

TEST CODE 6 1 3 2 0 2

FIAS – MGP 2023 – Cohort 13 Alt – Sectional Test #4

Time Allowed : Three Hours  
समय : तीन घंटे

ForumIAS

Maximum Marks : 250  
अधिकतम अंक : 250

## GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	SWATI SHARMA		
Roll No./अनुक्रमांक	1910099200	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	1901	Date/दिनांक	19 August 2023

\*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 भर।	
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 (प्रवृत्तीए) 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।	
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Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
			10:am	1:05 p.m.
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 आये के अभाव पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			<b>For Office Use Only / केवल कार्यालय प्रयोग हेतु</b>	
			ECN CODE/ ईसीएन कोड :	Evaluation Date/ मूल्यांकन तिथि :
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**Note:** You can discuss your evaluated copy with the Mentor. Raise a ticket from your portal to schedule a mentor call or visit the offline centre to meet mentor (all 7 days, Timings - 11 AM to 6 PM). Further if you are unsatisfied with the evaluation, you can seek re-evaluation of the copy.

## 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 STEM (Science, Technology, Engineering and Mathematics) sector provides opportunities for India to become a leader in knowledge economy; however, there is a need to democratise its access in order to harness its complete potential. Analyse.  
(10 marks, 150 words)

STEM (विज्ञान, प्रौद्योगिकी, इंजीनियरिंग और गणित) क्षेत्र भारत को ज्ञान अर्थव्यवस्था में अग्रणी बनने के अवसर प्रदान करता है; हालांकि, इसकी पूरी क्षमता का उपयोग करने के लिए इसकी पहुंच का लोकतंत्रीकरण करने की आवश्यकता है। विश्लेषण करें।

(10 अंक, 150 शब्द)

India has the largest population in the world (1.4bn) along with huge demographic dividend to enhance the STEM sector.

STEM provides opportunities to become a leader in knowledge economy -

i) Innovation and startups -

India is 3<sup>rd</sup> largest ecosystem with startups. STEM can provide enhancement of position

ii) IT sector -

Technological developments can aid India to increase the service sector exports.

iii) STEM can provide to enlarge the space sector from present 2% of global space sector to more than 9% of globally

iv) STEM can aid developments in semiconductor research, hydrogen economy to have ripple effects on manufacturing sector.

eg - National Quantum Mission to aid knowledge economy.

However, in order to realise the potential

→ Government

- Ease of learning
- Centre of excellences in backward areas
- funding to research

eg - AWCAR for Nano mission

→ Demography

- enhance culture of innovation
- risk taking attitude

Knowledge economy through STEM can help bridge the gap to fulfil SDG by 2030

**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
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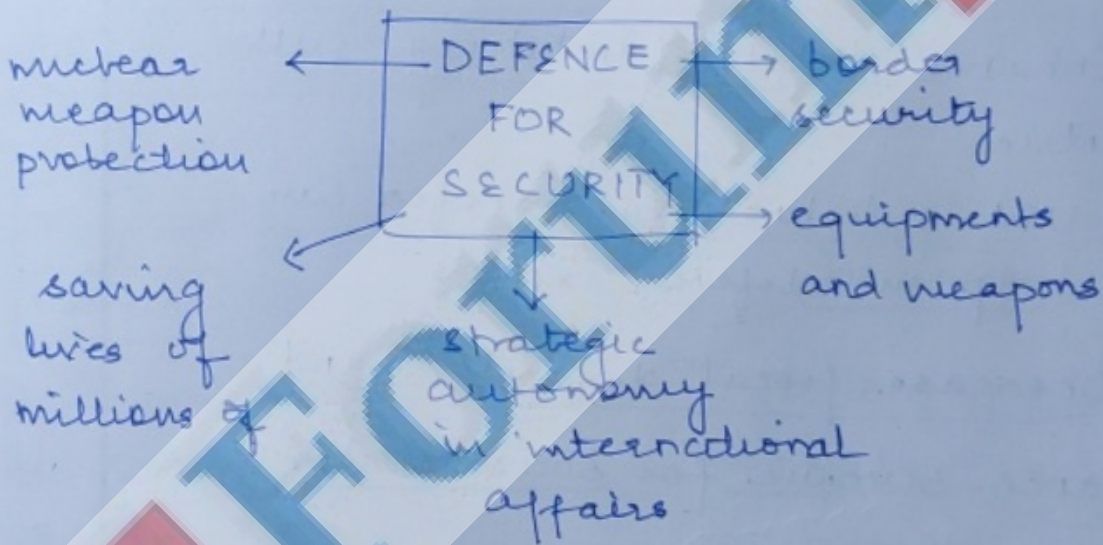
Q.2) Defense indigenization remains the Achilles heel of India's security architecture. Examine the importance of startups in defense sector to make India secure and self-reliant.

(10 marks, 150 words)

रक्षा स्वदेशीकरण भारत की सुरक्षा संरचना का आधार बना हुआ है। भारत को सुरक्षित और आत्मनिर्भर बनाने के लिए रक्षा क्षेत्र में स्टार्टअप के महत्व का परीक्षण कीजिए।

(10 अंक, 150 शब्द)

Defence sector has been recently liberalised to enhance the potential of sector along with to create more secure borders.



The importance of startups in defence sector -

1) India has set a target of

\$770bn exports in defence sector.  
Startups can create an ecosystem for more exports.

ii) India is import dependent on weapons and equipments -  
eg - Russia accounts for around 70% of imports of weapons.

iii) Enhance bilateral relations with countries  
eg - USA's technology transfer can help in defence exports.

iv) Decrease fiscal deficit and enhance revenue for social sector.

However, challenges —

→ low funding

→ STEM education

→ low research & development

→ Conflict of interest

Defence sector is crucial for domestic and international reconnaissance capacity being a net security provider.

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Q.3) DPI (Digital Public Infrastructure) is indispensable for digitally enabling citizens and businesses; however, the challenges of exclusion, exploitation, and monopolisation cannot be ignored. Examine. (10 marks, 150 words)

DPI (डिजिटल पब्लिक इंफ्रास्ट्रक्चर) नागरिकों और व्यवसायों को डिजिटल रूप से सक्षम करने के लिए अपरिहार्य है; हालाँकि, बहिष्कार, शोषण और एकाधिकार की चुनौतियों को नजरअंदाज नहीं किया जा सकता है। परीक्षण कीजिए। (10 अंक, 150 शब्द)

Digital Public Infrastructure refers to the set of infrastructure that includes stack of UPI, Aadhar, etc to enable good governance.

DPI is INDISPENSABLE FOR -

Citizens

Business

- i) It empowers citizens for taking decisions on the data  
eg - Digi locker
- ii) It provides easy access and portability
- iii) It enhances

- i) It engages transparency in business activities  
eg - e way bill
- ii) It provides ease of doing business

ease of living

iv) It provides better policy implementation

eg - Aadhar for ration cards

iii) It helps in creating an innovation of environment

iv) Easy credit and clearances

However, CHALLENGES OF

i) Exclusion

- Digital divide - with concentration of internet services in urban areas
- Digital illiteracy

ii) Exploitation

- Issues of privacy and cyber attacks
- data as the new oil

iii) Monopolisation

- Government's can control the infrastructure
- Limitations in facility delivery partners

the digital public infrastructure is the need of hour along with easy accessibility and data protection.

Feedback	
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Q.4) Project cheetah marks a departure from India's efforts for conservation of various critically-endangered species. In this perspective, do you think the reintroduction of major fauna that has gone extinct is justified? (10 marks, 150 words)

प्रोजेक्ट चीता विभिन्न गंभीर रूप से लुप्तप्राय प्रजातियों के संरक्षण के लिए भारत के प्रयासों से विचलन का प्रतीक है। इस परिप्रेक्ष्य में, क्या आपको लगता है कि विलुप्त हो चुके प्रमुख जीवों का पुनरुद्धार उचित है? (10 अंक, 150 शब्द)

India remains a signatory to international agreements for protection and conservation of endangered species such as CITES, TRAFFIC.

Project Cheetah marks a departure -

- i) It was a the first intercontinental reintroduction of species
- ii) Ex-situ conservation
- iii) Use of African cheetahs than Asian cheetahs.

The steps taken for REINTRODUCTION OF MAJOR FAUNA for extinct species-

Justified →

- i) Animal rights are protected

ii) Rectification of species loss due to anthropogenic reasons

eg - hunting and poaching of cheetahs

iii) Harmonizing the food chain

iv) Maintaining the ecological balance along with carrying capacity of ecosystem.

However, it can also be unjustified

if →

i) Reintroduction as invasive species

ii) Can raise competition for the resources limited in environment

iii) Changed climatic conditions -

Issues of adaptability

iv) Prey base maintenance.

However, steps should be taken to protect and conserve every species as to achieve SDG - life on land (15) and life on water (14).

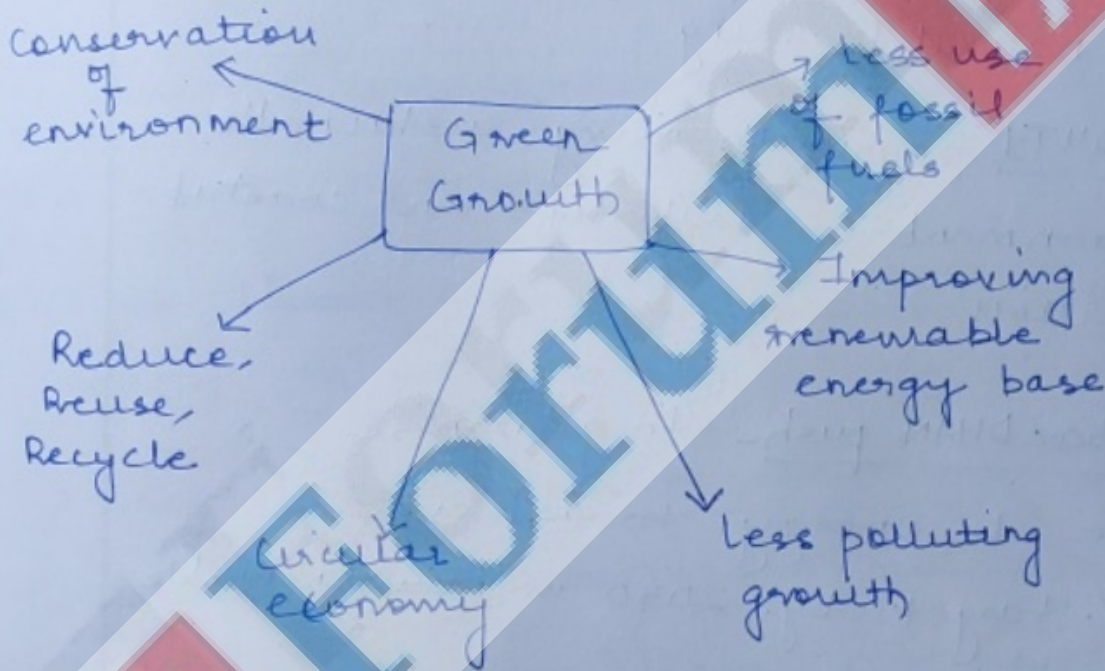
Q.5) What do you understand from Green growth? With special reference to the budget 2023-2024, discuss various government measures to propel green growth in the country.

(10 marks, 150 words)

हरित विकास से आप क्या समझते हैं? बजट 2023-2024 के विशेष संदर्भ में, देश में हरित विकास को बढ़ावा देने के लिए विभिन्न सरकारी उपायों का आकलन कीजिए।

(10 अंक, 150 शब्द)

Green growth refers to the growth of economy that is compatible with ecology and sustainable in nature.



In view of green growth in economy, BUDGET 2023-24 has taken measures →

i) National Mission on Hydrogen - To propel a hydrogen based economy,

with production of SMMT by 2030 to reduce pollution and aid manufacturing and agriculture sector

ii) PM PRANAM - fertiliser nutrient use efficiency → green growth in agriculture

iii) Prakritik Krishi - to spur organic and natural farming

iv) MISHTI - growth using sustainable environment - coral reefs and coastal protection

v) Gobar DHAN push - to galvanise waste to energy to achieve 50% target by 2030 in ~~non~~ renewable electricity

The push to green growth is one of Saptmishis in spurring India's 21<sup>st</sup> century growth by 2070.

**Feedback**

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Here G is Good, is Average and P is Poor.			
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Q.6) Unplanned urbanization has made Indian cities vulnerable to fire safety hazards. Discuss and recommend measures for mitigating urban fires, with special reference to national building code, 2016.

(10 marks, 150 words)

अनियोजित शहरीकरण ने भारतीय शहरों को अग्नि सुरक्षा खतरों के प्रति संवेदनशील बना दिया है। राष्ट्रीय भवन संहिता, 2016 के विशेष संदर्भ में, शहरी अग्नि को कम करने के उपायों पर चर्चा करें और सुझाव दीजिए।

(10 अंक, 150 शब्द)

Urban fires are a hazard to public life and property. According to UN, by 2030, around 30% of population will live in urban areas.

Unplanned urbanization has led to fire safety hazards -

- i) No license audit of buildings existing in urban areas
- ii) Lack of adherence to security guidelines while constructing buildings
- iii) Construction on illegal land and in haphazard manner
- iv) Lack of emergency exits, regular checking on wires in business or commercial buildings.

v) Lack of checks on license of construction contractors

vi) Red tapism and crony capitalism

there is a dire need for reforms by adopting MEASURES such as -

i) National Building Code 2016

→ Regular audit of buildings

→ Checks on licenses

→ Provisions of exits, smoke release, evacuation exits

ii) Maintenance of checks on regulatory bodies

iii) Prevent politicisation of the monitoring authorities

'Fire hazard can bring havoc to life and property. There are need of reforms to bring a sustainable lifestyle for all

Feedback

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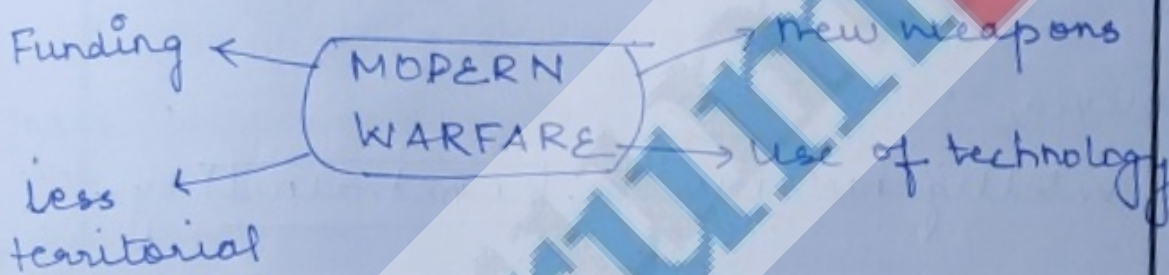
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Q.7) Edge in modern warfare lies not so much in the capacity to overwhelm the adversary as much in the ability to nip the threat in the bud. In this context, discuss the role of intelligence in maintaining national security, and also cite challenges associated. (10 marks, 150 words)

आधुनिक युद्ध में बढ़त प्रतिद्वंद्वी पर हावी होने की क्षमता में उतनी नहीं है जितनी कि खतरे को शुरुआत में ही खत्म करने की क्षमता में है। इस संदर्भ में, राष्ट्रीय सुरक्षा को बनाए रखने में खुफिया जानकारी की भूमिका पर चर्चा कीजिए और इससे जुड़ी चुनौतियों का भी उल्लेख कीजिए।

(10 अंक, 150 शब्द)

The face of modern warfare has changed with globalisation and challenges of 21<sup>st</sup> century.



The role of intelligence is significant in light of modern warfare →

- ① It can help know the strategy of adversary in advance
- ② It can protect borders using satellites, drones

(eg) - USA's help using satellite during LAC crisis

(3) It can help formulate plans in event of attack beforehand

(4) It helps in knowing secret plans of enemy

(eg) - Uri attack, Balakot strike

However,

The intelligence can be constrained by -

i) Anonymisation of technology is reducing due to new innovations

ii) Skilled human resource is required

iii) Funding to aid intelligence activities

iv) Privacy concerns

Intelligence can play a better role if aided with manpower and funding to achieve national security.

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Here G is Good, A is Average and P is Poor.	
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Q.8) Highlighting different kinds of cyberthreats faced by India, evaluate the current status of cybersecurity framework in the country. (10 marks, 150 words)

भारत द्वारा सामना किए जाने वाले विभिन्न प्रकार के साइबर खतरों पर प्रकाश डालते हुए, देश में साइबर सुरक्षा ढांचे की वर्तमान स्थिति का मूल्यांकन करें। (10 अंक, 150 शब्द)

Cybersecurity is essential in wake of 21<sup>st</sup> century Digital India. NCRB reports there has been 6% increase in cyber crimes between 2020-21.

India, being largest populated country, faces different KINDS OF CYBERTHREATS -

i) Ransomware

- 91% of organisations suffer ransomware attacks.

ii) Attacks on public units -

- AIIMS attack

iii) Phishing

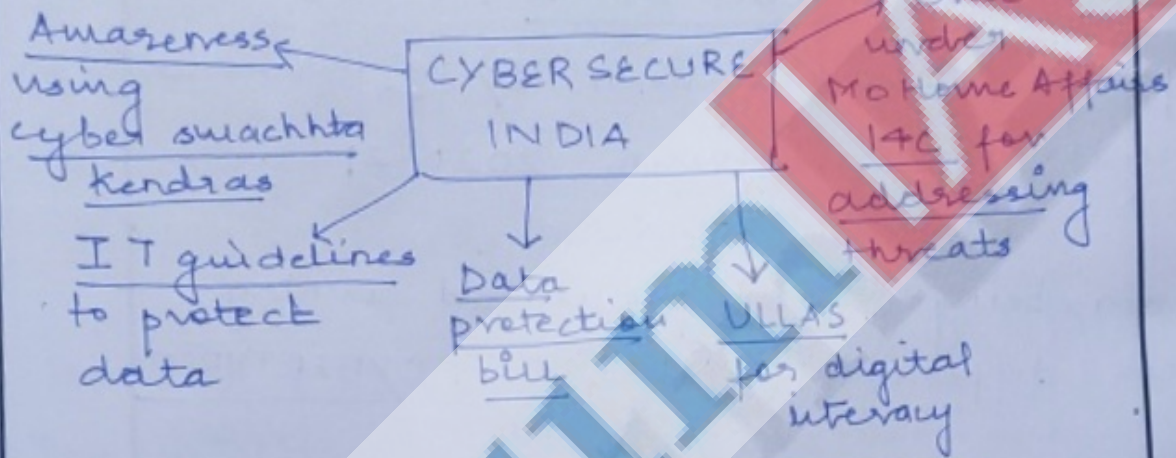
- Jantana known for around 90% phishing

iv) State sponsored cybercrimes.

- Pakistan, China, threats

The current status of Cybersecurity framework -

Indian government has taken various measures to maintain cybersecurity -



However, there are CHALLENGES

- i) Anonymity of cybersecurity crimes increasing
- ii) Increased use of smartphones (729 million users) with low security
- iii) Lack of digital literacy
- iv) Haphazard regulatory environment

A cybersecure India is necessary to achieve the goal of digitally empowered India by 2070.

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TOTAL MARKS

Q.9) Money laundering is a global problem that cannot be solved by isolated responses. Discuss the statement and also suggest ways to curb the menace. (10 marks, 150 words)

पूनी लॉन्ड्रिंग एक वैश्विक समस्या है जिसे विभाजित प्रतिक्रियाओं से हल नहीं किया जा सकता है। कथन पर चर्चा करें और खतरे को रोकने के तरीके भी सुझाएं। (10 अंक, 150 शब्द)

Money laundering is a security issue that involves use of illegal money that is converted to be used as legal or white money for illegal purposes.

Money laundering is a global problem

i) Organised crimes by terrorists along borders use money laundering

ii) Trafficking of vulnerable across nations

eg) - Middle east, Iran

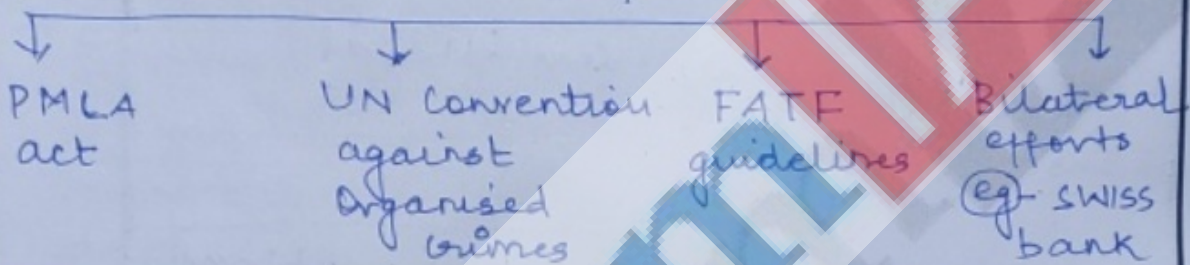
iii) Increased use of technology to launder money

eg) - cryptocurrency being used to launder money.

iv) Establishment of transnational bodies and transnational actors

(eg) - use of NGOs to

Indian government, along with global world has taken **STEPS** such as



**MEASURES that can be taken** :-

i) Use of regional and multilateral architecture to enhance cooperation

ii) Enhancing monitoring and accountability of border checks

iii) Stringent norms by banks to check any doubtful cases

iv) Multipronged approach by government

Money laundering can lead to reversal of SDG. Hence, there is a need to have zero tolerance approach towards

Q.10] Assess the relevance of the NISAR mission in observing and managing climate change and natural hazards.  
(10 marks, 150 words)

जलवायु परिवर्तन और प्राकृतिक खतरों के अवलोकन और प्रबंधन में NISAR मिशन की प्रासंगिकता का आकलन कीजिए।  
(10 अंक, 150 शब्द)

NISAR mission is the international effort between NASA and ISRO to use synthetic aperture radar (SAR) to observe climate change in world.

### Relevance of NISAR mission

i) It will cover the journey in around 2-3 weeks around the world - faster delivery of knowledge to create policies

ii) It will cover areas around the Arctic and Antarctica.

→ There has been instances of Antarctic Overturning circulation (AMOC) that shows increased warming of area region.

iii) It can help in measuring the global temperature of water resources

→ With climate change, IPCC AR6 reports increased sea level rise, and warming of ocean temperature

→ It can help in formulation of adaptation strategies for floods and cyclones in future

iv) It can help in addressing the global problem of air pollution.

The mission aims at creating structures of global public good by mitigation of efforts to reduce climate change.

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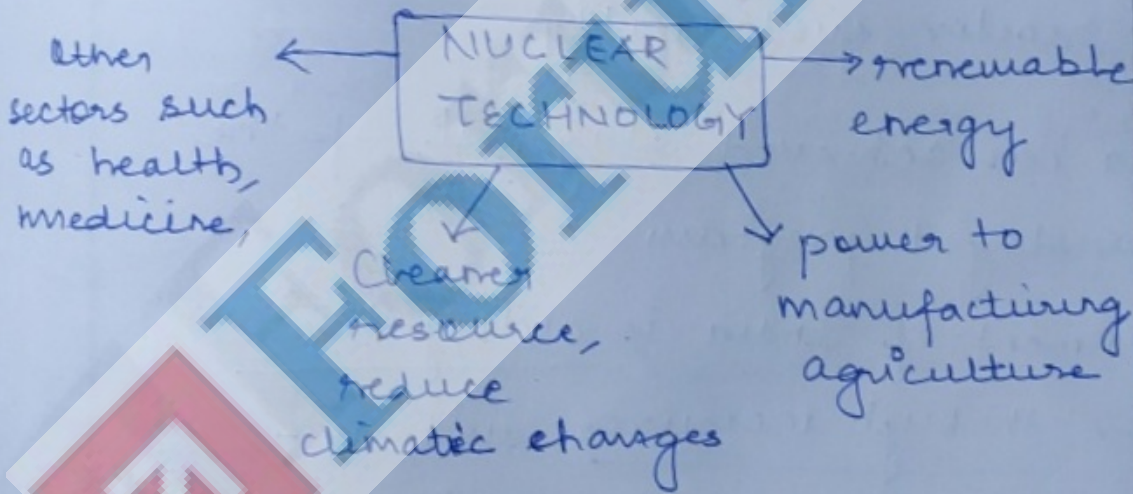
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Poor.

Q.11] Though often presented as a panacea to the dichotomy between development and ecological conservation, (nuclear technology) has multitude of other uses. Briefly explaining India's three stage nuclear program, throw light upon various applications and challenges associated with nuclear technology in the country. (15 marks, 250 words)

हालांकि अक्सर विकास और पारिस्थितिक संरक्षण के बीच द्विभाजन के लिए परमाणु प्रौद्योगिकी को रामबाण के रूप में प्रस्तुत किया जाता है परंतु इसके कई अन्य उपयोग भी हैं। भारत के तीन चरणों वाले परमाणु कार्यक्रम की संक्षेप में व्याख्या करते हुए, देश में परमाणु प्रौद्योगिकी से जुड़े विभिन्न अनुप्रयोगों और चुनौतियों पर प्रकाश डालिए। (15 अंक, 250 शब्द)

India has set a target to achieve 50% of electricity using non fossil fuel resources in INDC (Paris agreement) by 2030. Nuclear energy can aid the target.



In light of nuclear adoption, India's three staged nuclear program began with Homi J Bhabha -

Stage I - Pressurised Heavy Water

Reactors - used to split atoms to start fission process and water as coolant.

Stage II - Use of plutonium to create uranium-238 of high fuel fission process

Stage III - utilisation of thorium further to enhance the capacity of reactor sustainably

India has achieved stage II of the three staged program.

Government of India is aiding the sector through measures such as -

- i) Increased research & funding
- ii) Uranium deposits enhancement
- iii) Push to STEM education
- iv) Scientists support through funding  
 (eg) - women scientists in STEM.



However, there are CHALLENGES in nuclear technology →

i) The effects of uranium radiation can have lifelong effects on human generation

ii) The mining of uranium puts challenges such as -

→ groundwater contamination

eg - Jharkhand and Bihar West Bengal

→ displacement of people

iii) High level of technology and expertise

iv) Use of freshwater resources in light of water scarcity.

Nuclear energy contributes to less than 2% of renewable energy. There is a need of equitable balance between environment and ecology ~~to~~ while using nuclear resource.

**Feedback**

(For OFFICE use only)

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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) What do you understand by nanotechnology? In what ways can nano-technology aid in socio-economic growth of the country? (15 marks, 250 words)

नैनो टेक्नोलॉजी से आप क्या समझते हैं? नैनो-प्रौद्योगिकी देश के सामाजिक-आर्थिक विकास में किस प्रकार सहायता कर सकती है? (15 अंक, 250 शब्द)

Nanotechnology is to use technology in production of resources at nano scale ( $1-100^{\text{nm}}$ ). There has been predicted growth of around 35% between 2021-26 globally.

Nanotechnology can AID IN SOCIO-ECONOMIC GROWTH OF COUNTRY →

i) Economic growth -

- In agriculture sector, nanotechnology
  - (eg) - nanofertilisers - IFFCO Urea
  - nanodrones for monitoring crops
  - nano seeds to enhance productivity

- In manufacturing sector, -

- eg - nanobots to address skill gap
- nano sensors for preventing chemical and biological accidents

- In service sector -

- eg - nano drones to address delivery to remote areas
- nanosatellites for connectivity and reduced costs

ii) Social growth

- In health

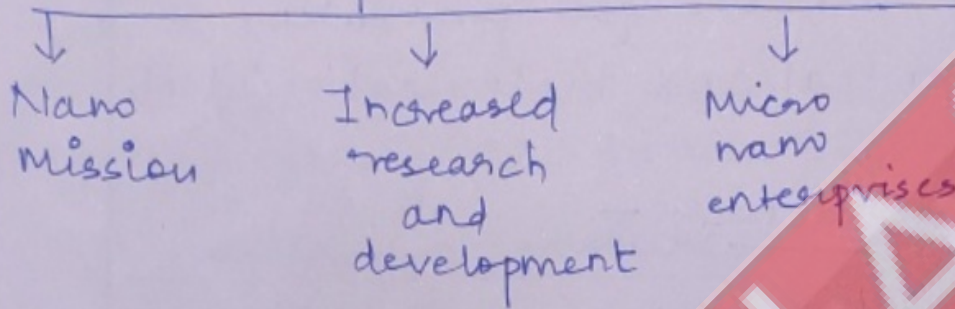
- eg - nanomedicines for targeted delivery
- nanomicelles for cancer treatment

- In environment

- eg - nanoscrubbers for oil spills
- nanotags for species conservation

- Nano products can aid income of farmers

Government of India has taken  
steps to aid the sector



However Challenges such as -

- i) Proliferation of nanomaterials
- ii) Nanomaterials can enter food chain
- iii) Unintended side-effects of nanotechnology

Reforms such as -

- \* Adequate research on nanotechnology
- \* Mechanism for review of policies
- \* institutional checks eg - biotech under MoEFCC

Efforts should be enhanced to reap benefits of nanotechnology to create \$5 trillion economy.

Feedb	
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Q.13) Warming ocean temperatures, oxygen loss and ocean acidification form a deadly trio for marine ecosystem that can have irreversible repercussions for environment as well as economy. Elucidate.

(15 marks, 250 words)

समुद्र का गर्म होना, ऑक्सीजन की कमी और समुद्र का अम्लीकरण समुद्री पारिस्थितिकी तंत्र के लिए एक घातक त्रिकोणीय है जो पर्यावरण के साथ-साथ अर्थव्यवस्था के लिए अपरिवर्तनीय प्रभाव डाल सकती है। स्पष्ट करें।

(15 अंक, 250 शब्द)

Marine ecosystem consists of all the marine flora and fauna along with their habitat. The ecosystem has been under stress due to -

① Warming ocean temperatures -

- IPCC reports increased warming due to increased green house gases and climate - around  $1.4^{\circ}\text{F}$  increase

② Oxygen loss -

Due to warming of ocean temperature, there has been increased regions of dead zones, with increased biological oxygen demand (BOD) to degrade substances  
 eg - Pacific dead zones.

③ Ocean acidification -

- With increased absorption of carbon dioxide and nutrient release into oceans. The oceans have become acidic.

These can have REPERCUSSIONS ON ENVIRONMENT -

1) The creation of dead zones can lead to loss of many marine animals.

(eg) - dolphins

2) The ocean acidification can lead to loss of corals, mangroves.

(eg) - coral bleaching increased near Australia

3) The warming ocean temperatures can increase the intensity of floods, cyclones, tsunamis that can impact coastal erosion, etc.

(eg) - IMD reports increased warming of

Bay of Bengal

iv) It can also lead to increased instances of El Nino phenomenon - loss of marine species.

ECONOMY -

i) The fishing industry can be impacted.

(eg) - El Nino can impact fish stocks near Chile (Peruvian coast)

ii) Increased temperatures can lead to loss of infrastructure, lives and human security due to hazards.

iii) Loss of GDP towards mitigation of disasters than towards welfare

iv) Tourism related activities are impacted

With increased urbanisation and development, steps should be taken to adapt to environment for sustainable development using policies such as LiFe.

**Feedback**

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Here G is Good, A is Average and P is Poor.			
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Q.14) Examine the factors that heightens the vulnerability of Indian cities, to urban floods. In light of National Disaster Management Authority (NDMA) guidelines on urban floods, discuss suitable mitigation and management strategy. (15 marks, 250 words)

उन कारकों का परीक्षण कीजिए जो शहरी बाढ़ के प्रति भारतीय शहरों की सुभेद्यता को बढ़ाते हैं। शहरी बाढ़ पर राष्ट्रीय आपदा प्रबंधन प्राधिकरण (NDMA) के दिशा-निर्देशों के आलोक में, उपयुक्त शमन और प्रबंधन रणनीति पर चर्चा करें। (15 अंक 250 शब्द)

Urban floods lead to creation of situation of floods that are more in speed and amount of water accumulated.

The major Indian cities are vulnerable

to urban floods due to factors -

i) Skewed drainage mechanism -

The drainage are clogged with urban waste and plastics.

ii) Improper regulations to plan urbanization -

The construction of buildings in haphazard manner, low level of importance to environment clearances.

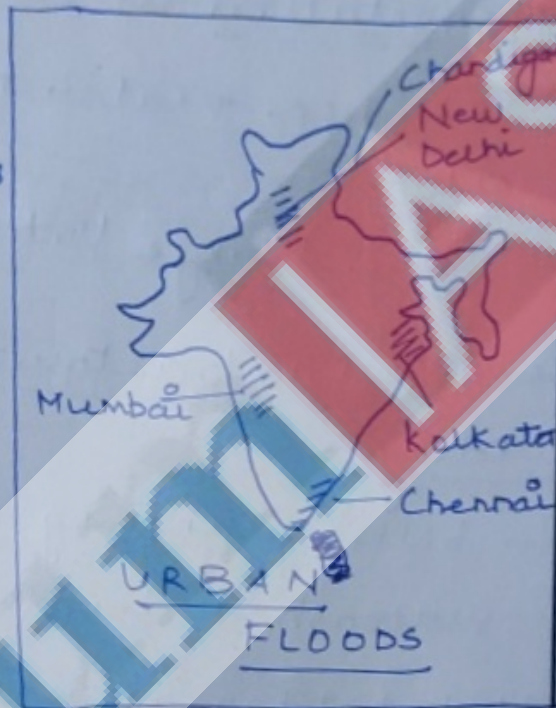


iii) Increased population -

- UN estimates that by 2030, around 30% of population will live in urban areas

iv) Increased concretization of areas

v) Deforestation of deemed forests that reduces the water holding capacity of soil.



The Indian government has taken various Steps to mitigate the situation

- i) Creation of NDMA and SDMA
- ii) Harmonizing building plans with better adaptation
- iii) Drainage management - Swachh Bharat Mission
- iv) Emphasis on sponge cities concept

The strategy that can be adopted in light of NDMA guidelines

- i) Afforestation in urban areas to enhance water holding capacity  
 eg) - Pune Waaje Urban forests
- ii) Focus on infrastructural deficit building  
 eg) - better planning of drainage  
 - watershed development approach
- iii) Stakeholder approach towards mitigation and management  
 - creation of shelter homes  
 - providing medical facilities  
 - evacuation on time
- iv) Strengthening Early Warning System  
 eg) - CWC - Floodwatch portal app for floods

Urban floods lead to issues on life and property - The whole of government approach is needed to address issue.

Feed

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Q18] Though Naxalism is showing a downward trend, it is not only thriving in its core areas of influence but also changing its form. Analysing the reason for its retreat, underline the factors behind its continuance. Also, discuss measures towards eliminating LWE from the country altogether. (15 marks, 250 words)

सामाजिक नक्सलवाद में गिरावट की प्रवृत्ति दिख रही है, लेकिन यह न केवल अपने प्रभाव के मूल क्षेत्रों में कम-कम रहा है बल्कि अपना रूप भी बदल रहा है। इसके पीछे हटने के कारणों का विश्लेषण करते हुए, इसके जारी रहने के पीछे के कारणों को रेखांकित करें। साथ ही देश से वामपंथी उग्रवाद को पूरी तरह खत्म करने के उपायों पर भी चर्चा करें। (15 अंक, 250 शब्द)

Naxalism refers to the extremist ideologies advanced through violent means that aim at disruption of democratic state. They are followed by creation of Red Corridors.

MoHume Affairs has reported around 78% decrease in incidents during the last decade. However, the REASONS FOR THE RETREAT →

- i) COVID led to inequalities and poverty on rise were overshadowed due to low movement.
- ii) ~~Reduced~~ ~~enhance~~ citizen participation Enhanced
- iii) continued ~~low~~ development in backward regions.
- iv) Urban naxals - changed form.

Further, Naxalism is an continuation due to following factors -

i) Fuelled extremist policies against state by highlighting local issues

- eg - unemployment
- land issues -  
jan, jangal, jameen



ii) Increased levels of trafficking, extortion that aid the funding

iii) Availability of youth due to high demographic dividend with low jobs

iv) Low level of development

- eg - Maoist Affairs showed persistence in Jharkhand and Chhattisgarh due to low development

v) Porous borders with lax monitoring

In order to curb the naxal activities -  
 The government has taken steps -

i) SAMA DHAN (2017) strategy - multi pronged approach

ii) Implementation of PESA in the 5th scheduled areas

iii) Security service expenditure scheme

iv) Modernisation of forces.

Further STEPS THAT CAN BE TAKEN -  
 to eliminate LWE -

① Enhanced community participation  
 using survey, local leaders  
 (eg) - Orcha survey, - Chattisgarh

② Advancement of leadership and police modernisation  
 (eg) - C40 naxal operation

③ Development in regions - awareness  
 (eg) - Dantewada, (Chattisgarh) model

LWE can hamper national unity.

It should be tackled with 4D -

dialogue, development, devolution and decentralisation.

### Feedback

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TOTAL MARKS			

Q.16) Across sectors and regions, the most marginalised sections are also the most affected by the impacts of climate change. Explain. Also, present a case for a climate resilient model of development that integrates mitigation and adaptation measures. (15 marks, 250 words)

विभिन्न खंडों और क्षेत्रों में, सबसे अधिक हाशिए पर रहने वाले वर्ग भी जलवायु परिवर्तन के प्रभावों से सबसे अधिक प्रभावित हैं। व्याख्या कीजिए। इसके अलावा, विकास के जलवायु लचीले मॉडल के लिए एक मामला प्रस्तुत कीजिए जो शमन और अनुकूलन उपायों को एकीकृत करता है। (15 अंक, 250 शब्द)

Climate change has affected every sphere of life. However, it has shown differentiated impacts over the world.

The most marginalised are most affected as -

i) Global South has been bearing brunt of climate change -

eg) - The carbon footprint of Global North has been three times that of Global South

- Africa has been impacted by droughts - Ethiopia

ii) The low income groups are more affected than high income

because of failure of finance to mitigate the impacts of climate change

eg - food scarcity will push more low income groups in poverty

ii) Disasters ~~are~~ hit the vulnerable more

eg - tsunamis and cyclones affect the fishing community

iii) the women, dalits and vulnerable groups are more affected

eg - around 80% of household work are done by women, with around 2 hours on fetching water

- improper housing and sanitation aggravated by climate disasters - heatwaves, floods.

Hence, there is a CLIMATE RESILIENT MODEL OF DEVELOPMENT →

① Afforestation - Forests are the

largest sink of carbon sequestration after oceans.

- the soil can absorb around 50% of carbon stock.

② Deep ecology ~~than~~ of model of development

eg - circular economy of products  
- sustainable lifestyle

③ Filling infrastructural gaps -

eg - creation of environmental friendly building  
- adherence to Sendai framework on disaster risk reduction

④ Funding to aid adaptation measures -  
- globally more than 50% funds are spent on mitigation than adaptation.

A climate friendly behaviour is the need of hour to achieve climate neutrality as per Paris principles

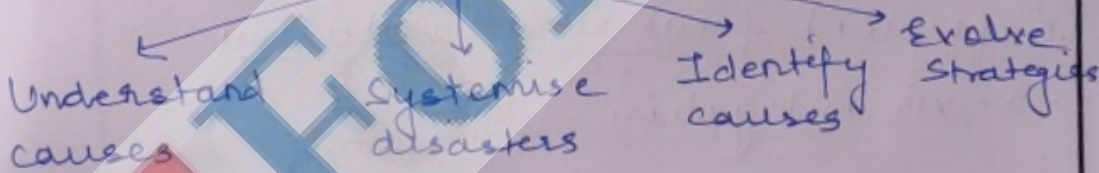


DRR is a multi-sectoral and multi-tiered process, Disaster Risk Reduction (DRR) is beset with a plethora of constraints. Identifying these constraints, recommend measures for building a robust DRR strategy.  
(15 marks, 250 words)

DRR एक बहु-क्षेत्रीय और बहु-स्तरीय प्रक्रिया, आपदा जोखिम न्यूनीकरण (डीआरआर) कई बाधाओं से घिरी हुई है। इन बाधाओं की पहचान करते हुए, एक मजबूत डीआरआर रणनीति बनाने के उपायों की सिफारिश कीजिए।  
(15 अंक, 250 शब्द)

Disaster Risk reduction (DRR) refers to understanding and evolving methods aimed at mitigation and adaptation towards disasters.

Sendai framework was adopted under DRR strategy (2015-30) as a method to for risk reduction



The DRR is a multi sectoral and multi tiered process, hence also beset with CHALLENGES →

- i) Climate change - Climate change

has been the foremost challenge  
with multi sectoral impacts

(eg) - different strategies required for  
developed and developing

ii) Climate finance -

The adaptation and mitigation require  
financial contributions.

- The \$100 bn has not been received yet
- India would need around \$10 tr  
to become climate neutral by 2070

iii) Inefficient focus on adaptation  
vs - a - vis mitigation.

iv) Lack of political will -

- funding and investment by  
resource mobilisation

v) Urbanisation and related pressures -

There is a dire need to adopt a multi stakeholder approach to BUILD A ROBUST FRAMEWORK -

i) Involvement of local participation

- NITI Aayog underlines local level achievement of SDG.

ii) Funding to be directed equally towards adaptation and mitigation.

iii) Sustainable methods using needs based approach

eg - afforestation  
- sponge cities

iv) Multilateral and regional efforts

eg - QUAD and IPEF focused on climate change

v) Learning best practices and implementation

Disasters can bring destruction to humans and environment. There is a need to evolve better implementation

### Feedback

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TOTAL MARKS			

of sendai framework.

Q.18) Though ethnic fault lines are a major threat, security challenges in the North-East are not confined to the same. Discuss the statement with special reference to Manipur. (15 marks, 250 words)

यद्यपि एथनिक फाल्ट लाइन्स (नृजातीय त्रुटिपूर्ण रेखाएँ) एक बड़ा खतरा हैं, उत्तर-पूर्व में सुरक्षा चुनौतियाँ यहीं तक सीमित नहीं हैं। मणिपुर के विशेष संदर्भ में कथन पर चर्चा कीजिए। (15 अंक, 250 शब्द)

North east has been a sensitive challenge in matters of internal security.

The security challenges of north east has been due to various factors -

i) Ethnic fault lines -

- North east has been a region of rich cultural diversity

eg - issues between Nagas, ~~and~~ Bodos

- Meiteis and Kukis (Manipur)

ii) Lack of communication to mainstream

eg - Siliguri corridor being major passage connecting mainstream and north east.

↳ Porous borders with neighbours

- ⊙ - Indo Bangladesh borders - Assam
- Indo Myanmar - Rohingya issue.

↳ Lack of development

- North east has been less developed than mainstream.
- low infrastructure, roads, etc

↳ International organised crimes -

- ⊙ - arms supplies from Myanmar
- Atunarchal security - China's intrusions

The recent issue in Manipur has been due to

- i) historical issues between Meities and kukis
- ii) demand for reservation and status by kukis
- iii) colonial legacy faultlines.

The situation at North east can be resolved through -

i) Development of backward regions

- eg - Noney bridge Manipur

ii) Stakeholder approach towards

peace talks

eg - NSCN talks not fully realised

iii) Implementation of Responsibility

to Protect using border security

eg - Assam Rifles deployment to prevent conflict in Manipur

iv) Bilateral efforts

eg - Operation Sunrise

North east insurgency and conflicts can be better managed by increasing civic participation and peace talks to underscore development.

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Q.19) Critically examine the role of development initiatives in addressing the root causes of militancy/terrorism in Jammu & Kashmir. (15 marks, 250 words)

जम्मू और कश्मीर में उग्रवाद/आतंकवाद के मूल कारणों को संबोधित करने में विकासात्मक पहल की भूमिका का आलोचनात्मक परीक्षण कीजिए। (15 अंक, 250 शब्द)

Jammu and Kashmir has been the hotbed of terrorism and militancy since independence. With abrogation of Article 370 there has been decreased instances of militancy in Kashmir.

The ROOT CAUSES has been →

- i) Proxy wars by Pakistan to maintain militants
- ii) Extremist ideologies followed by some groups
- iii) Poor connectivity and development
- iv) Increased overground workers
- v) Jobless youth and unemployment

The Government of India has taken various initiatives in addressing the root causes of J&K militancy →

i) Increased funding to aid the infrastructure deficits

ii) FDI allowed in properties in J&K

iii) Education and employment

eg) - Naya Chetna

iv) Tourism activities

eg) - G20 meets at J&K

However, the militancy still persists

due to →

i) The overgroundworkers giving fuel to extremist ideologies

ii) Unemployment is on rise.

→ around 60% of population is youth



- iii) The hybrids are a source of safe havens
- iv) Pakistan continues to engage youth in proxy wars
- v) Rise in educated youth towards militancy
- eg) J&K police records showed increased youth participation between 2013-2015
- vi) Technology used as a means to employ and prepropagate militancy

Further there are needs of REFORMS →

- 1) Involve local participation using autonomous bodies
- 2) Political engagement - cooperative federalism
- 3) Citizen led development model - empowering Gram panchayats.

J&K militancy shows that the Indian model of unity in diversity needs better implementation.

**Feedback**

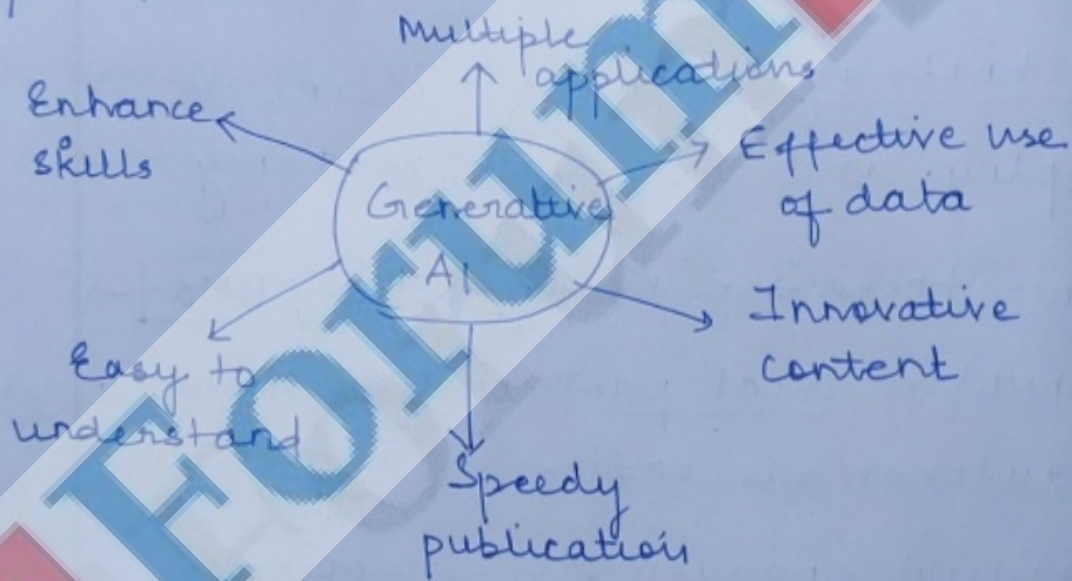
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TOTAL MARKS			

Q.20) What do you understand by generative Artificial Intelligence (AI)? How can policymakers and regulatory bodies effectively address the concerns and challenges posed by generative AI? (15 marks, 250 words)

जनरेटिव आर्टिफिशियल इंटेलिजेंस (एआई) से आप क्या समझते हैं? नीति निर्माता और नियामकीय निकाय जनरेटिव एआई द्वारा उत्पन्न चिंताओं और चुनौतियों को प्रभावी ढंग से कैसे संबोधित कर सकते हैं? (15 अंक, 250 शब्द)

Generative AI is a field of Artificial Intelligence where algorithms and ML data is used to create images, speech, etc.



The concerns and challenges posed by generative AI —

i) Regulation of content

+ It can lead to disruption due to deepfakes

- infringement of IPR rights - copyright of data

ii) Skilled workforce

- India Skills Report 2023 shows

only  $\frac{1}{3}$ <sup>rd</sup> of population is ready for needs of 21<sup>st</sup> century

iii) Research and investment

- Less than 2% is spent on research by government.

- Private investment is low

iv) conflict of interest in regulation and review of policies

v) Cybercrimes using AI - a new tool for propaganda

In order to effectively address the challenges of Generative AI →

- i) Institutional mechanisms for monitoring and regulations
- ii) Better guidelines and enforcement on the use of AI
- iii) Tackling misinformation and privacy of customers
- iv) Global efforts  
 (eg) - India joined group of "AI for All"  
 - ICGT with USA
- v) Ethical concerns to be addressed

Generative AI is a technology that can drive growth of orange economy. There is need of better enforcement and guidelines to spur innovation.

Feedback

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