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NEXT IAS (Head Office) : 27-B, Pusa Road, Metro Pillar no. 118, Near Karol Bagh Metro, New Delhi-110060
Bhopal Centre: Plot No. 46, ZONE-2, M.P. Nagar, Bhopal-462011
Ph: 8081300200, 8827664612 | E-mail : mts@nextias.com | **Web:** www.nextias.com

(To be filled by candidate)

Name of Candidate : Bariya Mansoor.

Roll No. : 5809750.

Registration Number : 85 Date of Examination : 31 Aug '23.

Exam Centre : Old Rajinder Nagar ☐ Bhopal ☐ Online ☑

Test - 7

Code : TC709

RCA Batch 2023

GENERAL INSTRUCTIONS

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.....

SUBJECT/PAPER
GENERAL STUDIES

Invigilator's Sign. : .....

[To be filled by the STUDENT]

Student's Queries for the Evaluator (if any write them below)

[To be filled by the EXAMINER]

Evaluator's response

(For filling by Examiners only)

Evaluator Code :

Q.No	Pg No.	Maximum Marks		Marks	Total
1	1				
2	3				
3	5				
4	7				
5	9				
6	11				
7	13				
8	15				
9	17				
10	19				
11	21				
12	24				
13	27				
14	30				
15	33				
16	36				
17	39				
18	42				
19	45				
20	48				
Grand Total					

Signature

MACRO COMMENTS

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6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

36-41

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1. भुगतान संतुलन (बीओपी) के घटकों के रूप में पूँजी खाते और चालू खाते के बीच अंतर का सविस्तार वर्णन कीजिए। भारत के बीओपी घाटे को संतुलित करने के लिए कुछ उपाय सुझाएँ। (150 शब्दों में उत्तर दीजिए) 10 अंक

Elaborate on the difference between Capital Account and Current Account as components of Balance of Payment (BOP). Suggest a few measures to balance the BOP deficit of India.

(Answer in 150 words) 10 Marks

Balance of Payment refers to a country's trade account with rest of the world. It is composed of—

Capital Account	Current Account
① Includes financial transactions such as investments, equity.	These include payments for goods, services, remittances etc.
② Partial convertibility	Full convertibility is permitted.
③ More volatile as currency can leave economy easily. (Eg Asian BOP crisis 1997)	More secure in nature as it is based on purchase of merchandise, services.
④ Often remains in surplus as India 5th most highest FDI Recipient	often in Deficit as India remain net importer of goods.

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Measures for balancing BOP deficit

(i) greater export
- Economic Survey: Develop 'network products' specialisation.

(ii) Reduce import dependency.
- Eg. Renewable energy use to ↓ oil imports.

(iii) Boost manufacturing sector in India → gain FDI → increase exports.

(iv) internationalisation of rupee.

Thus, a balanced BOP will ensure economic stability of the nation and further steps towards 'Developed nation status by 2047'.

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2. लॉजिस्टिक्स (रसद) क्षेत्र, विनिर्माण उद्योग के विकास के महत्त्वपूर्ण घटकों में से एक है। चर्चा कीजिए। साथ ही, हाल ही में घोषित राष्ट्रीय लॉजिस्टिक्स नीति, 2022 के विभिन्न घटकों का भी उल्लेख कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The logistics sector is one of the important components of the growth of the manufacturing industry. Discuss. Also, mention various components of the recently announced National Logistics Policy 2022.

(Answer in 150 words) 10 Marks

Q-2

Logistics sector includes packaging, warehousing, transportation and delivery of goods manufactured in the country. currently 14% of GDP is spent on logistics. (2023 Budget).

Important for Manufacturing Growth

- Reduce the cost of the product with efficiency in logistics. ↑ competitiveness
- Timely delivery ↑es demand
- establish supply chain linkages within the industries
- Reduces wastage based losses Eg in sugarcane to sugar mills.
- Expand market for products as reach increases.

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In this light government announced

National Logistics Policy 2022

- Goal: bring logistics to 9-10% GDP contribution.
- creation of 10-15 million jobs.
- increase the turnaround time for shipment.
- greater supply chain integration globally.

Thus, logistical development will boost investment in infrastructure and economic growth, creating avenues for Amrit Kaal.

51-56

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3. डब्ल्यूटीओ के तहत मत्स्य पालन सब्सिडी पर नए समझौते पर भारत का क्या रुख है? भारत के लिए मत्स्यपालन क्षेत्र किस प्रकार महत्त्वपूर्ण है? इस क्षेत्र के विकास के लिए सरकार द्वारा उठाए गए कदमों का उल्लेख कीजिए।
(150 शब्दों में उत्तर दीजिए) 10 अंक

What is India's stand on the New Agreement on Fisheries Subsidies under WTO? How is the Fisheries sector significant for India? Enumerate the steps taken by the Government to develop this sector.
(Answer in 150 words) 10 Marks

Recently in the WTO ministerial summit, a new agreement on fisheries was finalised which calls for phaseout of subsidies on IUU fishing.

India's stand: India calls for greater timelines for developed countries in phaseout of such subsidies as large number of poor population depends on sector for subsistance.

Furthermore, India decries 'WTO Plus' approach of going beyond economic issues into environmental concerns beyond its mandate.

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Significance of Fisheries Sector

i) India 2nd largest producers of fisheries thus has a large market.

ii) contributes about 7% to the agriculture sector.

iii) High population dependency, especially in coastal areas.

Steps taken by Government
- → National Fisheries Development Board for export and domestic promotion
- → Blue Economy Mission for integration of all schemes.
- → ~~KCC~~ Kisan credit cards for fish farmers extended.

Therefore, India needs sustainable fish farming methods to ensure economic inclusive growth in the sector.

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4. उन प्रणालीगत और संस्थागत बाधाओं का विश्लेषण कीजिए जो भारत में भूमि सुधार प्रयासों में बाधा बनी हुई हैं और भूमि के न्यायसंगत वितरण को सुनिश्चित करने के लिए व्यावहारिक समाधान प्रस्तावित कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

Analyze the systemic and institutional constraints that continue to hinder land reform efforts in India and propose pragmatic solutions to ensure equitable distribution of land.

(Answer in 150 words) 10 Marks

Land reforms refers to steps taken by the government to determine the relationship between agricultural land and owners. The aim is to create an equitable society and increase land productivity.

Constraints hindering land reforms

I. Systemic

(a) Federal differences and lack of uniformity as 'land' is a State subject.

(b) Land fragmentation ↓ productivity (NSSO: 86% landowners are small and marginal farmers).

II. Institutional issues.

(a) limited updated land records

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due to ↳ digitised records.

(b) Corruption and scams in the sector
Eg Land for job scam Bihar.

Solutions →
- Cooperative pooling of land resource ↑ viability of output.
- Limit size of farms with proper land ceiling laws
- innovative methods for agriculture eg hydroponics.
- Tenancy reforms.
  - implement 2016 model act across states

Therefore, land should be seen beyond consideration of social and economic status. New methods of proper utilisation of land and to achieve goal of doubling farmer's income.

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5. ब्रह्मोस सुपरसोनिक क्रूज मिसाइल की अद्वितीय विशेषताएँ और क्षमताएँ क्या हैं, और इसने भारत की रक्षा क्षमताओं और सामरिक स्थिति के क्षेत्र में किस प्रकार योगदान दिया है? (150 शब्दों में उत्तर दीजिए) 10 अंक

What are the unique features and capabilities of the BrahMos supersonic cruise missile, and how has it contributed to India's defence capabilities and strategic position in the region? (Answer in 150 words) 10 Marks

(1) (2) (3)

BrahMos missile is developed with the aid of Russian technology and it steengthens India's hard power and strategic sector.

Features and capabilities
- → can fly 290 km distance.
- → easy manoeuvreability.
- → radar for target detection.
- → Speed of mach 5.

contribution to Indian defense capabilities.

→ development of deterrance in light of security threats from Pakistan, China.

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→ Strengthens air, water and surface war fighting capability.

Strategic position in region.

→ Strengthen status as 'net security provider' in region.

→ Counter China by sale of the Brahmos to Vietnam

→ growth as global power due to ability to influence outcomes in South China Sea.

Thus, Brahmos has increased Indias defence capabilities

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6. समुद्र की गहराई का पता लगाने और उसमें मौजूद संसाधनों का दोहन करने के देश के प्रयासों के अनुरूप, भारत सरकार ने गहरे समुद्र में अन्वेषण मिशन 'समुद्रयान' का प्रस्ताव रखा है। यह मिशन देश में समुद्र विज्ञान और प्रौद्योगिकी की प्रगति में किस प्रकार योगदान दे सकता है? (150 शब्दों में उत्तर दीजिए) 10 अंक

In line with the country's efforts to explore the depths of the ocean and harness the resources it holds, the Indian government has proposed a deep-sea exploration mission Samudrayaan. How can this mission contribute to the advancement of ocean science and technology in the country?
(Answer in 150 words) 10 Marks

Samudrayaan mission is envisaged to take 3 scientists to 6000 m depth in the ocean for 3 days to explore the seafloor of the Indian Ocean.

contribution
- provide valuable data for research on ocean sources.
- greater knowledge of mineral resources in the ocean.
- information of temperature, salinity in the ocean
- conduct experiments.

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Such missions will help develop autonomy in scientific endeavors and enhance India's image as a scientific power.

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7. वैश्विक मीथेन प्रतिज्ञा क्या है? क्या आपको लगता है कि वैश्विक मीथेन प्रतिज्ञा मीथेन उत्सर्जन को कम करने की दिशा में एक सकारात्मक कदम है? इस मुद्दे पर भारत का रुख स्पष्ट कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

What is Global Methane Pledge? Do you think the Global Methane Pledge is a positive step toward mitigating methane emissions? Explain India's stance on this issue. (Answer in 150 words) 10 Marks

Global Methane Pledge is undertaken by various nations to reduce methane emissions by 30% by 2030.

Positive step
- reduce GHG potential – as methane has 2.5× GWP of carbon.
- Shift towards cleaner technologies : as present technologies can ↓ methane emission by 45%.
- Meet well below Paris target of 1.5-2°C ~~cooling~~ by 2100.

ISSUES
- focus on only one GHG.
- time bound target
- limited participation by nations.

GHGs like ~~SF~~ HFC with much higher GWP ignored.

Candidates must not write on this margin

India's Stance:

(i) Focus on methane puts <u>burden</u> on <u>agricultural nations</u> like India

(ii) affects livelihood of <u>poor farmers</u> as India is a major rice producer (2nd highest in world).

(iii) violative of <u>CBDR-RC principle</u>.

Way forward → greater phaseout time to developing nations.

→ use of clean technologies in industries.

-x

Thus, a collective approach in line with economic realities is required for climate action and meeting SDG # 13 goal.

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8. कोविड–19 महामारी ने सार्वजनिक स्वास्थ्य में आपदा प्रबंधन के महत्त्व पर प्रकाश डाला है। महामारी और अन्य संक्रामक रोग के प्रकोप के प्रबंधन के लिए प्रमुख रणनीतियों और चुनौतियों पर चर्चा कीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

The COVID-19 pandemic has highlighted the importance of disaster management in public health. Discuss the key strategies and challenges for managing pandemics and other infectious disease outbreaks.

(Answer in 150 words) 10 Marks

Covid 19 pandemic brought the focus to biological disasters and the impact it can have on public health.

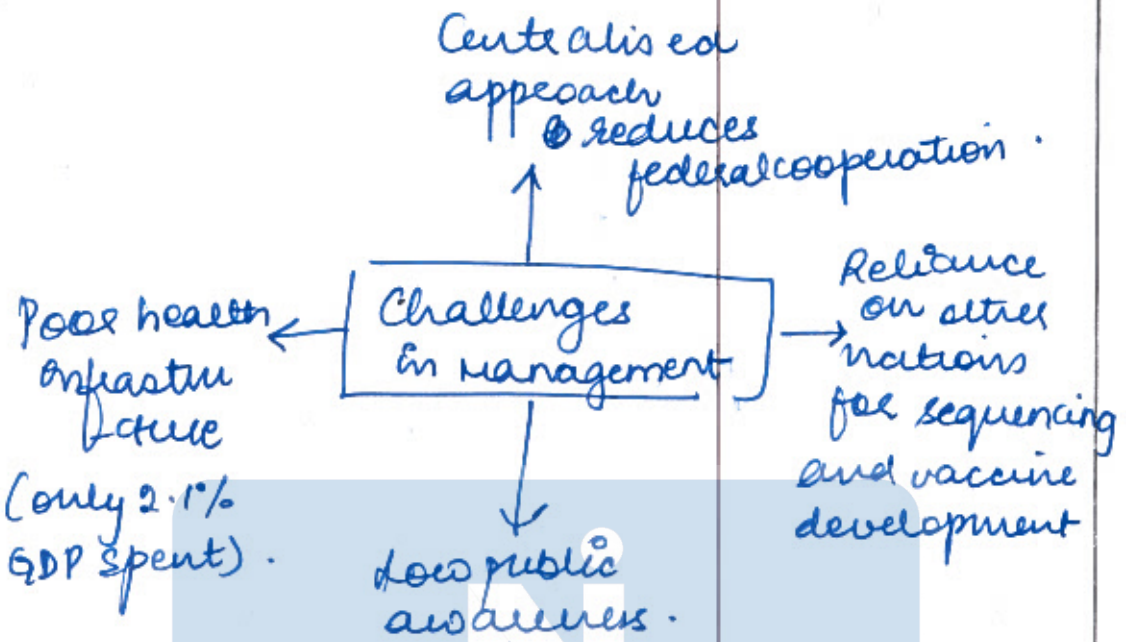
Biological Disaster → affect human resource → productivity lowered → high vulnerability

In this regard, government used the Epidemics act 1897 (colonial era) highlighting our under preparedness.

Key Strategies

- Developing new law to meet modern day needs.
- training of medical personnel and other front fighters.
- development of local govt capacity eg. needed for vaccine acceptability.
- Strengthen R&D institutions (atleast 2.5% GDP in R&D).

Candidates must not write on this margin



thus, an overhaul in the biological disaster management infrastructure is required to create disaster resilience in line with Sendai targets.

20-27

Candidates must not write on this margin

9. "पूर्वी और मध्य भारत का संसाधन अभिशाप वामपंथी उग्रवाद का एक महत्वपूर्ण चालक रहा है"। इन क्षेत्रों के सतत और समावेशी विकास के लिए उपायों को विस्तार से बताइए और सुझाव दीजिए।

(150 शब्दों में उत्तर दीजिए) 10 अंक

"The resource curse of Eastern and Central India has been a crucial driver of LWE". Elaborate and suggest measures for sustainable and inclusive development of the region.

(Answer in 150 words) 10 Marks

The resource rich regions of Eastern and central India include coal mines, mineral deposits in States of Madhya Pradesh, Chhattisgarh, Odisha, West Bengal among others.

It has driven LWE as these regions were use by 'outsiders' like big companies, PSUs to exploit the mineral potential for industrial use.

However, it turned into a resource curse as —

i) Receipts not shared with locals.

ii) Land alienation and displacement (Xaxa committee: 40% displaced are tribals)

iii) Environmental degradation. Eg in Chhotanagpur plateau.

iv) Development deficit : due to ↑ corruption & neglect.

Candidates must not write on this margin

These factors led to LWE which continues to be a major security issue in India.

Measures

I. Security
→ curb subversive elements through SAMADHAN Strategy

II. Development
→ Schools, villages insti- -tutions, healthcare.
→ Roshni scheme for skill development.

III. Governance
→ Targetted scheme.
→ use of 5th Schedule - PESA
→ FRA land rights
→ Counter corruption.

This will ensure India's naxalism issue is countered and inclusive regional development is undertaken.

Candidates must not write on this margin

10. उत्तर पूर्व और जम्मू–कश्मीर क्षेत्र में हिंसा की घटती प्रवृत्ति के आलोक में क्या आपको लगता है कि एएफएसपीए (अफ्सपा) अपनी उपयोगिता बरकरार रख पाया है? टिप्पणी कीजिए (150 शब्दों में उत्तर दीजिए) 10 अंक

In light of the declining trend of violence in the North East and J&K region do you think that AFSPA has lived its utility? Comment. (Answer in 150 words) 10 Marks

Recently, the government announced the decision of gradual demilitarisation of J&K region. AFSPA has been ~~Sects~~ removed from various districts in N.E.R as well.

This is in light of reducing trend of violence as seen in falling attacks in the Kashmir region (less than 50 in 2022, from 200+ in 2017 - MHA), as well as North East.

Arguments for removal of AFSPA
- reduction in security threats.
- Reduce hostility among locals
- greater integration in region.
- further normalisation and economic growth.

Candidates must not write on this margin

Such arguments were given by Justice Reddy committee who called for AFSPA removal.

However, a gradual demilitarisation will be more beneficial as →

(1) Prevent re-peoliteration of threats to security (Eg. Rajouri attack).

(2) Containing conflicts → eg in Manipur.

(3) Ensure security of citizens.

Wayforward
- → use of technological means like cyber methods, drone for surveillance
- → reduce military presence

Thus, a balanced approach will help in furthering better integration in Indian nation.

Candidates must not write on this margin

11. अंतर्राष्ट्रीय व्यापार प्रमुख मुद्रा प्रतिमान (डीसीएम) पर केंद्रित है। अंतर्राष्ट्रीय व्यापार में हार्ड करेंसी (दुर्लभ मुद्रा) के महत्त्व का आलोचनात्मक विश्लेषण कीजिए और डॉलर साम्राज्यवाद के विकल्प के रूप में वैश्विक व्यापार में रुपये की स्वीकार्यता की संभावना पर चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

① International trade is centred on the dominant currency paradigm (DCM). Critically Analyze the
② importance of Hard currency in International trade and Discuss the potential of rupee acceptance in global trade as an alternative to dollar imperialism. (Answer in 250 words) 15 Marks
③④

International trade is largely conducted in US $ as it a hard currency (preferable due to national economic stability and acceptability).

Dollar dominance is maintained through:

1) largest world economy status of USA.
2) use by Bretton woods institutions.
3) SDR status of currency.

Importance of hard currency

i) prevents hedging against precious metals. Eg Gold.

ii) Provides ease of transitions across nations.

iii) Commonality in investment eg FDI and FII in this currency.

Candidates must not write on this margin

However it creates certain issues like —

a) predominance of one national currency.

b) impacted by domestic vulnerabilities Eg the 2008 GFC.

c) ~~Creates the perception~~ Force maintainence burden on other countries.
Eg India force of presently $550 bn.

In this light, India is furthering steps towards Rupee internation-alisation.

Potential →
- growing economic clout of India — Now 5th largest economy.
- Large market of 1.4 bn people with ↑ demand of global products.
- High international trade and with diverse set of nations
  Eg. Russia - India vostro accounts.

Candidates must not write on this margin

However, there exist certain challenges for emerging as an alternative to the $. ⟶

(a) low export of Indian products.
Eg Russia cited ↓use of ₹.

(b) Volatility of INR currency.
Eg. Rupee fell from ₹70 to ₹80 a $. last year.

(c) Rise of Chinese Renmibi as a competitor. Eg in SDR.

Thus, need of the hour is to further currency ~~Rupee~~ swaps arrangements, steps like BRICS currency to counter $ imperialism.

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12. जनसांख्यिकीय लाभांश संवृद्धि सुनिश्चित नहीं करता है; यह केवल सामर्थ्य उत्पन्न करता है। जनसांख्यिकीय परिवर्तन से उत्पन्न अवसरों का लाभ उठाने के लिए सरकार द्वारा उठाए गए कदमों पर चर्चा कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

A demographic Dividend does not ensure growth; it only generates potential. Discuss the steps made by the government to take advantage of the opportunities presented by the demographic transition.

(Answer in 250 words) 15 Marks

Demographic dividend refers to economic growth created due to high working age population (15-64 years) in a country.

India is undergoing demographic dividend with 68% population in the working age and median age of 28 years. (NHFS-5 data).

However, demographic dividend is only a potential to tap the labour power of the country.

It is not unused growth as there is need for human resource development to tap this working population.

Health
↑
Skill development ← HRD → Education

Candidates must not write on this margin

Demographic Dividend Challenges in India.

- Low skilled workforce
  >5% population skilled (NSSO)
- malnutrition : ↓ productivity
  Eg. Global hunger Index Rank 107.
- Lack of Quality education
  (ASER highlights foundational literacy levels are pre 2012 level)
- Low Quality of jobs.
  (Informal sector >90% economy: NSSO).

Steps taken by government

1. PM Kaushal Vikas Yojana.
   - for skill development of the Indian population.
2. Tapping Traditional Knowledge.
   - Vishwakarma Scheme for handicraft workers.
3. Cluster based manufacturing
   - one district one product approach used.

Candidates must not write on this margin

④ Increasing expenditure and focus on social sectors.
- National education policy 2020 (6% GDP target)
- National Health Policy 2017 and Ayushman Bharat for universal health coverage.

⑤ Reform of labour laws for ↑ jobs
- Labour codes formulated (4)

⑥ focus on untapped population
eg- women - KIRAN scheme etc.

Way forward → holistic plan for demographic dividend required.

This will aid in becoming a $5tn economy by 2025 with inclusive growth.

Candidates must not write on this margin

13. 'जीनोम एडिटिंग (जीनोम संपादन) में फसल सुधार की अपार संभावनाएँ हैं, लेकिन यह नैतिक और सुरक्षा संबंधी चिंताओं को भी जन्म देती है।' भारत में जीनोम-संपादित पादपों के सुरक्षा मूल्यांकन के लिए नए दिशानिर्देश आनुवंशिक रूप से संशोधित फसलों की सुरक्षा को कितना सुनिश्चित करते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

'Genome editing holds immense potential for crop improvement, but it also raises ethical and safety concerns'. How far do the new guidelines for the safety assessment of genome-edited plants in India, ensure the safety of genetically modified crops? (Answer in 250 words) 15 Marks

Genome Editing refers to altering the genetic makeup to attain certain desired characteristics or remove certain undesirable elements.

Potential for crop improvement

- Increase productivity for food needs Eg Bt Brinjal.
- develop climate resilient crops — eg salinity tolerant rice.
- Increase yield for economic uses. Eg Bt. Cotton. (300 kg/ha → 500 kg/ha).
- Pest resistance
- fortification Eg. Golden rice with Vitamin A.

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Concerns raised :

I) Ethical:

a) Impact on plant diversity and varieties.

b) Religious concerns regarding altering god's creation.

c) Rise in cost and affordability issues.

II) Safety:

a) Impact on biodiversity and ecosystem is unknown.

b) long term impact on human health is not assessed.

The new guidelines for safety assessment by GEAC will be helpful in —

① ensuring scientific assessment before product launch.

② Multi stakeholder consultation

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and analysis of social impacts as well.

③ Allow peer reviewed research and on the subject.

However, they can be more comprehensive and undertake long term studies of the GM impact on food crops.

Thus, need of the hour is to balance food security concerns with larger issues of people and planet.

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14. भारत में कृषि क्षेत्र पर प्रत्यक्ष और अप्रत्यक्ष कृषि सब्सिडी के प्रभाव की चर्चा कीजिए। न्यूनतम समर्थन मूल्य (एमएसपी) ने कृषि अर्थव्यवस्था को किस प्रकार प्रभावित किया है? (250 शब्दों में उत्तर दीजिए) 15 अंक

Discuss the impact of direct and indirect farm subsidies on the agriculture sector in India. How have Minimum Support Prices (MSP) affected the agricultural economy? (Answer in 250 words) 15 Marks

Farm subsidies refers to the financial incentives or remissions given to the farmers for furthering agricultural growth. About 1-2% of the GDP is spent on farm subsidies in India.

Subsidies

- **Direct** → given directly to boost production. Eg MSP.
- **Indirect** → subsidies on inputs to incentivise production. Eg- on fertilisers, electricity.

Impact of subsidies — POSITIVE —

① Improved the stability of Indian agriculture.

② Increased production and ensured food security. Eg. 315MMT crops produced in 2022-23.

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③ Helps deal with vagaries of nature. as >50% agriculture land is rainfed. (Economic Survey).

④ Allows government to direct production of certain crops.
Eg - sugarcane.

Negative Impact

① Resource crisis Eg water scarcity in Punjab, Haryana due to ground water pumping.

② Monocropping culture ↓ diversification
Eg Rice and wheat > 75% of the crops.

③ Land degradation due to excessive use urea use.

Impact of MSP on the agricultural economy

Positive Impact:

① India as a leading exporter.
Eg. @ #2 exporter of Rice.

② Grains for PDS — affordability and availability ↑.

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③ Agricultural households income assured. (47% population dependency on the sector)

④ encourage certain crops — Eg Millets through MSP.

Negative Impact →
- WTO issues — over peace clause
- Regional imbalance
  Eg Punjab Haryana overdeveloped compared to Bihar.
- Affects reforms
  Eg. Protests against 3 agricultural bills.

Therefore, Ashok Dalwai Committee calls for UBI transfer of subsidy allowing farmers greater choice in investment. PM-Kisan scheme is step in that direction.

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15. रोगाणुरोधी प्रतिरोध (एएमआर) एक तेजी से बढ़ता संकट है जो दुनिया भर में सार्वजनिक स्वास्थ्य के लिए एक गंभीर खतरा है। रोगाणुरोधी प्रतिरोध की बढ़ती समस्या में योगदान देने वाले प्रमुख कारक क्या हैं, और इस वैश्विक स्वास्थ्य खतरे से निपटने के लिए कौन से कदम उठाए जा सकते हैं? (250 शब्दों में उत्तर दीजिए) 15 अंक

Antimicrobial resistance (AMR) is a rapidly escalating crisis that poses a grave threat to public health worldwide. What are the major contributing factors to the growing problem of antimicrobial resistance, and what steps can be taken to address this global health threat? (Answer in 250 words) 15 Marks

Anti microbial resistance (AMR) refers to a medical situation where drugs of treatment are not functional/ effective in countering the disease.

It leads to a public health crisis because:

1. Inability to limit the spread of disease eg TB. #1 burden in India. (WHO)
2. Increases cost of treatment.
3. Requires development of new drugs.
4. Loss of human resource

This is leading to problems such as 'superbugs'. Eg seen in MDR, XDR - TB.

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Contributing Factors for AMR →

- Polluting areas allowing development of superbugs. Eg- Pharma release of waste in water bodies.
- Unsanitary conditions of living. Eg Slums.
- Improper treatment Eg. in TB not taking adequate & time dosage.
- Improper bio medical waste disposal. (needs incineration).
- over use of antibiotics (Eg even in viral diseases like fever)

Steps need to be taken →

(i) Ensure proper awareness in use of drugs like antibiotics.
↳ more steps like Red line campaign.

(ii) Doctor training to ensure proper drug prescription based on requirement.

(iii) Proper implementation of

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Biomedical waste rules 2017 at all levels.

(iv) Stringent action against pharmaceutical company's discharge of waste in open environment.

(v) Drug quality monitoring by DSCSO to ensure proper efficacy.

Thus, a one health approach is required to ensure larger wellbeing of — people, environment, animals.

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16. विघटनकारी नवाचारों से आप क्या समझते हैं? हाल के दिनों में विघटनकारी नवाचार के कुछ उदाहरण बताइए और यह भी बताइए कि इन नवाचारों ने उद्योगों के संचालन के तरीके को किस प्रकार परिवर्तित किया है?
(250 शब्दों में उत्तर दीजिए) 15 अंक

What do you understand by Disruptive innovations? What are some examples of disruptive innovation in recent times, and how have they changed the way industries operate?
(Answer in 250 words) 15 Marks

Disruptive innovations refers to such technologies which significantly alter the trajectory of technological development and have far reaching impact on society as well as economy.

J. Schumpeter calls them "creative destruction" as they dismantle the previous technological regime and move beyond just providing a alternative. Infact, disruptive technologies create their own space and domain.

Examples of destructive technologies include →

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(i) Artificial Intelligence → they changed industrial operation by allowing big data analysis and predictive economics.
Eg. Netflix predictive marketing

(ii) Supercomputers → they go beyond the normal computers allowing backend for new services like artificial intelligence.

(iii) Quantum computing → they use laws of physics to achieve another level of computing. They achieve in seconds, what supercomputers could take years.

(iv) Smartphones → were a disruptive innovation as it turned a communication device in a multifunctional entertainment device. This had rapidly increased their penetration and production.

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(v) Virtual Reality → Eg Metaverse.

Allows individual to perceive stimuli which doesn't exist in real world. Allows industry to use it for product Sampling (eg IKEA), entertainment (Eg. video games).

Thus, the future is changed by such technologies as one moves towards Industrial revolution 4.0. The need is to create regulations for their use for common good.

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17. हानि और क्षति (L&D) कोष के क्रमिक विकास को निहित कीजिए। COP27 में हानि और क्षति कोष से संबंधित कौन–से प्रमुख घटनाक्रम हुए हैं? इस सम्मेलन में भारत ने क्या प्रतिबद्धताएँ व्यक्त की हैं?

(250 शब्दों में उत्तर दीजिए) 15 अंक

Trace the evolution of the Loss and Damage fund. What are the major development related to loss and damage funds in COP 27?, What are the commitments made by India in this conference?

(Answer in 250 words) 15 Marks

Loss and Damage Fund emerged in COP at Warsaw. It aims at Reimbursing nations at the receiving end of loss and damage due to climate change.

Evolution

↳ Warsaw COP formed.

↳ continuing talks across different COPs without finalisation of funds limits and goals.

↳ COP27 → talks to operationalise L&D fund was conducted.

↳ COP 28 → to finalise the agreement on L&D.

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COP27 on L&D funds →

① Agreements among nation states to start contribution towards the fund.

② Talks underway on details of L&D fund.

③ Contributions to be made by advanced economies as well as emerging economies (Eg India, China)

Commitment by India →

a) agreed to contribute funds to L&D corpus.

b) This is based on India as the 3rd largest emitter of GHG.

However, this is criticised as

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many call it abdication of CBDR-RC principle by global north.

Way forward
- Just transition partnerships and framework.
- fund contribution in CBDR-RC principle.

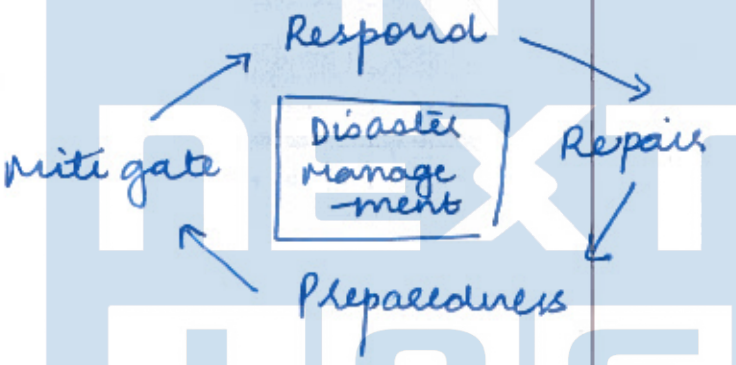
This will ensure we collectively move towards goal of net zero by 2050, established at COP 27, glasgow.

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18. आपदा प्रबंधन सिर्फ आपात स्थिति से निपटने के बारे में नहीं है, बल्कि लचीले समुदायों के निर्माण के बारे में भी है। उन प्रमुख रणनीतियों पर चर्चा कीजिए जिनका उपयोग सामुदायिक लचीलापन बनाने और आपदाओं के प्रभाव को कम करने के लिए किया जा सकता है। (250 शब्दों में उत्तर दीजिए) 15 अंक

Disaster management is not just about responding to emergencies but also about building resilient communities. Discuss the key strategies that can be used to build community resilience and reduce the impact of disasters. (Answer in 250 words) 15 Marks

Disaster management refers to proactive and reactive approach to crisis management and vulnerability Reduction.



It is beyond responding to emergencies, as response is reactive and includes steps like providing essential services, rescue operations etc.

It also focuses on building resilient communities as it will reduce vulnerabilities of the people and

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develop their capacities to mitigate impact.

Key Strategies for Community Resilience

I. Training of first responders.
- Eg. local self governments
- civil society.
- community mock drills.

Eg in Odisha - seen in help provided during train accident.

II. Preparedness of structures
- disaster resilient buildings
  Eg Earth shock absorbers, houses on stilts in flood areas.
- rationing of food, medical, essential supplies.

III. Institutional preparedness-
- volunteers chosen and trained.
- focus on vulnerable sections
  Eg elderly, pregnant women, children.
- Early warning system
  Eg. Mobile phones, was registered.
  (UN Secretary General

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Guterres called for EWS for all).

IV. Response strategies prepared
- Eg. Shelters in cyclone areas.
- Knowledge of disaster handling eg. protection of oneself in stampede, fire.

Way forward → PM 10 point agenda for disaster risk reduction
→ Sendai framework 2015-30.

Thus, a community resilience approach will ensure a bottom up approach to disaster management creating secure communities.

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19. मेटावर्स और वर्चुअल एसेट्स जैसी नई और उभरती प्रौद्योगिकियों के उपयोग के माध्यम से आतंकवाद का परिवर्तन चिंता का विषय है। हम आतंकवादी उद्देश्यों के लिए नई और उभरती प्रौद्योगिकियों के उपयोग का मुकाबला किस प्रकार कर सकते हैं? इस संबंध में "दिल्ली घोषणा पत्र" के महत्व को स्पष्ट कीजिए।

(250 शब्दों में उत्तर दीजिए) 15 अंक

The transformation of terrorism through the use of new and emerging technologies like metaverse and virtual assets is a matter of concern. How can we counter the Use of New and Emerging Technologies for Terrorist Purposes and Elucidate the importance of the "Delhi declaration" in this regard?

(Answer in 250 words) 15 Marks

Terrorism & terrorism refers to the use of violent methods on general public for fulfilling one's ideological agenda.

It is transforming in light of new technologies like metaverse due to →

① Anonymity in the internet

② greater opportunities of simulation.

③ Increasing precision in targetting.

④ gain knowledge of terrain and geospatial data. Eg. Rajouri Poonch attacks.

⑤ Reduces interceptability by traditional sources like radar, surveillance.

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Thus, it raises concerns like →

① need for skilled workforce for online surveillance.

② tapping of vulnerable communities by terrorists. Eg in Kashmir.

③ Bioterrorism : eg use of genome editing.

counter the use

→ employment of people well versed in new technology eg ethical hackers.

→ capacity development of countering equipment Eg Dark net telescope by India (DRDO)

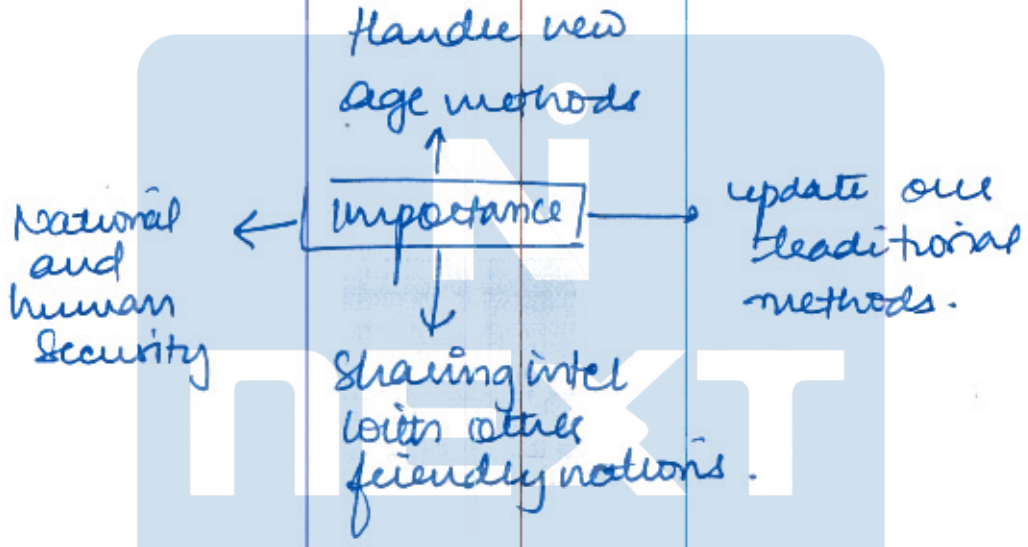
→ confidence building mechanism Eg. Vibrant village prog

→ social media surveillance especially in security areas.

→ use of technology like drones for increasing range of surveillance.

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The recent Delhi Declaration on Countering Terrorism raised this concern of handling terrorism through new and emerging technologies.



Thus, a multipronged strategy is the need of the hour to further national security.

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20. "अग्निपथ योजना हमारे सशस्त्र बलों के लचीलेपन और प्रभावकारिता के लिए आवश्यक एक कड़वी गोली है।" प्रासंगिक तर्कों के साथ कथन का आलोचनात्मक विश्लेषण कीजिए। (250 शब्दों में उत्तर दीजिए) 15 अंक

"The Agnipath scheme is a bitter pill needed for the resilience and efficacy of our armed forces." Critically Analyze the statement with relevant arguments. (Answer in 250 words) 15 Marks

Agnipath scheme was launched in 2022 to hire recruits for the army for a period of 4 years. After this period, certain recruits will get permanent employment while others will receive benefits like lumpsum money and NSQF skill certification to aid in other employment. This added expenditure makes it a "bitter pill". This scheme will feature resilience and efficacy of our armed forces through →

(1) open recruitment of talent from a larger pool.

(2) Reduce vacancies in the armed forces.

(3) Infuse young energy in the armed forces.

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④ Capacity development will aid in military development specially in times of Chinese aggression, and non state actors threat from Pakistan.

⑤ Allowing proper manning of borders – especially in porous areas such as – Bangladesh, Myanmar.

However, it can create certain challenges as well.

① Increasing expenditure on the defense sector in the GDP.

② Can create overinflated military forces. (Eg. China reduced military by 1/3rd).

③ Shift focus from other spheres of warfare Eg – nuclear, cyber which needs specialists.

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④ Create issues of infrastructure and management of new recruits.

⑤ create discontentment in heart of recruits left go after 4 years.

Thus, need of the hour is to fill required vacancies while emphasising domain specialisation for meeting new age problems of security.

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Space for Rough Work

NEXT IAS