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(To be filled by candidate)

Name of Candidate : SHOIAIB

Roll No. : PTTP221500

Registration Number : MIAS23000018756 Date of Examination : 15th August

Exam Centre : Old Rajinder Nagar ☑ Bhopal ☐ Online ☐

Test - 7

Code : TC077

MTS IGP Batch 2023

GENERAL INSTRUCTIONS

This Question-cum Answer (QCA) Booklet contains 56 pages. Immediately on receipt of the booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.

Candidates must read the instructions on this page and the following pages carefully before attempting the paper.

Candidates should attempt the questions strictly in accordance with the instructions specified in the question paper and in the space prescribed under each question in the booklet. Any answer written outside the space allotted may not be given credit.

Question paper will be provided separately and can be taken by the candidates after conclusion of the exam.

.....

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

IMPORTANT INSTRUCTIONS

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2. Write your registration number and other particulars, in the space provided on the cover of QCA Booklet.
3. Write legibly and neatly. Do not write in bad/illegible handwritings.
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5. If you wish to cancel any work, draw your pen through it or write "Cancelled" across it, otherwise it may be evaluated.
6. Handover your QCA Booklet personally to the invigilator before leaving the examination hall.

Candidates must not write on this margin

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 ndia.

(Answer in 150 words) 10 Marks

The Economy is divided into Capital and current account to measure the impact of Balance of Payment situation

Current Account

- The account which doesn't create any asset or liabilities in the future.
  - e.g. Goods export and Import
- It shows short term issues and trends
- It shows the financial health of current year

Capital Account

- The account which create future liabilities or assets in the future.
  - e.g. - Investment in Economy.
- shows long term issues & trends.
- It shows the Impact on long term.

Candidates must not write on this margin

Measures to Control BoP Deficit

- **Current Account Deficit**

(i) Reduce Import of Oil & Gas
- e.g. Hydrogen as alternative
- energy efficient - ethanol blending, BS-6 norms.

(ii) Promote export of goods & services.
- current trade deficit of $122 bn should be reduced.
- e.g. Toy products rising in last 5 yrs.

Capital Account

(1) Attract Investment [current $92 bn].

(2) Build assets & reduce loans
- will benefit both current & capital accounts

(3) Capex Investment - multiplier effect & crowding in.
- e.g. Infra [Budget 2022-23].

⇒ BoP crises can be tackled through Fiscal Prudence

Candidates must not write on this margin

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

currently logistics cost is around 13-16% in the economy. This makes Manufacturing more redundant.

Logistics cost impact on Manufacturing

- Supply side → It makes raw material costly.
  - → It increases the cost of production.
- Supply side → It makes the delivery cost more high.
  - → making product uncompetible in Market.

- Therefore, logistics cost makes product ~~compete~~ market competitive e.g. Walmart has 6% logistics cost.

Candidates must not write on this margin

National Logistics Policy 2022

(1) Reducing cost of logistics
- from current 13-16% to global competitive level. (i.e. 6-8%).

(2) Make top country in efficient delivery of products.

(3) Support manufacturing growth through efficient logistics.

(4) Establish Database for logistic service.

(5) Sustainable practices

(6) Increase Railway to 45% [from 26%].

⟹ Logistics policy needs to effectively implemented to make Manufacturing sector's share from current 17% to 25% as National Manufacturing Policy.

Candidates must not write on this margin

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

Fisheries sector contribute ~7.1. of agriculture GDP. Government provide various subsidies so WTO's new agreement becomes critical

New Agreement on Fisheries in WTO

- Remove subsidies in Unfenwate plans
  - e.g. Bottom Trawling
- No subsidies in International ~~Waters~~ Waters
  - e.g. in high seas no subsidies allowed.
- Reduce effective subsidies in Fisheries
  - establishing global supply chains.
- Full immunity in subsidies in Territorial waters

Candidates must not write on this margin

Significance for India → Livelihood for farmers → Use of allied work force.

- Sustainable fishing
- Income support to Livelihood farmers.
- Increase fish export → 3rd largest producer

Steps by Government to Develop Sector

- Various schemes by government
  - PM Matsya Sampada Yojana 6000 Cr [Budget 2023].
  - National Action on Fisheries (2016).
- Credit Availability
  - Interest subvention Scheme – 3%. & 2% for timely repayment
- Infrastructure Development
  - Focus in budget for fisheries Infrastructure.
- Extension of schemes from Agriculture
  - like PSL loans.
- Blue Bonds by NABI, aquaculture development

⇒ Blue revolution plan of Hon'ble Prime Minister for holistic development of Fisheries.

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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 – The exercise of changing ownership, control and mode of production over agricultural land.

↳ e.g. Land Reforms after Independence.

- Abolition of Zamindari
- Tenancy Reforms
- Land ceiling
- Reorganization of land distribution

Constraints in Land Reforms Efforts

- **Systematic** (i) High level corruption in land reforms distort materialise.
  - (ii) Land Hitting Issue
    - Records are not annotated

- **Institutional Issues** – No institution for land digitalization
  - Productivity of land is very low.

Candidates must not write on this margin

Solutions to Ensure Equitable Distribution of land

(1) Fulfill the land Reforms
- Ms Swaminathan: Incomplete land reforms.

(2) Land Digitalization
- through Swamitva Scheme.
- Issuing Blue-coalition for the same.

(3) Reform Titling deed
- clear ownership of land.

(4) Increase productivity of land
- recommended by Ashok Dalwai committee

(5) Corporatization and FPOs
- Land should be pooled and use private investment for development.

[Chitra Model: Cooperatives & Private Investment].

⇒ Ashok Dalwai: To double farmer's income completion of land Reforms is necessary.

Candidates must not write on this margin

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

BrahMos Missile was developed by partnership between Russia & India.
- Derives its name from Brahmaputra & Moscow Rivers.

Unique Features & Capabilities

(1) **Supersonic Speed** i.e. it has speed of about 3 mach [speed of sound].

(2) **Cruise Missile** i.e. it has a clear line of sight while attacks.

(3) **Long range Terrain** – It terrain for **Intercontinental Defence**.

(4) It is **state-of-art** technology that can **impact** & large targets at **equal** pace.

Candidates must not write on this margin

Contribution to Defence Capability & Strategy

(1) It give Industrialization of Manufacturing
- Technology Transfer.
- Development of Production capability
(Part of Defence Export & Production Policy 2014)

(2) Give Supersonic Missile to protect from possible neighbouring threat.

(3) Long range capability gives security in the Indian Ocean Region.

(4) It provide opportunity for Defence Collaboration
- Defence Partnership.
- e.g. like alternative to BRAK from Israel.

(5) Future Explorations of generation 5 missiles

⇒ Defence Manufacturing & Industrialization are part of key Ingredients of Atmanirbhata under New Dawn @ 75.

Candidates must not write on this margin

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

India has coastline of 7517 km and 717 lakh sq km of EEZ area. Thus the opportunity for ocean exploration & are paramount.

Country's Efforts to Harness Resources

(1) Earlier Missions
- O-SMART Mission for harnessing oceans

(2) Fulfilling Needs of Rooms
- ↳ especially rare earth metals.
- ↳ sea Bed floor have ample resources.

(3) Fiscal Benefit - such resources will reduce the dependence on imports.

(4) Developing Industrial growth
(from current 4% to 10% [Target].

(5) Disruption in Supply
Leads to Deglobalization & SC disruptions

Candidates must not write on this margin

Samudrayaan → Is India's mission to send exploration mission to seas for ocean.

Its contribution to Ocean Science & Technology

(1) Sea floor Mapping
↳ can be done using Infrared & lasers.

(2) Information on Biodiversity & Minerals in the ocean.

(3) Give India's approach to Blue Revolution understanding various aspects.

(4) Future Deep Ocean Travelling & Tourism
↳ development in Technology will provide such opportunity.

(5) Map Resources & effective Exploration
↳ in most effective manner.

⇒ Samudrayaan Mission shows our scientific capability and economic exploration zeal for a developed India by 2047.

Candidates must not write on this margin

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 a global initiative to reduce the methane emissions by 30% by 2030.

- It set targets for countries & ratification will result into National Plans.

Global Methane Pledge : positive step

1. High Methane Pollution
   - 150% according to IPCC AR6 from pre-industrial levels.
2. Achieving SDGs by tackling methane emissions.
3. Methane emissions cause health hazards
4. Global Guidelines necessary for efficient shift to Green Technology.

But **It Raises Concerns**

- Inequality in Emission [Developed nation]
- Less finance with Developing countries
- No Direct Technology Transfer violate CBDR principle.

Candidates must not write on this margin

India's Stance on Methane Pledge

(1) Though India committed to climate change mitigation but such obligation is not equitable
   - e.g. Developed vs Developing emission not compatible.

(2) It doesn't give financial support for adaptation

(3) India already taken steps
   - NCDs at COP@27 raised.
   - Parliament

(4) CBDR principle not followed
   - as equal responsibility for both developed and developing

(5) Development Component such drastic action may compromise (Energy security and development needs)

⇒ Ultimate change shouldn't become false alarm, rather persistent technologies are needed to tackle it with CBDR Principle intact

Candidates must not write on this margin

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 public health emergency and effective measures were required to deal with it.

Importance of DM in Public Health

- Risk of Health Emergencies
  - e.g. Ebola outbreak, SARS, COVID-19.
- Vulnerability addressed through effective vaccination and welfare schemes
  - e.g. PM garib kalyan Yojana.
- Widescale spread - due to urbanisation & globalisation.
  - e.g. spread with > 2 times spread.
- Shortage in Healthcare
  - Doctors per person (~1:800 in India)
  - Health Infrastructure.

Candidates must not write on this margin

Key Strategies for Public Health Emergency

- Robust legislation
  - Epidemic act 1897
  - NDMA 2005.
- Decentralised approach - regulation & relaxions at local level. eg. Bhilwara Model.
- Movement Restriction & Economic growth need to be balanced.
  - eg. - China didn't lead to crises after opening up.
- Vaccine Development & Medical facilities
  - eg. >200 cr doses
  - eg. Temporary COVID centres

Challenges faced

- Very old legislation
  - epidemic act 1897
- Role of WHO questioned
  - eg. avian flu
- Ineffective Decentralization
  - eg. National lockdown
- Healthcare infrastructure
  - Not optimum.

⇒ At national level we have to focus Healthcare Reforms and at global stage new cooperation like Pandemic Treaty

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

LWE – It is a form of armed insurgency against the State motivated by leftist ideologies

- It has risen in Naxalbari in 1967 and afterward.

Resource curse of Eastern & Central India

- Resulted in Development Deficit in the area due to lack of ~~due~~ positive mining and resource use.
  - e.g. Districts with mining want in HDI parameter.
- Polluted Environment → Polluted air, water scarcity
- Underdevelopment i.e. ineffective use of resource.
- Corruption & Malpractices e.g. Chattisgarh, Rajasthan, Orissa, etc all are in BIMARU category

Candidates must not write on this margin

Measures for Inclusive Development

- Focus on ~~Good~~ Human Development i.e. improve skilling & livelihood.
- work through CSR and SDG models.
- Participation from all sections of society esp. Vulnerable like SCs / STs.
  - e.g. SJS, SRE schemes.
- Confidence Building measures
  - e.g. Himayat & Pehel Initiatives
- Innovative solutions e.g. D.P. Chaudhary's work on Education.

Measures for Environment-

- Focus on Clean Technologies e.g. coal washing, Restoration of exhaust
- SDG through aspirational district program → all LWE i/a ADP
- Community Participation & Traditional conservation e.g. Mangroom Biofertilizers in sundarbans

⇒ (PM) — "Development can reflect any form of violence". That development should be Inclusive & Sustainable

Candidates must no 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 (अफस्पा) अपनी उपयोगिता बरकरार रख पाया है? टिप्पणी कीजिए (150 शब्दों में उत्तर दीजिए) 10 अंक

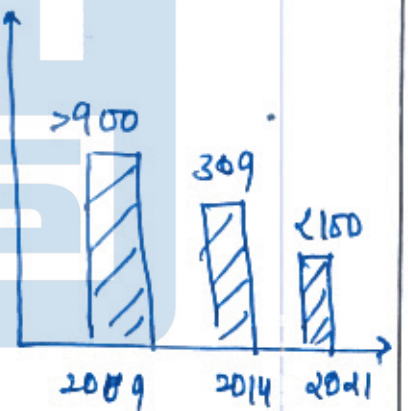
In light of the declining trend of violence in the North East and J&K region do you think that AFSPA has lived its utility? Comment. (Answer in 150 words) 10 Marks

AFSPA – Armed forces special powers act was first brought to control the quit India Movement. Later post Independence It has been used to curtail violence in North-East, Kashmir, Punjab, etc.

Declining Trends of violence

In North-East

- The no of deaths have been reduced
- Peace accords with different communities
  - ie. Naga, Bodo, etc.
- Development Projects – SIS, SRE, Roshni, etc.



In J&K – MHA data → 70% declining in Incidents & 78% decline in death of army personnels – **Reasons** → Removal of Article 370, Development.

Candidates must not write on this margin

Need To analyse AFSPA

- Defining terms - shows need to focus on development.
- It questioned the effective of AFSPA
- Allegation of Human Rights violation
- AFSPA can convert rebels into more insurgency.

But still needed because

- Determine ↳ & prevent guidelines by Army
- violence affected e.g. Naga NSCN-IM
- community classes e.g. Kukis & Meitis
- Control Over Insurgency e.g. Tripura.

- Jeevan Reddy Committee - has said to have not that AFSPA can be diluted or repealed with Transfer of provision to UAPA.
- 2nd ARC - have also recommended to control lapse and violence under AFSPA.

Thus there is need to analyse the provisions.

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

International trade is centred on the dominant currency paradigm (DCM). Critically Analyze the 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

Dominant Currency Paradigm – The phenomena which suggest that most trade occurs in dominant currency.

↳ e.g. > 70% in Dollar [American].

Currency influencing Trade

(1) Dominant currency decides Inflation and Trading balance

(2) **Trade Manipulation** – alleged by countries on Dominant currency. e.g. – alleged case in 1997.

(3) **Unilateral restrictions**

↳ e.g. Ban Russia during Russia-Ukraine war.

(4) **Global Impact** – USA 2008 crisis caused global slowdown.

(5) **Regional Ties** can be established through regional currency trade.

Candidates must not write on this margin

Importance of Hard Currency in International Trade

(1) Dictate Global Trade

- Imports – costlier leading to trade deficit if currency weak.
- Exports – will become easy in cheap currency [efficient in hard currency].
  - e.g. Currency Manipulation allegation on China.

(2) Hard Currency – is used as medium of exchange making domestic country important player.

(3) Regional Trade – can be enhanced by hard currency.

- e.g. Chinese Yuan is playing portion lead to use in trade.

(4) Create Global Demand

- due to demand of playing currency.

⇒ Turn for hard currency can dictate trade but other factors – Export competitiveness, supply side cost factors, technology assumption, logistics cost.

Candidates must not write on this margin

Rupee alternative to global Dollar hegemony

- Strong position
  - even during Russia-Ukraine war & COVID-19 disruption.
- 5th largest economy
  - shows significance of Rs.
- Bright star in world (IMF) & high growth
  - fastest growing major economy.
- Increasing Regional Ties & Currency Trade
  - e.g. currency swap with Russia.

But there are certain limitations

- low share in global trade w.r.t.
- volatility compared to dollar
- Dollar's hegemony difficult to break
- Chinese claim to establish Yuan as currency

⇒ To establish Rupee as International currency there is need for Diplomatic, Economic and Competitive negotiations in world Trade Body.

Candidates must not write on this margin

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 → The opportunity to capture advantage of high working age population as a stimulus for growth.

↳ e.g. India supposingly enjoyed dividend phase of 37 years from 2018.

Potential of Demographic Dividend

(1) High reasonable participation
↳ 41.6% in India.

(2) Less dependent population
↳ reduce fiscal burden.

(3) Growth in production and export.
↳ e.g. China reaped benefit of low cost labour for economic use.

(4) High employment in manufacturing
lead to boom in world trade.

Candidates must not write on this margin

But not always potential lead to growth.

(1) Participation - without participation will result in high unemployment

(2) Productivity of Labour force
   - e.g. only 50-1. graduates employable.

(3) Skilling Mismatch & Lack of Training
   - e.g. <5% formally skilled in India (India Skill report).

(4) Lack of Inclusive growth
   - lead to inequality in population.
     - e.g. Oxfam Report top 1-1. hold 40-1. wealth.
   - lack of Vulnerable section participation

(5) Gender Exclusiveness
   - only 25-1-1. LFPR currently.

(6) Technology adoption - Technology adoption can determine high rate growth.

(7) Sustainable growth - need green growth.

Candidates must not write on this margin

Steps by Government

(1) Skilling provisions
- PM Kaushal Vikas Yojana.
- IT skills – Future skills prism.

(2) Inclusive & Participation of all
- Informal sector – Pradhanmantri Shram Yogi Maandhan (13Cr outlay)
- e-Shram Portal linked with the National Career Service.
- SC/STs/women
  - Standup India scheme → cheaper credit
  - Mudra Scheme Bank.
  - Lakhpati Didi

(3) Sustainable growth / Green growth
- Sustainable growth → National Green Hydrogen Mission; e-vehicles
- Green growth → MHHI; Clean & Solar energy Tech.

(4) Technology adoption
- National supercomputer Mission
- National Centre on IR 4.0 [Mahaayu]

⇒ Demographic dividend may turn to demographic disaster if such steps are not taken.

Candidates must no 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 - The process ~~of~~ adding deleting a gene to modify the DNA or genome sequence of the species.

- e.g. - LAMA & MAMA.

Genome editing for crop Improvement

(1) GM crops has pest resistance
- may lower the use of pesticide

(2) It can produce climatically sustainable & extreme weather surviving crops.

(3) High productivity from GM crops
- e.g. BT cotton yield is higher.

Candidates must not write on this margin

(4) It can improve resistance against weeds & weedicides
↳ e.g. GM Mustard used Total

(5) How Nutritious crops & Health Security
↳ achieve target of SDG 1 & 2.

Concerns Regarding GM crops

Ethical Concerns
(1) Consumer may not be aware.
(2) Once started they can't market & alternatives not available
(3) Would shifting towards Organic & Manual farming.

Security Concerns
(1) Health Impacts on Consumption
- Digestive quality
- poisonous or Toxicity.

(2) May act as Invasive species.
(3) May cause harm to Environment & Sustainability.

Candidates must not write on this margin

To highlight the concerns, the government has released guidelines for the same :-

(1) Restriction on Import of GM crops.
   ↳ Thought extent of crops allowed
   eg: Soya cannot allowed.

(2) Percentage limit for GM product in Import
   Eg: 2% max limit.
   & FSSAI approval

(3) Extended fields for implementing GM crop in a phased manner.

(4) Consumer must be aware, so mark on GM crop products.

⟹ GM crops have the potential to help deal with climate Issues and food security but the potential challenges should be solved.

Candidates must not write on this margin

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 → The fiscal support provided by the government to support production of crops.

2 types

Direct
- MSP
- Income Support PM KISAN

Indirect
- Fertilizer
- water
- Electricity, etc.

Impacts of Direct & Indirect farm subsidies

① **Food Security** :- It has ensure food security for country
- 315mn tonn crop production [Survey 2022]

② It also provide **Income support to farmers** [~45% population in Agriculture]

③ Spurred the production to **Rice & wheat economy.**

Candidates must not write on this margin

(4) Low productivity Stagnant
↳ No private Investment

(5) Large farmers benefitted, while small didn't
↳ only 12% farmers sell crops under MSP regime.

(6) Stagnant agriculture & Allied Sector
↳ only ~4.6-1. average growth in last 5 years.

MSP regime & its Impact on Agri-Economy

- The minimum support price is guaranteed price for crops by government for few crops.
↳ announced for 22 crops.

Impact

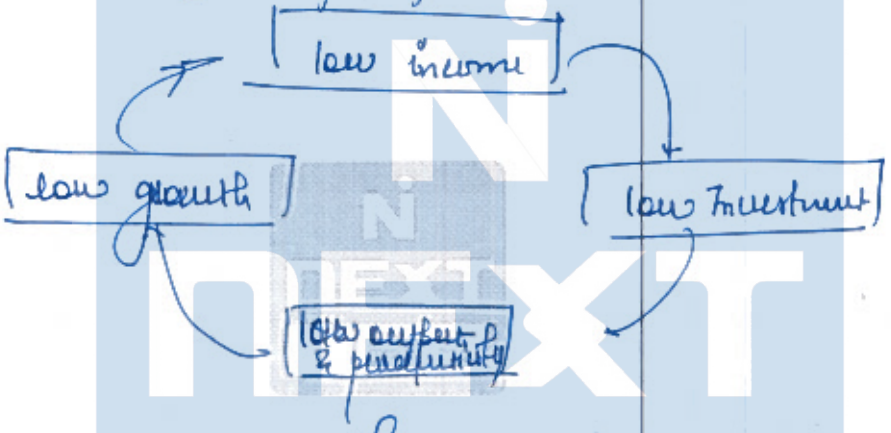
(1) Grain Dominant Economy
↳ e.g. wheat & rice due to open procurement.

Candidates must not write on this margin

(2) Economy is most stagnant
- less growth compared to other country (4.1% in 2022-23).

(3) Low production of cash crops

(4) Vicious cycle for farmers



(5) Low crop diversification & allied sectors demonstrate [where growth higher 7-8%]

To deal with Issues we must-

Implement Recommendations of

Ashok Dalwai Committee
- Crop Diversification
- Non farm sector farms e.g. Food processing.

Shanta Kumar Committee
- Better Agmc agencies
- food wastage content storage production

Agriculture is key to both Sustainable Development & Food Security.

Candidates must not write on this margin

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

AMR — The resistance developed in the pathogens due to adaptability to the various anti-microbial or anti-biotics medicines.

Public crises
- Pathogen Explosion
  - COVID-19, etc.
- Higher burden on Healthcare
- Low sanitation

→ AMR Escalating
- Anti-biotics in cheap solution
- AMR reducing capability to cope with it

⇒ AMR crises has occured due to following factors

(1) Improper use of Medicines
- Taking medicine without Consultation
- Overdose of Anti-Biotics
- Probe Treatment not followed [stopped in between].

Candidates must not write on this margin

(2) Spread through Animals - animals are also given Antibiotics, which transfers to animal food products.

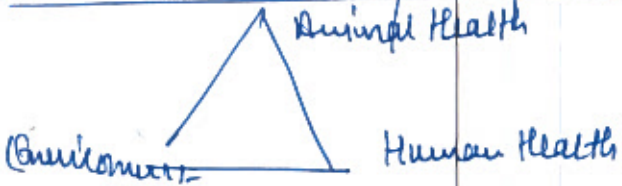
(3) Medical & pharma Residues
- anti-biotic residues are mixed with drains without Treatment.

(4) Unhealthy lifestyle & growing demand
- Lower Immune capabilities
- Due to explosion of Pathogens.

(5) Viral Impact also - virus infections also cause bacterial diseases.
- e.g. COVID-19 reduced Immune & throat Infections were common.

Steps that can be Taken

(1) Focus on One Health principle



(2) Regulation of Pharma Production and residue control

Candidates must not write on this margin

(3) Government action to control Improper usage
- e.g. Schedule H1 drugs
- Red mark on medicines not permitted w/o prescription.

(4) Global cooperation
- e.g. AWARE tool by WHO.
- guidelines to control AMR by WHO.

(5) Awareness among public
- campaigns
- Healthcare messaging, etc

(6) Incentive to Promising start [AIIMS Bibinagar]
- we should focus on Promising healthcare.

(7) Pathogen exploration restrictions
- e.g. WHO's restriction on the food & farm animal food supplements.

⇒ The idea is to balance the consumption, proper regulation and proper healthcare can go further. [SDG-3]

Candidates must not write on this margin

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 → The innovations which tend to **reorganise a product** to cater the **needs of the society**.

↳ e.g. Genome editing → BT cotton.

Features of Disruptive Technology

- Usually based on latest Technology
  ↳ e.g. ChatGPT – on AI (Neural Networks).
- **Impact** & cater to **Needs of large** section of society.
  ↳ e.g. gene editing → production & consumption of oils
  ↳ e.g. soya in USA.
- can solve **larger issues**
  ↳ e.g. Defence, food security, **Ease of Doing Business** and **Ease of living**.

Candidates must not write on this margin

Examples of Disruptive Technology

(1) ChatGPT based on Generative AI
- The capability to answers to multiple themed question.
- catered to public at large

(2) Gene Editing – in crops like BT cotton, mustards, soya, rice, etc.

(3) Cryptography – it is way to secure communication and transactions.
- e.g. used in crypto currency.

(4) Blockchain – distributed ledger which ~~works~~ chronologically arranges information
- e.g. India Chain – proposed architecture for all services.

(5) Digital Media / Social Media
- Information but also challenges of hate speech & security.

Candidates must not write on this margin

(6) Space Technologies : e.g. Chandrayaan 3.

(7) Optical fibre e.g. High speed Internet.

They don't only impact people but also changed the way industries operate

(1) shift to Digital world
- account of companies, functioning of various entities

(2) Demand of products
- digital goods required.

(3) companies starting to use Disruptive Technologies
- e.g. Digital Media Marketing.

(4) Threat to companies
- e.g. Zomato Data breach

(5) Asset for building Security

But we ~~can~~ have to take immediate steps to control these "Creative Disruptions" and generalise Rishabh Garg Committee on digital economy to all such sectors.

Candidates must not write on this margin

17. हानि और क्षति (L&D) कोष के क्रमिक विकास को चिह्नित 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 & Damage Fund – It is based on the principle of common-but-differentiated responsibilities, which establishes fund for damage in developing countries.

Evolution of fund – The idea was first mooted in Warsaw agreement in COP 19 [2013].

↳ Later through different COPs, idea materialised.

↳ It was included in Paris Agreement but in diluted form.

↳ COP 27, also recognized the CBDR principle and loss & damage fund.

Candidates must not write on this margin

Loss & Damage Fund in COP 27

- The fund got recognition and established under the Paris treaty.
- Warsaw agreement & CBDR principle was agreed.
- Establishment of concrete fund was not finalised
- Agreement on finance
  - Source of funding could not be finalized in the agreement.
- The developed countries are not willing to contribute significantly to the fund.
- While developing countries want $ 100bn every year to tackle the challenges.

Candidates must not write on this margin

India's Stand on the Fund

(1) Developing country's demand & CBDR principle
↳ favoured by India.

(2) India's Stand was aligned with Disasters due to climate in developing country.
↳ (i) Most pollution result of developed country.
14.14.1. contribution in Pollution from 1901-2019 [Economic Survey].
↳ (ii) Developing countries are unable to adopt to green technologies esp. global South.
↳ (iii) Time for developed countries should fund developing countries.

⇒ Provisions like Carbon Trading (under article-6), CERs, etc can be used for technology transfer and funding of climate issues

Candidates must not write on this margin

18. आपदा प्रबंधन सिर्फ आपात स्थिति से निपट ने 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 → The ability to establish **systems** or **systems** against impacts of disaster
e.g. Early warnings to prepare for upcoming disaster.

Disaster management for Responding to emergencies

(1) Early warning System
e.g. SUPAM systems.

(2) Regular Information to tackle ongoing challenges.

(3) Reducing risks through Non-Structural measures e.g. NDMA Plan 2016.

(4) Supply of emergency needs → food, water, medicines

(5) Immediate Rehabilitation
e.g. Shelter homes, etc.

Candidates must not write on this margin

Don as for Building Resilience

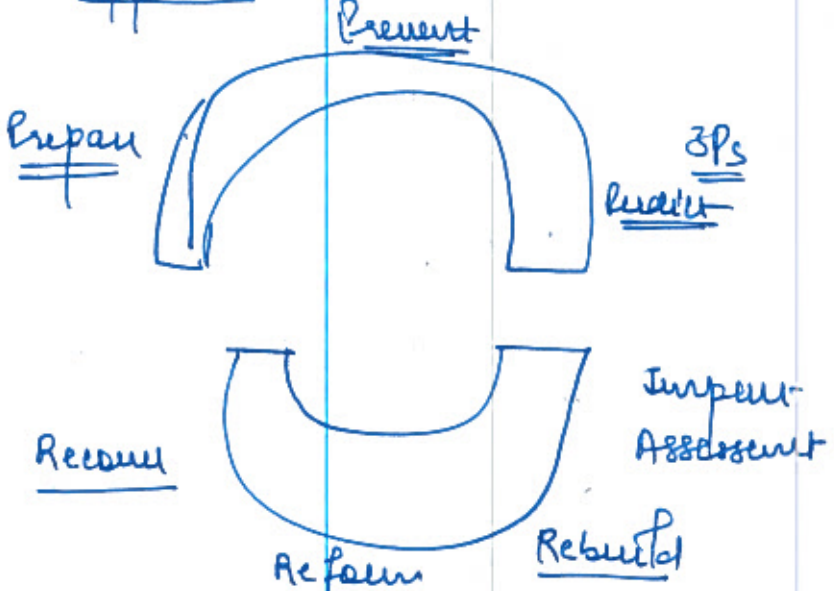
(1) creating disaster Resilient Infrastructure
L.g. CDRI Initiative.

(2) Making Plan and guidelines
L.g. National Disaster Management Plan gives 5 key guidelines.

(3) Making Strategies to tackle
- Building Shelter Homes bifor.
- Mapping of vulnerable areas.

(4) Community participation & involving all stakeholders.

Thirfor Disaster management is two fold approach



Candidates must not write on this margin

Strategies to build Community Resilience

- Early warning and color coding
  - like EWAM systems and color coding for cyclones (Orange, Red, green, etc.).
- Inter-Ministerial Coordination for effective response and multi-pronged action.
- Structural Measures
  - Resilient infrastructure
  - Proper city development plans
    - e.g. AMRUT etc.
  - Shelter homes with protection
- Non-Structural Measures
  - Public awareness & participation
    - e.g. Through curriculum
  - Stakeholder responsibility
  - Mapping of hazards

⇒ Disaster management is about vulnerability and resilience. If resilience can reduce vulnerability of will reduce its impacts.

Candidates must not write on this margin

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 - A form of organised violence to bring change or pursue socio-political goal in society.
- e.g. Boko Haram, ISIS, etc.

Transformation Through Modern Technology

- New platform of **Cyberspace**
  - used for radicalization
  - Threat to critical cyber infrastructure
- Metaverse use for planning attack
- **Drones** - used for surveillance
  - e.g. attacks in Iran.
  - used for smuggling
    - e.g. Drug & weapons supply from across porous Border.

Candidates must not write on this margin

- Artificial Intelligence - can be used to develop state-of-art defence systems, morphed videos, fake news, etc.

- mass collaboration & funneling
  - [victim organised crime, etc.
  - [cryptocurrency
  - [money laundering

But They can also be use to counter.

Technology as Defence & Offence

- Protective Measures
  - [Anti Drone Protection Technology [by DRDO]
  - [cyber security Policies
  - [Protect critical Infrastructure [NCIIPC].

- To attack terrorist groups
  - [e.g. - drone attacks used by Israel on Hamas.

- Use Digital Space for positive Speech & Deradicalisation

Candidates must not write on this margin

- Terrorism Simulation

e.g. Metaverse simulation by Interpol recently.

Significance of Delhi ~~Cyber~~ Declaration

- It was recently adopted to counter new Cyber Terrorism & impacts on the global scene.

Key Issues Raised & adopted

- Global Cybersecurity Architecture like CCIT proposed by India.
- Inter-country collaboration & data sharing.
- Define Terrorism and update it every ~~day~~ year
- Common database & its use in Terrorism.

⇒ Technology is a double edged sword which can both aid & check terrorist activities. We must take early steps.

Candidates must not write on this margin

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 → Establishes new post in the army of agniveer and modernize the recruitment process

Features
- Recruitment first through exam (Rank selection)
- 4 years of service
- Seva Nidhi & Certificate.
- After 4 years, 25% will be selected for permanent position

Bitter Pill : Agnipath Scheme

1. Reduce training period of army officers → can be negative like Russian forces ineffective during recent war.
2. No permanent position → may not enrich best talent man as job than service
3. No pension & other benefits for the officers.

Candidates must not write on this margin

(4) Reduces uptake in army
- earlier 65500 in a year, 1st year of agniveer only ~21000

(5) All pending recruitment
- government scrapped the earlier recruitment of previous years [selected candidates suffered]

Agniveer : As Resilient & efficient change

(1) It will modernize the army for.
- eg. new skilled participants.

(2) Make profile younger
- PIB → reduce age profile by 5 year.

(3) Reduce employment among Youth
- Recruitment in Army
- & skill certificates.

(4) Hire the best talent to serve forces
- 25% are chosen for Agniveer.

(5) It create military ethos in the society

Candidates must not write on this margin

(6) will give Sena Medal & spl certificates and also they will be preferred in central & state vacancies.

(7) Most accepted Reasons
- e.g. Israel - 2 year military service for everyone.
- Russia

(8) Reserved force for emergency
- for any future possible war.
- e.g. - Russia faced deficiency of soldiers, hired private (WAGNER group).

⇒ As Lt. Col. Rajendra, who was the key architect of scheme, said that military reason is about Maintaining Security and having best talent rather than mere job opportunity

Candidates must not write on this margin

Space for Rough Work

NEXT IAS