

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	HARIPRASATH.M		
Roll No./अनुक्रमांक	1213429	Medium/माध्यम	English ☒ हिंदी ☐
Center Code/परीक्षा केंद्र	1900	Date/दिनांक	05.09.2024

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

INDEX TABLE / अनुक्रमणिका			INSTRUCTION / अनुदेश	
Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक	1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet. कृपया उत्तर-पुस्तिका में नाम, ईमेल, रोल नंबर और मोबाइल नंबर भरें।	
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Total/कुल अंक	250			
Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय : 9.00 AM	End Time/समाप्त करने का समय : 12.00 PM
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि : online	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 आरखों के उपयोग, फ्लोचार्ट, तथ्यों और आकड़ों या समय रूप किसी अन्य विषय वस्तु जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आयी के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
			ECN CODE/ ईसीएन कोड :	Evaluation Date/ मूल्यांकन तिथि :
			EG/ईजी :	
			① ② ③ ④ ⑤	

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

EXAMINER'S REMARKS

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

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

Q.1) 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)

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

Free Trade Agreements refers to an economic partnership or relationship between two nations allowing import and export activities without any customs or restrictions.

Need of increased focus on negotiating, renegotiating and concluding FTA by India

- ① Improving India's export power in service sector need free service trading support,
- ② For the easy import of raw materials for certain manufacturing industries,
Eg:- Lithium import from Australia.
- ③ To reduce the export price and improve competitiveness of Indian product in local market,

- ④ To establish India as a global supply chain superpower,
- ⑤ Diversifying trade activities with various nations with different FTA to reduce dependency,
Eg:- India's high dependency on china for Active Pharmaceutical Ingredients
- ⑥ In order to fulfill the free trade policy of world Trade Organisation,
- ⑦ Helps in improving diplomatic relationship that leads high relation in other sectors,
Eg:- Defense Partnership through QUAD with Australia.

India in conducting FTA should apply balanced approach protecting domestic manufacturers and increasing export activities.

Feedback

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#	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			

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 can be defined as
Annual financial statement of Government
as mentioned in article 112 of constitution
estimating total revenue and expenditure of year

Fiscal policy facilitating equitable distribution
of resources and ensuring welfare of all
sections of society

- ① well designed progressive taxation with
reduced burden on low income society
help in tax distribution,
- ② Helps in reducing inflation and
keeping price rise at optimum rate
by rationalising spending,
- ③ Various control and centrally sponsored
schemes helps in empowerment

of vulnerable section,

Eg:- Jarvis Swaksha Yojana,

Poshan Abhiyan 2.0,

④ Infrastructural development helps in
improving economic activities,

Eg:- National Infrastructure Pipeline with
111 lakh crores.

⑤ Provision of credit through schemes
helps in development of small industries,

Eg:- MUDRA Yojana.

⑥ Investment in social and human
capital improves the demographic
dividend,

Eg:- AUYUSHMAN Bharat Yojana.

Fiscal Policy along with monetary
Policy combinedly can lead to efficient
economic growth to achieve 5 trillion
economy.

Feedback

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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.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 is the largest consumer and largest importer of edible oils in the world making its edible oil dependent on other countries.

Factors contributing to significant reliance on imported edible oils

- ① Low production and productivity that cannot provide necessary supply to large consumption,
- ② Higher wage of oil in Indian consumption,
- ③ Lack of proper implementation of oil based policy like National edible oil mission,
- ④ Lack of diversification to other crops by farmers,

- ⑤ Lack of higher technology of
cultivation and hybrid varieties of
edible oil,
- ⑥ Lack of processing centres,

Measures to increase domestic production

- ① Increased MSP for edible oil seeds
production,
- ② Promoting crop diversification through
cash incentivization,
Eg = Punjab Government's 6000 ₹
incentive for crop diversification.
- ③ Proper implementation of national
edible oil mission,
- ④ Increased processing centres through
proper credit,
- ⑤ Increased R & D along with hybrid
seed production,
edible oil less import can save
high forex reserve and energy security.

Feedback

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

Q.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)

India with 17-1. world population
and 4-1. of water resources need efficient
water conservation strategy for sustainable
development.

Role of micro-irrigation in offering
sustainable solution for water conservation

- ① Helps in increasing water-use efficiency
of irrigation by direct application
to roots by Drip irrigation,
- ② Reduce conveyance loss by preventing
evaporational and seepage losses,
- ③ Sub-soil pipes helps in reducing
water loss and reduce pipe damage,
- ④ Helps in optimum application by

variable rate technology under precision control,

- ⑤ Prevents weed infestation and extra water usage by weeds along channels.

Problems in its implementation

- ① Lack of credit availability to farmers
- ② High initial cost of investment of drip pipes and sprinkler heads,
- ③ Lack of technical knowledge about proper usage by farmers,
- ④ Lack of awareness about subsidies and schemes for micro-irrigation,
- ⑤ Corruption and administrative lagging in provision of subsidies,

Agriculture with around 90-1% of water usage need to be regulated for water conservation by increasing use efficiency.

Feedback

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TOTAL MARKS			

Q.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 असंख्य चुनौतियों के समाधान की तत्काल आवश्यकता को उजागर करती हैं। विश्लेषण कीजिए। (10 अंक, 150 शब्द)

India have recently witnessed various railway accidents like odisha accident etc happening due to various causes affecting life and property.

Causes for increasing railway Accident

- ① Lack of modernization with reduced signalling technologies lead to high accidents,
- ② slower implementation of high-tech devices with low coverage ratio,
- ③ Increased freight traffic and passenger traffic with slow rate of new rail compartment production,
- ④ not presence of separate track of freight and passenger train,
- ⑤ Lack of technical skills to locomotive

pilot and railway technical force to
prevent accident,

⑥ Higher work pressure with minimum
managing skills leading to high
accident rates,

Measures to address these challenges

- ① Improved training with proper recruit-
ment of railway employees
 - ② Increasing rate of production of
modern coaches with early warning
system and signal production,
 - ③ Proper implementation of schemes like
KAVACH schemes,
 - ④ Speeding up production of railway
compartment with increased activities
 - ⑤ Making separate track for freight
and passenger transport,
- India should modernise its railway
platform for preventing rail related
accident.

Feedback

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TOTAL MARKS			

Q.6) 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)

NISAR मिशन अंतरिक्ष अन्वेषण और वैज्ञानिक अनुसंधान में अंतराष्ट्रीय 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 is a acronym for NASA
ISRO Synthetic Aperture Radar which
is a earth-monitoring satellite monitoring
land and ice-cover for climate change
prediction.

NISAR mission exemplifying international
cooperation in space exploration and
scientific research

- ① It brings up two different agencies
for combined research and development,
- ② Acts as precursor for further
collaboration with other countries,
- ③ Provides data on climate change that
can be used by other countries,
- ④ Signifies the transfer of technology
from high technical country to low

technical knowledge country,

- ⑤ shared financial responsibility reduce burden on low-income country like India.

UISAR's helps in climate change monitoring and natural hazard management

- ① Reflected spectral radiation based assay helps in estimating the increase in green house gas at particular area,
 - ② Provides data related to temperature variation based on area approach,
 - ③ Monitoring of melting ice-caps provides data on increasing sea-level and sudden flooding,
 - ④ land based monitoring helps in policy and programme development.
- UISAR with its huge benefit can reduce GHG emission and ensure sustainable development.

Feedback

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TOTAL MARKS			

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

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

Nuclear technology can be defined as any developing technology that utilizes the use of radioactive elements improving the particular process.

Role of nuclear technology in enhancing food security and agricultural sustainability

- ① Provision of green energy with higher power for various agricultural require-ment like irrigation etc.
- ② Used in molecular markers and DNA based markers for the development of hybrids through various selection methods,
eg:- Pedigree selection for self-pollinating crops.
- ③ Helps in detecting of pests

of various minerals and nutrients in
the soil enhancing soil fertility,

④ Nuclear isotopes used in controlling
pest infestation by sterilising the
pest population,

⑤ Neutron based meters can help
in identifying the water moisture
level through gravimetric and
tensiometric methodology

⑥ Helps in promotion of shelf-life
thereby increasing the storage and
reduce post-harvest losses,

India with world's highest
population (142 crores) need to enhance
its food security at same time do by
sustainable methodology for balanced
development.

Feedback

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TOTAL MARKS			

Q.8) 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)

भारत में जंगल की 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)

As per the Annual Forest Survey Report around 30% of India's forest land is vulnerable to forest fire leading to deforestation effects.

Causes of forest fire

- ① climate change with prolonged dry periods leading to increased forest fire,
- ② Anthropogenic activities and clearing of forest for agriculture in slipping cultivation,
- ③ Natural effects like lightning and frictional fire of dry trees leads to natural forest fire,
- ④ clearing forest for developmental activities

Multi-dimensional impact of forest fire

- ① Affect flora and fauna and bio-diversity of particular region,
- ② Affects the tribal population by reducing minor forest produce,
- ③ Increased greenhouse gas emissions leading to global warming,
- ④ Butterfly effect on agriculture through reduced pollinators,

Measures for prevention and Management

- ① Proper implementation of National Forest Policy to increase forest to 33%,
- ② strict regulation on forest clearing activities,

- ③ Improved afforestation programmes,
- ④ Creating artificial rains through heli-copters for reducing the effect.
Forest with enormous benefit need to be protected for sustainable development.

Feedback

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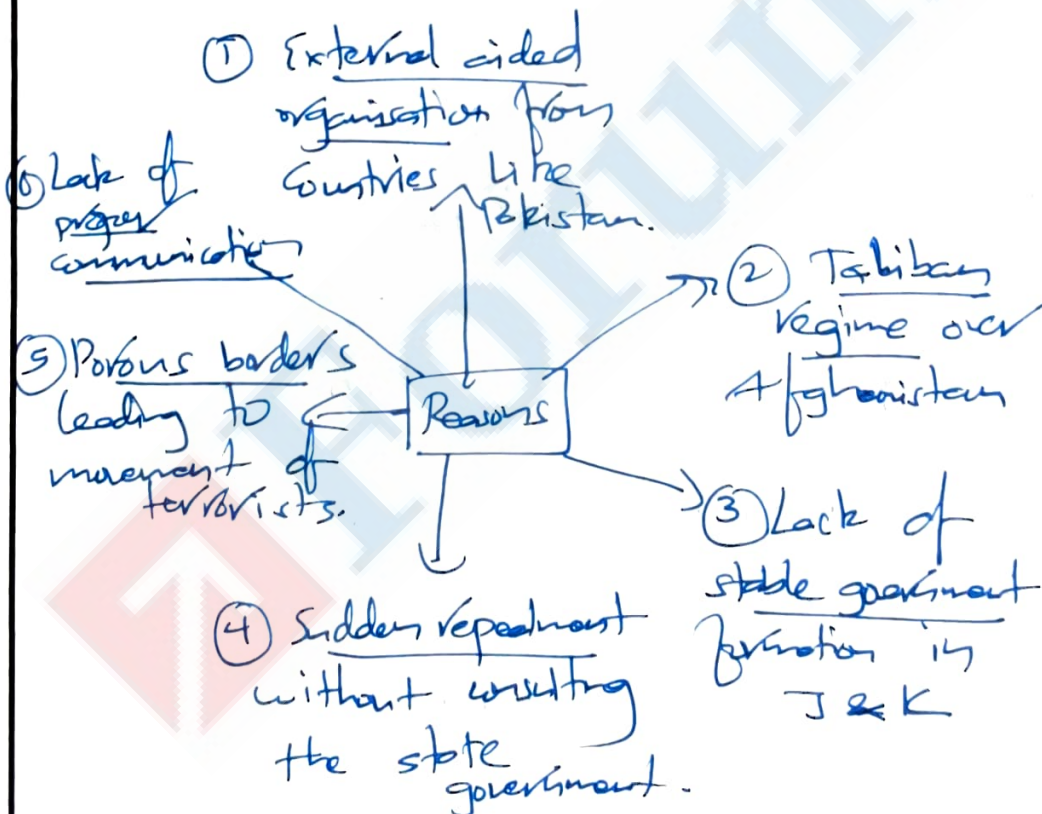
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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

Q.9) 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)

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

with the repeal of article 370
and bifurcation of Jammu and Kashmir
into two union territories there
have been increased terror related violence

Reasons for increased surge in terror
related violence.



Strategies to counterfeit their terrorist activities

- ① Increased bilateral talks with neighbouring countries of Pakistan and China to regulate terror organisation
- ② Usage of modern technologies like AI assisted facial recognition for terrorist identification,
- ③ Improved training to Border Security Forces to prevent infiltration,
- ④ Satellite based observation and increased communication system,
- ⑤ Proper protection of porous borders.

Terrorism in every form lead to loss of life and property hence it need to stopped holistically for effective development.

Feedback

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TOTAL MARKS			

Q.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)

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 can be defined as new online form of cyber blackmailing where individuals are lured into various online money based activities like gambling without their will.

Implications of cyber slavery on internal security of India

- ① leads to reduced cyber based activities affecting good online measures,
- ② Increases economic burden on middle-class people affecting their livelihood,
- ③ economic burden leads to increased crime like bank frauds, thefts for balancing the losses,
- ④ leads to mental pressure and high rate of suicides in India,

- ⑤ lead to increased violence and threats to cyber gaming companies,
- ⑥ Economic stress provides opportunities for incubation into terrorist and Wakalite organisation,
- ⑦ leads to less trust on government leading to government instability,
- ⑧ Increase women-based sexual torches through blackmailing,
- ⑨ Acts as source of funding for terrorist organisation,
- ⑩ Increases the presence of blackmoney affecting economic stability.

Cyber slavery should need to be
resolved through proper litigation and
strict regulations for effective development
of technology in India.

Feedback

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

Q.11) "The liberalization policies of 1991 significantly enhanced India's economic dynamism, but the evolving global and domestic landscape necessitates 'Reforms 2.0' for sustained economic development and prosperity." Comment. (15 marks, 250 words)

"1991 की उदारीकरण 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)

India have undertakes LPG (Liberalisation, Privatisation and Globalisation) Reforms in 1991 for economic change in country, but current economic challenges requires further extensive reforms.

Challenges in current evolving global and domestic landscape

- ① High environmental pollution affecting the environmental sustainability leading to higher effect on vulnerable section
- ② Higher inequality with 10-1% of population with 60-1% of Indian Resources,
- ③ Lack of employment opportunities with increasing population,

- ④ low technical and technological development compared to well developed countries,
- ⑤ Lack of R&D and innovative environment in economic activities,
Eg:- India still ranks 40 in Global Innovation Index.
- ⑥ Presence of poverty and Lack of developmental activities in country
Eg:- 134th rank in HDI index.

"Reforms 2.0" for sustained economic development and prosperity

- ① High focus on developmental schemes for vulnerable section for inclusive development,
- ② strict regulation of CSR responsibilities and calculating environmental GDP for environmental protection,

- ③ Proper fiscal policy for improved tax distribution through progressive taxation,
- ④ Increased budgetary allocation for R&D and innovation development,
Eg:- Currently it is less than 1-1.
- ⑤ Focus on educational and skill development for reaping the demographic dividend,
- ⑥ Increasing the FDI and renewing global value chain superpower,
Eg:- Make in India programme
- ⑦ Improving green energy for reduced sustainability on energy inputs,
India should adopt "reforms 2.0" for increased economic growth with higher developmental activities for sustained development.

Feedback

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



Q.12) 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)

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)

India through its National Infrastructure pipeline has planned to spend around 111 lakh crore in phased manner for overall infrastructure development.

Role of infrastructure in economic transformation

- ① Improved transportation through increased logistics infrastructure
Eg:- Setu Bharat scheme for building bridges.
- ② Improved export and import activities through developed ports and Kharays,
Eg:- Samudraujan project > Sagar Mala Project for ports.
- ③ Improved digital infrastructure helps

in increased online based business activities,

Eg:- online education platforms like Buysus

④ Increased storage facilities like cold-chain infrastructure can improve the agricultural GDP,

⑤ Improved market-based infrastructure reduce price spread and high value-addition to farmers.

Eg:- e-NAM programme.

Role of infrastructure in sustainable development and societal wellbeing

① Improved green-energy infrastructure projects like solar parks helps in reducing green-house gas emissions,

Eg:- Largest solar park in Rajasthan.

② Increasing infrastructure development with elderly support helps in their development,

Eg: Accessible India programme.

- ③ Gender-sensitive infrastructure programmes helps in equal development of every section,

Eg: - separate toilet facilities for transgenders.

- ④ Recreational infrastructure in cities can reduce mental pressure and reduce effects of loneliness,

Eg: Park facilities in cities.

- ⑤ Digital infrastructure helps in connectiveness of tribal areas and improve educational access,

Eg: Online digital education Programme.

- ⑥ Development of hospitals and medical college ensure proper health facilities

Eg: Recent increase in AIIMS college and hospitals,

Infrastructure along with economic development can lead to holistic socio-economic development.

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			

Q.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)

पोषण सुरक्षा, 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 can be defined as part of agriculture that involves cultivation of both marine and inland fisheries for effective food security and recreational activities.

Significance of aquaculture towards nutrition security, livelihood generation and economic growth

① Nutrition security

- (i) Fish acts as cheap source of protein for coastal region people,
- (ii) Presence of high linoleic acid and Poly-unsaturated fatty acids and other nutrients help in addressing mal-nutrition

② Livelihood generation

- (i) Acts as source of income for
coastal region people
- (ii) Increases the tourism sector
based on aquaculture like aquarium
leading to area-wise development
- (iii) Development of fishing based industry
lead to developing the entire region
with economic activities.

③ Economic growth

- (i) Increases its contribution to
agricultural GDP enhancing overall economic growth
 Eg:- Currently Agriculture contribute only
18-1% of GDP.
- (ii) Increased export of Marine products
leads to high forex reserves,
- (iii) value addition of aqua products
leads to increased value chain
realisation.

Measures taken by Government to improve aquaculture in India

- ① Creation of Boards like MPEDA
(Marine Products Export Development
Authorities) in Kochi for increasing
export of aqua products,
- ② Regulations on overfishing and
trawl nets for sustainable fishing,
- ③ Pradhan Mantri Matsya Sampada
Yojana for holistic development of
fisheries and aquaculture,
- ④ Provision of credit through KCC
card for fishermen,
- ⑤ Development of Marine universities
and Aqua research centres for
improved R & D on Aqua culture.
Aquaculture with its economic
activities can make India superpower
in Marine based product export.

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.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)

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

(15 अंक, 250 शब्द)

Minimum Support System with intention for ensuring food security and increased stability of farmers have both benefits and certain limitations

Market distortions and ecological stress created by MSP

- ① Lead to Lack of diversification and monocropping of certain crops like Rice and wheat lead to nutrient deficiencies
- ② High rice cultivation lead to high water usage and groundwater exploitation
- ③ lead to clearing of forest area and high deforestation
- ④ Intensive cultivation with high use

of fertilizers lead to soil pollution
and eutrophication effects,

- ⑤ Lack of produce for food processing
industry affects their development,
- ⑥ Higher hoarding and black marketing
through FCI leads to market distortion,
- ⑦ Government fixed market intervention
sometimes leads to loss to farmers,
e.g. Release of grains during time of
high price reduce grain value.

Reforms needed for inclusive and
efficient and MSP

- ① Need for diversification of MSP
provision with high emphasis on
pulses, millets and oilseed production,
- ② Need to increase the choice of
market for farmers with open
choice to sale outside APMC,

- ③ Digitisation of food storage records with proper regulation for preventing hoarding and blackmarketing,
- ④ Multi-stakeholder approach of fixing the price by consulting farmers along with food industries,
- ⑤ Less regulation of market with enhanced free market system for higher price realisation to farmers,
- ⑥ Incentivising for diverse crop cultivation through cash incentives.
Eg. Punjab ^{state} provision of ₹ 6000 for crop diversity.
- ⑦ MSP system with enhanced benefits need to be properly regulated with increased coverage in low coverage area for sustained benefits to farmers.

Feedback

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

Q.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 अपार संभावनाएं हैं। स्पष्ट कीजिए। (15 अंक, 250 शब्द)

Biotechnology refers to usage of certain biological organism like microbes for developing new technology for various benefits of society.

Role of bio-technology in sustainable food production.

- ① Used in development of GM (Genetically Modified) crops with transfer of Gene from micro-organisms,
 e.g. i) Dardar Mustard variety (DMH-11)
 developed from Agrobacterium tumefaciens
 ii) GM-cotton for Resistance to Helicoverpa armigera (Cotton Boll worm)
- ② Increase the crop productivity through increased nutrient mobilisation through usage of Bio-fertilizers,

Eg:- Usage of Agrobacterium in rice crops.

③ Develops pest and disease resistance in crops with pest management

Eg:- Trichogramma spp for pest management.

④ Tissue culture technology improves the hybrid development with pest-free and disease free stocks.

Eg:- Somatic hybridisation technique.

Role in waste Management

① Helps in clearing up of oil spills through Pseudomonas putida bacteria culture.

② Helps in aerobic and anaerobic digestion of organic waste for production of energy through byproducts.

Eg:- Methane production through Methotrophic bacteria.

- ③ with recent developments, certain microorganisms can degrade long-chain plastics,
- ④ Helps in detoxification of heavy and toxic elements in soil,

Advancement in Human Health

- ① used in improvement of Gut bacteria like lactobacillus for the proper digestion of lipid molecules,
- ② Used in drug production for efficient disease management,
eg:- Penicillium used for first drug production.
- ③ used in creation of vaccines for certain diseases
eg:- m-RNA vaccines for COVID
- ④ efficient drug delivery system.

Bio-technology with diversified benefits can enhance the economic activities and sustainable human development.

Feedback

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

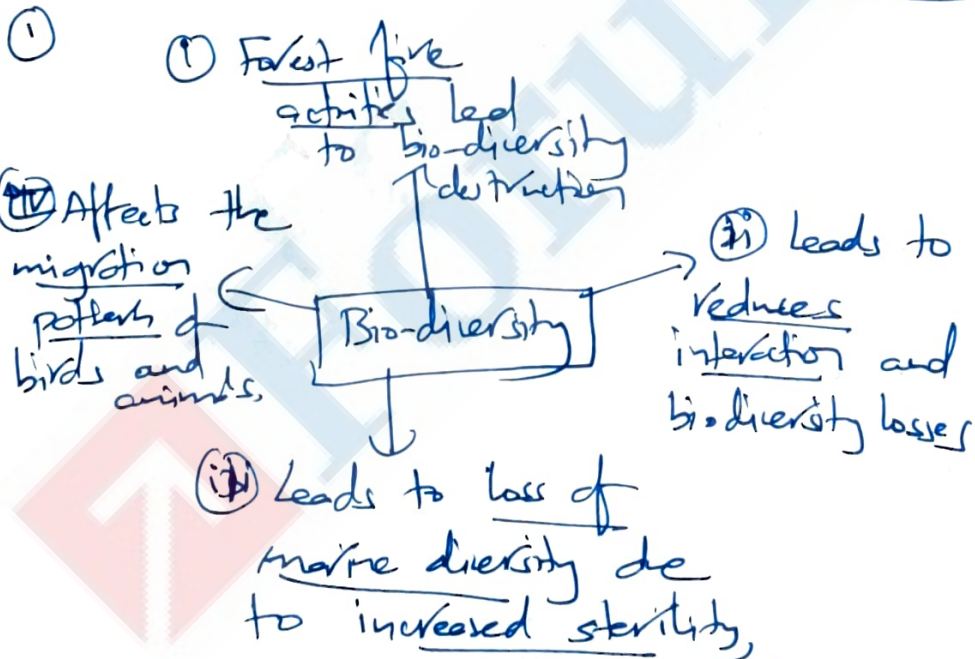


Q.16) Climate change is leading to significant alterations in ecosystems, resulting in cascading effects on biodiversity, ecosystem services, and human livelihoods, necessitating integrated approaches to conservation and climate adaptation. Analyse. (15 marks, 250 words)

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 as per IPCC can be defined as prolonged change in atmospheric condition due to anthropogenic factors leading to increased global temperature.

Effects of climate change on Biodiversity, ecosystem services and human livelihoods,



② Effects on Ecosystem services

- (1) Destruction of forest reduces the
producing ability of ecosystem,
 (ii) leads to low nutrient recycling
processes of ecosystem,
 (iii) Affects the replenishment and
detoxifying ability of ecosystem
 (iv) effect on forest affects aesthetic
values,

- (3) Effects on human livelihoods
 (i) Increased diseases due to climate
 change,
 Eg: Heat stress, Pollutionary effects
 (ii) Disaster activities affecting life and
property, Eg: Recent widespread floods
 and landslide
 (iii) Affects habitat and economic
activities
 Eg: Rising sea level etc.

Integrated approaches to conservation
and climate adaptation

- (1) Stricter enforcement of pollutionary
regulation for reduced greenhouse emissions

- ② Enhanced conversion to green energy
for reduced effects traditional fossil
fuel emission,
- ③ Disaster resilient infrastructure adaptation
for resilience of habitat during
disasters,
- ④ Climate smart Agriculture techniques
for sustained food production
Eg:- Precision Agriculture
- ⑤ Transfer of technologies from developed
country to developing country for
enhanced climate resilience,
- ⑥ Conservation of forest areas through
various afforestation programmes and
policies for carbon sequestration,
Eg- CAMPA fund, CSR responsibilities.
Climate change through integrated
approachment and holistic solution can
be presented for sustainable development.

Feedback

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

Q.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)

With increasing urbanisation estimated to be around 50% by 2050 by World Bank in India, the effects on human livelihood have both positive and negative impacts.

Urbanisation ^{experiencing} ~~leading~~ various natural and man-made disasters in India

- ① Industrial disasters due to leakage of certain harmful gases through chemical industries,
eg:- Bhopal Gas Tragedy with methyl isocyanide
- ② High flooding due to frequent sudden heavy rainfall,
eg:- Chennai flooding in 2015.
- ③ High drought condition due to prolonged

definit Vorfell,

Eg:- Bangalore drought in 2024.

④ Man-made flooding due to encroach-
ment of urban water bodies

Eg:- Delhi flood due to Yamuna
encroachment.

⑤ Effects of Tsunami over the
coastal cities,

Eg:- chennai Tsunami in 2004.

⑥ effects of cyclone disaster over urban
areas,

Eg:- Kolkata disaster effect by cyclone.

Mitigation and Management strategies

① Proper following of revised guidelines
by National Disaster Management
Authority,

② Disaster resilience building for prob-

- used resistance to disaster,
- ③ Preventing encroachment of water bodies by proper regulatory measures and efficient land management, eg:- Digitisation of land records.
 - ④ Enforcing efficient Coastal Regulation Zones and evacuating high risk area for holistic protection,
 - ⑤ Creation of sponge areas and water conservatory bodies for efficient storage of water during high rainfall,
 - ⑥ Establishment of proper water drainage system for reducing flooding eg:- Chennai rainfall drainage plan

Urbanisation with high population density and vulnerability need to be enhanced to reduce disaster and to absorb disaster based efforts

Feedback

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



Q.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)

Indian government have enacted National Disaster Management Act, 2005 and established Disaster Management authority at National and state level for efficient Disaster management.

Significant Progress in India's disaster management

- ① Creation of statutory body for efficient disaster management with proper training,
- ② Satellite based observation of the meteorological development and enhancing earlier prediction,
eg:- Usage of Remote sensing and earth observation satellite,
- ③ Improved technological development

and usage of Geographic information system for proper information collection and analysing,

(4) Increased observation and development of Regulation zones like coastal Regulation zone for evacuation of risk areas,

(5) Increased communication system with developed technologies and intrusion into every household for awareness,
Eg:- Instant mobile based communication.

Challenges persisting in timely response and effective co-ordination.

(1) There is a lag of co-operation between state and national disaster management Agency,

(2) Difference in training facilities of national and different states affect the proper co-ordination,

- ③ Lack of co-ordination from state
police department and administrative
mechanism lagging management practice,
- ④ Lack of coordination by various
departments like finance, science
and technology for effective prevention
strategy,
- ⑤ Lack of proper implementation of
committee reports like Kasturirangan
Committee, Gadgil committee report,
Eg:- Waghad flood due to high
settlement at disaster prone zone
- ⑥ Lack of efficient complaint mechanism
for sudden ~~emergency~~ emergency response,

Measures like unified training
with proper co-ordination along with
efficient complaint mechanism should
be ensured for holistic disaster
management.

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.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)

बताइए 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)

Terrorism can be defined as act of violence leading to terror for fulfilment of certain personal objectives.

Organized crime can be defined as various illegal activities committed by well-structured mafia organisation.

Symbiotic relationship between organised crime and terrorism aggravating internal security

① Provides a source of funding to terrorist organisations

Eg:- Money from drug trafficking of drug mafia

② Ensures the recruitment to terrorist organisation by Human trafficking of vulnerable sections like women, children.

- ③ online fraudulent activities leading to money collection for terrorist organisations
- ④ Spreading the principles of terrorist organisation by online media,
eg. - ISIS idea spreading in Tamil Nadu.
- ⑤ Technology based hacking and providing information regarding security framework to terrorist organisation,
- ⑥ Taking local control and providing breeding ground for terrorism

Measures to address the linkage and threats arising from the linkage

- ① Empowering organisations like Interpol - most Directorate, CBI with high training for preventing black money transaction,
- ② High protection to porous border

- for preventing drug trafficking,
- (3) Proper regulation of online platforms
and proper implementation of IT Act
for reducing malware spreading,
 - (4) Enhancing bilateral talks with other
Country for regulating mafia control,
eg:- India sandwiched between
Golden triangle and Golden crescent
of drug trafficking.
 - (5) Empowering the state police forces
with technology based training for
reducing human trafficking activities,
 - (6) Usage of satellite based technology
for efficient communication control and
spotting the organisation

India should prevent this
linkage for cutting the fund trans-
-action to terrorist organisation for
their efficient control.

Feedback

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



Q.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)

India being surrounded by hostile
neighbours with evolved nuclear weapons
need to protect its borders with
efficient border management strategy.

Strengthening security apparatus in
border areas and forging development
partnerships with local for border
management

- ① Establishment of vibrant village
Programme for the effective develop-
-ment of village along line of
Actual control for preventing chinese
intrusions,
- ② Recent Amendment of Biological
Diversity Act, 2002 and creating
provision of usage of 100 km. sq

long along the border for effective
border management,

③ Usage of satellite based monitoring
and effective facial recognition
technology for preventing terrorist
intrusion,

④ Increased road and infrastructure
development by Border Road
Organisation (BRO) for efficient
mobilisation of Defence vehicles,

⑤ Effective development of northeastern
region with schemes like TRIFED,
NAFED, PM-DEVINE programme
for effective local development,

⑥ Improved communication technology
with indigenously developed system
for effective monitoring and enhanced
communication in border areas,

Eg:- NavIC system for satellite navigation

- ⑦ Purchase of high tech missiles and development of missiles with partnership for efficient protection,
Eg:- Purchase of S-400 from Russia,
Brahmos development with Russia.

- ⑧ Development of various indigenous defence equipments, satellites, drives etc for border management.
Eg:- Usage of Uk helicopter,
Agni missiles etc.

- ⑨ Enhancing the livelihood of local citizens for enhanced support for border management,
Eg:- scheme for livelihood enhancement in Jammu & Kashmir

Border management apart from defence strategy need local support for holistic border development.

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			

Mentor Feedback Questions

- 1
- 2
- 3
- 4
- 5

Test Goal

- 1 ☐
- 2 ☐
- 3 ☐

Outcomes

-
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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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