

TEST CODE 6 1 3 4 0 3

FIAS | MGP 2023 | Open Test – GS Paper #3

Time Allowed : Three Hours

समय : तीन घंटे

ForumIAS

Maximum Marks : 250

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate

परीक्षार्थी का नाम

DIYA DASGUPTA

Roll No./अनुक्रमांक

1910048904

Medium/माध्यम

English हिंदी

Center Code/परीक्षा केंद्र

1901

Date/दिनांक

*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	
2			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।
3			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।
4			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।
5			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 प्रदेश 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।
6			5. Word limit in questions, if specified, should be adhered to. Any page or portion on 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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Total/कुल अंक 250

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Examiner's Discretion/मूल्यांकन कर्ता का विवेक :

Start Time/प्रारंभ करने का समय :

End Time/समाप्त करने का समय :

Total Marks/कुल अंक :

Mode Of Examination/
परीक्षा की विधि :Online/ऑनलाइन Offline/ऑफलाइन

*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 आयें, के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।

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ECN CODE/
ईसीएन कोड :

EG/ईजी :

① ② ③ ④ ⑤

Evaluation Date/
मूल्यांकन तिथि :

Note: Students are expected to incorporate suggestions from the solution 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. Asks 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) To what extent can the Jan Vishwas (Amendment of Provisions) Act 2023 help enhance trust-based governance for ease of living and doing business? (10 marks, 150 words)

जन विश्वास (प्रावधानों का संशोधन) अधिनियम 2023 किस हद तक जीवन और व्यवसाय करने में आसानी के लिए विश्वास-आधारित शासन को बढ़ाने में मदद कर सकता है? (10 अंक, 150 शब्द)

Budget 2023-24 announced
introduction of Jan Vishwas bill, to
boost trust based governance by
modifying regulatory/legal mechanisms.

Jan Vishwas Act, 2023 :

① Decriminalization of over 39,000 laws.

② Simplification of over 3000 regulatory requirements for business.

Analysis of efficacy :

(A) Boost to trust based Governance → ① Allows

citizens to access/understand regulatory requirements.

② Avoidance of multiple laws on same matter

③ Single window system of Compliance boosts ease of Doing Business.

④ Helpline Desk & Grievance Redressal Online → further streamlines the process.

(Yet challenges exist):

① Extent of Awareness amongst average business (regarding law/rules) still low.

② Low returns of tax → tax: GDP ratio = 11%
India.

③ Poor Digital penetration.

Hence, as solution, the Digital Outreach needs boost via blatant Net and systematic awareness generation of existing laws, via Task Forces is imperative.

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) Fluctuations in the price of TOP (tomato, onion, potato) crops impact all strata of societies. Highlighting the reasons and implications of such fluctuations, evaluate the effectiveness of Operations Greens in stabilizing the otherwise restive horticulture sector. (10 marks, 150 words)

TOP (टमाटर, प्याज, आलू) फसलों की कीमत में उतार-चढ़ाव समाज के सभी वर्गों को प्रभावित करता है। इस तरह के उतार-चढ़ाव के कारणों और निहितार्थों पर प्रकाश डालते हुए, अन्यथा अस्थिर बागवानी क्षेत्र को स्थिर करने में ऑपरेशंस ग्रीन्स की प्रभावशीलता का मूल्यांकन कीजिए। (10 अंक, 150 शब्द)

Horticultural sector accounts for 2% of Indian GDP. A 1% increase in horticultural land can result in 0.46% increase in horticultural output like tomato, onion, potato.

Fluctuations in price of TOP → impacts all strata

① As evidenced by rise of Onion (Over ₹150/kg) during 2021 Lockdown.

② As shown from inflation of Prices of Tomato (over ₹200/kg) in 2023

Reasons & Implications of such Fluctuations

A (Reasons): ① Biological Factors like increase in crop pesticides. eg in case of recent Tomato crop.

② International Events like war - cause fluctuations in global prices.

③ Fuel Inflation - due to war, causes price rise. Peg increase in \$1 dollar a barrel increases import cost by \$1 bn.

④ Lack of sufficient cold storage houses.

Implications

- ① Price Volatility
- ② Consumers suffer
- ③ Distress sale by farmers
- ④ Import dependency increases.

In this case, Operations Queens is useful:

① Creation of buffer reserve.

② Targeted crops which have maximum consumption.

Yet challenges like → Recent Tomato Crisis
→ high prices of vegetables like ginger exist

Thus, diversification of Operation Queens to other crops, along with greater capital infusion, in related projects, is needed

Feedback

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#	G	A	P
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CD & VA			
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Please put tick marks in the above table.

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TOTAL MARKS	
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Q.3) A focused and sustained promotion and pursuit of blue economy help meet the challenges of food security, national security, and climate security. Discuss. (10 marks, 150 words)

नीली अर्थव्यवस्था का एक केंद्रित और निरंतर प्रचार और अनुसरण खाद्य सुरक्षा, राष्ट्रीय सुरक्षा और जलवायु सुरक्षा की चुनौतियों से निपटने में किस प्रकार मदद कर सकता है? (10 अंक, 150 शब्द)

Blue Economy refers to the generation of output from the Ocean and other allied sources like inland lakes, rivers etc.

Considering its potential, a thrust on doubling output from Blue Economy was raised.

Blue Economy can meet several challenges:

① Food Security → India ranks 5th in fisheries production & 5th in aquaculture.

② Marine Fisheries → 108 lakh tonnes

③ Inland fisheries → 17 lakh tonnes

Hence steps like

- cultivating sea grass ①
- using sea cages ②
- avoid bottom trawling ③

② Natural Security → a) India has 7516 km of maritime border.

b) Novel threats → piracy, sea to land attack, threats to fishermen } response

c) Hence steps like:

i) Synergy b/w Indian Coastguard & Coastal Police.

ii) Alerting fishermen to report suspicious acts

③ Climate Security:

a) By harnessing tidal energy

b) By harnessing rare earth minerals, Cobalt based, Polymetallic Nodules from sea bed.

c) By preserving Mangroves (MISHTI Scheme) & Corals

Hence Sustained Pursuit of Blue Economy can help attainment of Panchaan of food, national & climate security

Feedback

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#	C	A	P
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CD & VA			
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TOTAL MARKS	
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Q.4) What advantages does Green Hydrogen and a hydrogen economy offer in addressing national and global concerns? Discuss the impediments in its adoption. (10 marks, 150 words)

राष्ट्रीय और वैश्विक चिंताओं को दूर करने में ग्रीन हाइड्रोजन और हाइड्रोजन अर्थव्यवस्था क्या लाभ प्रदान करती है? इसे अपनाने में आने वाली बाधाओं पर चर्चा कीजिए। (10 अंक, 150 शब्द)

Green Hydrogen refers to production of hydrogen by electrolysis (splitting) of hydrogen from water.

Advantages to address National & Global Concerns

A National Concerns:

- (a) Non-fossil source of energy.
- (b) abundance presence \Rightarrow renewable source
- (c) non-polluting production mechanism
- (d) Will help India become Carbon Neutral by 2070.
- (e) Aid in other Sustainable goals of India.

B Global Concerns:

- (a) can address Climate Change -
- (b) can arrest Global temperature rise at

1.5°C (IPCC Study).

- (C) Aid Global Carbon Neutrality
- (d) Reduction in reliance of crude / petrol

Impediments:

- ① Process is cost intensive.
- ② Sophisticated infrastructure → needed
- ③ Challenges in making it commercially viable
- ④ combustible nature of hydrogen
- ⑤ Issues in storage.

Solutions: ① National Hydrogen Mission - is a step in right direction

② MoUs with nations for technology transfer
Req US.

Thus, in this way India along with world can aid to combat energy crisis & GHG emissions, thereby halting climate change.

Feedback

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TOTAL MARKS	
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Q.5) In what ways do plastics harm human, animal, and ocean health? Bring out the various domestic and international efforts that have been put in this regard in recent times?

(10 marks, 150 words)

प्लास्टिक किस प्रकार मानव, पशु और समुद्री स्वास्थ्य को नुकसान पहुँचाता है? हाल के दिनों में इस संबंध में किए गए विभिन्न घरेलू और अंतर्राष्ट्रीय प्रयासों को उजागर कीजिए। (10 अंक, 150 शब्द)

Plastics are a form of chemical product, which inhibit passage of gases like oxygen, CO₂, thereby ~~passing~~ becoming choking hazards.

(Harm caused by Plastics):

- (A) To Humans :
- (i) Clogging drains thereby disrupting Solid Waste Management.
 - (ii) Micro Plastics → consumed as part of food, can hamper bodily functions.
 - (iii) Contaminates food sources.

(B) To Animals:

- (i) Hinders Oxygen Flow by constricting

nasal cavity.

Eg seen amongst cats/dogs.

(ii) Bovines chew & ingest plastic → which impacts their gut health & milk they produce.

CC Ocean Health

- (i) harms fishes
- (ii) suffocates turtles
- (iii) Impacts corals & mangroves → killing them

Hence Efforts taken:

(A) Global Efforts:

(i) Removal of plastic Garbage by Denmark based NGO from Great Pacific Garbage Patch.

(ii) Marpol Convention, UNCLOS → regulation of Ocean pollution, along with London Convention

(B) National Efforts:

(i) Environment Protection Act, 1986

(ii) Plastic Management Rules under EPA

(iii) Extended Producer Responsibility

(iv) Ban on Plastics.

These are ways to combat plastic pollution in India & World.

Feedback

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TOTAL MARKS

Q.6) Though spatially distributed across the length and breadth of the country, incidents of cloud burst disproportionately impact the mountaneous regions. Comment (10 marks, 150 words)

हालांकि सम्पूर्ण देश में बादल फटने की घटना आम है, लेकिन बादल फटने से पर्वतीय क्षेत्रों पर प्रतिकूल प्रभाव पड़ता है। टिप्पणी कीजिए। (10 अंक, 150 शब्द)

Cloud bursts refer to sudden and disruptive rainfall over a specific area, over a span of 24 hours, exceeding 200 mm.

(Cloud Bursts: Spatially Distributed)

①



- + + High Intensity
- High Intensity
- Moderate
- o•o Low Intensity

Intensity of cloud burst distribution in India

② Present in Desert ecosystems as witnessed in Rajasthan's Western border

③ South India's Karnataka, Kerala

have frequent incidents.

However higher impact: Mountainous Regions

Causes: ① Presence of Mountain blocking clouds.

② Greater presence of clouds.

③ Allied factors → landslides
flash floods
can trigger glacial lake outbursts

④ Rugged terrain

⑤ Construction of Dams → lead to flooding.

Measures: ① Planned drainage

② Restrict Further mega hydro projects

③ Sponge City model of China.

④ Early Warning System

Thus, Cloud bursts can be deftly dealt with, by focussing more on Disaster Risk Governance.

Feedback

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TOTAL MARKS	
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Q.7) As the emerging technologies enhance their reach and extent, the amalgamation of real and virtual will become inevitable. In this perspective, discuss how metaverse will alter the lives of common man. (10 marks, 150 words)

जैसे-जैसे उभरती प्रौद्योगिकियों अपनी पहुंच और सीमा बढ़ाती हैं, वास्तविक और आभासी का सम्मेलन अपरिहार्य हो जाएगा। इस परिप्रेक्ष्य में, चर्चा कीजिए कि मेटावर्स आम आदमी के जीवन को कैसे बदल देगा। (10 अंक, 150 शब्द)

Metaverse refers to the amalgamation of novel technological innovations like Augmented Reality, Virtual Reality, IoT, AI etc.

Inevitability of amalgamation of Real & Virtual :

- ① Use of AR/VR in real life.
- ② Simulations using Metaverse
- ③ Assimilation of technology in daily life.

Ways for which Metaverse : Alters life of Common Man :

- ① Use of Virtual Reality in

recreating simulations.

② Medicine → simulation of practice surgery.

③ In Gaming → propulsion to making it a profession.

④ In Food Industry → Superior Culinary

⑤ In Tourism → simulation before selecting actual spot.

Yet, challenges exist, which can be solved as follows:

① Problem (P) → Privacy Issues.
Solution (S) → Global Community needs to devise laws/rules

② (P) → Cyber Security Threats
(S) → Enhance preparedness via ethical hackers

Thus, Metaverse is a double edged sword. Its benefits must be reaped, keeping demerits at bay.

Feedback

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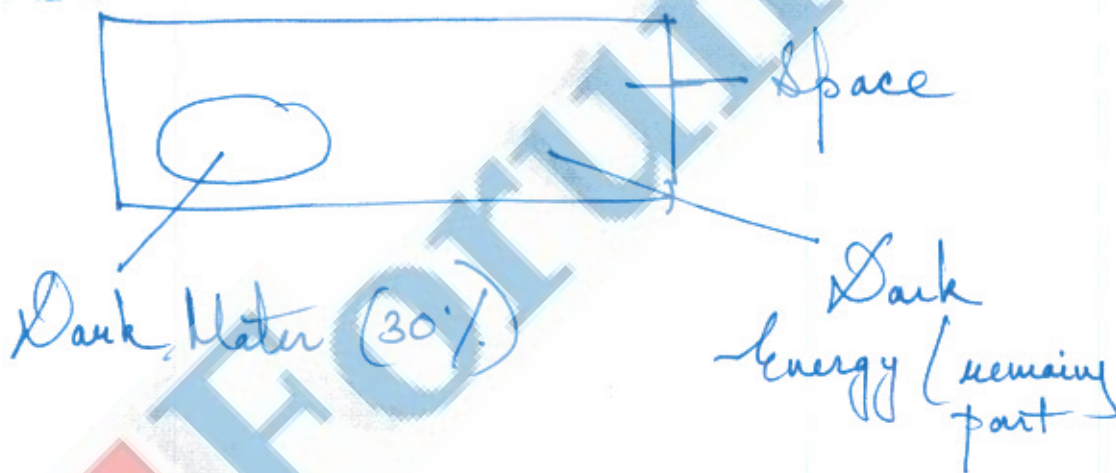
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TOTAL MARKS	
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Q.8) What makes dark matter difficult to detect? Also, analyse how the search for the elusive dark matter has influenced the trailing of modern pursuits in science. (10 marks, 150 words)

क्या कारण है कि डार्क मैटर का पता लगाना कठिन हो जाता है? साथ ही, विश्लेषण कीजिए कि मायावी डार्क मैटर की खोज ने विज्ञान में आधुनिक गतिविधियों को कैसे प्रभावित किया है। (10 अंक, 150 शब्द)

Dark Matter refers to the component of space which is challenging to see, perceive or detect.



Difficult to detect:

- ① Illusive properties
- ② Attractive potential

③ Magnetic Configuration .

Search for Dark Matter: Pursuits in Modern Science

① Discovery of Black holes

② Gravitational Waves

③ Aids in understanding General

Theory of Relativity better

④ Space exploration .

⑤ Prospects in "Worm Hole Hypothesis"

Thus, the pursuit of modern science is premised upon curiosity. Such curiosity will result in further growth of Dark Matter Research .

Feedback

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TOTAL MARKS

Q.9) While AFSPA has been criticised for promoting excesses by the security forces, its profound utility to upkeep the security situation cannot be overstated. Comment. (10 marks, 150 words)

हालांकि सुरक्षा बलों की ज्यादतियों को बढ़ावा देने के लिए AFSPA की आलोचना की गई है, लेकिन सुरक्षा स्थिति को बनाए रखने में इसकी महान उपयोगिता को नजरअंदाज नहीं किया जा सकता है। टिप्पणी कीजिए।

(10 अंक, 150 शब्द)

AFSPA or the Armed Forces Special Powers Act is a legislation which empowers uniformed military personnel with special powers of arrest, search, seizure in areas of unrest.

(AFSPA has been criticized):

① Search and seizure ^{w/o warrant} under Sec 4 of the Act has been allegedly abused.

② Arresting power of military, has been exercised unjustly. (Complaints from Assam)

③ Power to shoot/kill has been over-used.

④ Alleged crimes against women. [eg] rapes by military

③ Blanket Immunity - to such military personnel, unless appointing authority intervenes → cause of concern.

Yet, AFSPA's benefits :

- ① Prevention of accumulation of armed groups in conflict prone areas. [Eg] Nagaland
- ② Check on militancy to a fair extent
- ③ Maintenance of Law and Order.
- ④ Quick & Prompt Response in case of rising conflicts. [Eg] densed rising conflict in Assam.

Yet, some Recommendations :

- ① Dilute the power of immunity to military.
- ② Phased removal of AFSPA - as voted by Jusheevan Reddy Committee.

Thus, powers and duties need to be balanced under AFSPA, to alluviate fears of citizens

Feedback

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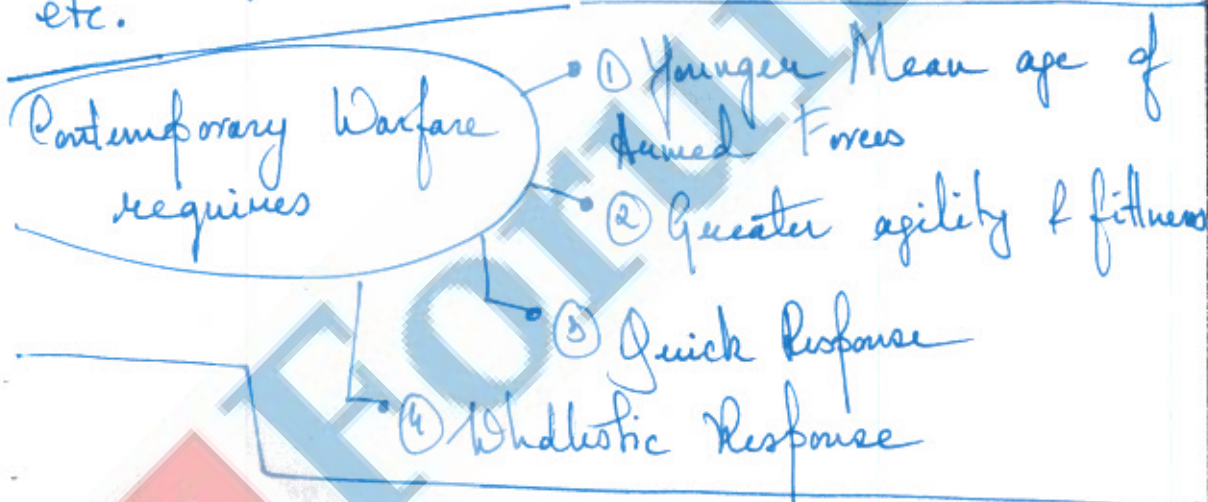
Here G is Good, A is Average and P is Poor.

TOTAL MARKS

Q.10) Its not only the heft but also the agility, efficiency, and swiftness which will define the warfare in the contemporary times. In this context, discuss the relevance of the Agnipath scheme. (10 marks, 150 words)

यह न केवल अनुभव बल्कि चपलता, दक्षता और तेजी भी है जो समकालीन समय में युद्ध को परिभाषित करेगी। इस संदर्भ में अग्निपथ योजना की प्रासंगिकता पर चर्चा कीजिए। (10 अंक, 150 शब्द)

Contemporary Warfare refers to emerging modes, means and channels of attack by other countries, on Indian Sovereignty, including militancy, Rome Waf Attacks etc.



In this context, The Agnipath Scheme is relevant:

- ① Recruits Young Soldiers - who are fresh out of school.
[eg] 18 - 23 years.

② Lowers the mean age of Indian Army → Fresh valour
→ Younger bodies are more agile

③ Easier to train candidates, due to initiative shown.

④ Alternative for candidates who can't crack UPSC's NDA Exam.

⑤ Less burden on Govt. exchequer - as no need of pension, full time employment.

Yet challenges exist:

① Only 25% of all applicants will receive permanent commission. [eg] rise of unemployment post 23 years

② No scope of Disability pension.

Hence Anand Mahindra and other such industrialists have offered to provide preference to Agnipath Scheme's candidates, in jobs. Such initiatives from private sector can historically secure India's future

Feedback

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#	G	A	P
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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.11) The path towards an Atmanirbhar Bharat traverses through an overhaul of industrial policies. Comment, with special reference to the Production Linked Incentive (PLI) scheme.

(15 marks, 250 words)

आत्मनिर्भर भारत की दिशा में मार्ग औद्योगिक नीतियों में व्यापक बदलाव से होकर गुजरता है। प्रोडक्शन लिंक्ड इंसेंटिव (पीएलआई) योजना के विशेष संदर्भ में टिप्पणी कीजिए।

(15 अंक, 250 शब्द)

Atma Nirbhar Bharat

Indicates a pathway towards Economic Self Reliance by thrusting the flagship project of "Make in India"

Overhaul of Industrial Policies:

Overhaul of:

(A) 1948 Industrial Policy which focussed on State Control

(B) Industrial Policy of 1956 -

which focussed on A, B, C categories of Industries.

(c) Industrial Policy of 1977 → which began focussing more on small scale Industries.

(d) Policy of 1980 → with dedicated focus on State Capitalism, along with benefits to small scale + cottage Industries.

(e) 1991 LPG Reforms → which ushered in era of Liberalization, End of license, Quota Raj.

(f) Eventually, "Make in India"; & Production Linked Incentive began:

- (i) in Semi Conductor
- (ii) in MSME Sector
- (iii) in Defence Production
- (iv) in Manufacturing Sector

Consumer Durables

(v) Infrastructure projects

Impact:

(a) growth of Domestic production capacity

(b) employment boost

(c) Technology transfer

(d) MOU with foreign nations

(e) Skill development of Indians

This is inching India closer to ultimate dream of becoming \$5 trillion economy.

Feedback

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TOTAL MARKS	
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Q.12) Infrastructure investments are crucial for socio-economic development, as they have a multiplier effect on economy, however, concerns for safety must not be ignored. Discuss in the light of recent events. (15 marks, 250 words)

बुनियादी ढांचे में निवेश सामाजिक-आर्थिक विकास के लिए महत्वपूर्ण है, क्योंकि उनका समाज पर गुणक प्रभाव पड़ता है, हालांकि, सुरक्षा के लिए चिंताओं को नजरअंदाज नहीं किया जाना चाहिए। हाल की घटनाओं के आलोक में चर्चा कीजिए। (15 अंक, 250 शब्द)

Infrastructure Investments are the wheels of (capital generation) of any economy, specially when Infrastructure focusses on Capital, Social and Environmental Sectors.

Crucial Nature of Infrastructure Investments

(For Economic Goals & Development) :

1. Budget 2023:

- (a) 10 lakh cr for infrastructure growth
- (b) 33% hike \Rightarrow highest ever outlay
- (c) Largest allotments \rightarrow Railway (2.4 lakh cr)
 \rightarrow Roadways (2.7 lakh cr)

2. These investments create Capital as :

- (a) They create employment
- (b) Leverage private investments via PPP model
- (c) Boost skills of Indians.

3. Connectivity - across the country is boosted (Rakesh Mehan Committee).

4. Secures supply chains → for transfer of food grains, resources, etc. [eg] Dedicated Freight Corridors

B (For Social Development):

(1) Boosts people to people connect
[eg] Vande Bharat Express

(2) Facilitates Migration for work opportunities.

(3) Hospital & Schools investment, boost Social Infrastructure ⇒ stronger demography

However, concerns for Safety can't be ignored

(1) Secure building materials - to

prevent collapse of infrastructure. [Eg] Delhi Bridge collapse case

② Railways require Anti-Collision devices (Kavach) to prevent accidents

[Eg] July 2023 Humsafar Express case

③ To prevent Damage in case of disasters. [Eg] Earthquake proof buildings

④ Safety Norms of commercial buildings need attention to prevent fires.

[Eg] Recent fire in Delhi Coaching Institute

Hence Measures are needed]:

① Focus on Sustainable Architecture (SDG 9,11)

② Align Infrastructure plans with SENDAI framework.

③ Invest in good quality building material that are eco-friendly → fly ash → m-sand

Hence, when infrastructure is sustainable only then investments worth trillions can help India become \$5 trillion economy by 2024.

Feedback

(For OFFICE use only)

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Please put tick marks in the above table.			
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TOTAL MARKS			

Q.13) How will you explain the irony of poor adoption of millet crops despite their multifarious advantages? Also, recommend measures to curb this anomaly. (15 marks, 250 words)

आप मीठा अनाज की फसलों को उनके विविध लाभों के बावजूद खराब तरीके से अपनाने की विडम्बना को कैसे समझाएंगे? इसके अलावा, इस विसंगति को रोकने के उपायों की सिफारिश कीजिए। (15 अंक, 250 शब्द)

Millets are a member of the grass family of crops which have exceptionally high nutrition value, are cost-effective and not at all resource intensive.

As a result, with India's request 2023 was declared by the UN, as International Year of Millets. Yet, its adoption is poor in India.

Reasons of Poor Adoption of Millets:

① Few millets under MSP - like jowar, ragi and bajra ⇒ poor coverage

② MSP on Millets is lower compared to rice and wheat.

③ Select Areas focus on millets → hence no pan India presence. Eg → Bajra - Rajasthan
→ Jowar - Maharashtra
→ Ragi - Karnataka

④ Processing of Millets → is a capital intensive investment

⑤ Inconsistency amongst farmers to produce millets → hence low procurement by FCI

⑥ Low consumer demand

Eg "Ragi Mudde" → perceived as "poor man's food" despite being high in iron

Yet, Advantages of Millets: Multifarious):

① Not water intensive

② Good for dryland farming

③ Promotes growth of local races of plants

④ Combats hidden hunger → millets rich in iron, proteins, calcium, potassium, zinc

It has solutions :

- ① Diversify and increase MSP on Millets.
- ② Government Assistance in processing millets, will encourage farmers to grow it.
- ③ Create public awareness about richness of millets.
- ④ Provision of millets in PDS will boost its consumption.
- ⑤ Continued Procurement from farmers in decentralized manner will ensure consistency in millet production.

Thus, a multi-faceted approach span Price Input Assistance to production/processing help, along with awareness generation, is crucial to popularize millets.

Feedback

(For OFFICE use only)

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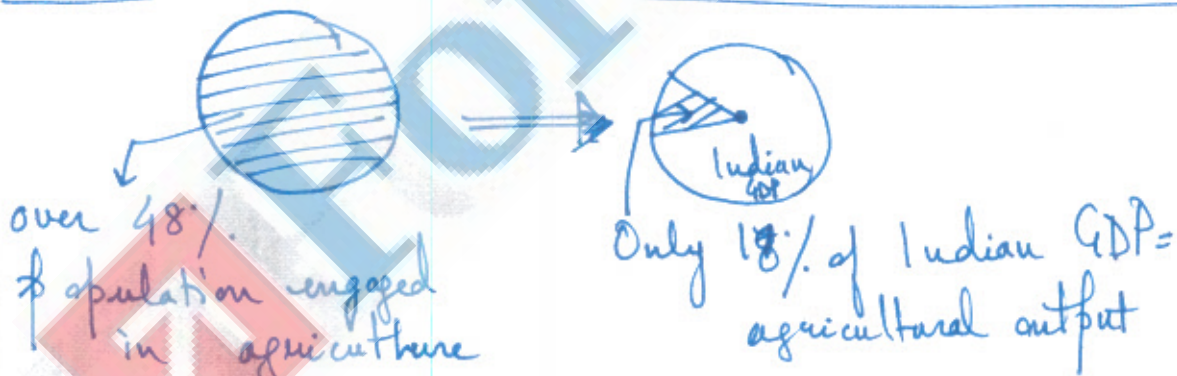
Here G is Good, A is Average and P is Poor.

TOTAL MARKS	
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Q.14) Analyze the role Agri-tech can play in penetration of technology in agriculture. In what ways can AgriStack help address the crisis in the farm sector. (15 marks, 250 words)

कृषि में प्रौद्योगिकी के प्रवेश में कृषि-प्रौद्योगिकी की भूमिका का विश्लेषण कीजिए। एग्रीस्टैक किस तरह से कृषि क्षेत्र में संकट का समाधान करने में मदद कर सकता है। (15 अंक, 250 शब्द)

Technology in agriculture can hasten the pace of Doubling Farmers Income. Agri-tech refers to use of technology like Smart Irrigation, Agri Stack, Agri-Extension Services, etc boost productivity of agriculture.



(Agri-tech can correct this anomaly)

Role of Agri-tech :-

- ① Precision Agriculture & Farming

can be ensured

② Agric-extension Services - by linking ATMA's to Krishi Vigyan Kendras.

③ Skill development of farmers in methods of Scientific agriculture.

④ Optimal Resource Utilization - via SMART/AI driven irrigation

⑤ Use of Drones - to spray pesticides in correct quantum.

⑥ In Seed Management :

6.1 Using Genetically Modified seeds
Key BT Cotton

6.2 Use of Hybrid seeds

6.3 IRRI's Drought & Salt resistant seed varieties like FUSA.

⑦ In Marketing of Agriculture → e-NAM
 → AgriNet.

Role of Agri-stack to address crisis in Farm Sector:

- ① Utilization of Resources efficiently, like optimal fertilizer usage.
 [Eg] Ideal ratio $\rightarrow 4:2:1$
 Current usage $\rightarrow 24:8:1$
- ② Wastage of Food Grains - can be reduced via data based growth.
- ③ Focussing on supply based production
- ④ Connects Farmers to Consumers like big Corporates. [Eg] prevents farmers distress sales.
- ⑤ Reduces tyranny of APMC agents.
- ⑥ Income Security of farmers due to Agri Stack.
- ⑦ Diversified food grain production & help to farmers can be hence ensured by Agri Stack, taking India closer to Dubbing Farmers

Feedback

(For OFFICE use only)

#	G	A	P
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Please put tick marks in the above table.			
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TOTAL MARKS			

Q.15) The objective of an inclusive clean energy transition will remain incomplete without leveraging the potential of the biofuels. Enumerating the seminal provisions of the National Biofuel Policy, analyze the possible challenges in its smooth implementation. (15 marks, 250 words)

जैव ईंधन की क्षमता का लाभ उठाए बिना समावेशी स्वच्छ ऊर्जा परिवर्तन का उद्देश्य अधूरा रहेगा। राष्ट्रीय जैव ईंधन नीति के मौलिक प्रावधानों की गणना करते हुए इसके सुचारु कार्यान्वयन में संभावित चुनौतियों का विश्लेषण कीजिए।

(15 अंक, 250 शब्द)

Biofuels are those food grains, agricultural or organic products, processing which an alternative to coal based fuel can be generated

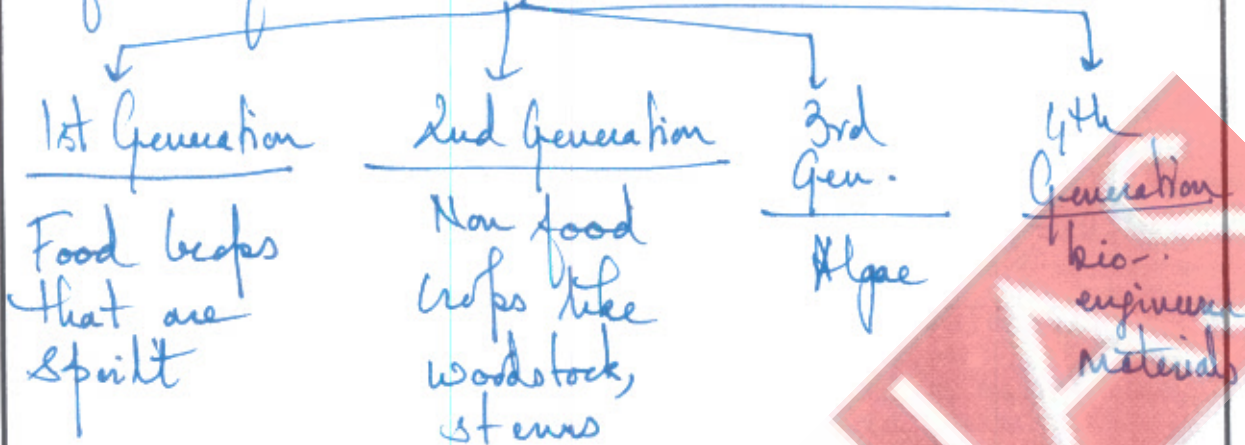
Ex: cassava, corn etc.

Inclusive Clean Energy Transition:

- ① Guided by Panchamrit Goals → Carbon Neutral by 2070
- ② Currently → 70% of energy still thermal based (NTPC) → Reducing emission intensity by 1bn tonnes by 2040 etc.
- ③ Bio-fuels play crucial role in inclusive clean energy.

National BioFuel Policy: ① Categorization

of Biofuels into:



② Focus on production of ethanol from items like bagasse.

③ Blended petrol → 20% blending target.

④ Blended diesel → 5% target

⑤ Recently, → food crops can be allowed to

(Challenges in Smooth Implementation):

① Food Security threats - when farmers grow food crops for bio-fuel.

② Lack of infrastructure for transition.

- ③ Lack of sufficient capital investment
- ④ Retrofitting of car engines needed to run on blended petrol & diesel.
- ⑤ Unpredictable source of bio-materials ^{production} independent on weather.

Hence Solutions) :

- ① Restriction on divergence of food crops beyond certain limit.
- ② Collection of Waste Food for processing into bio-fuel.
- ③ Phase wise scheme to enable car/vehicle engine upgradation; to use bio-fuel.

Hence, national biofuel policy can be a game changer for India's target of having 50% energy source as non-fossil.

Feedback

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Please put tick marks in the above table.

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TOTAL MARKS	
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Q.16) Despite having a robust legal architecture in the form of Disaster Management Act, 2005, coordinated on ground response to disaster remains in a state of want. Comment.

(15 marks, 250 words)

आपदा प्रबंधन अधिनियम, 2005 के रूप में एक मजबूत कानूनी संरचना हानि के बावजूद, आपदा के लिए जमीनी स्तर पर समन्वित प्रतिक्रिया अभाव की स्थिति में है। टिप्पणी कीजिए। (15 अंक, 250 शब्द)

The National Disaster Management Act, 2005 (NDMA) provides an overarching framework of managing disasters. Yet, the losses due to contemporary disasters are amounting to \$80 bn/year.

Robust Legal Architecture in form of NDMA, 2005

① Focuses on disaster risk governance, as warranted by SENDAI Framework.

② Decentralized Approach - by creating:

- ① National
 - ② State
 - ③ District
- } Level Disaster Management Committees

③ Provision of National Disaster Response Force and State level forces.

④ Fund → provides for National Disaster Response Fund to provide ready resources for mitigation.

⑤ Executive Council - headed by PM, facilitates quick decision making.

Yet, Ground Response : Still in State of Wait

① Evolving Nature : of Disasters like cloud bursts, hydro seismicity, flash floods and urban floods.

② Lack of sufficient Warning - [Eg] Shinku landslide

③ Inefficacy of technology employed like vulnerability mapping.

④ Unplanned Urbanization accelerates disaster risk in vulnerable areas. [Eg] Char Dham project.

⑤ Lack of Synergy between NDRF and Indian Army, during evacuation.

⑥ Multiplicity / Overlapping Jurisdiction of State & Central authorities \Rightarrow confusions.

⑦ Civilian Response to instructions from authorities are incoherent.

⑧ National Disaster Communication Infrastructure is not upto the mark.

⑨ Disasters like forest fires / urban fires not yet listed as disasters.

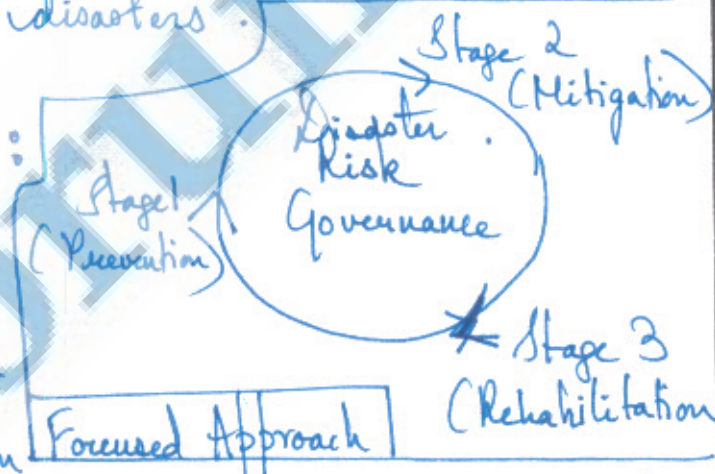
Hence Solutions

① Align measures to Sendai Framework

② Greater Coordination

b/w IMD, Inccis, Early Warning System, Min. of Earth Sciences.

③ Ground level connect - with NGO & CSOs needed.



Hence, planning is futile unless Disaster Mitigation can be exercised, when actual Disasters like Chamoli floods etc. take place.

Feedback

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Please put tick marks in the above table.

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TOTAL MARKS	
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Q.17) With suitable examples, throw light upon the use of disruptive technologies like Big Data and Artificial Intelligence (AI) in enhancing the service delivery component of good governance.

(15 marks, 250 words)

उपयुक्त उदाहरणों के साथ, सुशासन के सेवा वितरण घटक को बढ़ाने में बिग डेटा और आर्टिफिशियल इंटेलिजेंस (एआई) जैसी विघटनकारी प्रौद्योगिकियों के उपयोग पर प्रकाश डालिए।

(15 अंक, 250 शब्द)

Artificial Intelligence & Big Data are disruptive technologies which can aid in faster, efficient service delivery of welfare schemes to public.

Big Data: Impact |.

① Data Based Governance

② Aid in targetted approach to nutritional deficit.

Exg Data of tribal ailments can help reduce death burden

③ Central Registry System can help to keep tabs of beneficiaries for welfare scheme

④ Linking of Aadhar to PDS Ration cards can be facilitated

Role of AI

- ① Identification of leakages in DBT
- ② Aid in block-chain technology to digitise land records - via Bhoomi Portal.
- ③ Justice Delivery mechanism

was SC is using systems like SUPACE based on AI.

4 challenges exist:

- ① Job losses
- ② Lack of digital connect
- ③ Internet penetration → 33% in rural areas
- ④ Lack of Digital illiteracy.

Hence, AI for All

↳ Sustainable AI based mantra

↳ NITI Aayog is the ideal way forward.

Feedback

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TOTAL MARKS	
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Q.18) Trace the evolution of Indian Space Research Organization (ISRO) from its humble beginnings as the space agency of the government to becoming a technology behemoth, spearheading innovations with respect to satellites, launch vehicles and planetary explorations.

(15 marks, 250 words)

भारतीय अंतरिक्ष अनुसंधान सगठन (इसरो) के सरकार की अंतरिक्ष एजेंसी के रूप में मामूली शुरुआत से लेकर प्रौद्योगिकी दिग्गज बनने तक, उपग्रहों, प्रक्षेपण वाहनों और ग्रहों की खोज के संबंध में नवाचारों का नेतृत्व करने तक के विकास का अन्वेषण कीजिए।

(15 अंक, 250 शब्द)

ISRO was set up in the 1950s, was a science-based organization to leverage India's growth in the space sector, which was then dominated by UK, USSR and Britain.

(Evolution of ISRO):

① Patronage of Dr. Vikram Sarabhai helped start ISRO.

② Shift in locations from one room set-up, to fully functional campus in Bengaluru.

③ Aided by stalwart scientists like Dr. Nambi Narayan (who refused offer to join NASA) & Dr. APJ Abdul Kalam & Dr. Satish Dhawan.

Today: ISRO ⇒ technology behemoth

① Satellites:

① Started with SLV-III success which was a satellite launch vehicle

② Successful launch of Rohini satellite (one of the first)

③ Recent array of Geosynchronous, Geo-stationary, RISAT, image sensing satellite, CARTO-SAT, Kalam-SAT, Edu-SAT.

④ Recently launched SAARC ~~based~~ satellite.

- ② Launch Vehicles :
- (a) First was SLV-III
 - (b) Liquid Propulsion launch vehicle under patronage of Dr. Homi Bhabha
 - (c) Training of Scientists of ISRO at France ^{Eg: PSLV}
 - (d) Current Cryogenic launch vehicle → GSLV-Mk-III

③ Planetary Explorations:

(a) Mangalyaan Mission under guidance of Dr. Bhanu Prasad

(b) Chandrayaan - I under Dr.

Sivan

(c) Chandrayaan-III Mission → first nation to soft land at Moon's South Pole

(d) Aditya L-1 Mission

(e) Ongoing Mission to Venus

(f) Gaganyaan mission

Hence, ISRO is on its path to become champion in Space Industry.

Feedback

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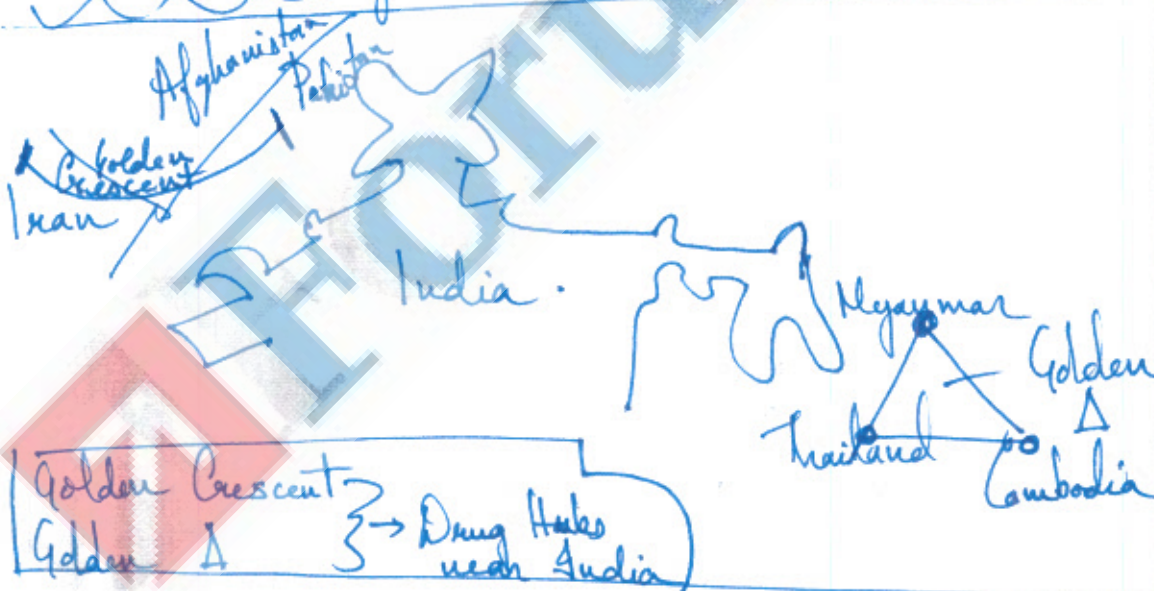
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TOTAL MARKS	
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Q.19) In what ways has Drug trafficking taken new forms and new routes in recent years. Elucidate the steps taken by the govt in this regard, with special reference to Operation Samudragupta. (15 marks, 250 words)

हाल के वर्षों में नशीले पदार्थों की तस्करी ने किस तरह से नए रूप और नए रास्ते अपनाए हैं। ऑपरेशन समुद्रगुप्त के विशेष संदर्भ में, इस संबंध में सरकार द्वारा उठाए गए कदमों को स्पष्ट कीजिए। (15 अंक, 250 शब्द)

Drug Trafficking refers to illicit means of transportation and transfer of drugs, in a clandestine manner, both within the nation and across country.



Drug Trafficking: ~~is~~

(A) New Forms - ① In form of powder

that is coloured black. [Eg] black powder

② In form of tablets. [Eg] LSD tablets

③ Present in crystalline form.
[Eg] crystal meth.

⑬ New Routes :

① Across border routes

② Via routes of money laundering.

③ Via shipment containers

[Eg] ^{Drugs} lost at Chittagong Port

④ Via Children as mules of

drug carriers.

⑤ Via Human Trafficking → [Eg] Women who are trafficked

Hence Steps Taken by Government:

① Operation SamudraGupta :

① Stricter Vigilance

② Across Border Cooperation with countries

① Cross border training of officials to detect Drug Trafficking.

② Use of Trained Animals like Alsatian Dogs, to identify drug traces.

③ Maintain Database of drug networks and carryout raids by organizations like ED, CBI, CrPF jansans.

④ Trace organized crime network to cut off supply of laundered money to drug cartels.

⑤ Civilian Empowerment - to report cases of drug trafficking & abuse.

⑥ Distribution of Fresh Syringes - to prevent spread of AIDS.

Thus, to combat Drug Menace and trafficking fully, a bottom up approach is imperative.

Feedback

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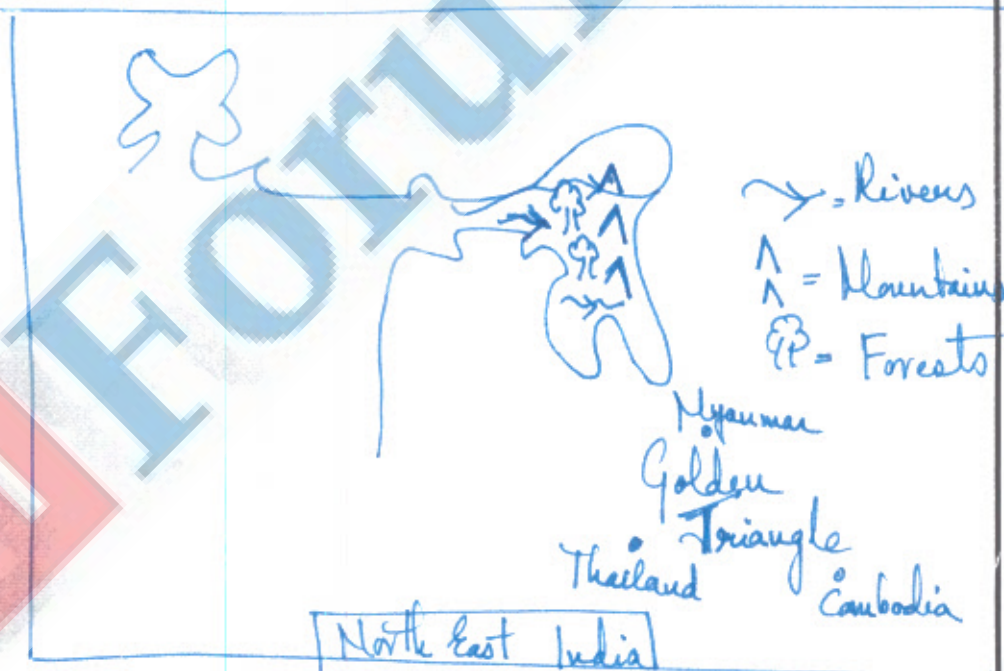
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TOTAL MARKS

Q.20) Why does the North East remain a hotbed of insurgency? With special emphasis on government measures, discuss the steps to ameliorate the situation. (15 marks, 250 words)

पूर्वोत्तर उग्रवाद का केंद्र क्यों बना हुआ है? सरकारी उपायों पर विशेष जोर देते हुए स्थिति सुधारने के कदमों पर चर्चा कीजिए। (15 अंक, 250 शब्द)

An insurgency in the North East has indicated harboring of over 11,000 insurgents in over 60 pockets over Assam, Nagaland, Manipur etc.



North - east : Hot bed of Insurgency

① Physical Features - ① Presence of Mountains

like Purvanchal, Patkai Bum

(b) Presence of Dense Jungles [eg] Kaziranga

(c) Numerous of cross-cutting rivers
[eg] Brahmaputra, Lohit, Barak

(2) International factors:

(a) Proximity to Golden Δ → source of drugs and organized crime

(b) Inflow of illegal migrants from Myanmar and Bangladesh

(3) Presence of Multiple Tribes - of different ethnicities, demanding autonomy. [eg] Kukis, Meitis, Jaintia Nagas etc.

(4) Uneven Development due to

lack of connect with rest of India - only via Chicken Neck (Siliguri Corridor)

(5) Historical Factors - of Unmindful division of British of the region. [eg] in Assam

(6) Ease of Access to black money, illicit weapons.

Hence, Steps to Ameliorate the Crisis:

- ① Anitabh Maitoo suggestions of:
 - (a) Demilitarize the area
 - (b) Devolution of greater autonomy
 - (c) Development of the area.
- ② Focussed Infrastructure projects via projects like PM-Devine.
- ③ Institutional Progress:
 - (a) DONER Ministry } to function more
 - (b) North East Council } effectively.
- ④ Border Security to be strengthened via Comprehensive Border Management Plan.
- ⑤ Negotiate Accords → Buse-Rang Accord } more such }
 Bodo Accord } agreements }
 needed
- ⑥ Train Assam Rifles to handle multi crises.

Hence, North-East has to be given concerted focus to ensure 'Akhond Bharat, Ek Dhanat, Ek Shreshth Bharat'.

Feedback

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Please put tick marks in the above table.

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TOTAL MARKS

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		

* Subject to change without prior notice.

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