

TEST CODE 7 1 3 3 0 4

MGP 2024

Time Allowed : Three Hours

समय : तीन घंटे

ForumIAS

Maximum Marks : 250

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	Nurehita Chandra		
Roll No./अनुक्रमांक	1910090945	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	online	Date/दिनांक	14th Sep '24

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

Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक
1		
2		
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20		
Total/कुल अंक	250	

INSTRUCTION / अनुदेश

- 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।
- 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।
- 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।
- 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।
- 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।

Examiner's Discretion/मूल्यांकन कर्ता का
वेवेक :

For Student Only / केवल परीक्षार्थी प्रयोग हेतु	
Start Time/प्रारंभ करने का समय :	End Time/समाप्त करने का समय :
11 : 00 AM	2 : 00 PM
Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन <input checked="" type="checkbox"/> Offline/ऑफलाइन <input type="checkbox"/>

Total Marks/कुल अंक :

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,
tables and figures or absolutely anything that he/she liked in your copy.Examiner कर्ता का दिये गए अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग,
तालिकाओं और आकृतियों या समग्र रूप किसी अन्य विषय वस्तु, जो
Examiner कर्ता को आपकी कॉपी में पसंद आती है के आधार पर (लेकिन इन्हीं
दोहराव नहीं) पर दिए गए अंक हैं।

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ECN CODE/ ईसीएन कोड :	EG/ईजी :	Evaluation Date/ मूल्यांकन तिथि :
	① ② ③ ④ ⑤	

Students are expected to incorporate suggestions from the feedback provided in the answers. Discussion classes for tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good 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

WIS = 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. Relative 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.

D & 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, tables, flowcharts, diagrams, facts and figures, data etc. This affects objective components of assessment.

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.

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.

2.1) Why has there been an increased focus on negotiating, renegotiating and concluding Free Trade Agreements (FTAs) by India in recent years? (10 marks, 150 words)

2.1) काल के वर्षों में भारत द्वारा मुक्त व्यापार समझौतों (FTAs) पर बातचीत, पुनर्वार्ता और समापन पर ध्यान क्यों दिया जा रहा है? (10 अंक, 150 शब्द)

FTAs are free trade agreements aimed at reducing trade and non trade barriers and increase economic coupling between two or more nations.

Reasons for negotiation, renegotiation & conclusion of FTAs

① Trade deficit for India

eg → India - Asean FTA ⇒ trade deficit of \$30bn/yr.

② Detrimental to Indian interest

eg → ~~Imp~~ Imports grew by 38% while exports grew only by 14%.
(CgTRI)

③ Protection of the vulnerable communities eg Farmers etc

- ④ Lack of data utilisation of or FTAs
- ⑤ MSMEs largely not aware & benefitted
 ↳ <5% exports by MSMEs, though e-commerce.
- ⑥ Low usage of Anti dumping Duties etc
- ⑦ Incompetitive manufacturing Industry of India
 ↳ only 1.8% exports
- ⑧ Spaghetti bowl effect ⇒ complex FTAs & tricky Rules of Origin.

Way forward ⇒ Surjit Balla Committee

FTP 2023

↳ status holder certificate for traders.

- use of Anti Dumping Duty
- Data utilisation
- MSME awareness

The India - Australia FTA can serve as a model for other FTAs with prospects for renewed mechanisms.

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) A well-designed fiscal policy can serve as a vital instrument to facilitate the equitable distribution of resources and ensure the welfare of all sections of society. Elaborate. (10 marks, 150 words)

एक अच्छी तरह से डिजाइन की गई राजकोषीय नीति संसाधनों के समान वितरण को सुविधाजनक बनाने और समाज के सभी वर्गों के कल्याण को सुनिश्चित करने के लिए एक महत्वपूर्ण साधन के रूप में काम कर सकती है। विस्तार से वर्णन कीजिए। (10 अंक, 150 शब्द)

Fiscal policy of government consists of revenue like taxation, fee etc and expenditure by the govt. in terms of subsidies etc

Well designed fiscal policy for

⇒ Equitable distribution

↳ Progressive taxation ⇒ level playing field in society

↳ Target based subsidies ⇒ PDS, fertilizer subsidy

↳ Inheritance tax etc ⇒ promote meritocracy & reduce inequality

⇒ US, Korea etc have wealth tax

- Welfare of all sections → allocation to schemes for vulnerable section
- ↳ Sambhal for women
 - ↳ Infrastructure Development
 - Rural Development
 - Job creation etc

Steps taken by govt for good fiscal policy

- ① Progressive taxation → leg 55% taxes through Direct
- ② Increasing tax base → leg 11% thru GDP.
 to FI through GST, TDS etc.
- ③ Use of Technology → DBT & aid 2.73 Lacs cr
- ④ Infrastructure Development → leg 13 Lcr/yr through NIP etc.

The Economic survey of 2015 calls for Golden Rule of Fiscal Policy which more oriented to building capital

Feedback

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AWIS			
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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.3) What are the primary factors contributing to India's significant reliance on imported edible oils? What measures do you suggest to increase domestic production and to reduce India's reliance on imported edible oils? (10 marks, 150 words)

आयातित खाद्य तेलों पर भारत की महत्वपूर्ण निर्भरता में योगदान देने वाले प्राथमिक कारक क्या हैं? घरेलू उत्पादन बढ़ाने और आयातित खाद्य तेलों पर भारत की निर्भरता को कम करने के लिए आप क्या उपाय सुझाएंगे? (10 अंक, 150 शब्द)

India has a 'two oil' problem. i.e. fuel and edible oil, making it largest importer of edible oil in world.

Primary factor for import reliance

- ① low domestic production ⇒ eg mostly restricted to mustard oil.
- ② Not all oil seeds covered under MSP for procurement.
- ③ Low farmer awareness about Palm oil etc.
- ④ Policy focus on cereal centric agriculture
eg MSP; Green Revolution

- ⑤ High population & eating habits of fried food
- ⑥ Diseases ~~eg~~ white fly infestation in Palm steps needed.
- ① Large scale oil seeds program supported by govt.
~~eg~~ National Oil Palm mission in Kerala & NER & Andaman.
- ② Farmer awareness ~~eg~~ Judging mode farmer in TN shift from Rice to Coconut.
- ③ Use of Technology ~~eg~~ DMH-11 genetically modified mustard has productivity ↑20%.
- ④ Policy measures ~~eg~~ concerning palm etc in MSP
- ⑤ consumer behaviour change.

Palm

Oil dependence is a major cause of imported inflation & must be controlled.

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			

2.4) With the growing water crisis in India, micro irrigation offers a sustainable solution for water conservation; however, its adoption remains skewed and below its potential. Discuss.

(10 marks, 150 words)

भारत में बढ़ते जल संकट के साथ, सूक्ष्म सिंचाई जल संरक्षण के लिए एक स्थायी समाधान प्रस्तुत करती है; हालाँकि, इसका उपयोग अभी भी विषम है और इसकी क्षमता से कम है। चर्चा कीजिए।

(10 अंक, 150 शब्द)

As per ADB about 50% of the population will be living under water stress by 2050.

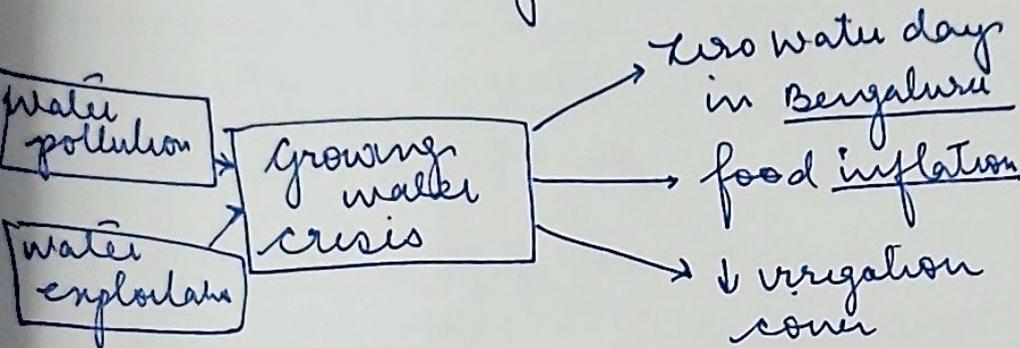


Fig 1

Potential of micro irrigation

→ ↓ Water exploitation

eg → 87% ground water used for ~~the~~ irrigation (CGWB.)

→ solving Galdichoche's Dilemma of Agriculture.

- ③ Precision farming → 'preventing virtual water export' \Rightarrow Rice export to Middle East.
- ④ Prevent Environmental degradation \Rightarrow sodic soil in HK & PB.

Skewed micro irrigation

- \Rightarrow Only 9mha covered \Rightarrow largely restricted by PB etc
- \Rightarrow Low capacity of farmers to shift \Rightarrow 86% farmers are marginal & small
- \Rightarrow ↓ Farmer Awareness \Rightarrow reliant on traditional practices \Rightarrow rice field floods
- \Rightarrow Water intensive crops \Rightarrow sugarcane in Maharashtra.
- \Rightarrow low govt support through RIDF & micro irrigation fund.

Feedback

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TOTAL MARKS			

5) The recurring railway accidents highlight the urgent necessity for addressing the myriad challenges related to safety, undercapacity and lack of modernization within Indian Railways. Analyse. (10 marks, 150 words)

बार-बार होने वाली रेल दुर्घटनाएँ भारतीय रेलवे के भीतर सुरक्षा, अल्प क्षमता और आधुनिकीकरण की कमी से संबंधित विभिन्न चुनौतियों के समाधान की तत्काल आवश्यकता को उजागर करती हैं। विश्लेषण कीजिए। (10 अंक, 150 शब्द)

The recent events of railway accidents like god derailment of Dibrugarh - Chennai express in Gonda has warranted a new approach to Railway operation.

Challenges in Indian Railways

- ① safety \Rightarrow vacancy in safety posts
 - \rightarrow unmanned level crossing
 - \rightarrow outdated signalling equipments
 - \rightarrow lack of accountability
 - \rightarrow obstruction of routes
 - \Rightarrow 37% rail accidents due to poor track management (CAG report)
- ② undercapacity \Rightarrow 60% of tracks routes operating $> 100\%$ capacity

- ② poor rolling stock management
- ③ Lack of Technology adoption
 Ex) INB ~~at~~, Kanish delays.

Lack of modernisation

- only 45k/65k track electrified
- High operating ratio ⇒ 107%.

Measures

- ① Eliminate level crossing (Kadokar committee)
- ② Full utilisation of rail Samrakshaan kosh.
- ③ Establish Railway RND center (Kadokar committee)
- ④ Address delays in responding to reports of Commission on Railway safety.
- ⑤ fill vacancies in safety posts

Rail carries 23 mn people/day. The safety lies in modernisation.

Feedback

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TOTAL MARKS			

Q) How does NISAR mission exemplify international cooperation in space exploration and scientific research? In what ways will it help in climate change monitoring and natural hazard management? (10 marks, 150 words)

Q) निम्न अंतरिक्ष अन्वेषण और वैज्ञानिक अनुसंधान में अंतर्राष्ट्रीय सहयोग का उदाहरण कैसे प्रस्तुत करता है? यह जलवायु परिवर्तन की निगरानी और प्राकृतिक आपदा प्रबंधन में किस तरह से मदद करेगा? (10 अंक, 150 शब्द)

NISAR - Nasa - Isro Synthetic Aperture Radar mission is set to be launched soon.

Significance of NISAR mission

- ① International collaboration between India & USA → sp spill over in other to space tech. areas.
- ② creates ~~at~~ positive atmosphere for space collaboration with other countries
 Eg → BRICS satellite cooperation
- ③ scientific research → collection of data of on changes in earth surface etc.

- ④ Data may be used to understand whether phenomenon \rightarrow monsoon prediction
- ⑤ Data of on status of cryosphere, crop coverage etc

Role in climate change monitoring & natural hazard management

- ① Monitoring tipping points \rightarrow Arctic amplification (2x rise in temperature)
- ② Data for climate change prediction & climate action
 \rightarrow IPCC advanced research
- ③ Rethinking on NDCs through data
- ④ Disaster management \rightarrow HRVA i.e. hazard risk vulnerability assessment
 ↓
 • monitoring of GLOF special lake \rightarrow prevent GLOF.
 \rightarrow Drought prediction

Feedback

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TOTAL MARKS			

7) Nuclear technology can play a transformative role in enhancing food security and agricultural sustainability. Discuss. (10 marks, 150 words)

माणु प्रौद्योगिकी खाद्य सुरक्षा और कृषि स्थिरता को बढ़ाने में एक परिवर्तनकारी भूमिका निभा सकती है। चर्चा कीजिए। (10 अंक, 150 शब्द)

Nuclear Technology harnesses
the energy of an atom through
techniques like fusion & fission

Role of Nuclear Technology

① Enhance food security

(i) Electricity availability for
irrigation

(ii) Electrification of rural clusters
etc through small modular
Nuclear Reactors where there is
no grid connection

② Agricultural sustainability

→ stable source of power.

→ technology adoption through

Nuclear properties

Fe⁵⁹ Ph-32 is used to measure the level of fertilizer uptake by crops

→ Nuclear Techniques for crop needs Fe⁵⁹ Nuclear Radiation

→ Crop enhancement ⇒ Nuclear breeding for enhancing specific of crop properties.

→ Other Benefits

↳ Energy security Fe⁵⁹ & GW through Nuclear currently

↳ Environment ⇒ ↓ carbon footprint

↳ Nuclear medicines Fe⁵⁹ Cobalt 60 in cancer & Iodine 131 in Thyroid.

Nuclear Energy has potential to transform the economic & energy landscape.

Feedback

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

18) Increasing frequency of forest fires in India underscores the urgent need for sustainable forest management practices. In light of the statement, bring out the causes and multidimensional impact of forest fires. Also, suggest measures for their prevention and management. (10 marks, 150 words)

जंगल में आग की बढ़ती आवृत्ति स्थायी वन प्रबंधन प्रथाओं की तत्काल आवश्यकता को रेखांकित करती है। इस कथन के प्रकाश में, वनाग्नि के कारणों और बहुआयामी प्रभावों का उल्लेख कीजिए। साथ ही इनकी रोकथाम और प्रबंधन के उपाय भी सुझाएं। (10 अंक, 150 शब्द)

About 36% of India forest is vulnerable to forest fires (IFSR'21). Recently, Simlipal, Saitha faced fires in 2023.

causes of forest fires in India

- ① Geographical → dominance of temperate - ate deciduous forests
 ↳ Erratic Rainfall ↳ ENSO, Heat wave facilitate fires.
 ↳ Dry stock
- ② Anthropogenic → Traditional practices
 ↳ Bidi etc ↳ Jhum cultivation
- ③ Lack of infrastructure
 ↳ Slack vacaines in fire post

(14) Climate change \Rightarrow Prolonged
heat waves

Consequences of Forest fire -

- \rightarrow Life & Livelihood loss
 \rightarrow 30% people dependent on forest
- \rightarrow Biodiversity loss \rightarrow Sarisha forest
fire
- \rightarrow Damage to infrastructure & land
- \rightarrow Halt economic activities \rightarrow Utter
khanda fires

Measures Required

- \rightarrow Structural \rightarrow building of fire reservoirs
firewalls etc
- \rightarrow Non structural \rightarrow Recognise forest
fire as disaster
under NDMA (CEEW)
 \rightarrow Checking Jhum cultivation etc.
- \rightarrow Institutional measures \rightarrow fill
gap of 5000 ~~lack~~ of Fire stations
- \rightarrow Vacancies \rightarrow fill 5lac fire
posts

Feedback

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TOTAL MARKS			

What reasons can be attributed to the recent surge in terror related violence in Jammu and Kashmir?
What strategies would you suggest to counter it? (10 marks, 150 words)

कश्मीर में हाल ही में आतंकवाद से संबंधित हिंसा में वृद्धि के क्या कारण हो सकते हैं? इसका मुकाबला करने के लिए क्या रणनीति सुझायें? (10 अंक, 150 शब्द)

The recent attacks in J&K like Reasi, Poonch etc shows a resurgence of terrorism in J&K region.

Reasons for surge

- ↳ covert offensive of Pakistan
 - ↳ Precision sniper attack shows technological support from Pakistan
- ↳ Reduced Army deployment in Rajouri & Poonch region.
- ↳ Growing unemployment ⇒ 33% makes youth prone to radicalisation.

- ↳ Hideouts provided by poonch & pirya forest etc
- ↳ Terror financing through drug trafficking eg > 500 drone sightings by BSF.

measures needed

- ① Army Deployment → Area Dominance
 → ~~ops~~ Revival of operation
Sarpinash (2003)
 → modernisation of Army ⇒
- ② Infrastructure development eg
 • Border Road development
- ③ Investment's potential eg
eg 21,000 cr in last year.
- ④ Winning hearts & mind
 → Economic package eg J&K package
 → elections to LA (Sc directed)
 → Capacity building eg Village Defence Committee

Feedback

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TOTAL MARKS			

10) In the light of recent events, throw light on the possible implications of 'cyber slavery' on internal security of India. (10 marks, 150 words)

10) हाल की घटनाओं के आलोक में, भारत की आंतरिक सुरक्षा पर 'साइबर स्लेवरी' के संभावित प्रभावों पर प्रकाश डालिए। (10 अंक, 150 शब्द)

Cyber slavery is a term used for coercion of individuals to carry out cyber attacks.

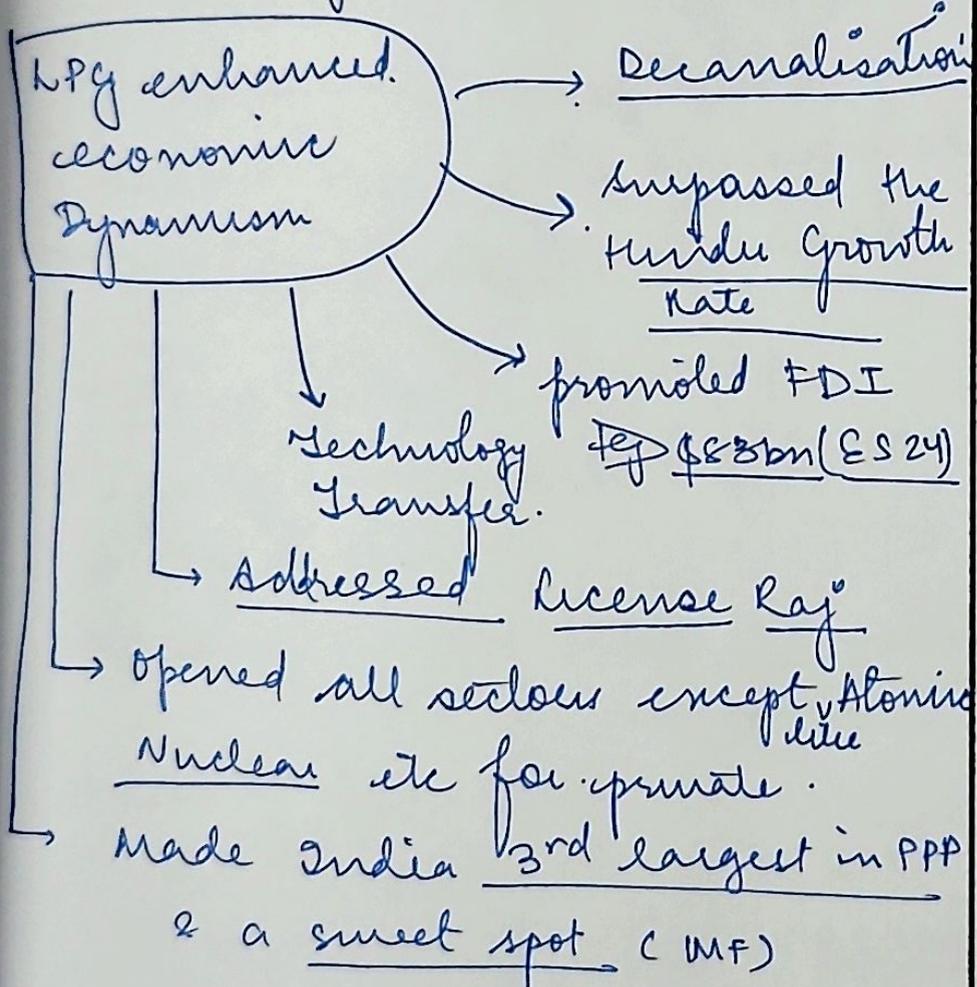
Implications of Cyber slavery

- ① Human Rights violation of those coerced.
- ② covert greyzone operations of countries like China.
 ↳ Sinister networks used to lure youth in name of jobs & sent to countries like Kambodia.
- ③ Economic loss on Govt
 ↳ Each attack costed around 4.3 mn

1) "The liberalization policies of 1991 significantly enhanced India's economic dynamism, but the living global and domestic landscape necessitates 'Reforms 2.0' for sustained economic development and prosperity." Comment. (15 marks, 250 words)

1991 की उदारिकरण नीतियों ने भारत की आर्थिक गतिशीलता को महत्वपूर्ण रूप से बढ़ाया, लेकिन उभरते वैश्विक और घरेलू परिदृश्य में सतत आर्थिक विकास और समृद्धि के लिए 'सुधार 2.0' की आवश्यकता है। टिप्पणी कीजिए। (15 अंक, 250 शब्द)

The LPG Reforms 1991 ushered an era of new India with open economy and trade growth.



Need for Reform 2.0

① Evolving Global Landscape \Rightarrow Adoption
of New Technologies \Rightarrow AI, etc.

\Rightarrow Rise of China \Rightarrow controls R & E,
supply chain etc.

\hookrightarrow contains dependence on china

\Rightarrow Rise of MNCs \Rightarrow exploitation of
labour laws, Profit repatriation etc.

\Rightarrow Development security hypernaka

② Evolving Domestic Landscape.

\Rightarrow Growth of Service sector \Rightarrow IT
sector = \$192 bn

\Rightarrow unemployment \Rightarrow \Rightarrow 10% youth
unemployment

\Rightarrow Rise of Gig economy

\Rightarrow 77 lac workers in 2021

\Rightarrow to reach 2.39 lac CES 2025

Reforms Needed

① Manufacturing sector

- ↳ Address dwarfism of MSME through technology adoption eg ONDC.
- ↳ Labour-intensive sector eg Textile has employment elasticity of 80%.
- ↳ Assemble in India (ES 2020)

② Agriculture as profitable venture

- ↳ R&D from 0.5% to 1% of GDP (Ashok Gulati)
- ↳ Agri start ups (only 5%) through support eg Agri clinics
- ↳ PPP Private sector eg Government farms

③ Better standards of life eg Reach

goal of \$12,000-18,000 PCI (Viksit Bharat goal)

④ FDI & skill in sector with comparative Advantage eg mobile phones 2nd largest manufacturer

Feedback

(For OFFICE use only)

	C	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			

12) Infrastructure development is essential not just for economic transformation but also for sustainable development and societal well-being. Elaborate with examples. (15 marks, 250 words)

12) बुनियादी ढांचे का विकास न केवल आर्थिक परिवर्तन के लिए बल्कि सतत विकास और सामाजिक कल्याण के लिए भी आवश्यक है। उदाहरणों के साथ विस्तार से समझाइए। (15 अंक, 250 शब्द)

Infrastructure development plays a key role in economy. The govt spends around 1.3 lakh crore on infrastructure (budget 2023-24)

Infrastructural Development for

① Economic Transformation

↳ Multiplier effect of 2.45 X on GDP

(Road & Rail sector \Rightarrow RBI report)

↳ Reduce logistic cost \Rightarrow currently 14% of GDP. (LEAD index)

↳ sets forth Development Investment cycle (ES 2020)

- ↳ Crowding ~~in~~ in effect of private sector
- ↳ monetisation of projects ~~eg~~ NMP etc

Societal Wellbeing

- ↳ Employment generation
 ↳ Bharatmala Pariyojna created 14.4 cr mandays
- ↳ Regional Development ↳ Node based development ~~of~~ industrial corridor
- ↳ Spill over effect ↳ Dhulera special investment zone
- ↳ Agriculture marketing
 ↳ KISAN rails to check to transport perishable goods.

Sustainable Environment

- ↳ Reduce carbon footprint
 ↳ Rail ways 6x cleaner than road.

- ↳ Green Finance \Rightarrow Sovereign Green Bonds.
- ↳ Investment in Renewable energy
 \Rightarrow ₹ 10,000 cr from Clean Energy fund for Offshore wind energy
- ↳ Green shipping etc.
 \Rightarrow maritime vision 2047 aims at:-
 - ① Carbon Neutrality of 14 ~~major~~ ~~ports~~ major ports
 - ② Green H₂ bunkers.

Issues \rightarrow land acquisition issues for Renewable etc.
 ↓
 lack of Green finance \rightarrow Delays in Infrastructural projects
 \Rightarrow only Eastern Dedicated freight corridor completed

The issues can be solved through steps like land pooling, PPP, social impact bonds etc.

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	
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13) Bring out the significance of aquaculture towards nutrition security, livelihood generation, and economic growth. Also, mention various measures taken by the government to promote aquaculture in the country. (15 marks, 250 words)

13) आजीविका सृजन और आर्थिक विकास के लिए जलीय कृषि के महत्व पर प्रकाश डालिए। साथ ही, देश में जलीय कृषि को बढ़ावा देने के लिए सरकार द्वारा उठाए गए विभिन्न उपायों का उल्लेख कीजिए। (15 अंक, 250 शब्द)

Aquaculture has a potential of transforming Blue Economy in India especially when sectors like fisheries growing at 10% CAGR (since 2014).

Significance of Aquaculture

1) Nutrition security

(i) Protein rich diet to counter hidden hunger & Malnutrition

eg) 19% children undernourished (Global hunger index)

(ii) Food availability in coastal areas & mainland.

2) Livelihood generation ⇒ 30%

population lives within 100km of
road.

↳ Export-potential \Rightarrow ^{Squaculline} Agri export 3rd
largest

↳ Livelihood generation
 \Rightarrow 2.8 cr people employed.

by Fishery sector.

↳ doubling farmers income.

⑧ Economic growth

↳ Development of backward &
forward linkages

\Rightarrow currently ~~is~~ only 33MMT
cold storage capacity.

↳ Promoting Foreign Investment

⑨ Sustainable Development

\Rightarrow Biofed aquaculture
practices \Rightarrow ~~be~~ left out
~~for~~ waste as feed.

Measures Taken by the Govt.

① PM Matsya Sampada Yojana.

- 20,000 cr budget
- doubling farmers income
- infrastructural development
- credit facility

② Technology adoption → Aquaculture self promoted in PMMSY.

③ other sectors promoted.

- Nuclear marine centers for shrimp farming (budget 2024-25)

④ Sustainable practices → SAIME in West Bengal → mangrove & shrimp together

⑤ Access to credit → ~~KCC~~ Marine farmers covered in KCC.

The Blue Chakra in Indian flag represents blue potential of Blue Economy (Modi-ji) in India.

Feedback

(For OFFICE use only)

	G	A	P
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CD & VA			
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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 14) The MSP system, though well intentioned, has led to market distortions and ecological stress, necessitating reforms to make it more inclusive and efficient. Examine. (15 marks, 250 words)

Q 14) MSP प्रणाली, हालांकि अच्छी नीयत से बनाई गई है, लेकिन इसने बाजार में विकृति और पारिस्थितिकी तनाव पैदा किया है, जिससे इस और अधिक समावेशी और कुशल बनाने के लिए सुधारों की आवश्यकता है। परीक्षण कीजिए।

(15 अंक, 250 शब्द)

MSP was introduced on the recommendation of MS Swaminathan committee for assured price to farmers. It is announced for 23 crops by ~~CA~~ CCFA.

Issues with MSP

I) market distortion → became a floor price
 ↳ supply demand mismatch in the market.

II) ecological stress
 ↳ promotion of water intensive cropping ⇒ sodic & Ared soil in RB, HR.

↳ Water Distress ⇒ India has become a net water exporter (ES 2025).

② Nutritional issues ⇒ Promotion of Rice wheat economy

⇒ issues of hidden hunger & Nutrition puzzle

⇒ 57% of children & 53% women anaemic (NFHS 5)

③ Farm Distress ⇒ Lack of crop diversification

↳ Issue of mass crop destruction

⇒ 5 lha wheat ~~lost~~ due to intense heat wave in 2023.

④ Food inflation ⇒ 9% in ~~July~~ (July '24)

⇒ cereals contribute 37%

of food inflation where M.S.P. is a contributor

Steps Needed

① Govt policies for → Rainbow Revolution
 ↳ Promoting indigenous crops
 ↳ eg MSP for pulses, oil seeds through assured procurement
 ↳ millet production only 18MMT compared to cereals 328MMT
 ↳ cover all millets in MSP.

② Crop Diversification ⇒ Horticulture
 ↳ MIDH scheme.

③ Agriculture marketing reforms
 ↳ model APMC act, contract farming etc

④ stimulate resilient varieties ↳ 109 seeds released (Budget 2024-25)

⑤ check price subsidy ↳ Electricity.

MSP can be made a basis of 2nd evergreen revolution if reformed.

Feedback

(For OFFICE use only)

	G	A	P
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P & R			

Please put tick marks in the above table.
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TOTAL MARKS	
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Q 15) Biotechnology holds immense potential for achieving sustainable, food production, efficient waste management and significant advancements in human health. Elucidate. (15 marks, 250 words)

जैव प्रौद्योगिकी में टिकाऊ खाद्य उत्पादन, कुशल अपशिष्ट प्रबंधन और मानव स्वास्थ्य में महत्वपूर्ण प्रगति हासिल करने की क्षमता समाविष्ट है। स्पष्ट कीजिए। (15 अंक, 250 शब्द)

Biotechnology uses innovations in field of organisms, cells etc for benefit of the society. It uses techniques like germline editing, Stem cell, genetic modification etc

Potential of Biotechnology

① Food production

⇒ ~~the~~ GMO crops for increasing shelf life productivity etc.

⇒ checky import dependence

⇒ DMH-11 (GMO Mustard) can tackle India's edible oil problem

⇒ Food fortification

⇒ Golden Rice by IARI

② Waste Management

⇒ Bio remediation Technology

Ex) Bhalasa landfill cleared.

⇒ GM^o microorganisms for
landfill augmentation

⇒ Waste to ~~Gen~~ Energy

Ex) 3GW potential by 2050

⇒ Oil spill cleaning

Ex) 'oil zapper' by TERI

③ Health Sector

⇒ Vaccine creation ⇒ COVID-19

mRNA by Moderna. in just
2 days after genetic sequencing

⇒ Edible vaccines

Ex) Banana with Kola
virus vaccine

→ Genetic issues like sickle cell anaemia through genome editing.

→ Cancer Treatment (eg) CAR-T cell Therapy

Issues

- IPR issues in India
- Ethical considerations (eg) Designer babies in China

→ side effects (eg) Cytokine storm in CART Therapy.

→ off targeting issues in genome

→ inequality reinforced.

India Biotech sector has potential of \$100bn by 2030. Effective regulation with development may help it as revolutionary technology.

Feedback
(For OFFICE use only)

	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 16) Climate change is leading to significant alterations in ecosystems, resulting in cascading effects on biodiversity, ecosystem services, and human livelihoods, necessitating integrated approaches to conservation and climate adaptation. Analyse.

(15 marks, 250 words)

जलवायु परिवर्तन के कारण पारिस्थितिकी तंत्र में महत्वपूर्ण परिवर्तन हो रहे हैं, जिसके परिणामस्वरूप जैव विविधता, पारिस्थितिकी तंत्र सेवाओं और मानव आजीविका पर व्यापक प्रभाव पड़ रहा है, जिसके कारण संरक्षण और जलवायु अनुकूलन के लिए एकीकृत दृष्टिकोण की आवश्यकता है। विश्लेषण कीजिए।

(15 अंक, 250 शब्द)

Climate change has increased average temperature from pre industrial level to 1.1°C (Emission gap report).

Cascading Effects of climate change

① Affecting ecosystem ~~is~~ ⇒ loss of habitable grounds

~~is~~ ⇒ Polar bears to be extinct by 2100 due to loss of ice cover.

⇒ Polar Amplification

↳ 2x temperature rise & 4x acidification in FOK.

② Biodiversity loss \rightarrow 70% of original biodiversity lost in India (WFP Living Planet Report)

③ ~~Loss~~ \Rightarrow Forest fires due to heat waves \rightarrow Australian wildfires 2022

③ ecosystem services lost
 \rightarrow wetland which provide purification of water, breeding ground. \Rightarrow 2/2 in 5 wetland lost (Wetland India national report)

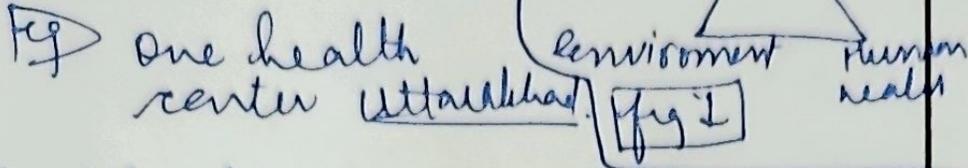
④ Threat to human livelihood

\rightarrow monsoon dependent Agriculture \rightarrow 5 lha wheat lost to heatwave in PB, HL.

\rightarrow Disaster \rightarrow Storm surges in coastal areas.

Need for Integrated Approach

① One health Approach



② Sustainable Development

⇒ Green finance ⇒ Renewable energy projects

⇒ Infrastructural innovation

Feg mangrove walk at Panaji

⇒ Green Transport ⇒ Green shipping (maritime)

↳ Dedicated Freight Corridor (Nov 2017)

③ Blue green Infra Feg Green roof Project Resilio (Amsterdam)

④ Biodiversity protection

Feg firelines in forest

climate change needs to be mitigated through SDG 13, 14, 15

Feedback

(For OFFICE use only)

	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	
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Q 17) Urban areas, often referred to as the cradle of civilization and growth engines, are increasingly experiencing various natural and man-made disasters. Discuss in the Indian context. Also, suggest suitable mitigation and management strategies. (15 marks, 250 words)

शहरी क्षेत्रों को अक्सर सभ्यता और विकास के इंजन के रूप में संदर्भित किया जाता है, जो विभिन्न प्राकृतिक और मानव-निर्मित आपदाओं का सामना कर रहे हैं। भारतीय संदर्भ में चर्चा कीजिए। साथ ही, उपयुक्त शमन और प्रबंधन रणनीतियों का सुझाव दीजिए। (15 अंक, 250 शब्द)

Urban Areas contribute to about 65% of Indian GDP. Hence, serve as growth engines.

However, they are increasingly bearing the brunt of Disasters

① Natural ⇒ ~~75%~~ 10 states vulnerable to coastal disasters

↳ Cyclones in cities ⇒ Bhopal costed ~~\$4~~ \$15 bn to India & Bangladesh

↳ Earthquakes ⇒ cities like Delhi in zone IV of earthquake vulnerability

↳

II Manmade Disaster

1) Drought in cities \Rightarrow Zero water
Day in Chennai

\hookrightarrow \Rightarrow 27% illegal water entrenchment
in Delhi.

2) Unsustainable Development

\Rightarrow ~~unstable~~ Himachal Pradesh
floods 2022 \rightarrow Apple cultivation

& Road Development caused landslides

3) Deforestation \Rightarrow 60% wayside

landslides \Rightarrow 50% of forest cut
(CAG report)

4) ~~the~~ Hydro Electric Plants \Rightarrow Vishnu
- gash Paporan disaster.

5) Suppression of natural drainage &
engineering measures

\Rightarrow Delhi coaching center flood

\hookrightarrow saucer shaped road & drains
covered (MCD Report .)

Measures Needed

- ⇒ Structural Measures ⇒ Storm drain & Biosuables ~~for~~ China
 - ↳ Adherence to Building Bylaws
 - ↳ strict HRVA incorporation in Building laws
- ⇒ Sustainable Infra ⇒ Blue green Roof (Project Resilio) of Amsterdam
 - ↳ fire resistant Bricks
- ⇒ Strengthen institutions
 - ↳ Seac vacancy in fire jobs
- ⇒ Surprise checks & Third party assessment of urban infra
 - ↳ Amplifi 2.0 of MOHUA.

cities are natural heritage of the the nation & must be made safe.

Feedback

(For OFFICE use only)

#	C	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 18) "India's disaster management framework has made significant progress in the 21st century, yet challenges persist in ensuring timely response and effective coordination during crises." Comment. (15 marks, 250 words)

"भारत के आपदा प्रबंधन ढांचे ने 21वीं सदी में महत्वपूर्ण प्रगति की है, फिर भी संकट के दौरान समय पर प्रतिक्रिया और प्रभावी समन्वय सुनिश्चित करने में चुनौतियां बनी हुई हैं।" टिप्पणी कीजिए। (15 अंक, 250 शब्द)

India is ~~defined~~ ranked 7th in climate risk index of german watch with 14% GDP lost to disasters.

significant progress in Disaster management.

⇒ Early warning system For India
- quake for earthquakes

⇒ ITWS by INCOIS for Tsunami.

⇒ institutional measures

↳ Disaster management Act 2005 established NDMA
↳ clear responsibilities.

⇒ Proactive measures

Ex) 75 lac evacuated during
Bijayoj.

However issues remain :-

① Timely response is often absent
Ex) wayanad landslides killed
>400 people.

② Lack of effective coordination
↳ Between NDMA & SDMA etc
↳ coordination issues among
MHA, MOEFCC & MORTH.

③ Inaction by Disaster response
forces :-
Ex) Rajkot fire in TRP garment
zone saw delayed response
by fire Department.

- ④ Delays in institutional measures
 ↳ National Disaster Risk Mitigation - fund.
- ⑤ ineffective laws ↳ Draft EIA rules now provides post facto clearance.
- ⑥ Lack of capacity of institutions
 ↳ large vacancies in fire departments across India

Way forward

- ⇒ Capacity Development of locals
- ⇒ HVRA (Hazard Vulnerability Risk assessment)
- ⇒ Use of Technology
 ↳ SCURB by IITK for retrofitting old buildings.

Disaster's pose unprecedented challenge to both humans & infrastructure in 21st century

Feedback

(For OFFICE use only)

#	(C)	(A)	(B)
AWIS			
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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.19) Explain how the symbiotic relationship between organized crime and terrorism further aggravates internal security concerns. What steps can be taken to address this linkage and the threats emerging from it? (15 marks, 250 words)

बताएं कि संगठित अपराध और आतंकवाद के बीच सहजीवी संबंध किस तरह आंतरिक सुरक्षा संबंधी चिंताओं को और बढ़ाता है। इस संबंध और इससे उत्पन्न होने वाले खतरों से निपटने के लिए क्या कदम उठाए जा सकते हैं? (15 अंक, 250 शब्द)

Organised crime & Terrorism reinforce up upon each other and hence emerge as a force to reckon with.

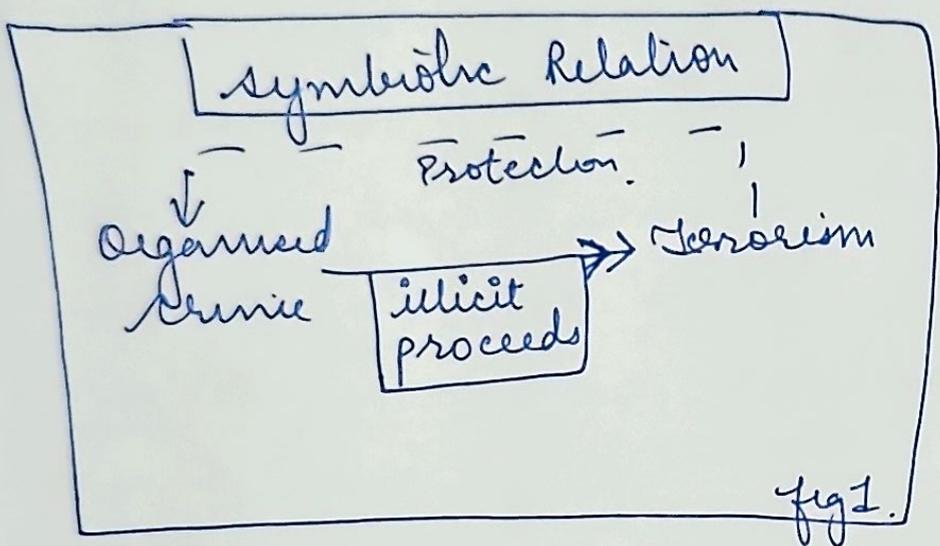


fig 1.

How symbiotic relation increases security concern

① Threat to state eg Haggani

network and Taliban nexus over
turned the state democratic state
of Afghanistan.

- ② Destruction of development \Rightarrow
Al shabab destroyed somalia through
drug trafficking.
- ③ Human flesh trade \Rightarrow Boko Haram
earns profit through it.
- ④ Drug trafficking Narco Terrorism
 \Rightarrow JEM through drug sinister
network in Golden Triangle
- ⑤ Parallel Economy \Rightarrow 'Khat' narco
plant taxed by Al shabab.
- ⑥ Anti social Development
 \Rightarrow Drug abuse issue in Punjab
famous Khalistan & J&K valleys.

Steps needed

① Securing borders & Indian coast:

↳ Double fencing & BOLD & IT at India Bangladesh border.

② Stand alone laws against organised crime outfits.

↳ MCOCA in Maharashtra.

③ Sea security exercises

↳ Op Sang Samudragupta between NCRB & Navy seized ₹ 15000 cr worth drugs.

④ Demand side management

→ Socio economic development for checking unemployment.

→ Nudge effect ↳ NGO sunrise education NER youth against drug abuse

Steps like def inclusion of organised crime (111, 112) & Terrorism (113) in BNS is a step in right direction.

Feedback

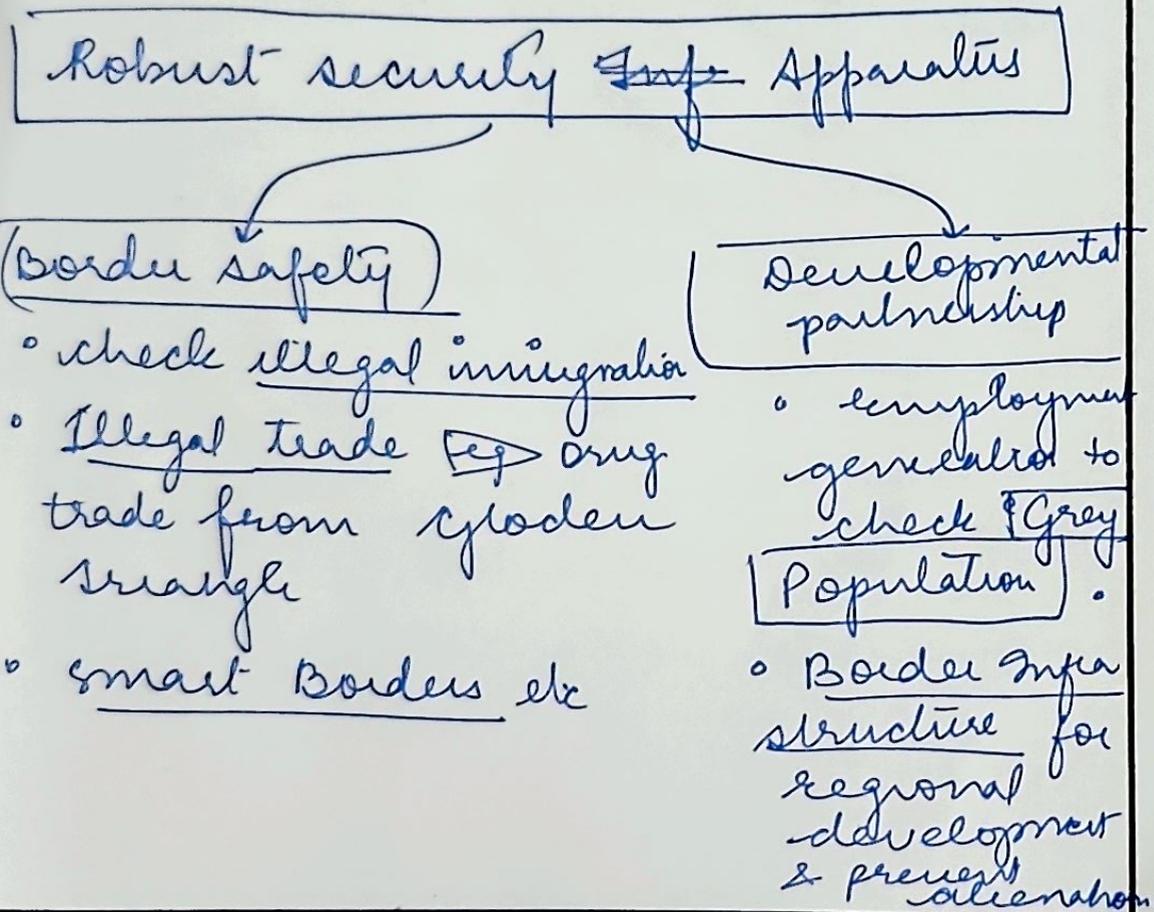
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TOTAL MARKS			

Q.20) Strengthening security apparatus in border areas and forging developmental partnerships with the locals are essential components of a robust and effective border management strategy. Discuss, with initiatives taken by the government in this regard. (15 marks, 250 words)

सीमावर्ती क्षेत्रों में सुरक्षा तंत्र को मजबूत करना तथा स्थानीय लोगों के साथ विकासत्मक साझेदारी बनाना एक मजबूत और प्रभावी सीमा प्रबंधन रणनीति के आवश्यक घटक हैं। इस संबंध में सरकार द्वारा उठाए गए प्रयासों के साथ चर्चा कीजिए। (15 अंक, 250 शब्द)

Internal security and security
in Border areas are not purely security issue but is coupled with developmental issues \rightarrow NER insurgency



Steps taken by Govt

- ① Border safety → Comprehensive Integrated Border Management scheme
 - ↳ Technology use
 - ↳ SMART Border (Madhukar Committee)
 - BOLD BIT. ↳ Double fencing
 - ↳ Strengthening of Armed forces
 - ↳ Modernisation of police force scheme
 - ↳ Institutional measures
 - ↳ Night vision ~~of~~ devices, Thermal imaging
- ② Developmental Partnership
 - ↳ Infrastructure Development
 - ↳ ₹ DIVINE project for NEK
 - ↳ ₹ 10,000 cr development fund for NEK.

↳ Winning hearts & mind of Border population

↳ Project Sadhbhavana, civic action plan.

↳ Economic growth ₹ 21,000 cr investment in J&K in past year by EMAAK etc.

↳ Capacity building measures

⇒ Vibrant villages programme along Chinese border

⇒ Strengthening village Defence Committee (VDC) in J&K.

⇒ Human Capital ₹ Mission UDAN

↳ ₹ Project Naya Sansa coaching for competitive exam

Hence, internal security involves both infrastructure & Human Development.

Feedback

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#	G	A	P
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