

MGP 2024

TEST CODE

7 1 3 3 0 2

Time Allowed : Three Hours

समय : तीन घंटे

ForumIAS

Maximum Marks : 250

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	SAUMYA MISHRA		
Roll No./अनुक्रमांक	Medium/माध्यम	English ☒	Hindi ☐
Center Code/परीक्षा केंद्र	Date/दिनांक	17/08/2024	

*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		
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20		
Total/कुल अंक	250	

- 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।

For Student Only / केवल परीक्षार्थी प्रयोग हेतु

Examiner's Discretion/मूल्यांकन कर्ता का विवेक :

Start Time/प्रारंभ करने का समय :

2:00 PM

End Time/समाप्त करने का समय :

5:00 PM

Total Marks/कुल अंक :

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

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ECN CODE/
ईसीएन कोड :

EG/ईजी :

① ② ③ ④ ⑤

Evaluation Date/
मूल्यांकन तिथि :

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

Q.1) How far do you agree that a robust domestic demand is the most important driver of India's economic growth? What are other factors that influence the growth trajectory of the country?

(10 marks, 150 words)

आप इस बात से कहां तक सहमत हैं कि मजबूत घरेलू मांग भारत की आर्थिक वृद्धि का सबसे महत्वपूर्ण चालक है? अन्य कौन से कारक हैं जो देश के विकास पथ को प्रभावित करते हैं?

(10 अंक, 150 शब्द)

India is the most populous country of the world (UNFPA) and is the 3rd largest economy in the world, reflecting its population prowess.

Role of domestic demand

- 1) Fuels production of different products
 (a) rising demand of services → growth of service sector industry
- 2) Rise in purchasing power of the population → rise in demand of products.
- 3) Rising urbanization
 ↳ rising ~~need~~ demand especially of convenience food → fuels FPI industry.
- 4) India's domestic consumption is higher than exports of many products (a) ~~the~~ food-grains, milk (only 0-5% exported)

Limitation

- 1) Income inequality
↳ 1% of population holds 40+ wealth (Oxfam)
- 2) Rural-urban divide
cities contribute 60% to GDP.
- 3) Demand of foreign products or high domestic demand leads to imports
(e) edible oil - India 4th largest producer yet 3rd largest importer

Other factors

- 1) Level of income
- 2) Quality of life
- 3) Infrastructure and logistical efficiency
- 4) Growth of agriculture and its productivity.
- 5) Expansion of manufacturing sector and its employment capacity
(currently provides only 11.4% employment)

Therefore a diverse and holistically strong economy fuels economic growth

Feedback

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AWIS			
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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) Macroeconomic stability is not solely dependent on the quantity of foreign exchange reserves, but also on the strategy and sources on which they are built. Discuss in an Indian context.

(10 marks, 150 words)

व्यापक आर्थिक स्थिरता न केवल विदेशी मुद्रा भंडार की मात्रा पर निर्भर करती है, बल्कि उस रणनीति और स्रोतों पर भी निर्भर करती है जिस पर वे निर्मित होते हैं। भारतीय संदर्भ में चर्चा कीजिए।

(10 अंक, 150 शब्द)

India holds world's 6th largest forex reserves (World Bank). This reflects its role in India's economy.

Role of foreign exchange in macroeconomic stability

- 1) Prevent from external shock (a) austerity of FDI in 2013-24
- 2) Provide import capacity of crucial goods (a) crude oil
- 3) Prevent from hot-capital money shocks and act as shock absorber in case of BOP crisis.

However strategy and sources of building forex is also important -

- 1) FPI - brings forex but is debt-
investment and leaves country easily in case of economic shocks.

2) Convertibility of currency

- ↳ Full convertibility - Uses both incoming & outgoing frequency of forex
- ↳ Partial convertibility - provides stability (Tarapore Committee)

3) FDI Investment

- ↳ In mfg sector and infrastructure - stable forex
- ↳ In service sector - unstable

4) NRI - Accounts

- ↳ Provide stability only upto their maturity.

5) Short-term foreign loans

- Provide forex but also bring instability (e.g. Sri Lanka crisis)

6) Appropriate strategy should be stable and predictable FDI with partial convertibility of rupee. If need be, the focus should be on long-term foreign loans. The ~~most~~ most important aspect is to increase exports.

Feedback

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TOTAL MARKS			

Q.3) DPI (Digital Public Infrastructure) is a critical enabler of digital transformation for both businesses and citizens; however, it comes with its own set of challenges. Examine. (10 marks, 150 words)

DPI (डिजिटल पब्लिक इंफ्रास्ट्रक्चर) व्यवसायों और नागरिकों दोनों के लिए डिजिटल परिवर्तन का एक महत्वपूर्ण प्रवर्तक है, हालाँकि, यह चुनौतियों के साथ आता है। परीक्षण कीजिए। (10 अंक, 150 शब्द)

Digital Public Infrastructure refers to aggregation of various digital services provided by the govt. @
Bhim UPI, Aarogya, Digital Aadhaar etc

Digital transformation

of Business

- 1) Reduced procedural complexities @ GSTN in tax
- 2) Seamlessness @ e-way Bills
- 3) Efficiency in registration @ MCA 21 portal
- 4) Opportunities of businesses @ e-m portal for MSMEs
- 5) Logistical efficiency @ Digi Yatra Portal

of citizens

- 1) Higher access to services @ MOOCs
- 2) Reduction in inclusion & exclusion errors @ DBT of subsidies
- 3) Transparency in procedures @ govt providing access to its data

Challenges

1) Infrastructure

↳ Lack of adequate internet density
in rural and remote areas.

2) Lack of digital literacy

~32% of Indian population is digitally
literate (Oxfam)

3) Content availability only in English or Hindi

↳ excludes the tribal and rural
population.

4) Threat of financial frauds and privacy breaches

④ ~30,000 digital ~~fraud~~ frauds
between Jan-July 2024.

Therefore there is need to
resolve these through infrastructure
expansion (PPP), ensuring data security
and inclusiveness.

Feedback

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TOTAL MARKS			



Q.4) The skewed emphasis on certain crops has distorted the cropping pattern in India, which has led to grave socio-economic and environmental consequences. Elaborate. (10 marks, 150 words)

कुछ फसलों पर असंतुलित जोर ने भारत में फसल पैटर्न को विकृत कर दिया है, जिसके कारण गंभीर सामाजिक-आर्थिक और पर्यावरणीय परिणाम सामने आए हैं। विस्तार से चर्चा कीजिए। (10 अंक, 150 शब्द)

India has monoculture being
practised in many of its parts, leading to
many issues

India has wheat
rice-dominant crop
pattern due to -
1) MSP based assured
procurement



2) Expansion of irrigation moniculture
infra (a) Indira Gandhi Canal in Rajasthan

3) Availability of HYV seeds and hybrid
seeds of wheat & rice

4) Low remuneration of millet, pulses

Social Impacts

1) Rise in nutrition deficiency esp.
protein deficiency due to neglect
of pulses.

- 2) Rural distress and suicides in Vidarbha
due to high cost of production &
indebtedness.
- 3) Income & social disparity between
West Green Revolution zones and
other zones.

Economic

- 1) Shift from growing other
crops to millets - sugi in Karnataka
replaced by rice
- 2) Income inequality
↳ monthly income of farmer in
Punjab - ₹ 22,000
Bihar - ₹ 8,000
- 3) Cowshed phenomena and production
exceeding storage capacity

Environmental

- 1) Rise in soil toxicity due to overuse
of agro-chemicals (a) Cancer train in
PN.
- 2) Nitrogen runoff - algal blooms
- 3) Rise in cost of soil reclamation
- 4) Rise in methane emissions from paddy
There is need of 2nd evergreen
revolution.

Feedback

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TOTAL MARKS			



Q.5) Private participation in propelling India's space journey is widely acknowledged but is yet to be fully tapped. In light of the statement, analyse the hurdles faced by the private sector and also recommend measures to unlock greater private participation in the space economy.

(10 marks, 150 words)

भारत की अंतरिक्ष यात्रा को आगे बढ़ाने में निजी भागीदारी को व्यापक रूप से स्वीकार किया गया है लेकिन अभी तक इसका पूरी तरह से दोहन नहीं किया गया है। कथन के आलोक में, निजी क्षेत्र के सामने आने वाली बाधाओं का विश्लेषण करें और अंतरिक्ष अर्थव्यवस्था में अधिक निजी भागीदारी को बढ़ाने के उपायों की भी सिफारिश कीजिए।

(10 अंक, 150 शब्द)

India is 6th largest major player in the space sector but its contribution in space economy is only

2-1.

Role of private sector

- 1) Driving innovation towards new arenas (a) space Tourism by SpaceX
- 2) Cost-sharing with ISRO
↳ ISRO can focus on deep-tech and core sector.
- 3) Rise in India's contribution in global space LV production and launches.
- 4) Drives culture of innovation
(a) Startup Prowess
- 5) ISRO can focus on dedicated mission

like - Gaganyaan etc.

Issues faced

- 1) Limited opening of space sector
- 2) Lack of vast skilled workforce in space - sector
- 3) Limited technology transfer by ISRO (limited to dev. of PSLV and SSLVs)
- 4) Threat of national security breaches by sharing data of critical info.

Measures needed

- 1) NSIL and InSpace can focus on technology transfer of other aspect.
(a) Components building.
- 2) International collaboration with SpaceX and Germany to reach best practice.
- 3) Keeping geo-spatial sector - Drones, UAVs largely for space - startups
- 4) Incentives - tax-breaks, funding.
This can help India become a 'Space Superpower'

Feedback

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Q.6) With recent advances in technology, robots are now equipped to perform more than just conventional and routine tasks, which brings new opportunities as well as risks. In this context, evaluate the future potential of the robotics sector. (10 marks, 150 words)

प्रौद्योगिकी में हालिया प्रगति के साथ, रोबोट अब पारंपरिक और नियमित कार्यों के अलावा और भी बहुत कुछ करने में सक्षम हैं, जो नए अवसरों के साथ साथ जोखिम भी लाता है। इस संदर्भ में रोबोटिक्स क्षेत्र की भविष्य की संभावनाओं का मूल्यांकन कीजिए। (10 अंक, 150 शब्द)

Robots are unique amalgamation of engineering, computer technology and AI & ~~that~~ is important component of Industry 4.0.

More than conventional and routine tasks

- 1) Agriculture - plucking fruits, spraying fertilizers.
- 2) Industries - Pick and place robots
(a) SCARA manipulators.
- 3) Health sector - nano-robots for surgery
- 4) Defence sector - autonomous firing, picking up soldiers from war-zones (a) ATLAS ROBOT
- 5) Social sector - Humanoid robots to help in care-economy (a) NEON.

Opportunities

- 1) Time efficiency
- 2) Perform routine task accurately for
an extended time
- 3) Innovation and growth in the
untouched sectors (e) robots making
semiconductor chips
- 4) Give Promote STEM field.

Risks

- 1) Autonomous defence robots -
risk of security to human life
- 2) Can be Algorithms which they work
upon can be biased.
- 3) Autonomous cars etc - threat of
accidents
- 4) Lack of clear national and
international regulation.

Thus future potential of robotics
sector in fields like computing, envt.
protection, autonomous manufacturing, or
surgery will depend on overcoming
these risks.

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Q.7) Write an explanatory note on the causes and impacts of avalanches. Also, highlight the various strategies to mitigate its impact, with a special emphasis on NDMA guidelines. (10 marks, 150 words)

हिमस्खलन के कारणों और प्रभावों पर एक व्याख्यात्मक नोट लिखिए। साथ ही, NDMA के दिशानिर्देशों पर विशेष जोर देते हुए इसके प्रभाव को कम करने के लिए विभिन्न रणनीतियों पर प्रकाश डालिए। (10 अंक, 150 शब्द)

Avalanche is a type of landslide that involves movement of solid debris downslope in force of gravity.

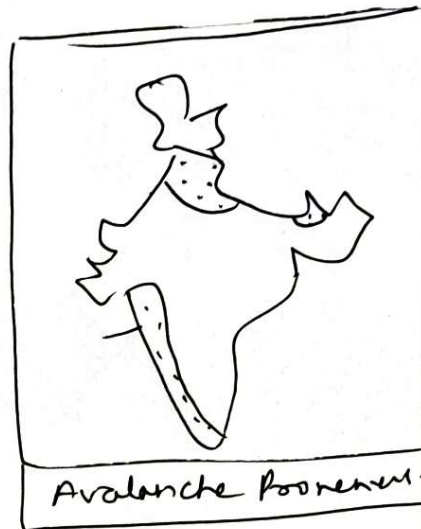
Causes of Avalanche

I. Natural

Heavy rainfall (a)
in Idukki

Loose structure of the slope due to rocks
(a) Himalayas

Cutting of downslopes by river &
(a) Ganga river in Uttarakhand



II. Anthropogenic

Removal of vegetation
(a) Deforestation in Wn Ghats

Excessive construction
(a) Charidham - Project

mining and blasting in slopes
Tourism beyond capacity.

InputsImmediate

- Loss of life
- Displacement of people
- Disruption of daily life
- Damage to property

Long term

- Loss of productive soil
- Damming and flood proneness
- Vegetation loss

NDMA guidelinesI. Structural measures

- ~~Flood~~
- Retention walls on unstable slopes
- vegetation & afforestation to stabilize slopes
- ~~Not~~ Construction of retention structures down slope.

II. Non-structural

- zoning and not allowing construction in vulnerable zones
- vulnerability mapping
- land-use demarcation
- Not exceeding tourism, beyond carrying capacity.

These can help avoid risk of loss of life and damage from avalanches.

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Q.8) Technology plays a multi-faceted role in augmenting the disaster management apparatus of the country. Discuss. Also, bring out the measures needed to enhance the usage of such technologies in managing disasters. (10 marks, 150 words)

प्रौद्योगिकी देश के आपदा प्रबंधन में एक बहु-आयामी भूमिका निभाती है, चर्चा कीजिए। साथ ही, आपदाओं के प्रबंधन में ऐसी प्रौद्योगिकियों का उपयोग करने के लिए आवश्यक उपाय भी बताएं। (10 अंक, 150 शब्द)

Technology plays important role
in various stages of disaster management.

Pre-disaster phase

- 1) Identification of risk-prone zones
(a) vulnerability mapping using
Satellite images, LIDAR
- 2) Risk-zoning of the areas
↳ use of remote-sensing
- 3) Building evacuation shelters and
safer sites
↳ use of robots.

During disaster

- 1) Search and rescue operations
↳ use of robots (a) snake robots.
- 2) Providing aid to the affected
population
(a) through drones.

- 3) Assessment of the damage
① Using drones.
- 4) finding immediate measures to
cope with emergency
② Use of AI to suggest best
options among given options.

Post-disaster

- 1) Recovery and reconstruction
↳ Use of semi-autonomous assembly
robots.
- 2) Mental recovery of the affected
population ① PTSD
↳ Use of AI.
- 3) Ensuring disaster resilience
Land-use zoning based on aerial
photography and remote sensing.

Measures needed

- 1) Detailed guide guidelines on the
extent and scope of technology
use
- 2) NDRF should be equipped and
trained in using technology
- 3) Adequate funding.
This can help in realizing
Sendai goal of Disaster Risk Resilience

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TOTAL MARKS			

Q.9) Outlining the various cyber threats faced by India, assess the state of the country's preparedness to deal with the same. (10 marks, 150 words)

भारत के सामने आने वाले विभिन्न साइबर खतरों को रेखांकित करते हुए, उनसे निपटने के लिए देश की तैयारियों की स्थिति का आकलन कीजिए। (10 अंक, 150 शब्द)

Between January to June 2024,
India faced >30,000 cyber-threats.

Cyber threats faced by India

I. Cyber-crimes

- 1) Fake-news using social media (a)
news of hatred etc
- 2) Deepfakes (a) recent Ashwini
Mandana case
- 3) Phishing, vishing to derive
sensitive information.
- 4) Breaching privacy through
man in the middle attack
- 5) malware, ransomware (a)
worms.

II. Cyber-terrorism

- 1) Damaging a country's critical infrastructure (a) Aims cyber breach
in 2020

2) Hacking into websites of govt. departments

3) Use of cyber-platforms to raise funds for terrorism

Preparedness of country

1) Agencies → CERT-IN
→ National Cyber Security Coordinator (NCSC)
→ NCIIPC
→ NATHRID

2) Policies/Initiatives → National Cyber Security Strategy
→ Cyber-Swachhta Kendra of MeITY
→ Awareness generation against malicious links etc by RBI.

Limitations

- 1) Lack of dedicated law ~~and act~~ to deal with the issues
- 2) Inadequate tech-knowledge of the workforce
- 3) Rising sophistication of the cyber-crimes

There is need of cross-country collaboration to deal with cyber-security issues (4) Budapest Convention

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TOTAL MARKS			

Q.10) Explain how the geographical location of India makes it extremely vulnerable to the menace of drug trafficking. What are the major security threats posed by drug trafficking?

(10 marks, 150 words)

समझाइए कि भारत की भौगोलिक स्थिति इसे नक्सलवाद की समस्या के खतरे के प्रति बहुत संवेदनशील बनाती है।
मादक पदार्थों की तस्करी से उत्पन्न विभिन्न जातीय दुष्प्रभाव क्या हैं?

(10 अंक, 150 शब्द)

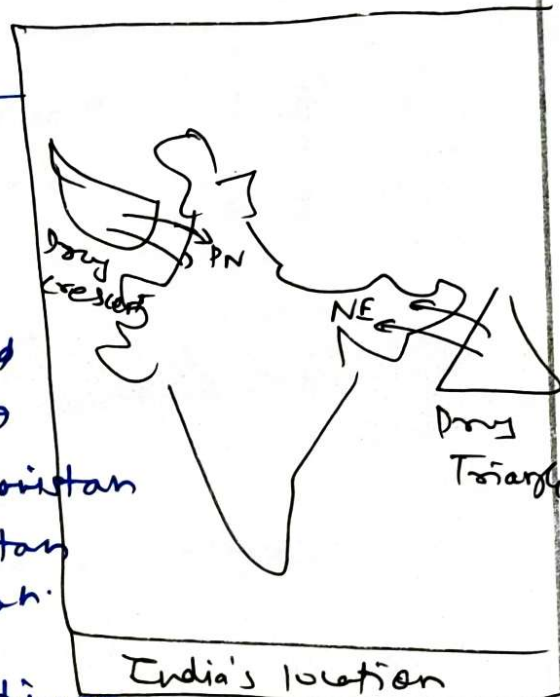
India is grappling with drug menace. About 2.8% of India's population is drug-addict (Ministry of Social Justice)

Geographical location

Located between

- Drug triangle - Laos
- Thailand
- Cambodia

- Drug crescent - Afghanistan
- Pakistan
- Iran



② smuggling of opium
~~Vulnerability~~ from Afghanistan to
Taliban.

Internal security threats

1) The routes to smuggle drugs are also used for human trafficking and arms smuggling.

- 2) Drug trade thrives on finding weaker population, especially youth
↳ threat of dependence on drug-
to routes
- 3) Turns demographic dividend into disaster (a) in Punjab.
- 4) Drug trade is used to fuel radicalism and fund insurgency in Jammu Kashmir and North-
East
- 5) Gives rise to money-laundering of drug-proceeds and is used in terror funding.
- 6) Is organized as a established crime.

India has signed UN convention against NDPS and enacted NDPS

Act to deal with drug menace.

There is need to focus more on it in order to break the links of this organized crime with other risks.

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			

11.

Inclusive growth refers to the growth whose benefits are shared by all classes, castes, genders equitably. It strengthens the idea of welfare state (DPSP Article 38-39)

Road to intergenerational equity

- 1) Sustainable growth and modes of development
 - Ⓐ Green India Mission
 - Ⓑ National Hydrogen Mission
- 2) Focus on specific needs of different age-groups
 - Ⓐ for children - pediatric care
 - Ⓑ for elderly - Geriatric care
- 3) Ensuring resource conservation and preventing wastage of resources
 - Ⓐ agro-ecologically suitable crops → food safety + water security

प्रश्न संख्या
(Question No.)

U.P.S.C.

इस भाग में कुछ
न लिखें
(Don't write anything
in this part)

II. Redistribution of wealth

- 1) Preventing concentration of wealth
within a particular group
(a) through tax and subsidies
- 2) Providing employment opportunities
to weaker and marginalized
(a) Nai Roshri scheme for minorities
- 3) Providing avenues of growth and
skilling to youth and women
etc
(a) National Skill ~~and~~ Qualification Framework

III. Employment generation

- 1) Skilling opportunities to youth
(a) ~~National~~ Skill India Mission
- 2) Vocational studies into curriculum
(a) NEP, 2020
- 3) Integrating industrial demands
with academic curriculum
(a) Industry - university
collaborations.

U.P.S.C.

Steps taken by government in
this regard

I. Inter-generational equity

- 1) NAPCC
- 2) Panchamrit Pledge - Carbon
neutrality by 2070
- 3) Focus on green energy (e)
National Hydrogen Mission
- 4) Efficient agriculture approaches -
(e) ZBNF, Neem-coated Urea

II (Redistribution of wealth)

- 1) Progressive slabs in direct
tax.
- 2) DBT for subsidies
- 3) Credit guarantees and loans
under MUDRA etc.

III (Employment generation)

- 1) Ministry of Skill Development
- 2) Self-employment - NULM, NRLM,
PM SVANIDHI
- 3) Wage employment - ~~ANCA~~ MGNREGA
etc.

Hence the inclusive growth
leads to wider opportunities &
freedom of all to achieve them
(Capability Approach)

Q.12) Discuss the importance of a multimodal transport system in improving the efficiency of transport and the measures to be taken to achieve this.

अर्थ: यह प्रश्न एक बहुमोडल परिवहन प्रणाली के महत्व और इसे सुधारे जाने वाले उपायों के बारे में है।

समस्या का यह अर्थ है कि हमें यह बताना है कि एक बहुमोडल परिवहन प्रणाली क्या है और इसे सुधारे जाने वाले उपायों को क्या है।

क्या कहना है कि यह प्रणाली हमें एक ही जगह से दूसरी जगह तक जाने के लिए सबसे अच्छा तरीका बताती है।

A multimodal transport system is built upon combination of railway, roadway, and waterways and airways to improve the overall economic efficiency

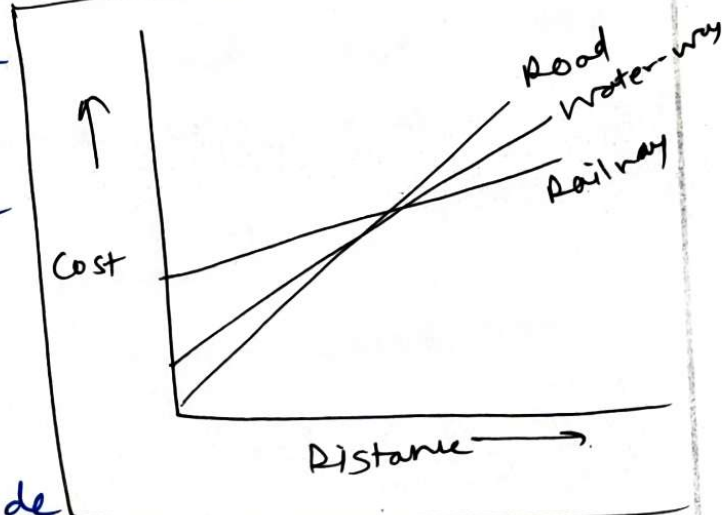
I. Achieving last mile connectivity

1) Roads provide door to door connectivity

2) Railways provide cheap mode of distance transport upto long distance @ Lucknow

mail connects Delhi to Lucknow

3) Waterways or ships provide inter-continental connectivity.



- Efficient Interoperability with different modes through GPS → less duplication and congestion.

Measures needed

- 1) Development of multi-modal logistical parks (1) India developing 35 mmLPs.
- 2) Enhance the utilization of inland waterways (currently CO-IT mode shore)
- 3) Improve the transport infrastructure. roads, railways etc
- 4) Integrated Smart Transport systems to utilize technology to connect.
- 5) Improve the number of ports and railway routes
- 6) Better port-to-hinterland connectivity

These can bring logistical efficiency and overall economic efficiency (SDG-11).

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	
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13

Q.16) 5G technology is effective rollout.

5G तकनीक का

आग

की

(Don't Write anything in this Area / इस स्थान पर कुछ न लिखें)

ing
थान

MSP is the minimum support price that govt announced at the beginning of every sowing season for 22 crops.

Rationale behind declaring MSP

- 1) Provide remunerative prices to farmers (Ashok Dalwai Committee)
- 2) ~~The~~ way to secure food security through MSP based procurement
- 3) Prevents distress-selling and post-harvest losses of products
- 4) Is a tool to incentivize changes in crop-patterns
 - ① MSP based procurement of wheat & rice → wheat-rice dominant crop pattern.

5) Prevents coashing of crop-prices and
safeguards farmers from economic
upheavels.

Issues related to MSP

1) Crop-disparity

- Assured procurement only of wheat
and rice $\rightarrow$ neglect of millets and
pulses etc.

2) Promotes monoculture of wheat &
rice $\rightarrow$ ~~environmentally~~ environmentally inefficient.

3) Benefits only large farmers

(ca) 90% of farmer beneficiaries
lie in green-revolution zone.

4) Not announced as per MS Swaminathan
Formula of $A2 + FL + C2$.

5) WTO issues over whether MSP
is trade distorting

Efficacy of legalizing MSP

1) Provides legal assurance of crops
to farmers & assured procurement

2) Creates liability of govt to provide
allowance in case procurement not
done → Safeguards farmers from
Cobweb phenomena

3) Will promote other crops as well
because assurance will be for all
MSP crops — agro-ecologically
suitable crop-pattern

Issues

1) Higher fiscal burden

↳ Food subsidy is already 0.5% of
GDP

2) Benefits only rich-region and farmers
↳ Only 6% farmers take MSP
benefits in India (NITI Aayog)

3) Populist policies may escalate in
future — "slippery slope"

The focus should be to improve
agricultural efficiency through investment
in infrastructure, better cropping patterns
and irrigation expansion.

This would lead to rise of
"Annapurna".

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			

(14)

Q 13

Topic

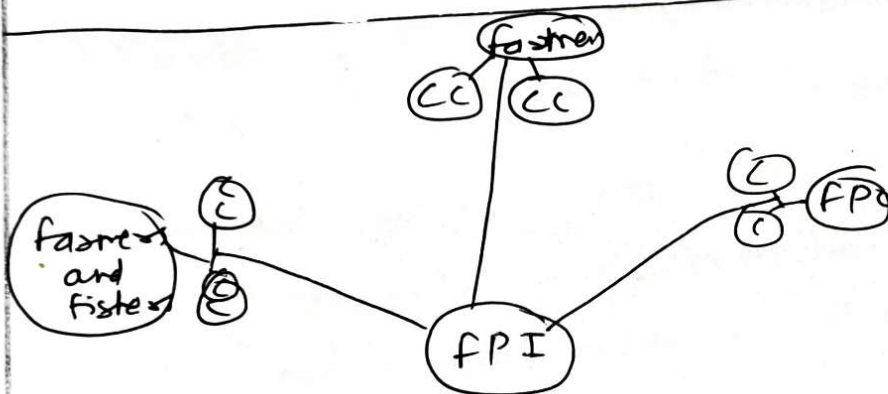
sustainability - farming

MSP

RIS

TAP

Food-processing industries in India contribute to 11% of the total exports and play important role in economic integration.



FPI as integrating mechanism

Bridge between farmers community and formal industrial sector

Due to their backward and forward linkages

Internal Farming Community

- 1) Purchasing raw material
from the rural areas
- 2) Providing regional
centres of growth
① small chips making
FPIs



- 3) Rural integration with urban areas
through demand supply
- 4) Connect villages to urban markets
 { improved remuneration
 { value addition in products } DFI
 (Ashok
 Ramesh)

Forward linkages with industrial sector

- 1) Promotes efficient value addition
in products
- 2) Reduction in post-harvest losses
due to prompt procurement
- 3) Promote Industries promote new
commercial crops in villages ①
FLCS7 variety of potato for chips

4) Access to inputs, infrastructure and credit

② Lays chips industry provides farmers with these.

Issues faced

1) Limited bargaining power of farmers
② seen in Lays chips case

2) Lack of adequate connectivity with urban markets for Bihar, North-East etc

3) Industries promote cash-crops which can increase cost of production for farmers

Measures needed

1) Improved infrastructure and connectivity between rural and urban areas
② Krishi Udaan, Kisan sois.

2) Awareness among farmers - of prevailing consumer demand

3) Creation of FPOs to increase bargaining power of farmers.

FPI thus can act as 'sunrise sector' which brings light in both
② informal economies and industrial sector.

Feedback

(For OFFICE use only)

	①	②	③
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Please put tick marks in the above table.			
Note: G is Good, A is Average and P is Poor.			
TOTAL MARKS			



Q.14) Food

India is 6th largest market
for the global biotechnology products

Role of biotechnology in enhancing
agricultural productivity

- 1) Development of pest-resistant crops
(a) BT cotton - resistant to bollworm.
- 2) Production of biofertilizers
which target specific deficiencies
(a) using rhizobium, azotobacter.
- 3) Producing hybrid varieties of cattle breeds, sheeps etc which give more fur, wool, milk etc
(a) Supercows in Israel - 30 l milk/day
- 4) Development of HYV seeds which

provide higher productivity.

5) Biopesticides — effective pest-
resistance

6) Herbicide-tolerant crops

① GM Mustard — resistant to
herbicide.

7) Biofortification — Golden rice.

Concerns

1) The efficacy of the GM crops is
not known yet

④ GEAC allowed only BT Cotton
and not BT Brinjal.

2) Threat of cross-pollination and
unintended effects

3) The pest-resistance of BT cotton
is slowly eroding.

4) Use of GM crops in food-crops
is not supported by ~~these~~ many
countries

⑤ EU bans GM food crops

5) High cost of production due to
use of terminator seeds.

c) Lack of acceptance among population
 ↳ less demand.

Measures needed

- 1) GM crops should be allowed only after thorough testing
 (Precautionary principle)
- 2) Adequate labelling of GM products
 (FSSAI regulations).
- 3) Until the tests prove certainty, GM crops be limited only to non-food crops
 (e.g. Bt Cotton).
- 4) Adequate R&D on the effects of GM crops.
- 5) The efforts in rest of the sector - HV seeds, hybrid seeds should be promoted.

Thus precautionary principle should be adopted to ensure SDG 1, 3, and 9.

Feedback

(For OFFICE use only)

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Q.15)

5G technology is improvement
over 4G VoLTE due to its wide-
ranging benefits across sectors

~~Feature~~

Applications of 5G Across Sectors

- 1) Entertainment Industry
low latency → good experience of
video watching.
- 2) Telecommunications
Allows multi-device connectivity due
to low latency and interoperability
↳ group calls on internet
possible.
- 3) Health Sector
 - Transmission of health data without
delay
 - Telemedicine.

4) Education

→ Good experience of learning through online lectures.

5) Disaster management

→ Real-time surveillance of the affected region on screen.

6) Industry 4.0

→ Provides speed and efficiency for AI, IoT, Robotics etc

④ ATLAS robot - AI robot based on 5G

Different from its predecessor

4G	5G
1) Limited bandwidth	1) High and wider bandwidth
2) Higher latency	2) Very low latency
3) Larger cell size of network	3) Smaller cell size
4) Can connect limited no. of devices	4) Can connect wide no. of devices.

Challenges

- 1) High cost of rolling out 5G due to infrastructure limitations
- 2) Since the size of network cell is small $\rightarrow$ more mobile towers are needed $\rightarrow$ limits its expansion to remote and rural areas
- 3) High cost of 5G network
- 4) Health issues due to radiowaves
(a) Tinnitus issues.

Measures taken

- 1) 5G has been already rolled out in India
 - 2) Digital Communications Policy promotes it
 - 3) National Broadband Mission ~~utilises~~ focuses on it.
 - 4) Use of USOF Fund to expand 5G infrastructure (a) BharatNet.
- Hence 5G is the new reality, which can fuel Industry 4.0.

Feedback

(For OFFICE use only)

#	G	A	P
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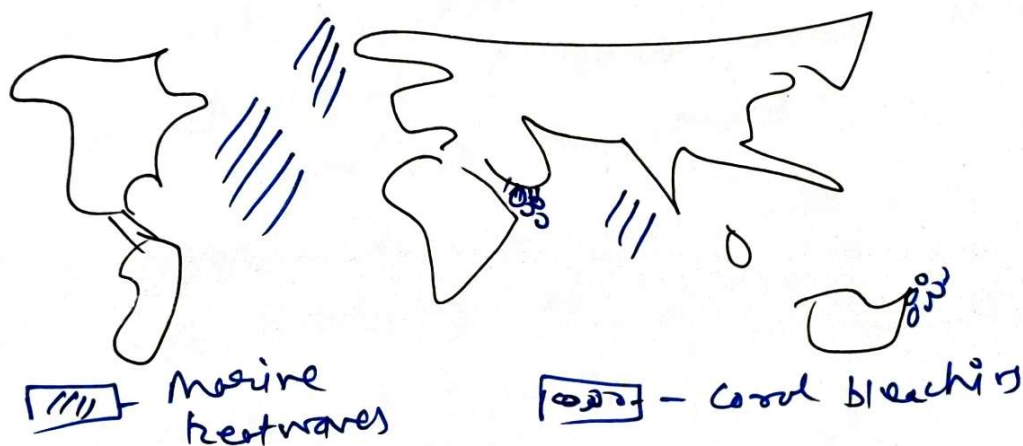
Q.17) Discuss

effects of ocean acidification

समुद्र का अम्लीकरण

उस और पर्यावरण पर क्या प्रभाव डालता है

According to IPCC Assessment Report 6.0, the mean sea-level has risen 15-20 cm between 1850s and today.



Ocean acidification

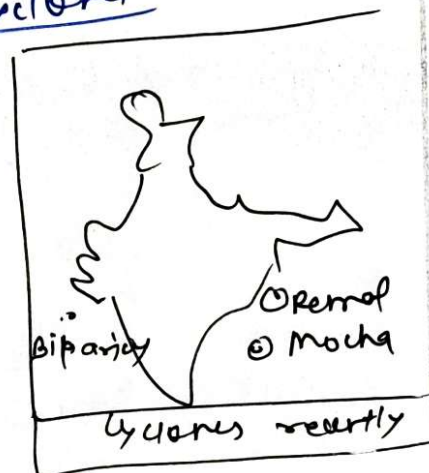
- 1) Leads to coral bleaching
④ 33% of coral reefs were bleached in last 10 years (IUCN)
- 2) Creation of ~~less~~ unfavorable habitats for fishes → fishes migrate →

loss of livelihood to coastal communities

- 3) Dissolution of shells of carbonate marine animals (e) corals, crustacean
↳ loss of biodiversity.

Ocean warming

- 1) Emergence of marine heatwaves
(e) in Europe.
- 2) Coral bleaching
(e) 2/3rd of ~~coral~~ Great Barrier reef is threatened.
- 3) Higher intensity, frequency and unpredictability of cyclones.
- 4) Creation of hypoxic zones → deaths of fishes → loss of coastal livelihood.



Oxygen loss

- 1) Creation of anoxic zones (e) in Central Pacific and Western Indian Ocean.

- 2) Deaths of marine organisms and
loss of Coastal livelihood
- 3) Loss of Coastal attractiveness due
to biodiversity loss → loss of
Coastal tourism.

Measures taken

- 1) UNCLOS Law of the sea prevents
pollution and dumping of waste into
oceans.
- 2) CRZ Rules of India - provide
for afforestation of mangroves and
not affecting coral-reefs etc.
- 3) Coastal Aquaculture Authority of
India
↳ promotes sustainable fishing
and adapting to climate-change.

There is need to mitigate
climate change in order to realize
SDG-14 - sustainable life below
water.

Feedback

(For OFFICE use only)

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



Q.18) The invisible nature of groundwater is a major obstacle in the path towards achieving the twin objectives of building climate resilience and meeting the Sustainable Development Goals (SDGs).
Elucidate. (15 marks, 250 words)

भूजल की अदृश्य प्रकृति जलवायु लचीलेपन के निर्माण और सतत विकास लक्ष्यों (SDGs) को पूरा करने के दोहरे उद्देश्यों को प्राप्त करने की राह में एक बड़ी बाधा है। स्पष्ट कीजिए। (15 अंक, 250 शब्द)

India is the largest user of groundwater in the world (1st. of the global) - WRI.

Invisible nature is obstacle in -

Building climate resilience and meeting SDGs

- 1) Excessive extraction of groundwater leads to land-degradation against SDG-15.
- 2) Lack of knowledge about utilizable aquifers → exacerbates drinking water issues arising due to surface water scarcity.

3)

Q.19) Despite various efforts, a lasting solution to the insurgency in the north-eastern region of India remains elusive. Analyse the reasons behind the continuation of insurgency in the region. Also, suggest effective measures to tackle it. (15 marks, 250 words)

विभिन्न प्रयासों के बावजूद, भारत के उत्तर-पूर्वी क्षेत्र में उग्रवाद का स्थायी समाधान अस्पष्ट बना हुआ है। क्षेत्र में उग्रवाद जारी रहने के पीछे के कारणों का विश्लेषण कीजिए। साथ ही इससे निपटने के लिए प्रभावी उपाय भी सुझाएं। (15 अंक, 250 शब्द)

The ~~major~~ North-East region remains connected to mainland through a separate Siliguri corridor. This region is grappling with many issues.



Various efforts

1) Signing of peace accords with insurgent groups

(a) Mizo Accord
Bodo Accord

2) Creation of Bodoland Territorial Council

3) NITI Forum for development of North-East

4) North-Eastern Council

5) SPADP-NER - for infrastructure

development in NER.

- 6) Infrastructure development (a)
~~Boat~~ on Towu and Lilobari airports
- 7) Governance reforms (a) ~~effective~~ implement-
 ation of Schedule VI and ILP

However the insurgency continues in
 form of { Demand of Greater Nagalim
 Insurgent groups - NSCN, ULFA
 Meitei - Kuki conflict etc.

Reasons behind it

I. Geopolitical

↳ Instability in Myanmar and
Bangladesh → illegal immigration →
 fuels threat of demographic change

II. Cultural

Diverse cultures and diverging
 demands (a) between Meitei and Kuki
 over ST status

III Administrative

- Suspicion and lack of trust on
 security personnel due to alleged
 human rights violation under AFSPA.

IV Economic

Poor economic developments unemployment and poverty → insurgents utilize these to fuel radicalism and insurgency

V Cross-border cultural affinity

(4) With Kuki of India and Chin Community of Myanmar → fuel immigration and cultural issues.

Measures needed

- 1) Economic development - provide employment opportunities.
- 2) Effective governance - effective implementation of FRA 2006, schedule VI → provide tribal autonomy.
- 3) Secure borders - use of technology (LIDAR, motion sensors etc) to seal borders - Madhukar Gupta Committee
- 4) Sensitization trainings of security officials - to not hamper human rights
- 5) Follow 'Act East Policy' to utilize neighbors' goodwill.
These can help erode insurgency in North-East.

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.20) While developmental initiatives have a significant role to play, they alone cannot root out terrorism/militancy in Jammu and Kashmir. Comment. (15 marks, 250 words)

हालांकि विकासात्मक पहलों की महत्वपूर्ण भूमिका है, लेकिन वे अकेले जम्मू-कश्मीर में आतंकवाद/उग्रवाद को जड़ से खत्म नहीं कर सकते हैं। टिप्पणी कीजिए। (15 अंक, 250 शब्द)

Terrorism refers to use of extreme ~~religious~~ and violent methods to propagate religious/political/ideological viewpoints of a radical group.

Role of development initiatives in Jammu and Kashmir

- 1) Abrogation of Article 370 and implementation of Constitution of India
↳ promotes constitutional ideals and feelings of national integration.
- 2) Allowing the outsiders to reside and purchase property in J&K
↳ promotes cultural and social diversity and development initiative.
- 3) Holding legislative assembly elections
↳ provides political representation to people and feelings of integration with

national polity

- 4) Promoting tourism and industries
↳ Provides employment to people
and reduces avenues for radicalization
by extremists.

They are alone, however, not enough
because

- 1) Militarism is still ongoing
- 2) Presence of over-ground workers and
sleepers cells.
- 3) Incidents of store beltins on security
personnel.
- 4) Smuggling of drugs, FICN, arms
through drones.

What else is needed

- 1) Promoting good-governance and
feeling of national integration through
Soft-measures
(a) not attacking civilian property
- 2) Strict border security
(a) use of CBMS-BOLD QIT.
(Shankar Committee).

- 3) Training and Capacity-building of
security personnel to deal with
sophisticated drones which are
used in smuggling
- 4) Promote tourism, industries (FPI,
cottage industries) etc
↳ employment to youth → less
chances of diversion.
- 5) International collaboration against
state-sponsored terrorism
(a) UNSC Resolution 1373.
- 6) Use of media and NGOs to
highlight positive impact of govt
initiatives in J&K.

The internal security of
a nation like India, thus lies upon
smart security and safe population.

Feedback

(For OFFICE use only)

#	G	A	P
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P & R			
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TOTAL MARKS			

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.