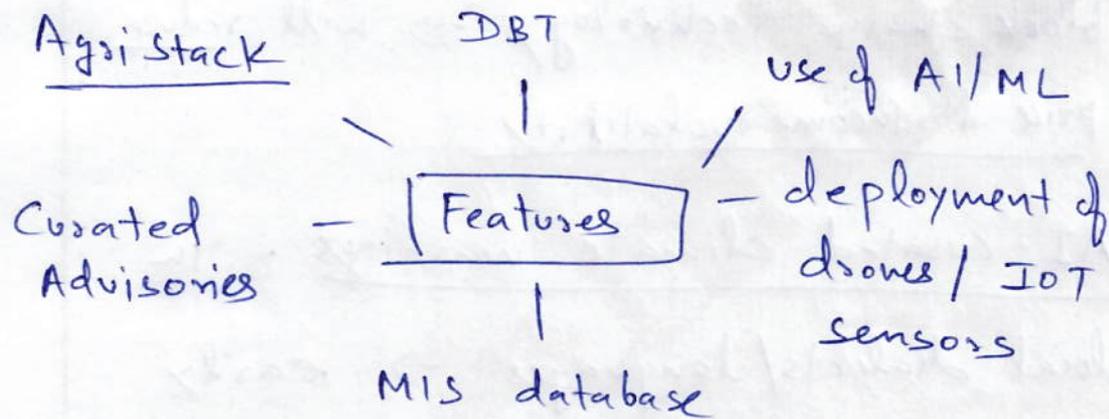
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TOTAL MARKS			

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)

Digital Agriculture Mission - launched by Mo Agriculture, it aims to revolutionize agriculture by the use of digital technologies



Benefits to Agri Sector

- evidence-based policymaking - by collecting data in real-time & making dynamic policies
- Sharing of best-practices - will allow farmers to learn from others' failures/successes

- Precision agriculture - (EX) precision Irrigation / precision application of fertilizers → better utilization of scarce resources

- Resilient supply chains - using block chain technology → will reduce price & income volatility

- AI-coated climate warnings - in local dialects/languages → early preventive/mitigation measures

- Academia - Agri linkage → agri-sensitive R&D → real world applications

- Reduction in pilferage of subsidies

Overall the Mission will help in increasing agri-yields, resilience of the rural sector & affordability of food.

Feedback

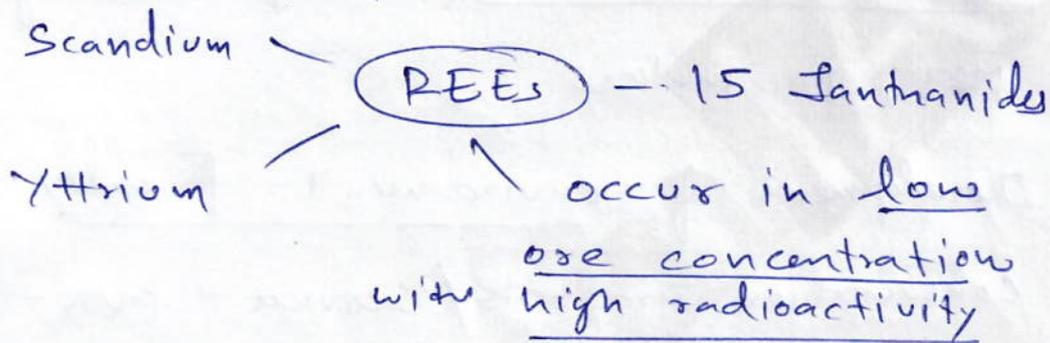
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TOTAL MARKS			

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। सविस्तर वर्णन कीजिए। (10 अंक, 150 शब्द)

Rare Earths - refer to a group of 17 elements that share similar chemical & physical properties



REEs are foundational inputs which act like 'seeds of technology' because

- critical inputs in space sector
 - ↳ (EX) use of Yttrium by NASA
- drive developments in emerging technologies like AI/ML/DA
 - ↳ (EX) use of superconducting magnets made from Dysprosium/Neodymium for super-computers

- to train AI-models on data
- Utility in Defence Sector, - for ICBMs, ~~an~~ automated weapons system, radars etc.
- Life-saving devices - Super-conductivity MRI, Pacemakers
- Development of environment-friendly consumption products / services - automated EVs, drones for delivery
- Further applications in
 - ↳ Nanotechnology
 - ↳ Mag Lev Trains

Initiatives

- ↳ Formation of KABIL
- ↳ Joint Agreements w/ Australia/ Argentina
- ↳ Joint venture b/w IREL & Toyotsu

Thus, these efforts form the basis of the new technology-driven Economy.

Feedback

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TOTAL MARKS			

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 डिसल्फ्यूराइजेशन (FGD) प्रणालियाँ लगाने के बजाय विद्युत-अवक्षेपकों (ESPs) का पुनर्संयोजन क्यों अधिक व्यवहार्य और कारगर विकल्प है?

(10 अंक, 150 शब्द)

Electrostatic Precipitators (ESPs) are devices which use electric charge to trap suspended particles in outgoing gas/smoke

Flue gas Desulfurisers (FGDs) are devices that remove SO_x from the emitted gas/smoke

ESPs more viable than FGDs because

- Huge cost of FGD units
- Most TPPs emitting SO_x below NAAQS standards - as per Principal Scientific Advisor
- more flexible & adaptable - as

per prevailing environmental conditions

- ESPs - based on indigenous technology
 - L heavy import-dependence on FGDS
- ESPs - more energy efficient than FGDS
- TPPs are already under pay plagued by payment delays - due to poor performance of DISCOMS - installation of costly FGDS → more burden

Way Forward

- └ region-specific environmental impact studies of ~~PP~~ impact of TPPs
- └ boost to domestic manufacturing of ESPs

Retrofitting of ESPs instead of installation of new FGDS would be both economically & technically feasible step.

Feedback

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TOTAL MARKS			

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)

EIA Regime - was introduced in India in the 1990s to assess the impact of large projects & industries, on local environment & take necessary steps

Key Challenges to EIA Implementation

- Lack of awareness among general population about the provision of EIA for large projects
- Lack of skilled EIA Professionals
- Inadequate mechanisms to track applications, proceedings & response
- Lack of stakeholder consultation - w/ civil society, NGOs, locals
- Drawn-out EIA Process - due to lack of co-ordination.

- Neglect of STs in 5th SA during EIA

Reforms

- Local language awareness programmes for EIA
- Introduction of EIA courses in colleges / universities
- Leveraging Gram Sabha for enforcing EIA
- Maintaining a central & multiple regional databases for tracking progress on EIA proceedings
- Setting timelines for various processes & sub-processes under EIA
- Strict penalties for violation of Environment Management Plan

Thus a reformed EIA regime is necessary to ensure a robust & de. sustainable development process

Feedback

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TOTAL MARKS			

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)

India produces ~ 9.2 mt of plastic pollution per year, making it the largest plastic producer in emission country in the world.

Mitigation Measures

- Supply side

- R&D in alternative materials - cloth, bagasse, technical textile
- Strict enforcement of Extended Producer Responsibility (EPR)
 - ↳ PIBOs can pool resources to establish common EPR pick-up centres
- financial incentives to recycle packaging material

- Demand Side

- raising awareness about the down-sides of excessive plastic use — medical — environmental
- Promoting use of durable materials & reducing use of SUP
- Plastic Tax

Govt Initiatives

- Plastic Waste Management Rules
- EPR for Producers, Importers & Brand Owners (PIBOs)
- Ban on single-use-plastic
- Participation in the UNEP Global Plastics Treaty.

Plastic Pollution causes air, water & soil pollution. It is imperative to act on both demand & supply side to reduce it.

Feedback

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TOTAL MARKS			

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)

Int Evolving Threats - refer to threats that are carried out by state / non-state actors using modern technology



Need for private sector capabilities in Internal Security

- more dynamic & up-to-date about threats
- highly skilled workforce
- emphasis on R&D to tackle emerging challenges

- more accepting of international best practices than the govt.

Ways in which private sector can contribute to Internal Security

- designing & developing indigenous drones - (Ex) \$500 drones in Ukraine
- Provide expertise to Internal Security Agency
 - ← CestIN
 - ← NCIIPC
- Industry - Academia Linkage - to study emerging threats, prepare reports & recommend measures
- Report cyber-breaches, unusual/suspicious activities to agency

A healthy PPP can ensure a robust & dynamic response to Internal Security issues emerging in recent times

Feedback

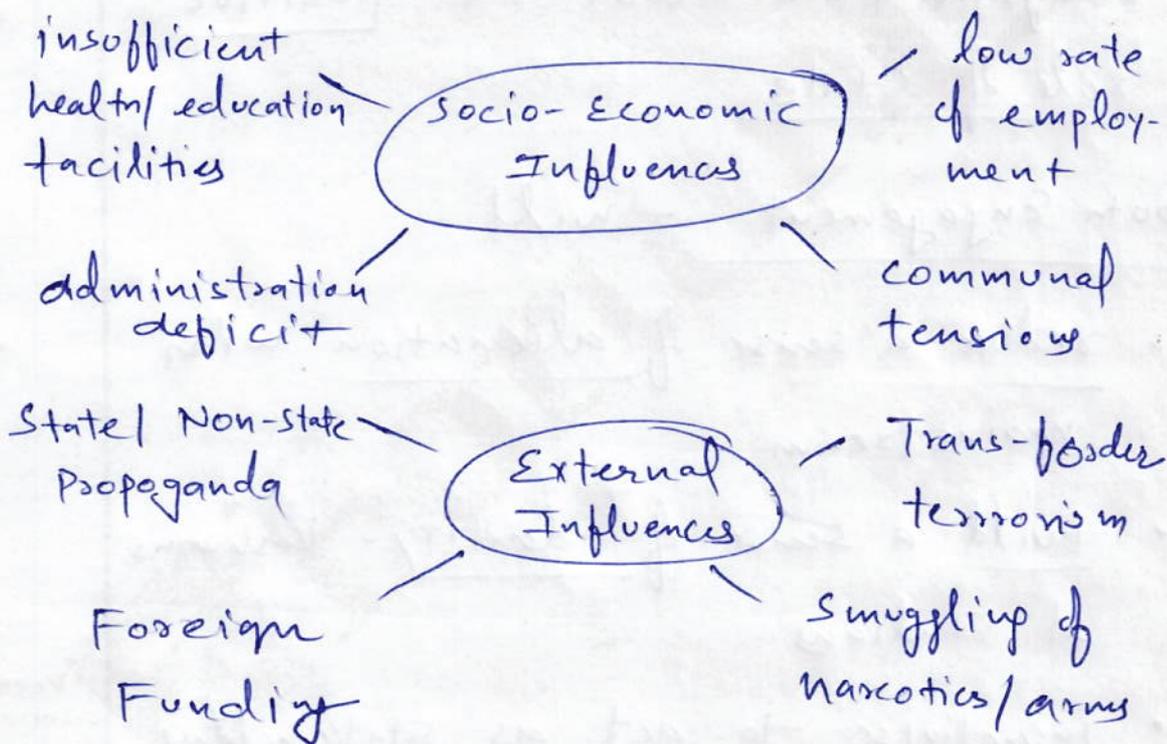
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TOTAL MARKS			

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. (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)

Recent attacks in Pahalgam point to local support & radicalization in J&K which is driven both by socio-economic influences & external influences



Role of Education & Youth Engagement in countering Radicalization

- Education - will

- provide skilling / employment opportunities → lower chance of seeking radicalisation
 - expose youth to ideas of unity & integrity of India, common brotherhood & instill patriotism
 - enlighten them about the positive role of state
- Youth Engagement - will
- reduce a sense of alienation with mainstream
 - build a sense of 'identity' - Kashmiris & Indians
 - incentivise to act as stakeholders of peace - report suspicious activity

Education & Youth engagement is a long-term but sustainable strategy to achieve Peace & security in J&K

Feedback

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CD & VA			
S & F			
P & R			
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TOTAL MARKS			

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)

Case Economy refers to a collection of economic activities that are directed towards taking care of the vulnerable sections - elderly, children, disabled sick etc.

Economy + Empathy/
duty → Case
Economy

Key Characteristics

- mostly unpaid - incurred as domestic responsibility by women
- outside formal sector, - not counted as part of value-addition
- viewed as an inferior / less-paying vocation
- lack of govt support / schemes for

Case workers

- Low-level of skilling
- Absence of social-security

Steps to integrate value of unpaid/underpaid
case work into economic frameworks

- Measurement - 'what can't be measured can't be managed'
 - ↳ making suitable changes to Economic Census & General Census
- Motners' Dividend - paying mothers a monthly basic income for unpaid domestic care
- Scheme - Introduce a MGNREGS-type Urban Employment guarantee scheme for case work
 - ↳ include care work in MGNREGS

- Skilling - open dedicated colleges to impart care-work courses
- Policy - Bring out a 'domestic & other Care Workers' policy prescribing
 - Min wage
 - Max working hours
- Social Security - Establish a 'Gig workers' type SS Fund for Care Workers
- Technology - Use online market to match supply & demand for care work - (Ex) within ONDC

Thus integrating care work into economic framework will give dignity to care workers & produce a more accurate measure of GDP

Feedback

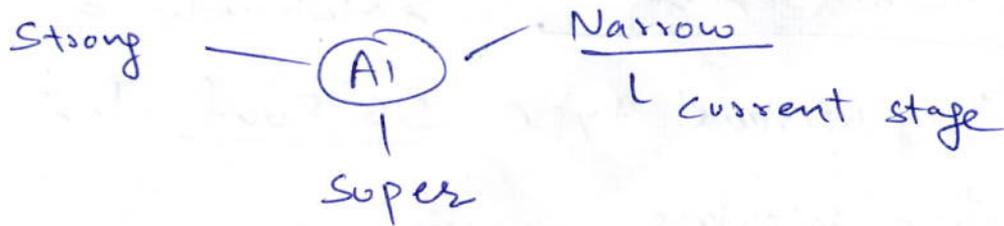
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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

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 तन्व्यशील श्रम बाजार परिणामों के साथ AI अपनाने को संरेखित करने की रणनीतियाँ भी सुझाएँ। (15 अंक, 250 शब्द)

Artificial Intelligence - an emerging technology that utilizes existing data & requires minimum human intervention to produce digital outcomes



Unprecedented Opportunities from AI

- automation of routine administrative processes → more efficient / timely
- Augments decision making - workers can improve the effectiveness of their decisions through big data analysis
- Improved management of labor - tracking progress, making automated

reports, awarding points etc

- Lower search Cost - AI-based apps can be used for more efficient search of new jobs - aligned with one's skills
- Evidence-based policy - by using AI to track developments in the labor market

Challenges from AI

- threat of job replacement
- Hourglass Model of Firms (∩) - heavy at top/bottom but thinning of middle-skill jobs
- Introduction of pre-conceived biases
- Threat of data safety/privacy of workers
- Labor market unrest → social unrest & tensions

Strategies to align AI with resilient & Inclusive Labor Market

- introducing AI-skilling in schools & colleges
- mid-career AI-education - (EX) AI for All Programme
- Mandatory training of displaced workers in a PPP mode
- Industry-Academia Linkages - to ensure market-oriented curriculum
- Risk-based Regulation - based on the risk of displacement & unemployment
- Digital Support - Apps/ website to match demand/ supply of AI-based work

Thus AI can be seen as a double-edge of sword for the Labor Market. Pro-active govt support is necessary to make it inclusive.

Feedback

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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

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 सुझाएंगे? (15 अंक, 250 शब्द)

Indian agricultural exports crossed \$ 50 billion mark recently. However this forms only 7% of total agri production in the country.

Reasons for weak agri-exports despite high production

- Inadequate cold storages & warehousing infra → Loss of ~ Rs 95 thousand Cores of agri-produce per year
- Weak supply chains - due to lack of integration of agri-markets
- Low branding & marketing
- Lack of testing/assaying infrastructure
 - ↳ to grade various ~~varities~~ varieties of

agri-produce.

- Very low number of FTAs / PTAs - less than 20
- Lack of diversification in export categories & export destinations - very few items to very few countries
- Restrictive Sanitary / Phytosanitary import conditions in developed countries

Measures to improve agri-export competitiveness

- a National Agri-Infrastructure Policy
 - ↳ to improve agri-logistics & reduce costs → higher competitiveness
 - Warehouses & cold storages in a PPP mode
 - Connecting producing areas to major

posts

- Creation of rural roads - special emphasis under PMGSY.
- Reintroduce Farm Acts w/ greater stakeholder consultations
 - ↳ Emphasis on ~~Model contract~~ contract farming & collectivisation of fragmented holdings
- Establish testing/certification centers
 - ↳ Strengthen Organic Certification Schemes - to satisfy SPS conditions of advanced countries
- Diversification of Markets - target South East Asia, South America, E. Europe etc.

Agri-Exports will not only ensure high & stable farm incomes but also shore-up India's current account balance.

Feedback

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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)

As per the Economic Survey, GoI spent about 1.5 Lakh Crores on various agricultural subsidies - fertilizer subsidies, power subsidies, subsidies for agri-IPs

Distortions

- high subsidy on Urea → inoptimal fertz mix - 8:2:1 instead of 4:2:1 → degradation of soil, water pollution, air pollution
- high subsidy on power → production of highly water intensive crops in dry areas
 - ↳ Punjab
 - ↳ Haryana
 - ↳ ↑ in cost → ↑ in MSP → ↑ in govt burden

↳ fall in ground water table -
75% water units in Punjab below safe level (CGWB)

- Distorted agri-food systems

{ large production of wheat & rice
low production of millets/pulses/edible oils → high import dependence

- Benefits of subsidies - highly concentrated among large farmers

- Unequal regional development - areas in East India are falling behind areas in NW India.

Reforms

- Targetted agri-subsidies - mostly to small & marginal farmers

- include Urea in Nutrient Based Subsidy Scheme (NBS)
- Promote use of organic fertilizers & (Ex) via PM-PRANAM
- Give push to PM-KUSUM - to ↓ Power subsidies
- Allocate more money from agri-sectors' share to gross fixed capital formation (GFCF) in agri
- Reform the PDS system - to reduce procurement of wheat/rice
- Separation of agri-electricity feeders (Minis Shah Committee)

The current agri-subsidy regime needs immediate reform to reduce burden on the govt, make agri dynamic & improve farmers' incomes

Feedback

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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)

Feedback

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TOTAL MARKS			

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)

Sovereign AI - refers to the development of AI using indigenous models, human resources & training infrastructure

Key considerations in developing indigenous AI models/tools

- Inclusivity - using regional languages in addition to English
- Localization of Data - use of local data sets - to capture India's needs & constraints
- Privacy & Safety - of citizens' data based on principles of
 - legality
 - legitimacy
 - proportionality

- Impact on Employment - AI as enabler of better employment & not a replacement for existing jobs
- Digital Literacy - to ^{understand} overcome digital divide
- Impact on Vulnerable sections

Measures to build an enabling ecosystem for AI Innovation

- High speed broadband connectivity - to tier 2/3 cities
- Creation of pooled infra to train AI programmes - shared computing power
- AI-based courses at school/college level
- Angel Investment / Venture Capital

funding models for financing of early-stage AI-startups

- Fiscal incentives - tax holiday, subsidies
- Industry-Academia Linkage - for real-time exchange of ideas

Govt Initiatives

→ India AI Mission - 7 Pillars

- AI Kosha - data base
- Commercial viability
- Shared computing power of 14000 GPUs

- National Language Translation Mission ~ Bhashini
- AI for All

AI has the potential to revolutionize the economy if it is inclusive & adapted to local conditions

Feedback

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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)

Recently an oil container ran aground the ~~to~~ Kerala coast causing huge oil spills, fires & loss to marine biodiversity.

Far reaching Consequences of Oil Spills

- impact on marine flora & fauna - especially sensitive species
- impact on livelihood of
 - fishermen
 - those involved in coastal tourism
 - coastal transporters
- Large costs of extinguishing oil spill fires & cleaning-up the cost → huge fiscal burden
- disrupts marine trade for some time

Significant Gaps in Prevention & Mitigation

Prevention

- ↳ No Rules/Regulations under EPA, 1986 - like PWM, e-WM Rules
- No designated authority - ICT confined to security aspects
- Lack of heavy penalties & punishments
- Lack of White Shipping Agreements

Mitigation

- ↳ not treated as a disaster under DMA, 2005 → no operational mitigation guidelines
- Lack of trained professionals at national & state level to mitigate impact

- inadequate co-ordination between Central & State agencies
- Lack of indigenous technologies for absorption & mop-up

Way Forward

- a dedicated agency / authority ^{or} extend the mandate of Coast Guard / Navy
- Specific Rules C EPA, 1986
- R&D in cost-effective cleaning technologies
- provision for declaring a big oil spill as disaster

India can achieve robust maritime trade iff it devises the mechanisms & rules to prevent / mitigate oil spill in a timely / cost-effective manner

Feedback

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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)

UN declared 2025 as 'International Year of Glaciers Preservation' to bring raise awareness about the current state of glacial erosion & highlight their significance

Ecological Significance

- maintain heat balance
- absorb insolation ~ 'albedo effect'
- Store fresh water
- support high-altitude flora/fauna

Socio-Economic Significance

- melted Glacier water is the main source of drinking water for many - (Ex) the ~ 2 billion people in S. Asia

- provide avenue for recreation -
 (Ex) Ice-skating
 ↳ provide employment & growth
- considered 'holy' by many
 ↳ (Ex) Gangotri Glacier

Key Challenges in Preservation

- Lack of cross-country collaboration -
 most glaciers transcend boundaries
- Rough terrain in & around glaciers -
 prevents preservation efforts
- No action on common sources of pollution near glaciers - black carbon due to forest fires / household chulhas
- Not much attention given to glacial erosion - in comparison to climate change / wildlife loss → lack of international policy & support

- Gaps in understanding of geology & climate

Measures taken

- National level

- National Climate Action Plan (NCAP) - Himalayan Component
- Introduction of fuel-efficient chulhas
- Direct transition to BS-VI
- Leopold Conservation Programme - habitat protection

- International level

↳ ICIMOD

Long term preservation of glaciers is crucial to ensure water, food & nutritional security in downstream areas.

Feedback

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TOTAL MARKS			

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)

Insurgency - refers to the illegal and unconstitutional measures taken by non-state actors against the State to voice their demands

Determinants of Insurgency in NEI

- isolation from mainland - via the 'chicken's neck'
- administrative & infrastructural deficit
- porous border with Myanmar
 - ↳ trafficking of drugs, arms
- Cross-border ethnic ties - allow easy escape to Myanmar
- Unstable political conditions in Myanmar → negative spill-over

- Many ethnicities & tribes → constant tension & conflict

Strategy

- Govt of India

- appoint seasoned administrators as Governors
- fast-track development programmes
 - └ Arunachal Frontier Highway
 - └ MOVCDNET
 - └ PM-Devine
- timely completion of 'Kaladan - Multimodal' Project - for alternative connectivity

- Civil Administration

- ensure return of stolen arms from police stations

- Build Trust & Confidence among various tribes / ethnic groups
- timely, efficient & economical implementation of schemes
- special emphasis on youth education & skilling
- Ensure presence of teachers & doctors in public institutions

- Security Forces

- No misuse of AFSPA
- Mission Sadbhavana
- Engagement of youth - organised as Village Defence Guards
- Tight patrolling of Indo-Myanmar border

Insurgency in NER can be overcome by a mix of political & economic initiatives & via a co-ordinative approach b/w Govt, civil administration & security forces

Feedback

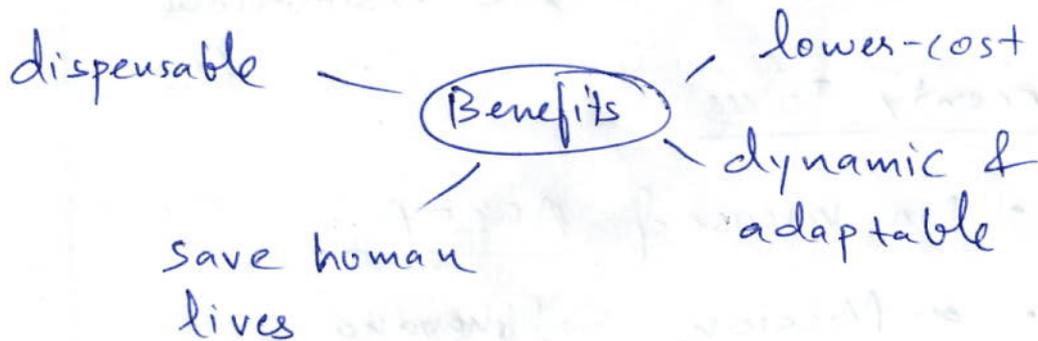
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TOTAL MARKS			

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)

The Russia-Ukraine War has shown that UAVs & drones will become integral part of future warfare by both state & non-state actors.



Implications for India's security architecture

- Threat on Indo-Pak border -
delivery of drugs & fake currency by drones
- Threat to sensitive sites etc

- Nuclear installations
 - Missile Silos
 - Govt Buildings
 - Dams
- Asymmetric Warfare - compel India to use high-cost air-defence systems to counter low-cost drones
 - Spying & Surveillance - ^{threat of} being used by countries / non-state actors to spy on military infra
 - Use as Loitering Munition - threat of actual damage to life & property

Measures to tackle Threats

- develop a dynamic domestic manufacturing base - for self-reliance & national security

- mandatory registration of all drones
↳ no exemptions as under Drone Regulations
- Use of Laser Directed Weapons & e-warfare to ↓ cost of fighting drones
- Strict patrolling of border areas - using advanced Radars / Jammers

Govt Measures

- PLI Scheme
- Drone Regulations / Policy
↳ demarcation of areas - Red, Orange, Yellow

Drone-warfare is at the forefront of asymmetric warfare, which can be tackled by R&D in efficient drones & capacity building of armed forces

Feedback

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Mentor Feedback Questions

- 1
- 2
- 3
- 4
- 5

Test Goal

- 1
- 2
- 3

Outcomes

- 1
- 2
- 3

Marking Scheme

Mark	Good	Average	Below average
10 Marker	3.75 - 5.0	3.0 - 3.5	< 3.0
15 Marker	5.75 - 7.0	4.0 - 5.5	< 4.0
20 Marker	7.75 - 10	6 - 7.5	< 6
✓	Key / Relevant Point		
✗	Vague / Irrelevant		

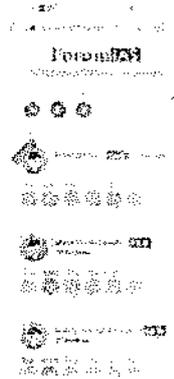
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