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TEST CODE 7 1 3 3 0 4

MGP 2024

Time Allowed : Three Hours

समय : तीन घंटे

Forum IAS

Maximum Marks : 250

अधिकतम अंक : 250

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	Muhammed Swalah T.A		
Roll No./अनुक्रमांक	1910110116	Medium/माध्यम	English ☒ हिंदी ☐
Center Code/परीक्षा केंद्र	1901	Date/दिनांक	11-9-24

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

INDEX TABLE / अनुक्रमणिका			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। 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।	
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Examiner's Discretion/मूल्यांकन कर्ता का विवेक :			Start Time/प्रारंभ करने का समय : 3:30PM	End Time/समाप्त करने का समय : 6:35PM
Total Marks/कुल अंक :			Mode Of Examination/ परीक्षा की विधि :	Online/ऑनलाइन ☒ Offline/ऑफलाइन ☐
*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, fact 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 limited नहीं) पर दिए गए अंक हैं।			For Office Use Only / केवल कार्यालय प्रयोग हेतु	
			ECN CODE/ ईसीएन कोड :	Evaluation Date/ मूल्यांकन तिथि :
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Note: Mentors 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

Q.1) Why
Agreement

हाल के वप

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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 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 subjective assessment 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 / space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggested 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, 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 subjective components of assessment.

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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)

Recently India renegotiated some of its FTAs with South East Asian countries in addition to withdrawal from RCEP negotiations with ASEAN.

Reasons for negotiating, renegotiating & concluding FTAs

① Widening trade deficit

eg 46-48 bn\$ trade deficit with ASEAN

② Tax evasion through tax havens.

③ Singapore washing.

④ Growth of multilateralism

- To counter China.

- Bilateral FTAs as more feasible.

⑤ India - UK FTA gives entry to EU markets.

④ Increasing weaponisation of trade.

⑨ Tariff wars

⑤ Growing Indian exports.

⑨ 3rd largest pharmaceutical industry.

⑥ Focus on labour

⑨ To reap the benefits of demographic dividend.

Wayforward

L Regional integration

⑨ Inter SAARC trade is only 5%.

L Internationalisation of Rupee

⑨ Rupee Rouble transactions.

We should also focus on

'Make in India and Make for the world'.

Feedba

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Please put tick marks in the table.

Here G is Good Average and P 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 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)

An efficient fiscal policy can promote redistribution of resources (Article 39b), & reduce inequalities while promoting growth and development.



Fiscal policy as Vital instrument

I Equitable distribution.

Horizontal & Vertical distribution

Address regional inequalities

Address distress migration

6th Finance Commission considering income inequality as criteria.

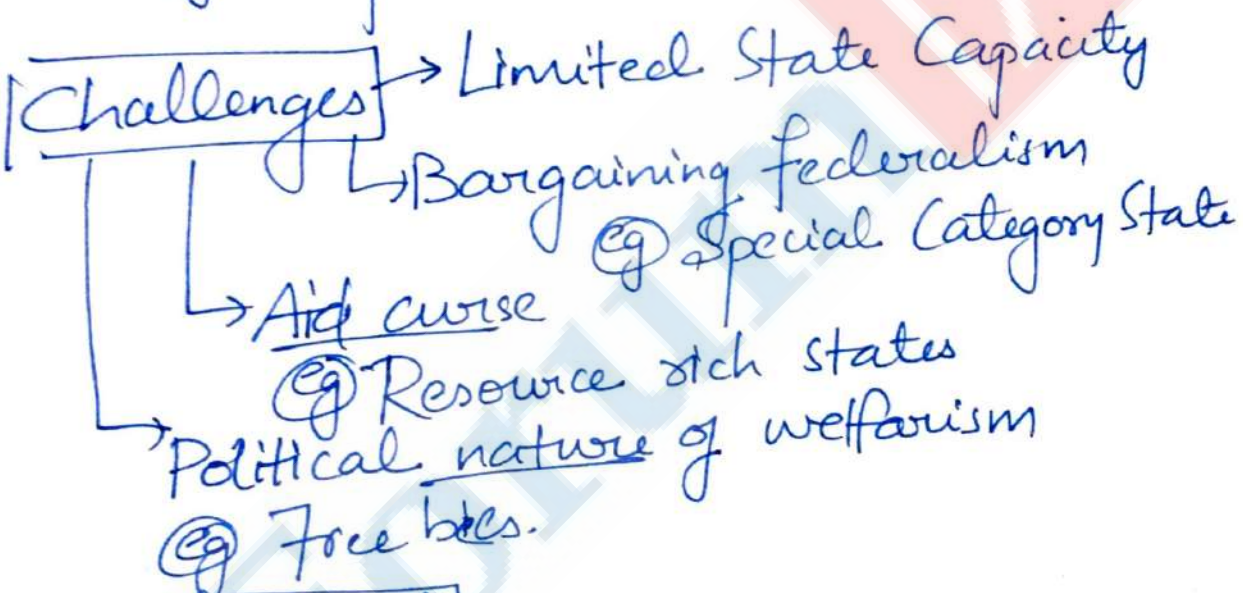
Regional growth

Employment

Mission Purvodaya for East.

II Welfare of all Sections

- ① Income redistribution @ Progressive taxation
- ② welfare for vulnerable sections
@ PM Janman.
- ③ Basic amenities for all
@ Capital investments.



Way forward

- ① Independent Fiscal Council
to regulate fiscal policy (14th FC).
- ② Zero budgeting

we should further focus on
 devolution of funds to ensure subsidiarity
 at local levels.

Feedb (For OFFICE

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Here G is Good Average and 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 meets 54% of its edible oil demands through imports (MoF, 2022).

Factors contributing to imports.

- ① Limited domestic production and high demands
 eg 11 MMT production and 24 MMT demands
- ② Lack of capacity for domestic processing.
- ③ Reliance on Palmoil rather than Mustard oil - due to health benefits.
 eg 86% imports from Indonesia.
- ④ Lopsided trade agreements - Making imports cheaper.
 eg India ASEAN agreement, 2010.
- ⑤ Challenge of Food Security
 eg Shifting land for oils.

Measures required

- ① Comprehensive National programmes
eg NMOP.
- ② Introduction of improved Crop varieties conducive for geography
eg GM Mustard
- ③ Oil seeds under MSP.
- ④ ~~PLI~~ Public private partnerships and incentivise production
eg PLI Scheme for food processing.
- ⑤ Renegotiate FTAs - To protect nascent ~~for~~ growth.

India should diversify its ~~6~~ sources of oil imports while augment local production to protect Strategic sovereignty.

Feedback

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Here G is Good 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)

Around 600 mn Indians face high to extreme water scarcity in India (NITI).
 → 0.3m ground water depletion every year (NOAA).

Water Crisis in India

→ R. Demand outweigh supply by 2030 (NITI).

→ 78% Urban waste reaches rivers.

→ 2 lakh deaths every year due to water borne diseases (Lancet).

Micro irrigation as Sustainable solution.

↳ High water use irrigation efficiency
 @ Drip irrigation.

↳ Low growth of weeds and pests.
 @ Reduce weedicide & pesticides.

↳ Reduced irrigation and power use
 @ 19% energy for irrigation.

L Address leaching and salinisation due to Overirrigation.

Challenges

- L High upfront cost
- L Suitable for high value crops
eg Grape Vines.
- L Low mechanisation in India
eg 48%. Compared to 54% in China.
- L Subsistence nature of farming.
↳ low skilling

Wayforward

- ① Promote agriculture extension to increase literacy
eg KVKs under ICAR.
- ② Climate resilient crops reducing water usage
eg Millets.
- ③ Promote horticulture - favouring microirrigation.

we should further
promote subsidised models to
promote microirrigation in agriculture
Sector.

Feedback

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Here G is Geo Average and P Poor.	
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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 seen ^{railway} accidents in Chandipur of Odisha and Vizianagaram of Andhra Pradesh leading to human loss.

Challenges causing accidents.

I [Safety]

- ① Underutilisation of funds under 'Rail Sanrakshan Kosh'
- ② Limited Coverage of Kavach - anti Collision mechanism.
- ③ Issues in Signalling eg Signal jump in Odisha.

II [Under Capacity]

- ① Low maintenance of tracks.
- eg Railway Safety committee report, 2022 found it as the major issue
- ② Vacancies in Safety related posts

③ III Modernization

- ① Use of ICF Coaches - Low security features.
- ② Delays in action taken report related to safety audits.
- ③ Lack of Overbridges, Unmanned Level Crossing etc.

Wayforward

Private participation in Station management

⑨ Namo Bharat

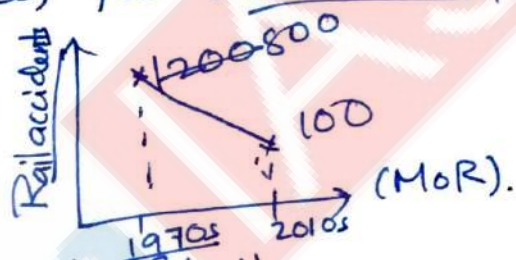
Increased electrification

⑨ Only 45000 km electrified under 65000 km

⑨ Promotion of new technologies

⑨ Bullet trains.

Considering the fact that Railways with 19000 trains carrying 3.5 mn people on a daily basis, we should prioritise its safety and security.



Feedb

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Here G is Good Average and Poor.

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 mission is a coordinated mission between NASA & ISRO for Earth Observation using Synthetic aperture Radar.

International Exemplify International Cooperation.

- ① ISRO as a reliable partner.
- ② Deep research in Space instead of Space observation.
- ③ Collaboration between Indian and US institution.
- ④ Coordinated research & resource transfer.

Significance

± Climate monitoring

- ① Ground Monitor Ground water depletion

3) Remote sensing on change in monsoon patterns

3) Change in Vegetation and biodiversity.

4) Monitor pollution levels.

II Natural hazard management

① Monitor glacial melting
- Predict GLOF

② Formation of cyclones and landfill

③ Realtime information of earthquake formation and Tsunami alerts

④ Information to complement Rescue missions

NISAR represents India's ascension as a Global Spacefaring leader.

Feedb

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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 involves use of atomic energy to generate heat and ~~ele~~ energy.

Significance of Nuclear technology

I. Food security | Agricultural Sustainability

- ① Radiation treatment of farm produce
- Increasing shelf life
- ② Cheaper and efficient electricity
- improved farm mechanisation.
- ③ Land use efficiency
- Prevents agricultural land transformation.
- ④ Reduced Carbon footprint
- ⑤ France reduced 70% of emission by Nuclear power.

II Food Security

- ① ~~Not~~ Reduced land equivalence for thermal power plants - more production
 - ② Low cost of generation
 - High purchasing power
 - ③ Reduced dependence on ~~fire~~ fire wood and reduced deforestation
- Way forward

- ① India's 3 Step programme
 - for sustainable energy.
- ② Promotion of Modular Small modular reactors - for electrification of remote areas.

Nuclear technology can reduce import dependency & ensure sustainable growth.

Feedback

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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)

India's 36% forests are susceptible to forest fires leading to ₹440 Cr loss in 2022 (NDMA).

Causes

- ① Climate change impacts
eg Years with highest mean temperature such as 2015, 2016 & 2019 have seen largest number of fires (NDMA).
- ② Intentional - Environmental Crime
eg Encroachment, land mafias.
- ③ Local factors
eg Dry leaves, beedi, fire in nearby villages,
- ④ Change in vegetation
eg Plantation forestry in Uttarakhand under British.

Impact

I Human

- Loss of livelihood, life.
- High Respiratory diseases.

II Biodiversity (eg) PM 2.5 and 10.

- High pollution.
- Favour growth of certain plants.
- Change in ~~geo~~ geography.
- (eg) Grasslands in Himalayas.

Measures required

- ① Forest fire alert system.
(eg) Canadian model
- ② Local Capacity building.
(eg) Boggins
- ③ Counter fires (WFI).

Forest fire mapping should be done under local & levels considering local factors.

Feedb

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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)

Recent attacks in Jammu region saw death of civilians and causing hurdles to ~~some~~ integration.

Reasons for recent surge.

- ① Growth of homegrown militants
 - ⊙ Reduction of foreign terrorists.
- ② Increasing Securitisation of Kashmir
 - Shifting militancy to Jammu.
- ③ Diplomatic goals for Pakistan
 - ⊙ To regain relevance after deoperationalisation of Art 370.
- ④ Changing nature of militancy
 - ⊙ Hybrid terrorists.

Strategies required

I Top down

① Coordination between forces.
eg BSF and Army.

② Effective intelligence gathering

eg Satellite based Surveillance

II Bottom up 3) Social media monitoring

1) Local Capacity building

eg Village defence Guards.

2) Good governance

eg Representative elections in

Kashmir.

3) Deradicalisation

+ Thorough adoption of
models like Telangana model.

Feedback
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Here G is Good Average and Poor.	
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 involves psychological impact of cyber space pushing them to be tools than ends while using cyber space.

Possible implications

- ① Negative health habits
eg Phubbing, Doom scrolling.
- ② Online radicalisation
eg Lone wolf attacks
- ③ Monetisation of personal data
eg Attention Economy.
- ④ Addiction
eg Infodemic, Loss of Cognition.

5) Reduction of physical activities

eg Reducing Increasing Non Comm life
Style diseases.

Way forward

1) Cyber literacy missions

eg Only 27% Indians are
digitally literate (RBI)

2) Promotion of Cyber hygiene

eg Digital tax media under IT Act

3) Address Technology enabled
gender violence.

4) Promotion of Spiritual and
Intellectual growth through Curriculum

Including Yoga and
Sports in Schooling and Colleges.

Feedb

(For OFFICE)

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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)

Economic Liberalisation of

1991 opened Indian markets to integrate with Global Supply chain.

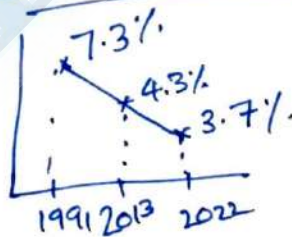
→ Stable foreign exchange reserves
 @ 650 bn\$ in 2023

1991 reforms enhancing India's Economic dynamism.

→ Rising FDIs

@ 400 bn\$ in 1987 to 1,100,000 bn\$ in 2019

→ Reduction in Unemployment



→ Reduction in poverty

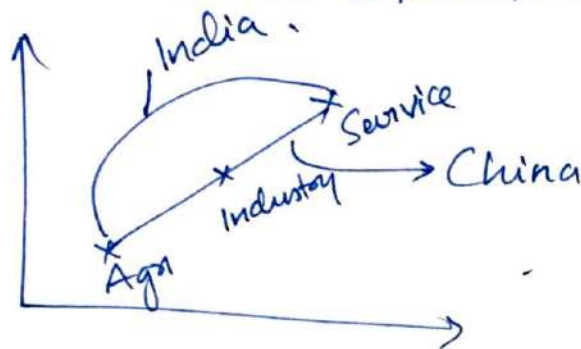
@ 223 mn 15% MDI poor in 2019 (CNITI).

Challenging domestic and global landscape

① Hyper globalisation repudiation (Eco survey).

① Rising protectionism, Tariff wars.

② Thwarted Structural transformation (Eco survey).



③ Climate induced Agricultural stress (Eco Survey).

eg 15-20% loss of farmers due to climate change.

④ Human Capital Regress (Eco survey).

eg Only 3.7% Indians are skilled compared to 86% in South Korea.

⑤ Global poly crisis.

Covid-19
Dot Com bust
Russia-Ukraine
Global Financial crisis
New Cold War
West Asian crisis
Climate Change

- Inflation
- polarisation
- low growth
- High mortality

Blue print for reforms 2.0

I Social

- ① Human capital development
 (a) 68% in working age population.
- ② Health Protection of Vulnerable population
 (a) 32% dependents.

II Economic

- ① Self sufficiency in Critical technologies
 (a) INDUS-X forum between India and US.
- ② Capability approach (Amartya sen)
 - Increase the capabilities of consumers.

III Political

- ① Trust based governance.
 (a) Reduce Corruption.

We should focus on evergreen growth underlining the idea of 'Ek Bharat Shresht Bharat'

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)

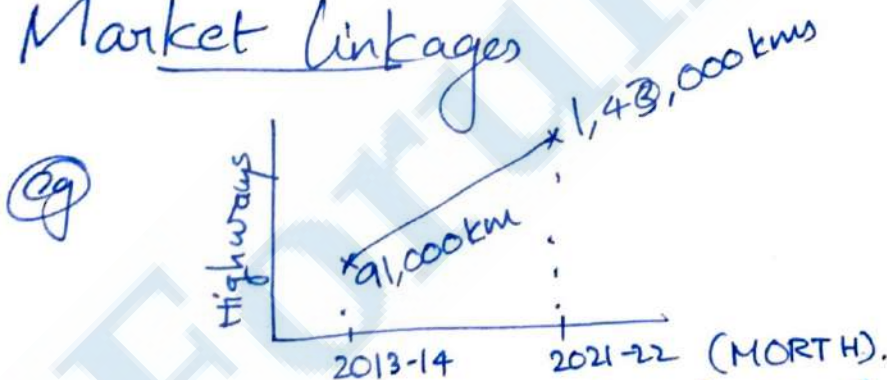
बुनियादी ढांचे का विकास न केवल आर्थिक परिवर्तन के लिए बल्कि सतत विकास और सामाजिक कल्याण के लिए भी आवश्यक है। उदाहरणों के साथ विस्तार से समझाइए। (15 अंक, 250 शब्द)

Long term multiplier of infrastructure investment is 2.5, (RBI) underlying the importance of infrastructure.

Significance

① & I Economic transformation

① Market Linkages



② Industrialisation of hinterlands

③ 'American roads are good not because America is rich, but America is rich because roads are good' (Roosevelt)

③ Reduce Logistics Cost

⑨ Inland waterways - ₹ 25-35 paise/km.
Road ways = ₹ 2.5/km

II Sustainable development

① Reduce congestion.

⑨ PM Gati Shakti

② Reduce pollution

⑨ Metro projects

③ Equitable growth

⑨ Mission Purvodaya - for Eastern India.

④ Climate mitigation and adaptation

⑨ PM Suryagari Yojana

II Social Wellbeing

① Digital public infrastructure

⑨ UPI & Aadhar

- Digital empowerment

② Empowerment of Vulnerable groups

③ Road Requirement project for LWE.

3) Democratisation of knowledge.

③ SWAYAM Prabha TV.

→ Long gestation period

→ Limited State Capacity

→ Last mile connectivity.

Challenges

→ Slow execution of projects
→ Lack of coordination.

Wayforward

→ Public private people partnerships

③ SHG-bank linkage.

→ Citizen audit

③ Public disclosure

→ Open bidding

③ Gem portal.

& Government increased

the Capital expenditure from ₹7 lakh Crore to ₹10 lakh Crore underlying the importance of infrastructure growth.

Feedb

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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 involves cultivation of fisheries, prawns and other marine products in farms, aquariums and other similar centres.

Significance.

I Nutritional Security

① Address micronutrient deficiency.

eg Hidden hunger, 43% anemia among teenage girls.

② Reduce marine pollution

eg Bottom trawling in Indian Oceans.

③ Value added products

eg Sea Omega 3 fatty acids, Calcium tablets.

II. Livelihood generation

① Address issues of marine fishing

eg 3-4 kg/catch/day by Indian fishermen against 250kg/day in Denmark.

② Protection from Climate distress

eg Rising Sealevel, 52% rise in Cyclones

③ Address deforestation pollution

eg Pollavarum mangrove loss due to fishing.

III. Economic growth

① Quality assurance for exports

eg India is the Second largest fish producing country.

② Growth of food processing Sector

- Huge initial Capital
 → Conversion of mangroves to fishing ponds
Challenges → Lack of expertise.
 → Subsistence nature of fishing.

Measures taken by government

- ① Promotion of Cold Chain infrastructure
 eg PM Mega food park in hub & spoke.
- ② Initiatives to double income of fishermen
 eg PM Matsya Sampada Yojana.
 - Subsidies for aquaculture.
- ③ Extension programmes
 eg Sagar Vani app.
- ④ Bilal fisheries under KISAN Credit card.

Underlining the importance of the sector, P Hon'ble PM rightly compared the blue charkha of flag to fisheries sector.

Feedback

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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 Price

are announced by the government every year at the beginning of Sowing Season based on the recommendation of CACP.

→ Address market distortions of farm produce @ Artificial hoarding.

Significance → Ensure price realisation

→ To promote food security

@ Procurement through FCI.

→ Ensure farmers welfare

@ M. S. Swaminathan: Two planks of India's food agricultural growth are assured price & markets.

etc

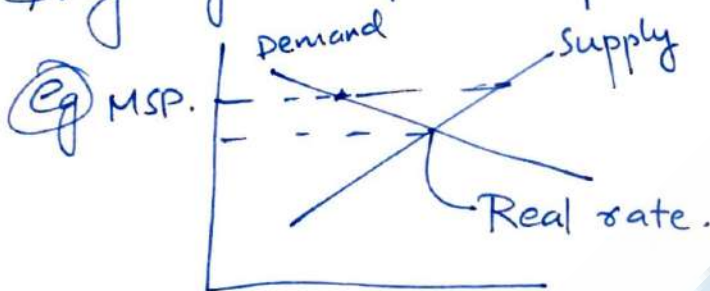
Challenges

I/Market distortions

① Cereals Cereals Centricity

eg Focus on Paddy and wheat

② Shift of Artificial food inflation



③ Shift of Cropping pattern

eg Millets to Cereals.

④ Chakravartu Challenge

eg No exit provision.

II Ecological stress.

① Water pollution

eg Salinity in Ground water stress for Cereals.

② Stubble burning

- Due to Paddy & wheat focus

eg 80,000 tonnes of stubble burnt in Punjab (2020).

3) Excessive irrigation

⑨ 19% power used for irrigation.

4) High fiscal burden

⑨ ₹ 98000 Crore. in 2022.

Measures required

I Inclusive

① Expansion to Eastern India.

⑨ ⑨ Green revolution 2.0. with MSP

② Rainbow revolution - inclusion of multiple crops under MSP.

③ Climate resilient crops to be promoted.

⑨ Millets under PM SHRI.

II Efficiency

① Water use efficiency

⑨ PM KUSUM for Solarisation.

② We should focus on

market linkages and increased targeting of MSP by converting into C2 model as suggested by M.S. Swaminathan.

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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 involves use of Genetic engineering and Bioprocess engineering for human welfare and growth.

Potential of Biotechnology

I Sustainable food production

① GM Crops

eg ~~BT~~ BT Cotton - making India the second largest cotton producer.

② Increasing Climate resilience

eg 30% increase in food production by 2030 through Biotech (ICAR).

③ Food fortification

eg Golden rice.

II Efficient waste management.

- ① 3rd and 3rd Gen and 4th Gen
biofuel production
eg Thorough Alga-GM Algae.
- ② Resource extraction and mining
- with reduced pollution
eg Bio mining. using micro organisms.
- ③ Waste decomposition
eg Methane plants through
bioprocess engineering.

III Human health

- ① Vaccine production
eg mRNA vaccines like Pfizer.
- ② Diagnosis and treatment
eg CAR-T Cells therapy for Cancer.
- ③ Preventive health care
eg BT used for seduction of pathogens.

- Spillover effects eg To other species,
- Development of Superbugs.
 - eg BT resistant white bollworms.

Challenges. → Inequality in access

eg 300,000 - 400,000\$ for CAR-T cell

→ Ethical dilemma

eg Super babies such as Lila in China.

→ Issues like Monocropping, Cancer development, monopolisation etc..

Way forward

→ Unified regulatory regime

eg Scattered between GEAC, RTGE etc..

→ Equitable access

eg Covid for vaccines

→ Promotion of Centres of Excellence.

At Domestic

As R.A.P.J Abdul Kalam

rightly remarked, 'Future belongs to ~~the~~ the integration of Bio-info and Space.

Feedback

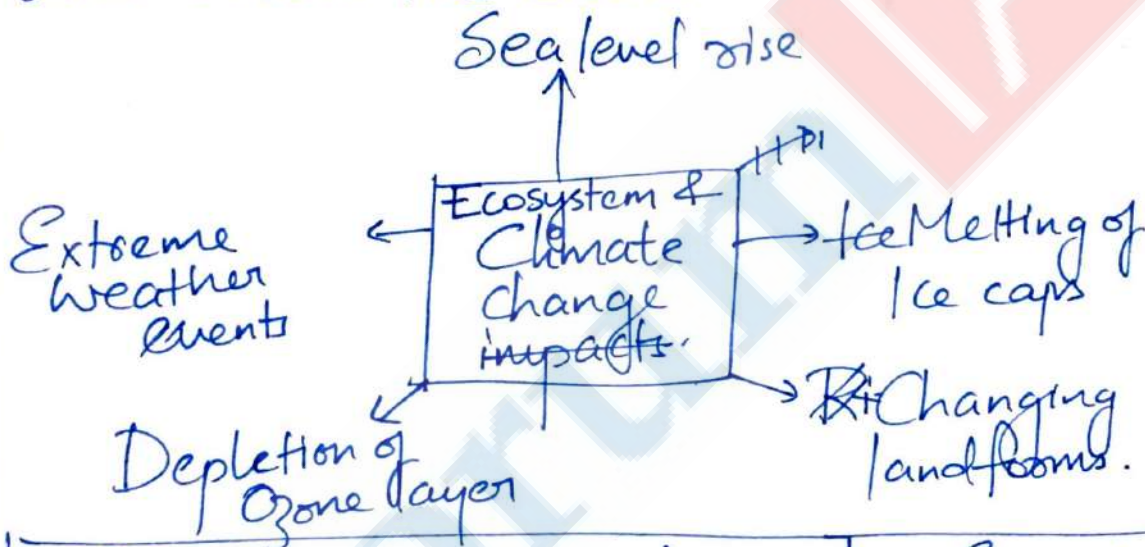
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TOTAL MARKS			

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

जलवायु परिवर्तन के कारण पारिस्थितिकी तंत्र में महत्वपूर्ण परिवर्तन हो रहे हैं, जिसके परिणामस्वरूप जैव विविधता, पारिस्थितिकी तंत्र सेवाओं और मानव आजीविका पर व्यापक प्रभाव पड़ रहा है, जिसके कारण संरक्षण और जलवायु अनुकूलन के लिए एकीकृत दृष्टिकोण की आवश्यकता है। विश्लेषण कीजिए। (15 अंक, 250 शब्द)

Climate change has resulted in more than 1°C temperature rise across the Globe since 1700s.



Effects of Climate change on Ecosystems

I Biodiversity

① Migrations

eg) Temperate animals to North due to melting of ice caps.

② Biodiversity loss

eg) & 25% of freshwater fish are

at a risk of extinction (IPCC 6th AR)

③ Coral bleaching

eg Lenses at Great barrier reef.

II Ecosystem Services

① Change in monsoon pattern

eg 80% of rain concentrated in 100 days (IMD).

② Rising pollution

eg Delhi during winters

③ Drought and famine

eg Water conflicts, agricultural stress.

III Human Livelihood

① Climate refugees

eg Australia signed agreements with Palau.

② Land Submergence

eg 80% land of Maldives to be submerged by 2050.

Integrated Measures needed

II Conservation

① One health approach.

⑨ Mission LIFE.

② Biocentric models of development

⑨ Species & centric projects

③ Global Cooperation

⑨ Carbon market mechanisms.

II Climate adaptation

① Adaptation of livelihoods

⑨ ① Climate smart agriculture

⑨ Expansion of Irrigation

② Reduction of agricultural pollution

⑨ Zero Budget Natural Farming.

② Protection of Vulnerable groups

① Islands and Under developed Countries

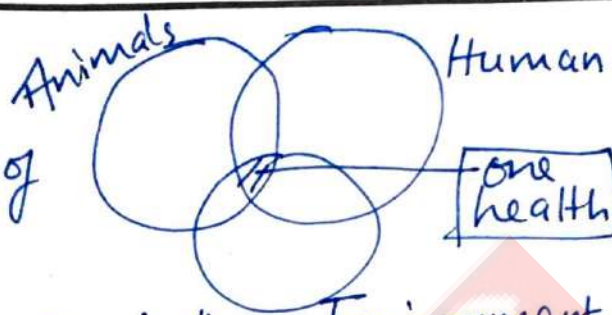
⑨ IRIS, Loss & Damage.

② Communities

⑨ Pygmies.

SC in Ranjith Singh Case, 2024

underlying the challenge of Climate Change
and freedom from Climate change
under Art 21.



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

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

Urban areas in India constitute 3% of the total land while contributing 60% of GDP (NITI).

→ Earlier Civilisational Centres

① Harappa & Mohenjodaro

Cradle of Civilization.

→ Great Seat of power

① Delhi of Mughals.

→ Cultural Centres

① Paris, Venice.

Growth Engines

→ 1% rise in Urban areas in a district leads to 2.4% rise in its GDP (NITI).

→ 67% of migrants registered growth in income after moving to Urban areas (NITI).

Challenges

I Man made disasters

① Urban fires

eg 4th largest threat in Urban areas (NDMA).

② Urban flooding

eg - due to congestion and encroachment

eg 2018 Chennai

③ Urban heat islands

- Due to over crowded neighbourhoods
- Lack of Ventilation

II Natural

① Cyclones in Coastal areas

eg Vardha Cyclone in Chennai, 2018.

② Earthquakes and Tsunamis

- due to tectonic and reservoirs induced

eg 2022 Earthquake in Turkey.

③ Weather extremes

eg Heatwaves, cloudburst etc..

Measures requiredI Mitigation

- ① Expansion of fire brigades (12th Schedule)
 - eg Fire brigades with 3 min response time (NDMA).
- ② Sustainable Urbanisation
 - eg Green highways projects of MoRTH.
- ③ Adaptation of Global models
 - eg 'City as water scapes model' - Denmark

II Management

- ① Local Capacity building
 - eg Citizen as first responders. (NDMA).
- ② Early Warning measures
 - eg IndiaQuake app
- ③ Realtime information dissemination
 - eg NDMA SMS Service.

Considering the fact that

30% Indians live in Urban areas.

Disaster Diastaster management of Urban areas is of paramount importance.

Feedback

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TOTAL MARKS			

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

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

India is has the Largest number of population (1 billion) vulnerable to disasters, followed by China (UNESCO).

→ ① First Standing Disaster Response force: NDRF

→ ② Satellite based disaster monitoring

Progresses made
in
Disaster Management

③ HYSIS, RISAT.

③ Comprehensive legislation

③ NDMA Act, 2005.

④ Successful efforts

③ India during Covid-19.

⑤ Global Cooperation

③ HADR Missions, Operation Dost for Turkey.

Challenges

I) Effective Coordination

- ① State governments as the first responders
 - ⓐ Fire brigade under 12th Schedule.
-leading to Coordination issues.
- ② La Graps in Capacity building
 - ⓐ Low & Inefficient management by Police.
- ③ Regional disparities
 - ⓐ Low presence of NDRF in North East.
- ④ Politicisation of Disaster response funds
 - ⓐ Karnataka against Centre.

II. Timely response

- ① Inefficient early warning measures
 - ⓐ Landslide warning still under development
- ② Lack of mapping and disaster zoning
-leading to increased vulnerabilities

②

Way forward

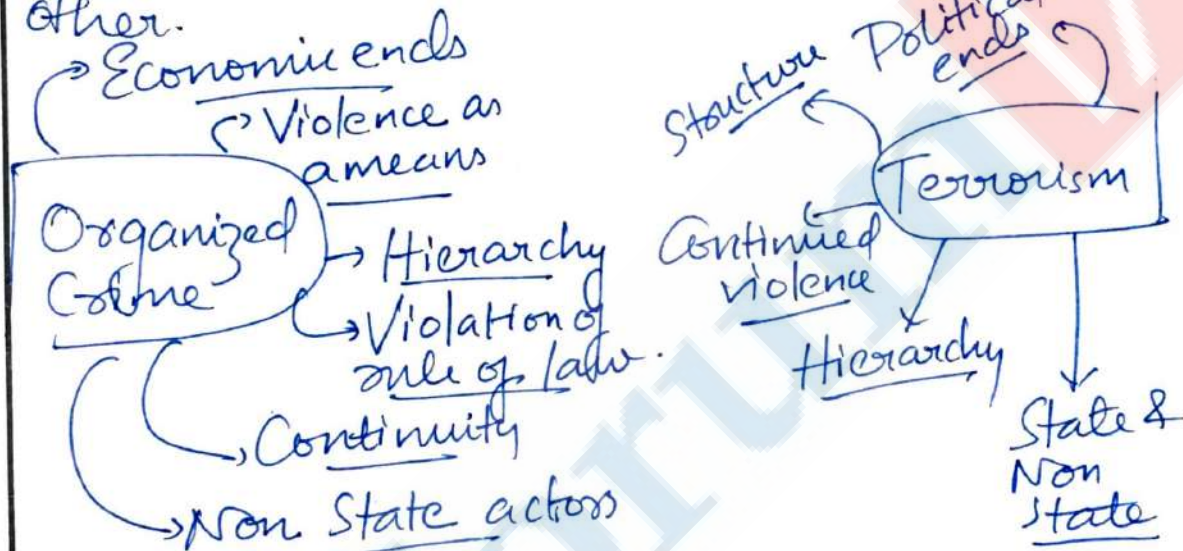
- ① Local Capacity building
 - eg Kerala Volunteer force with 1 lakh Volunteers.
 - ② Prevention focus on disaster risk reduction - Sendai Framework.
 - eg Sendai National Retrofitting mission, 2013.
 - ③ Inclusion of different emerging disasters
 - eg Cyber attacks, Epidemics.
 - ④ Inclusion of disaster management in School Curriculum
 - ⑤ Global Cooperation
 - eg NDRF during Nepal Earthquake, 2015.
- Disaster Management should focus on proactive measures such as Prevention - Mitigation - Preparedness in addition to the reactive Rescue, Response and Rehabilitation.

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)

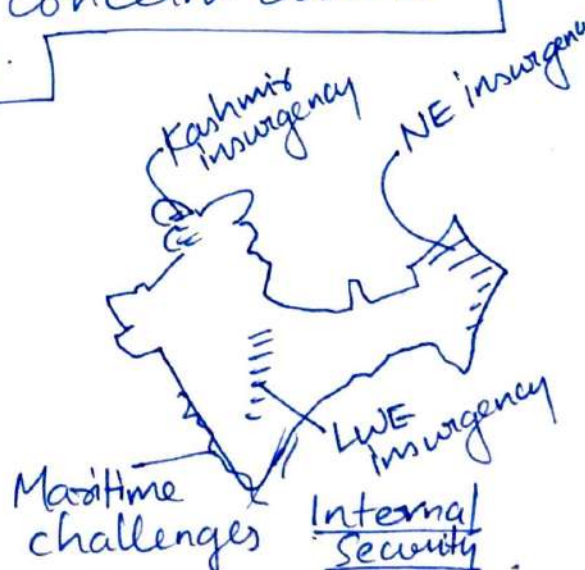
Organized Crime and terrorism has a diabolic symbiotic relationship where one perpetuates the other.



Internal Security concerns due to relation.

① Drug trafficking

② NCSM(IM) in Nagaland using



Poppy Cultivation to fund insurgents.

② Organized Crime providing Mobility and infrastructure

eg D-Company during 1993 Mumbai attacks.

③ Money laundering

eg Kashmiri terrorists using Hawala network.

④ Human trafficking

eg ISIS using woman trafficking for funds.

⑤ Radicalisation to create ungovernability

eg Lone wolf attacks.

Measures required

① Institutional

① Intelligence gathering and timely action

eg CERT-FIN and CERT-IN.

- ② Effective border surveillance
 - ⑨ BOLD - RIT in Indo Bangla border
- ③ Effective response force National
- ③ Single force to deal with Challenges
 - ⑨ NIA Act, 2008.

II People Centric

- ① Local Capacity building and Employment
 - ⑨ Himayat Scheme in Kashmir.
- ② Effective measures for human intelligence
 - ⑨ Vibrant Village programme.
- ③ Inclusive growth and development

III Global

- ① Arrest illegal flow of cash
 - ⑨ FATF
- ② Diplomatic measures to isolate state sponsored terrorism
 - ⑨ India's efforts to isolate Pakistan after 26/11

Feedback

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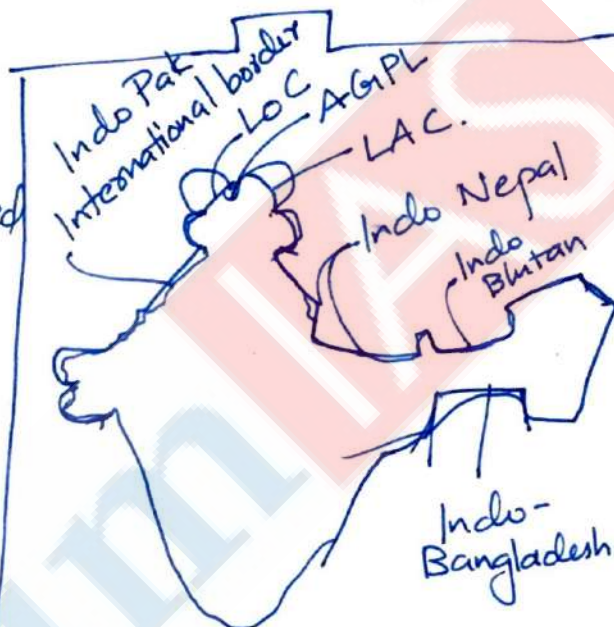
Q.20) Strengthening security apparatus in border areas and forging developmental partnerships with the locals are essential components of a robust and effective border management strategy. Discuss, with initiatives taken by the government in this regard. (15 marks, 250 words)

सीमावर्ती क्षेत्रों में सुरक्षा तंत्र को मजबूत करना तथा स्थानीय लोगों के साथ विकासवात्मक 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's Minister of Defence Rightly remarked that India's border population as 'strategic assets' rather than just villagers.

Significance of border management for

1. Partnerships with locals



India's borders

Indo Pak & Indo Bangla → BSF

Indo Nepal & Indo Bhutan → SSF

Indo China → ITBP.

① Reliable and actionable intelligence

eg Humint more reliable than Techint.

② Strategic First line of defence against incursions.

eg Village defence squads in Indo Pak.

II/ Security apparatus

- ① Counter 12 diplomacy Incursions by China
Infiltration by Pakistan.
- ② China's Xiaokong villages Pakistan.
- dual use villages of China, to militarise borders.
- ③ To counter Chinese policy of Pincer Strategy eg CPEC through POK.
- ④ Ungovernability of border countries
→ leading to refugees and insurgents
eg Instability in Myanmar, Bangladesh etc..
- ⑤ Difficult and diverse terrains
eg 40% of Indo-Bangla border is through Brahmaputra.

Measures taken by India.

- 1) Theatrisation of forces (Kargil Committee)
- India's focussing on theatrisation based on threats.

2) Graded escalation

② Surgical strike in Pakistan
Hotpursuit in Myanmar.

3) Increased border allocation for
border surveillance



4) Vibrant Villages programme
- To develop border
villages.

5) Promotion of Outreach initiatives

② Project Sachbhavana.

6) Satellite based Surveillance

② GSAT-9, RISAT etc..

We should further focus
on Capacity building of local population
and Security forces as we need to
make indomitable spirits than
impenetrable borders to protect our
Sovereignty.

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			