

TEST CODE

FIAS - MGP - GS -

Time Allowed : Three Hours
समय : तीन घंटे

ForumIAS

Maximum Marks : 250
अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	SHREY SHASHANK		
Roll No./अनुक्रमांक		Medium/माध्यम	English ☒ हिंदी ☐
Center Code/परीक्षा केंद्र		Date/दिनांक	

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

INDEX TABLE / अनुक्रमणिका

INSTRUCTION / अनुदेश

Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक
1		
2		
3		
4		
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9		
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19		
20		
Total/कुल अंक	250	

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।2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory.
उत्तर पुस्तिका में अंग्रेजी/हिंदी में बीस प्रश्न दिए गए हैं, सभी प्रश्न अनिवार्य हैं।3. The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के लिए निर्धारित अंक उसके सामने अंकित किए गए हैं।4. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided.
उत्तर प्रवेश पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो कि दिए गए स्थान में इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवर पर स्पष्ट रूप से लिखा जाना चाहिए।

5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off.

प्रश्नों में शब्द सीमा, यदि निर्दिष्ट हो, का पालन किया जाए। प्रश्न-सह-उत्तर पुस्तिका में खाली छोड़े गये किसी भी पृष्ठ या पृष्ठ के भाग को स्पष्ट रूप से काट दें।

For Student Only / केवल परीक्षार्थी प्रयोग हेतु

Examiner's Discretion/मूल्यांकन कर्ता का विवेक :

Start Time/प्रारंभ करने का समय :

End Time/समाप्त करने का समय :

9:30

12:30

Total Marks/कुल अंक :

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

For Office Use Only / केवल कार्यालय प्रयोग हेतु

*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.

ECN CODE/

EG/ईजी :

Evaluation Date/

ईसीएन कोड :

① ② ③ ④ ⑤

मूल्यांकन तिथि :

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।

Instructions: All questions are compulsory. The number of marks carried by a question/part is indicated against it. Quality of the answer is more important than the length of the answer.

निर्देश : सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न द्वारा धारित अंकों को उसके सामने इंगित किया गया है। उत्तर की गुणवत्ता उत्तर की लंबाई की तुलना में अधिक महत्वपूर्ण है।

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, पुनर्वार्ता और समापन पर ध्यान क्यों दिया जा रहा है? (10 अंक, 150 शब्द)

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 डिज़ाइन 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)

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)

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)

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)

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 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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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)

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 विकासात्मक 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)

Q.1)

Since India has
recently negotiating RCEP
agreements EU ~~free~~
free trade agreement etc
reveals the importance of
free trade agreements.

Need/Reasons

- ① to increase export potential
- ② for diversification of agri
export chain
- ③ to increase FDI 2.  currently
agri value
export
- ④ for economic growth
and inclusive growth
- ⑤ connecting global value chain

- ⑥ explore the potential of globalisation
- ⑦ increased penetration in US-EU markets
- ⑧ to promote rural economy
e.g. food processing export

Measures needed

- * [Asok Gulati] → remove ban on export
rice etc
- * diversification of destinations
- * quality standardisation
- * testing labs, for food processing sectors

free trade agreements are critical to achieve VPKSH Bharat by 2047.

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.2)

India's fiscal deficit is 5-6% of GDP demands for a well-designed fiscal policy to achieve inclusive growth.

Need for fiscal policy
→ equitable distribution of resources.

- targeted subsidies
eg: DBT transition.
- budget allocation to major welfare schemes
eg: lakhpati diet scheme
- evidence-based allocation
eg: poverty eradication program
- allocating funds for sector multiplier effect or high spillover effect
eg: CAPEX scheme.

Welfare of all

- ① equitable distribution
eg: 24000 crore for PM-JAM
- ② disabled friendly infrastructure
eg: Ramps in public places
- ③ gender budgeting
eg: Maternity Benefits Act
- ④ agrarian infrastructure
eg: PM-SAMPADA scheme
- ⑤ rural development
eg: Mudra Yojana

Measures needed:

- * Economic survey $\Rightarrow$ Golden rule of fiscal policy
- * employment generation
- * innovations to work began ^{saksham} ^{card}
eg: Aadhar linking ^{saved} ^{expenditure}
- fiscal policy need to be aligned with new welfare model.

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.3)

India's initiatives for National mission for oil seeds etc creates the significance of edible oils.

Reasons for import of edible oils

- ① inadequate domestic production
- ② cheap oil import eg. from Malaysia
- ③ high demand
- ④ to ensure food security
- ⑤ high cost of production of edible oil

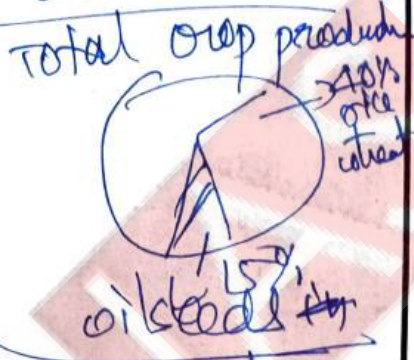
Measures needed to increase domestic production

- * policy support eg. National mission on oil seeds

(Don't
in this
by 2015)

Q.4)

- ① subsidize oil seeds
 - ② promote crop diversification
 - ③ irrigation facility
 - ④ awareness generation
 - ⑤ SAA-based community level seed distribution
 - ⑥ increase research for high yield variety
 - ⑦ Increase agri research spending on oil seeds
- oil seeds are critical to ensure food security and Right to food as per Article 21.



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.4)

India is the largest ~~depletion~~ of groundwater for irrigation (more than 60%) demands for micro irrigation adoption.

(too much water) → drought
 (too little) → delayed monsoon
 (too little) → groundwater depletion

Role of micro irrigation

- ① Targeted irrigation reduces water demand eg: PM Kisan Sanchay Yojna
- ② drip irrigation saves water by 30%
- ③ less groundwater extraction
- ④ saving water for other purpose

Q.5)

Adoption is skewed & below potential $\Rightarrow$ Reasons

- ① dependence on flood irrigation
eg: Rice, wheat
- ② high cost of drip irrigation
- ③ digital illiteracy $\Rightarrow$ lack of awareness in usage.
- ④ water intensive crop cultivation eg: Sugarcane
- ⑤ dependence & inertia to openness & technology.

Measures needed.

- * Per drop - more crop - micro irrigation
- * traditional harvesting
- * million wells recharge program
- ↳ by Swaminathan committee
- Irrigation ~~is~~ can be improved by ISRAEL model $\Rightarrow$ micro irrigation

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.5)

Recent Balasore railway accident, Andhra Pradesh's tooth clear mint de led to safety regulations debate.

Issues in railway

* safety → lack of safety rule
implementation
 → lack of safety audit
 → old & railway tracks
unsafe
 → level crossing

* under capacity → train running in tracks
with more than 100% capacity



60% of rail tracks overstrained

→ inadequate new plans
 → less number of tracks

Lack of modernisation → poor quality
signal management
 → inadequate technology
adoption
 → traditional train-oracle
management system
measures needed.

Bibek Debroy → modernisation
committee of railways
 → salvation for
quality enhancement

Independent railway safety
regulatory authority

technology eg: Korach
adoption system.

Since Railways are growth
 engines of nation's vitality.
Yatra ⇒ PM Modi, safety need
 to be ensured

Feedback
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TOTAL MARKS			

Q.6)

NISAR is the joint
cooperation between ISRO
and NASA.

[Role in space exploration
and scientific research]

- ① earth atmosphere studies
↳ on climate change
- ② impact of earth's
magnetism on earth
- ③ monitoring ocean
water, glacier and ice

[Role in climate change
monitoring]

- * sea level rise
↳ coastal flooding
management

* prediction of El Nino,
La-Nino and delayed
monsoon

* ~~the~~ brought management
through atmosphere
humidity accumulation.

monitoring natural
hazard management

* in tackling landslides,
earthquake by ~~the~~
observing text via banding

Feedback

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TOTAL MARKS			

Q.7)

Role in food security

- * increasing shelf life of food products
- * energy security for power for irrigation
- * irrigational facilities
- * groundwater depletion using nuclear energy.

Q.8)

IPCC $\rightarrow$ increasing temperature lead to 3-4 times increase in forest fires on India.

Need for sustainable forest management $\rightarrow$ carbon sink
 $\rightarrow$ carbon sequestration
 $\rightarrow$ part of Green India
 to achieve $\frac{1}{3}$ rd forest cover target

Causes of forest fires

- ① global warming & climate change
- ② rise in drought heat waves
- ③ poaching, ~~snatching~~
- ④ slash/burn agriculture
- ⑤ unsustainable forest tourism
- ⑥ ineffective rules implementation on campfires etc.

Multidimensional impact

- loss of carbon sink → global boiling effect
- urban heat island
- ecosystem degradation
- biodiversity loss eg: Birds, Animals
- soil infertility
- livelihood threat to tribes
eg: Mankharia → Tendu leaves collected by

Measures for preventing management

- * strict implementation of law
eg: forest conservation Act
- * fire breaks to prevent spread
- * afforestation eg: National Green Indira mission
- * Global cooperation
eg: Paris Agreement

Bonn challenge → aims to increase forest to 35% which would be useful to tackle forest fire issue

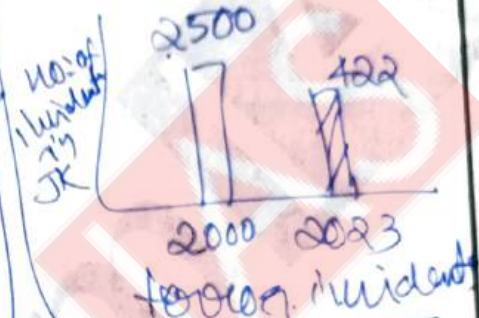
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Q.9)

Recent attacks in Jammu Kashmir have thrown light into burgeoning terrorism in JK;

Reasons for recent surge in terrorism violence in JK



- ① formation of new RAW groups
eg: Kashmiri Tigers in JK
- ② Pakistan state sponsored terrorism, infiltration etc
- ③ political instability in neighbouring countries eg: Taliban in Afghanistan
- ④ Opium cultivation, arms & weapons trade, increased funding etc for violence

- ⑤ policy issues → eg: Article 370
 revocation triggered separatist tendencies
- ⑥ inadequate surveillance
 due to snow-covered stretches

strategies to counter it.

- ① Development oriented → employment creation
 eg: PM special package for SK
 → rural connectivity.
 eg: Atal tunnel, Kargil-Leh projects.
- ② Security approach → modernisation of police
 → increase complement
- ③ Capacity building → cultural integration
 eg: Ek baar shreebhoot
 → community policing.
 eg: operation sadbhavana.

Dinesh Lakshy committee → amnesty scheme for stone pelters.

Kashmir violence can be tackled through AB Vajpayee's "Kashmiriyat Jammootat, Itis ahayat" approach

Feedback

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Q.10)

Recent cyber attacks by China has thrown light into cyber security issues.

Recent events

→ cyber hacking

eg: D-Talk on Kudamkulam plant

→ cyber crime Index

→ India ranks 10th

→ Polymorphic attacks

Implications of cyber security

① Threatening of information

critical infrastructure

eg: Kudamkulam power grid attack

② data colonialism & data

imperialism due to

Information not export states

of India

- ③ economic loss $\rightarrow \approx 5\%$ of GDP
- ④ privacy violations
eg: Titatok misuse by China
- ⑤ backwardness in deployment of SA technology
- ⑥ increasing cyber crimes
eg: Rashmi Karmaholake video
- ⑦ lack of governing / regulatory due to servers outside India
eg: FB, WhatsApp, Google

Measures needed

- * Srikrishna committee $\Rightarrow$ data localization for sensitive data
- * Kamakoti committee $\Rightarrow$ data ombudsman
- * India need to ratify Budapest Convention $\Rightarrow$ model $\rightarrow$ Paris call by France
- cyber ~~see~~ security should be aware through offensive & defensive cyber doctrine

Feedback

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Q.11)

LCA reforms in India involved liberalisation, privatisation, globalisation, through which its economy opened to global world.

LCA reforms need / $\rightarrow$ BOP crisis
 $\rightarrow$ high inflation
 $\rightarrow$ import over $\rightarrow$ low growth.

India's economic dynamism enhanced by LCA reforms.

- ① increased service sector export
eg: nearly 26% of total export
- ② agri products share in global value chain increased.
- ③ structural transformation
eg. from agriculture to services
- ④ banking social penetration, financial inclusion etc.
eg: 55 crore Jan Dhan accounts

⑤ increased human development index through health, education sector's private boom.

Global Issues - evolving

- global pol. crisis eg: climate change, Russia-Ukraine war.
- trade war & protectionism eg: US-China trade war
- corporate minimum tax debates

Evolving domestic landscape

- high inequality (eg: 1% of population holds 17% of total wealth)
- crypto currency developments
- digital revolution
- industrial sector stagnation
- low export share in global value chains.

Need for Reforms 2.0

- ① industrial modernisation $\Rightarrow$ increase overall GDP & overall prosperity
- ② banking sector privatisation $\Rightarrow$ high rural penetration
- ③ Infrastructure development through PPP model
 eg: PM Janashakti
- ④ Indic economy, $\Rightarrow$ create an enabling environment for private sector as anchor
- ⑤ agr. reforms with climate resilient crops.

Babakalyani $\Rightarrow$ focus on SEZ for export increase

Economic reforms 2.0 is needed to achieve industrial revolution 4.0 and 5 trillion economy.

Feedback

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Q.12)

India's recent initiative for National Infrastructure pipeline, PM-shakti etc. emphasised role of infrastructure in economic growth.

Infrastructure for economic transformation

① Structural transformation

⇒ Industrial infrastructure is needed

② Road, railway, port, airport

⇒ To promote export value chain

③ Overall connectivity

⇒ ~~for~~ overall growth

④ Cyber security infrastructure

⇒ To prevent loss due to cyber attacks

⑤ Digital infrastructure
eg: DigiLocker

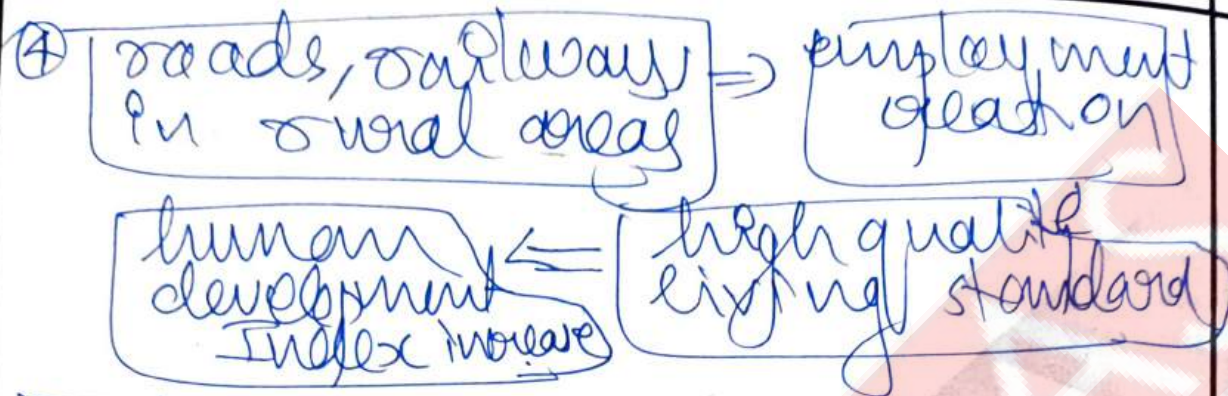
⇒ digital revolution

Infrastructure for sustainable development

- ① Green Infrastructure → to prevent climate change
eg: Green India mission.
- ② Climate-resilient Infrastructure → to reduce impact of floods, droughts
eg: rainwater harvesting infrastructure.

Infrastructure for social well-being

- ① Disabled-friendly infrastructure → Inclusive growth
eg: Ramps in public offices.
- ② Elder friendly infrastructure → eg: hearing aid, low benches etc.
- ③ Gender sensitive infrastructure
eg: Toilets for transgenders.



Challenges

- ① technology fatigue
- ② less fiscal space for capital investment
- ③ PPP model → less focus on risk allocation
eg: Delhi airport roof collapse

Measures

- ① PPP model → eg: National water pipeline
 - ② focus on risk viability
 - ③ Babbar Yamini recommendations → infrastructure development on SEZ
 - ④ Bibek Debroy committee → privatisation of railways
- Infrastructure development is helpful to achieve SDG - 9 & 8

Feedback

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TOTAL MARKS			

Q.13)

Asheries contribute 8% in agri value chains in which aquaculture play critical role to play.

Aquaculture $\Rightarrow$ role of significance

* nutrition security

① Fresh/egg $\Rightarrow$ nutritional diet

② Aquaculture practice $\Rightarrow$ better income security

Food budget increase

* livelihood generation

① additional income generation $\Rightarrow$ self employment

② Investment in aquaculture $\Rightarrow$ reduce rural urban migration

promotes rural industry

* economic growth

(1) [aquaculture industries] $\Rightarrow$ [increase agri output]

(2) [export opportunities] $\Rightarrow$ [increased foreign exchange]

(3) [FDI Inflow] $\Rightarrow$ [capital mobilisation]

[Measures taken by Govt]

(1) Infrastructure creation

$\hookrightarrow$ cold storage eg: PM Matsya Sampada

$\hookrightarrow$ long term fisheries

Modernisation

a: fisheries development ind

(2) Aquaculture export policy

eg: April export holidays

* diversification of commercial fisheries

eg: Aquaculture development program

* diversification of products and quality checks

eg. APEDA → authority

Way forward

① Shankar Kumar Committee

→ outsourcing cold storage to private sector

→ modernisation of infrastructure

② Asok Dalwai

link to Export value

chain → food processing cluster

Aquaculture plays critical role in achieving SDG-8 - economic growth and SDG-2 - zero hunger

Feedback

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Q.14)

MSP is direct cash subsidy, demands to raise MSP is in news because of farmers distress and suicides due to income inconsistency.

MSP - well intentioned → price realisation
 increasing aggr income → provide working capital to farmers

MSP ⇒ Issues

* Market distortions

① MSP price increase → next year crop production ↑
 ↓
 loss of income for farmers ← price in markets falls

② MSP oriented agriculture
 ↳ lack of crop diversification
 ↳ (pulses, millets, etc.)

③ less quality grains due to less investment in research

⇒

long term crop production falls & price increase

Ecological stress

① monoculture

→

green deserts

② lack of crop diversification

→

soil salinity increase

③ MSP for rice & wheat

→

irrigation need

ground water depletion

eg: Punjab & Haryana

→ stubble burning

air pollution

④ high usage of fertilisers & pesticides

→

soil erosion & water pollution

Need MSP reforms for more productivity & efficiency

① targeted subsidy

→

eg: DBT transfer

② nutrient-based subsidy → per unit productivity increase

③ awareness generation of MSP

④ link MSP with oil & health card



⑤ swaminathan committee

→ increase MSP to 150% of cost of production

⑥ expand MSP to all 22 crops

⑦ limit power subsidy to reduce the water table depletion

⑧ direct cash subsidy programs

eg: PM-Kisan

Model → Odisha → Kalika scheme

Efficient MSP reforms are needed to ensure doubling farmers income and inclusive growth

Feedback

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Q.15)

India's reforms in biotechnology is advanced by biopharma mission, am-crops etc, which plays critical role in various sectors including food security, environment, ethics etc.

Potential of Biotechnology

① * sustainable food production

① climate resilient crops → to address climate induced stress in agriculture
eg: Drought resistant seed varieties

② gene editing of crops/seeds → to create pest-resistant feature
eg: AM crops

③ bio-fortification of crops → increase crop productivity

- * Efficient waste management
- ① biodecomposers in tackling subtle burning / ^{stop} waste management
 - ② biodegradable plastics to control plastic management, reduction
 - ③ bacterias for reducing water pollution
 eg: Azapper to deal with water pollutants
 - ④ bio-methanation and aerobic decomposition to tackle solid waste management issues

* Advancements in human health

- ① gene editing → prevention of offspring diseases
 eg: CART-T cell technology
- ② in-vitro mitochondrial technology to tackle mitochondrial disease → preventing inherited diseases

③ vaccines based on RNA, DNA technology → healthy immunity
eg: COVID-19

challenges

- ① public perception eg: Protest against Bt mustard
- ② environmental ethical concerns eg: ^{Baby's} gene editing on clinical triggered ethical debates
- ③ technology fatigue
- ④ high cost of technology
- ⑤ → unaffordable for poor
- ⑥ seed colonialism by MNC's
- ⑦ Narrow range of pests resistance eg: Bt cotton

Measures

* Renuka Chaudhary Committee

Implementing bio safety regulation

Biotechnology can help to achieve inclusive growth and tackling emerging health issues

Feedback

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Q.16)

IPCC → global rise
in temperature already
surpassed 1°C against the
aim to ~~act~~ limit it to
 1.5°C - pre-industrial level.

This climate change has huge
impacts.

Significant alterations in
ecosystem.

① Oceans → coral bleaching
g: Gulf of Mexico
→ ocean acidification,
increase in dead zones

② Glaciers → melting ice release
more CO_2
g: by 2100 CO_2 BT CO_2 would release
→ mercury, CH_4 etc release
additional global warming

③ Land → drought & heat waves
affect land ecosystem.

↳ land ecosystem degradation Effects of climate change

* Biodiversity

① marine heat waves → food chain in ocean ⇒ collapse
 eg: 3000 ^{fish} species lost in 2015

② drought inadequate rainfall ⇒ species extinction

③ Threat to polar, land ecosystems aquatic ecosystems etc.

* Ecosystem services

④ ELNINO → heats ocean
weakening ocean currents

eg: Gulf stream current weakens
 ⑤ ecological productivity ↓
due to lack of nutrient recycling

* human livelihoods

① drought → crop failures eg: 50% of population in India depends on agriculture

① Coastal Flooding → Sinking Islands eg: Tuvalu Island

② Water scarcity → Industry's collapse eg: Textile industry

Approaches needed

* Conservation → afforestation
eg: National Green India mission

→ technology adoption
eg: Bio-rock ~~mineral~~ Technology

→ community participation, international cooperation
eg: Paris Agreement.

* Climate Adaptation → climate-resilient crops
eg: GM crops

→ shift to water deficit crops
eg: Millets, pulses etc

→ rehabilitation of people
eg: Indonesia's changing capital plan

Recommendations

→ alternative fuels such as ethanol etc
climate change need to be tackled to achieve NET CLIMATE NEUTRALITY by 2050

Feedback

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Q.17)

Urban areas, called cradle of civilisations such as Harappan civilisation, can contribute more than 60% of GDP.

as growth engine → urbanisation
→ smart cities
→ development of IT industries

Urban ⇒ increasing disasters.

* [natural]

- ① coastal flooding, eg: Mumbai due to melting ice & sea level rise
- ② droughts, heat waves, eg: Hyderabad due to climate change
- ③ water scarcity eg: Bangalore
- ④ cyclones, heavy rainfall eg: Chennai
- ⑤ earthquakes eg: Delhi
- ⑥ ~~flash~~ landslides due to tectonic effects eg: Western Ghats region

* Man-made disasters

- ① lack of drainage patterns → Flash floods
eg: Mumbai
- ② inadequate crowd planning & management → Stampede
eg: Delhi
- ③ ineffective safety regulations → Industrial disasters
eg: Vijay gas leak
- ④ not following fire codes, building codes → eg: fire accident in Sakshi

Mitigation & Management strategies

NDMA guidelines as follows

- * structural measures → wind breaks, shelter belts for cyclone
- disaster-resilient infrastructure
- natural levees barriers to prevent floods
- compartmentalisation of

- fire hazard areas
- rock netting to counter landslide
- drainage patterns
- rainwater harvesting ^{interesting}
- eg: Johad in Rajasthan

- Nonstructural ^{early warning system} eg: INCOIS
- flood, drought prone area mapping
- scientific methods for disaster prediction
- risk analysis & vulnerability assessment
- capacity building among people
- involvement of NAO's and other stakeholders

Disaster readiness to be focused rather than rescue and rehabilitation strategies

Feedback

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Q.18)

Disaster management
is guided by National Disaster
Management Act, 2005,
which helped to achieve significant
progress in 21st century.

Significant progresses

- ① National disaster response force
↳ for timely response to disaster
- ② National disaster mitigation fund
↳ for adaptation efforts
- ③ crisis management committee
↳ for effective coordination
- ④ involvement of community
NBO's etc eg: Kerala flood
- ⑤ use of social media and
technology for effective
propagation.

Challenges persist.

Ensuring timely response

- ① inadequate rescue equipment
eg: Uttarakhand Flood issue
- ② lack of pro-active approach
from authorities.
- ③ inadequate trained manpower
eg: need for CRPF in disaster
- ④ ineffective coordination
due to hierarchical bureaucracy
eg: Police & fire coordination

Ensuring effective coordination

- ① lack of support of NGOs and
other stakeholders eg: Chennai Flood
- ② ineffective media management
- ③ inadequate skilled training
for disaster response
- ④ lack of support of common people

⑤ issues in using technology
eg: synchornisation errors
in drone

Measures needed

NDMA guidelines

* Timely response → coordinate with early warning system
→ increase funding to disaster response infrastructure
→ disasters about in districts

* Timely coordination → MoU with fire and police department
→ easy deployment of NDRF, CRPF etc
→ effective media management
→ follow SOP for fire, police etc

Disaster preparedness should be in line with Sendai framework guidelines

Feedback

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Q.19)

In 2022, more than 100 organised crimes are reported, which have strong association with terrorism also.

Symbiotic relationship between organised crime & terrorism

- ① organised crimes planned mode ⇒ easy absorption for training in terrorism
- ② human trafficking, weapon trading, arms trading ⇒ funding for terrorism
- ③ common recruitment groups
- ④ training for both organised crime ⇒ terrorism
- ⑤ Money power & muscle power

Aggravates internal security concerns

① weapon trading → affects insurgency

② drug trafficking → Law & order issues
eg: Punjab, North East

③ human trafficking for ransom → gender violence

④ cattle smuggling = violates border security principles

⑤ support to LWE in eastern border regions eg: Nepal's support to West Bengal

steps can be taken to address the linkage of threats emerging

* Madhukar Gupta committee ⇒ defence modernisation

- drone based surveillance
- ground based sensors to tackle infiltration & terrorism
- modernisation of police forces to tackle IED etc.

* Shakti Committee → increase defence spending to 5% of GDP

* development oriented approach → rural connectivity
 eg: PM sadak yojna
 → employment creation
 eg: special package for J&K
 → skill development

* cyber security → enhance skilled manpower

→ digital literacy

Organised crimes & terrorism creates black hole syndrome, need to be tackled.

Feedback

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Q.20)

India's diverse
border territories with
snow-covered sielhen, hilly
northeast, coastal areas need
to be safeguarded for internal
security.

Robust & effective border
management strategy

* ~~Need for~~ ^{Role} ~~of~~ ^{for} security apparatus
in border area

① drone based surveillance $\Rightarrow$ prevents
infiltration & aggression

eg: CIBUS in Bangladesh border

② smart-fencing to prevent
illegal migration
eg: in Pakistan border

③ modernisation of borders with WiFi connectivity ⇒ prevents smuggling, piracy & program.
eg: Sagarimala

④ community based sensors for tackling IED

Role of local support

- ① in intelligence gathering about terrorist movements
- ② to prevent local support to infiltrators
- ③ counter the role of over ground workers by sensitising nationalism in them.
- ④ cultural integration to curb separatism, regionalism
eg: in JK.

[Initiatives taken by Govt]

* Security apparatus

[CIBNY] → drones for surveillance technology adoption

[Sagarmala] → port modernisation

→ smart farming

→ Border Road development by BRO to promote easy troop movement

* Developmental partnership with local

① Operation Sadbhawana by CRPF in JK to win the heart

② 'Watan Ka Jumo' for youth exchange

③ Ek bhagat shesht Bhavat for cultural integration

Onekakra committee → increase defence funding to 3% of GDP
→ needed for border security

Feedback

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