

TEST CODE 7 7 1 3 0 3

14 JUN 2025

SPS 2024 - UPPSC MAINS

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CENTER CODE
1903

Time Allowed : Three Hours

समय : तीन घंटे

ForumIAS

Maximum Marks : 200

अधिकतम अंक : 200

GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate परीक्षार्थी का नाम	AAKASH CHAUDHARY		
Roll No./अनुक्रमांक	1910074286	Medium/माध्यम	English <input checked="" type="checkbox"/> हिंदी <input type="checkbox"/>
Center Code/परीक्षा केंद्र	MUKHERJEE NAGAR	Date/दिनांक	10/6/25

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

INDEX TABLE / अनुक्रमणिका

INSTRUCTION / अनुदेश

Q. No. प्र.सं.	Max. Marks अधिकतम अंक	Marks Obtained प्राप्तांक
1		
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20		
Total/कुल अंक	200	

1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet.

कृपया उत्तर-पुस्तिका में नाम, ईमेल, रोल नंबर और मोबाइल नंबर भरें।

2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory.

उत्तर पुस्तिका में अंग्रेजी/हिंदी में बीस प्रश्न दिए गए हैं, सभी प्रश्न अनिवार्य हैं।

3. The number of marks carried by a question/part is indicated against it. प्रत्येक प्रश्न/भाग के लिए निर्धारित अंक उसके सामने अंकित किए गए हैं।

4. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided.

उत्तर प्रवेश पत्र में अधिकृत माध्यम में लिखे जाने चाहिए, जो कि दिए गए स्थान में इस प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के कवर पर स्पष्ट रूप से लिखा जाना चाहिए।

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

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

For Student Only / केवल परीक्षार्थी प्रयोग हेतु

Examiner's Discretion/मूल्यांकन कर्ता का विवेक :

Start Time/प्रारंभ करने का समय :

2:30 pm

End Time/समाप्त करने का समय :

6:00 pm

Total Marks/कुल अंक :

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

For Office Use Only / केवल कार्यालय प्रयोग हेतु

*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy.

मूल्यांकन कर्ता का विवेक अंक, आपकी लिखावट, प्रस्तुति, आरेखों के उपयोग, फ्लोचार्ट, तथ्यों और आंकड़ों या समग्र रूप किसी अन्य विषय वस्तु, जो मूल्यांकन कर्ता को आपकी कॉपी में पसंद आयी के आधार पर (लेकिन इन्हीं तक सीमित नहीं) पर दिए गए अंक हैं।

ECN CODE/
ईसीएन कोड :

EG/ईजी :

① ② ③ ④ ⑤

Evaluation Date/
मूल्यांकन तिथि :

Note: Students are expected to incorporate suggestions from the feedback provided in the answers. Discussion classes for the tests are also available online in your portal to aid in your preparation. Further, students are requested to see the good copies of the tests and learn from them. You can also discuss your copy with a Mentor and discover ways and means to improve your answers, or if you have any issues with this test / copy. Ask specific questions, to get specific answers.

EXAMINER'S REMARKS

PROTECTED

CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand of the question gets you an objectively fair score. It is examiner's perception if you have understood the question and if you know the answer in the first place. Creative answer writing, sometimes missing the core demand, may fetch very high or very low scores, and exposes your answer to the subjectivity of the examiner.
2. **CD & VA = Content Density & Value Addition.** Examiner will evaluate the quality and quantity of your content in the answer. In the same word limit and space limit have you (a) written what is asked (b) gone beyond what is asked (c) enriched answers through combination of (but not all!) suggestions, ideas, quotes, flowcharts, diagrams, facts and figures, data etc. This affects objective components of assessment.
3. **S & F = Structure & Flow =** Whether you have structured your answer properly or not. Whether the answer has been broken into parts and sub-parts and each part has been addressed appropriately or not. Whether the flow of the answer is maintained. Affects both subjective and objective components of assessment.
4. **P & R =** How your answer performs on the criteria of **presentation, ease of read, clarity and apparent effort** in writing the answer. This affects the subjective components of assessment.

SHORT ANSWER QUESTIONS

लघु उत्तरीय प्रश्न

Section-A / खण्ड-अ

Q.1) NITI Aayog gave a new dimension to the development planning process in India. Explain

नीति आयोग ने भारत में विकास नियोजन प्रक्रिया को नया आयाम दिया। स्पष्ट करें। (8 Marks)

NITI Aayog was established in 2015 as a successor to Planning Commission. It functions as a governmental think tank, focussed upon fostering cooperative federalism and inclusive development.

* New dimensions to development planning process via NITI Aayog

① Functions as an engine of growth.
↳ focusses upon inclusive growth.

② Plays an active role in development process as opposed to Planning Commission.
↳ (Reports on North-East Development)

③ Evidence-based policy making

↳ NITI's Multi-dimensional poverty Index (37% in rural areas)

④ Fosters spirit of competition as well as collaboration : "Race-to-Top" among States. (Eg) NITI's Aspirational District Programme

⑤ Creates pathways for balanced and environmentally sustainable growth, in line with SDG-8 and 13.

Thus, NITI Aayog is the 'harbinger of socio-economic change' in the country, creating "quantum leaps in planning process".

Feedback

(For OFFICE use only)

#	G	A	P
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Here G is Good, A is Average and P is Poor.

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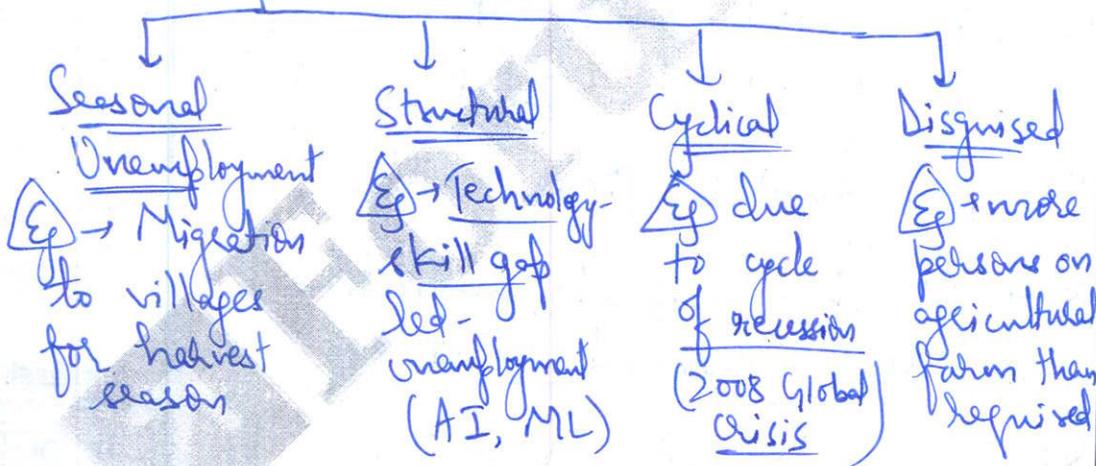
Q.2) Explain the concept of unemployment. Mention the main causes of unemployment problem in Indian context and the efforts made by the government to solve it.

बेरोजगारी की संकल्पना को समझाइए। भारतीय संदर्भ में बेरोजगारी की समस्या के प्रमुख कारणों एवं उसके समाधान के लिए सरकार द्वारा किए गए प्रयासों का उल्लेख करें।

(8 Marks)

Unemployment refers to inability of people in working age group (17-59) to find 150 days of gainful employment in an year.

* Types of unemployment



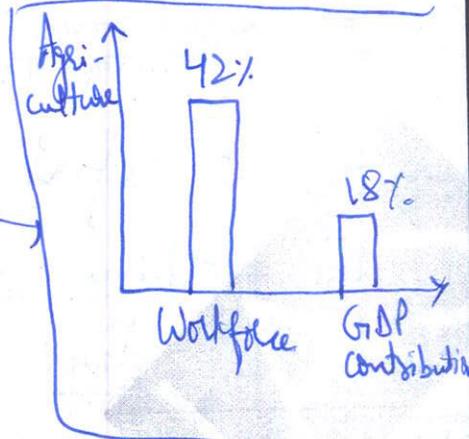
* Causes of unemployment

1) Industry - Academia mismatch
 ↳ More than 30% workers do not

have skills for IT sector. (NASCOM)

② Structural Issues

↳ such as agriculture
 ↳ limited technology adoption
 ↳ information asymmetry



③ Increasing use of technology

↳ Disruptive technologies like AI, Deep learning, IoT will take away 40% of jobs. (IMF)

- Government Efforts
- ① → PM Kaushal Vikas Kendras
 - ② → NSRF - designed curriculum for vocational training
 - ③ → MGNREGA extension

Thus, the boon of demographic dividend can be reaped by eliminating the bane of unemployment.

Feedback

(For OFFICE use only)

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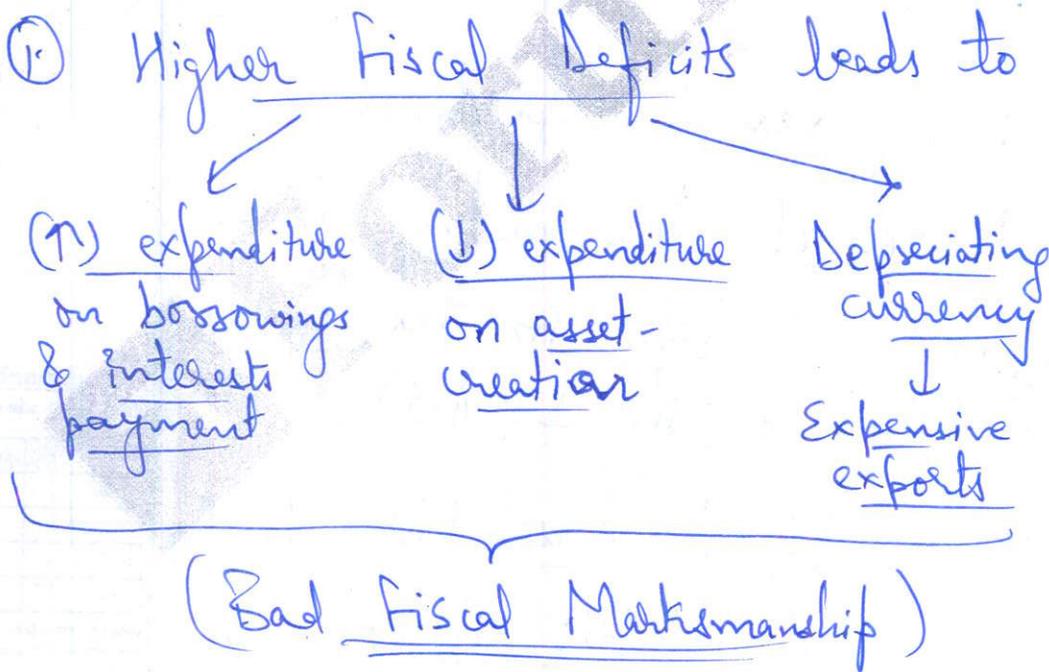
Q.3) What is fiscal deficit? Explain the ill-effects of fiscal deficit and discuss the measures to reduce it.

राजकोषीय घाटा किसे कहते हैं? राजकोषीय घाटे से उत्पन्न होने वाले दुष्प्रभावों को स्पष्ट करते हुए इसमें कमी लाने वाले उपायों पर चर्चा करें।

(8 Marks)

Fiscal deficit is the excessive expenditure over revenue-generation by government creating a gap in resources (fulfilled by borrowing).

* All-effects of Fiscal Deficit



② It increases the cost of future borrowings. Eg → Higher rate by IMF

- ③ Widens current account deficit bill.
↳ Balance of Payment problems
- ④ Results in overall weakening of economic system.

* Measures to Reduce Fiscal Deficit

- ① FRBM Act → sets the target of fiscal deficit to be reduced and brought within comfortable margins.
- ② Reducing revenue expenditure
- ③ Privatisation of loss-making PSUs.
- ④ Plugging the gaps in tax system (Amendments in IT Act).

Thus, fiscal consolidation is the need of the Viksit Bharat to perpetuate all-inclusive growth.

Feedback

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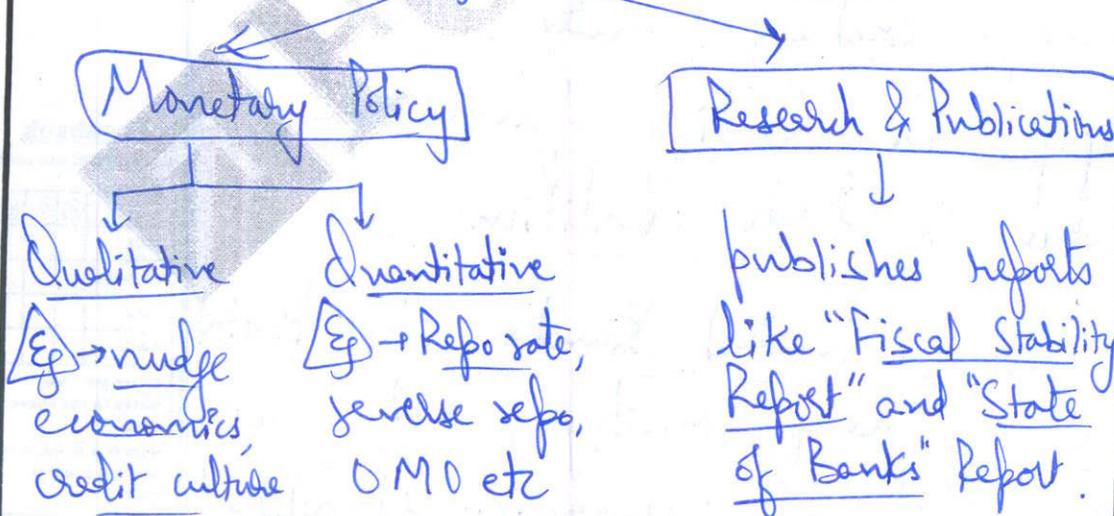
Q.4) Ensuring economic stability in any economy The central bank has an important role. Explain

किसी भी अर्थव्यवस्था में आर्थिक स्थिरता सुनिश्चित करने में केंद्रीय बैंक की महत्वपूर्ण भूमिका होती है। स्पष्ट करें।

The Central Bank of India (RBI) ^(8 Marks) is also called banker's bank, owing to vital monetary functions it performs for macro-economic stability

* Role of RBI in ensuring economic stability in economy

① Creates a Macro-economic security and stability framework via



② Vital role in inflation targeting
 Eg - $(4\% \pm 2) \rightarrow$ limit

③ Creates a framework for policy engagement with government.

Eg: Monetary Policy Committee



④ Plays a crucial role in managing forex reserves ($> \$650$ billion) and currency exchange rates.

⑤ Engages in creating favourable balance of trade conditions.

Thus, Central Banks are pivotal life line of any country, acting as the "holy grail of economic stability."

Feedback

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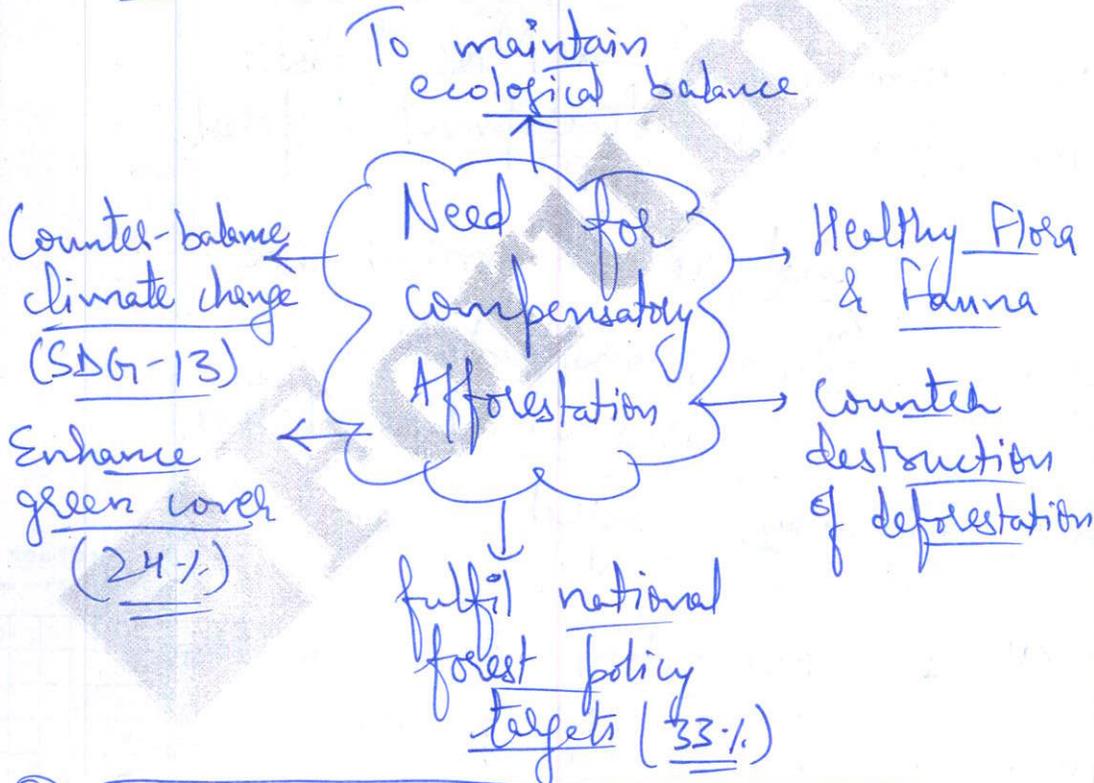
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TOTAL MARKS	
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Q.5) What do you understand by compensatory afforestation? Discuss the main elements of government policy in this context.

क्षतिपूरक वनीकरण से आप क्या समझते हैं? इस संदर्भ में सरकार की नीति के प्रमुख तत्वों की चर्चा कीजिए।

Compensatory Afforestation refers to planting new trees in lieu of destruction via deforestation to maintain ecological balance within nature. (8 Marks)



* Elements of Government Policy

1. Creation of Compensatory Afforestation

Funds (CAMPA) → to fill funding gap

- ② National Forest Policy → to create a target of 33% forest cover
- ③ Forest Rights Act → conservation of traditional forest dwellers' rights.
- ④ "Samsaksham to Samvardhan Approach" (2023 Amendment) → More holistic preservation and development of forest.
- ⑤ Use of technologies to minimize deforestation. Eg → Transplantation, Translocation of trees.
- ⑥ Green Highways Project

Thus, protection & conservation of environment (forests) is the ultimate pre-requisite for fulfilling UNCCD commitments and 3P approach.
 People ← Planet → Plants

Feedback

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#	C	A	P
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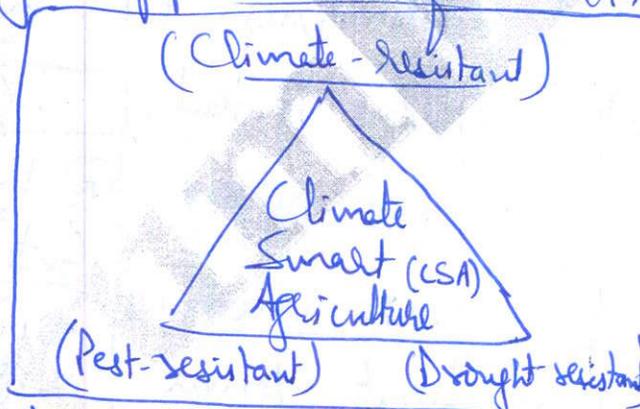
Q.6) What is Climate Smart Agriculture (CSA)? Highlight the need for adopting CSA and mention some of its salient features.

जलवायु स्मार्ट कृषि (CSA) क्या है? CSA अपनाने की आवश्यकता पर प्रकाश डालते हुए, इसकी कुछ प्रमुख विशेषताओं का उल्लेख कीजिए।

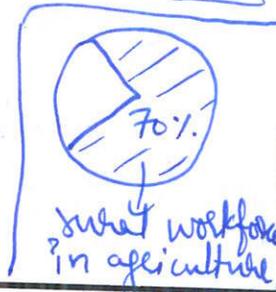
(8 Marks)

Climate Smart Agriculture refers to the practice of pest-resistant, drought resistant and climate-change resistant agriculture, by application of modern technologies

* Need for Adopting CSA



- ① 55% of Agriculture is rain-fed. (NABARD)
- ② Increasing prevalence of pesticides & insecticides in soil.
- ③ Climate-induced pest attack eg locust Swabhi
- ④ High dependency on agriculture
↳ overall employs 42% of the workforce.



* Salient features of Climate Smart Agriculture

① Use of technology to predict weather system. Eg m-KISAN app

② Use of drones to reduce exposure to diseases. Eg spraying pesticides via drones.

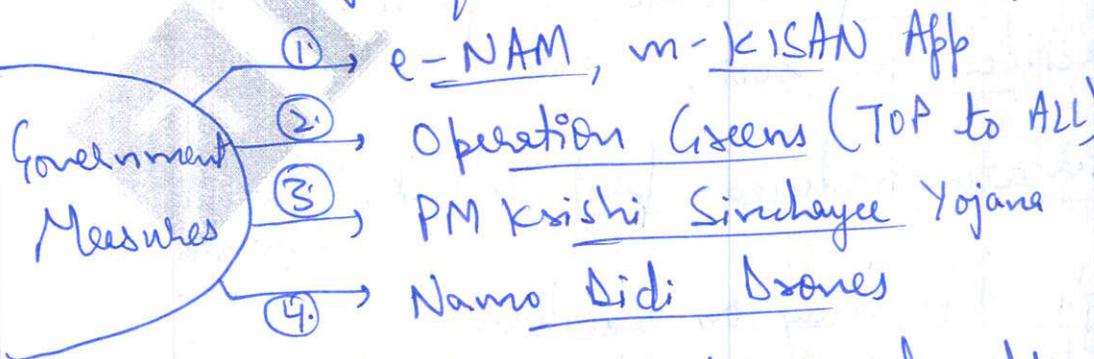
③ Use of techniques like intercropping & mixed cropping instead of monoculture cropping

④ Use of organic manures
Eg Pashu Pankaj Yojana

⑤ Establishing forward-backward linkages

Case Study

* Uganda & Rwanda Intercropping model
↳ Banana + Coffee
↳ Increased yields by 35%.



Thus, food security is foundational principle of "Sashakt, Samridh & Sampann Bharat"

Feedback

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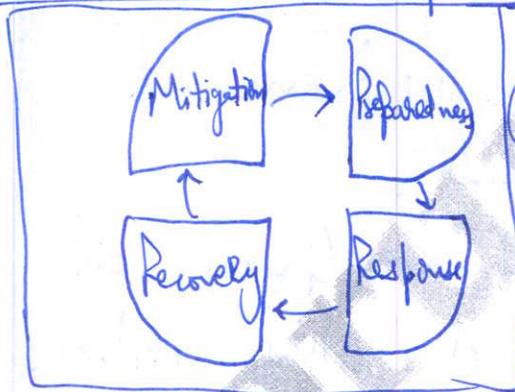
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TOTAL MARKS			

Q.7) Discuss the key provisions of "Disaster management (Amendment) bill, 2024, which aims to improve India's disaster management framework

आपदा प्रबंधन (संशोधन) विधेयक, 2024 के प्रमुख प्रावधानों पर चर्चा करें, जिसका उद्देश्य भारत के आपदा प्रबंधन ढांचे में सुधार करना है।

(8 Marks)

Disaster Management refers to ability to cope with the unforeseen natural or man-made calamities through structural and procedural interventions.



* 4 pillars of India's Disaster Management Framework

* Key Provisions of Disaster Management (Amendment Bill 2024)

① Reduce the overall vulnerability of Indian landmass (75% prone to disasters) by intensifying preparedness.

② Use of technological interventions such as Artificial Intelligence-

Based Weather Predicting Models.

② 'District' as the ^{basic} unit of disaster preparedness.

④ Enhance Early Warning Systems' Efficiencies

⑤ Enhance global cooperation framework
↳ fulfilling Sendai framework requirements.

⑥ Inclusive Approach → Grass-root level participation of village bodies.

↙ Training ↘
↙ First-Aid ↘

⑦ Create an Emergency Disaster Response force to supplement NDRF & SDRF as an auxiliary force.

Thus, shift from "recovery to preparedness" is the basic change in DM (Amendment) Bill 2024.

Feedback

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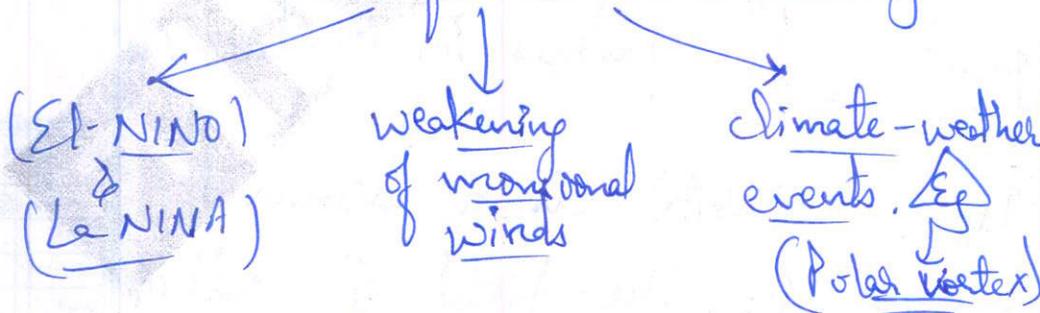
Q.8) Assess the relevance of NISAR mission in observing and managing climate change and natural hazards.

जलवायु परिवर्तन और प्राकृतिक खतरों के अवलोकन और प्रबंधन में एनआईएसएआर (NISAR) मिशन की प्रासंगिकता का आकलन करें। (8 Marks)

Nasa - Isro Satellite Aperture Radar (NISAR) mission is a watershed satellite technology aimed at observing and data-reporting of natural hazards and climate change events.

* Relevance of NISAR : Climate change

① NISAR satellite system could observe shifts in weather systems



② Could create better data prediction systems.

③ Establishing predictive weather models

System.

* Relevance of NISAR : Natural Hazards

① It could help establish Early Warning Systems for natural calamities. Eg → Cyclones in Bay of Bengal

② It → results in reduction of man and material loss

③ Evidence-based policy making to receive a push

④ Could determine climate change-induced hazards. Eg → Increasing intensity of cyclones in Arabian sea

Thus NISAR is a seminal technology in the field of weather forecasting and predictability, strengthening India's image as a Scientific Power.

Feedback

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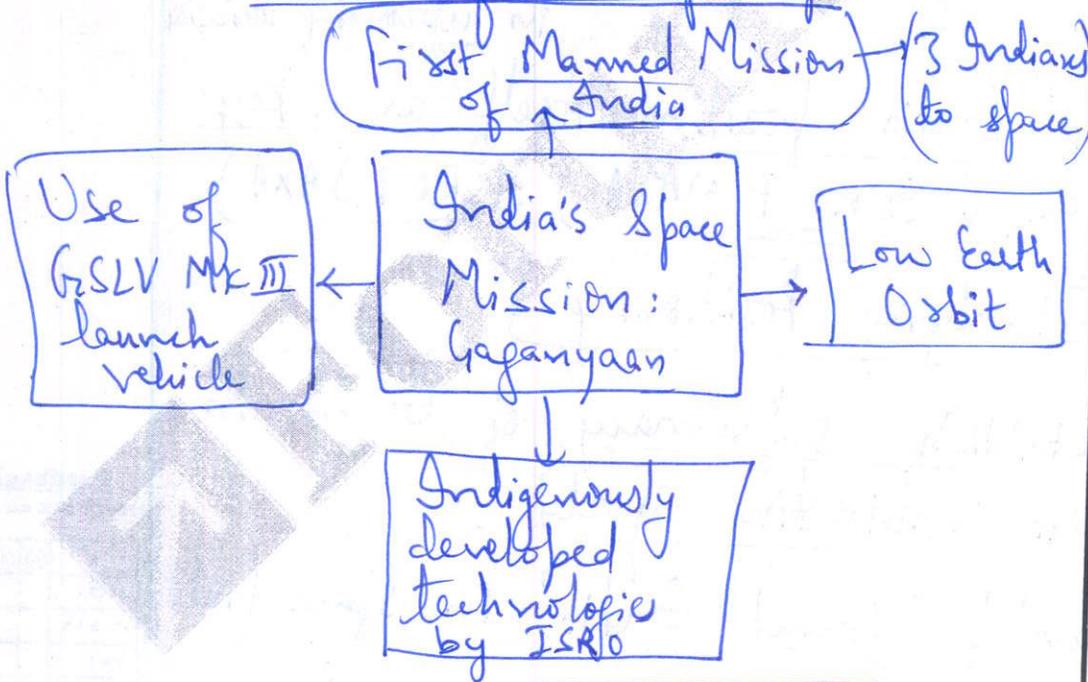
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Q.9) In what ways can manned space mission like the Gaganyaan impact India's scientific advancements, international collaborations, and strategic positioning in global space exploration?

गगनयान जैसे मानवयुक्त अंतरिक्ष मिशन किस प्रकार भारत की वैज्ञानिक प्रगति, अंतर्राष्ट्रीय सहयोग और वैश्विक अंतरिक्ष अन्वेषण में रणनीतिक स्थिति को प्रभावित कर सकते हैं? (8 Marks)

Global Space is continuously being redefined by the intensified race in the realm of space exploration and emerging technologies to wear the crown of a space power.



* Gaganyaan's Impact on India

I: Scientific Advancements

① Will successfully utilize indigenously

developed technologies in space (GSLV Mk III)

- ② Enhance competition and collaboration of private sector → (crowd-in-effect) in space technology.

II. International Collaborations

- ① Will put India in an elite club of countries → (↑) cooperation in upcoming missions
- ② Help India position itself as a key player (ISRO + NASA ; ISRO + JAXA)

III. Strategic Positioning

- ① Establish supremacy of India in space exploration field.
- ② Develop 'Brand India' in space field

Thus, Gaganyaan is India's dream to catapult itself into a global space super power

Feedback
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TOTAL MARKS			

Q.10) Highlight the working mechanism of the new satellite-based toll system. How can the new system plug the gaps in the Fastag system of toll collection?

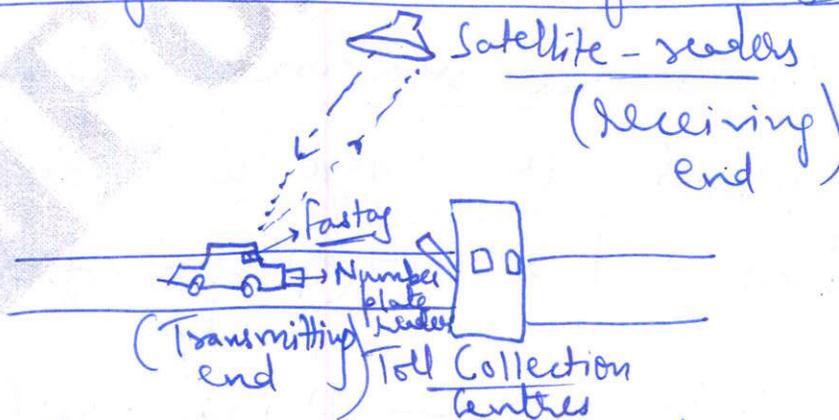
नए सैटेलाइट-आधारित टोल सिस्टम की कार्यप्रणाली पर प्रकाश डालें। नया सिस्टम टोल संग्रह की फास्टैग प्रणाली की खामियों को कैसे दूर कर सकता है?

(8 Marks)

With 85% import dependency on fuel, fastag system of toll collection acts as a saviour of our forex reserves, by enhancing energy security.

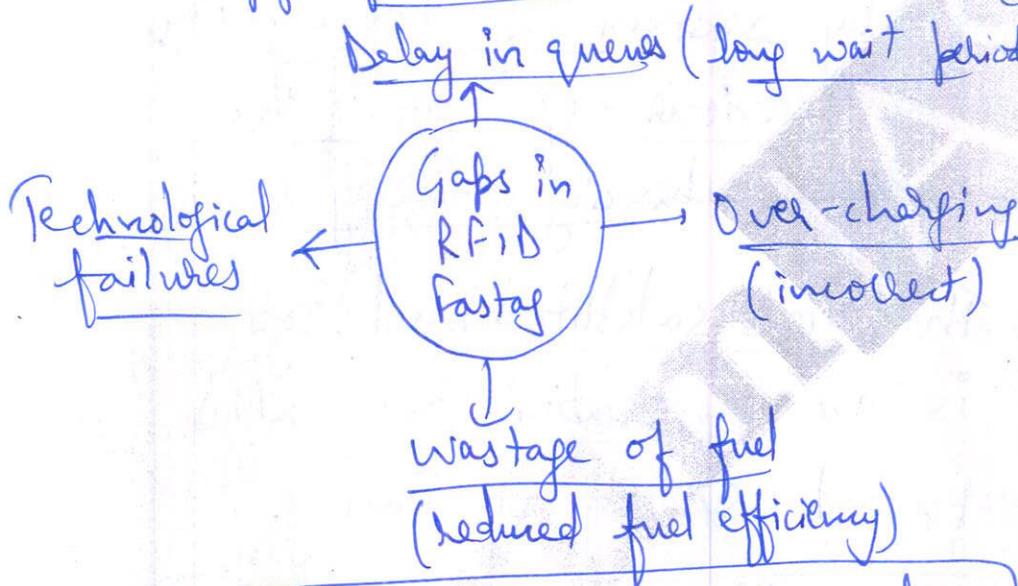
The new satellite-based toll system is an upgradation over RFID based present system of Fastag.

* Working Mechanism of New System



- 1. It eliminates the need of close range RFID reader
- 2. Works on long-range E-M waves

L3: The transmitter on tag is read by ~~radio~~ long waves perpetrating from satellite and deducts the appropriate amount, at receiving ^{end.}



* New system plugging the gaps

- ① Creates seamless movements of passengers
- ② Comfortable long-range deductions.
- ③ Reduces fuel bill → (↑) fuel efficiency

(↓) import dependency ← (↓) wait period
 ⇒ New system of Fastag is a technological advancement enhancing ease of movement whilst ensuring energy security.

Feedback

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LONG ANSWER QUESTIONS

दीर्घ उत्तरीय प्रश्न

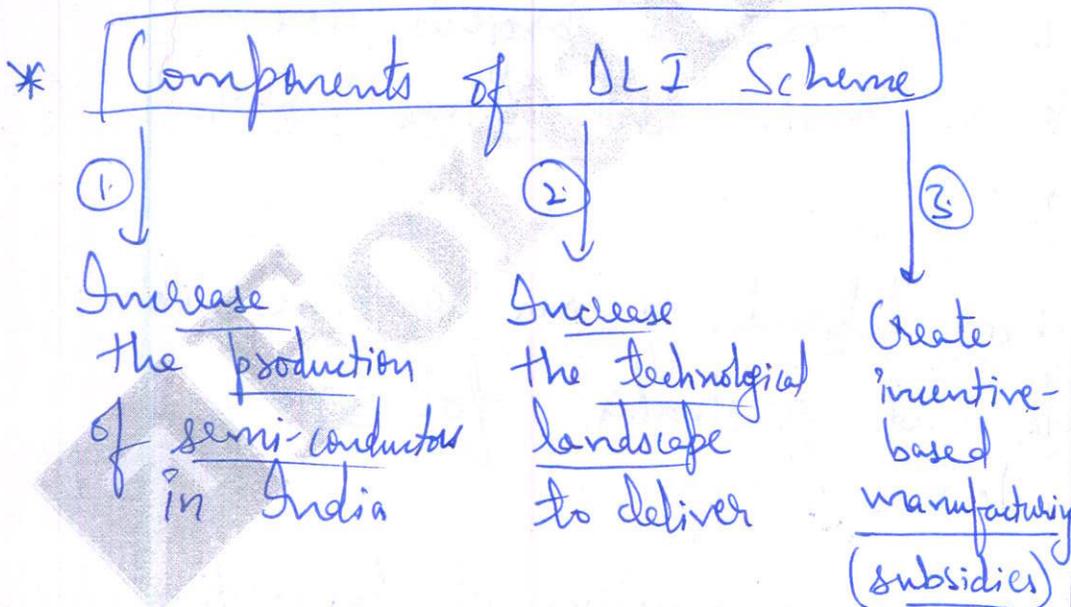
Section-B / खण्ड-ब

Q.11) What is the significance of the Design-Linked Incentive (DLI) scheme? Discuss the challenges faced in the implementation of the scheme.

डिजाइन-लिंकड इंसेंटिव (डीएलआई) योजना का क्या महत्व है? योजना के कार्यान्वयन में आने वाली चुनौतियों पर चर्चा करें।

(12 Marks)

Design-Linked Incentive Scheme is a technological-cum-economic model, part of ₹ 70000 crore Semicon India project.



* Significance of Design-Linked Incentive Scheme

① It enhances the positioning of

India from "Technology Importer to Technology Creator"

- ② Places India as a "Manufacturing hub" for latest semi-conductor chips for mobiles, car, GPS etc.
- ③ Opens up employment opportunities in India. (17% unemployed → India)
- ④ Gives a boost to projects like "Make in India" and "Atma Nibhar Bharat"
- ⑤ Reduces dependency on countries like China and Australia for rare materials.
- ⑥ Creates an ecosystem of Innovation and Invention.

* Challenges faced in scheme implementation

- ① Skill deficit: 30% of Indians

graduated do not have skills to be employed in IT sector (NASSCOM)

② Lack of familiarity with technologies like Nanotechnology, 3D-printing, CAD software etc (Limited Technical Know-how)

③ Incomplete structural transformation of economy.



④ Persistent dependency for raw materials.

However, with India's Semiconductor Mission targets and changing technological educational landscape, DLI scheme is bound to place India as a "new Manufacturer of the World".

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) Industrial corridors are not just a network of roads and factories, but a pathway to economic transformation, regional growth and national progress. Comment

औद्योगिक गलियारे केवल सड़कों और कारखानों का नेटवर्क नहीं हैं, बल्कि आर्थिक परिवर्तन, क्षेत्रीय विकास और राष्ट्रीय प्रगति का मार्ग हैं। टिप्पणी करें।

(12 Marks)

Industrial sector employs 18% of the people with 27% of contribution to India's GDP, reflecting stagnated growth. This stagnation parade is seen in the vicine of industrial corridors.

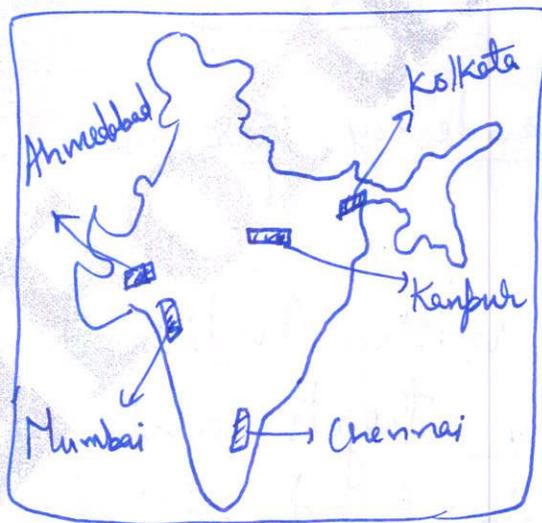


Figure:
Industrial Corridors
of
India

* Industrial Corridors: Not just networks of roads & factories

① Paras way for increased industrial

activity. Eg → Gift City (Gujarat)

② Enhanced incentives by the government.

Eg Land subsidy

③ Extended ~~the~~ by the network of roads, rails and factories.

Eg Delhi-Mumbai Expressway & Dedicated Freight Corridors

④ In turn supports development of the surrounding region. Eg → Peri-urban development

* Industrial Corridors: Pathway to economic transformation

① Enhances the employment opportunities (↑) by 25-30%.

② Creates ripple effect in other sectors of economy. Eg Hospitality, Food Services

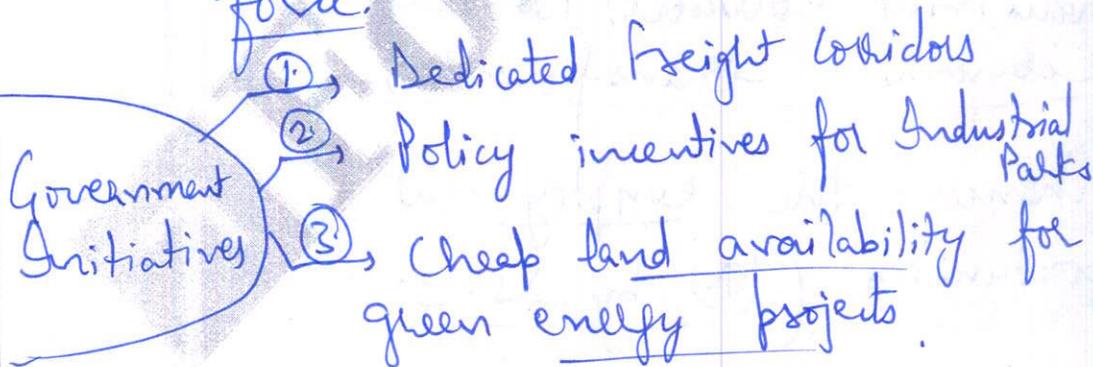
③ Attract foreign FDI's: Eg Real Estate - 13th largest

* Industrial Corridors: Regional Growth

- ① Put a hitherto under-developed region on map. Eg Jawahar Airport
- ② Reduces regional imbalances in growth.
↳ multiplier effect in development

* Industrial Corridors: National Progress

- ① Can significantly enhance the developmental progress.
- ② Acts as tools of nation-building force.



Thus, industrial corridors can act as 'force multiplier' in the achievement of 'Viksit Bharat' vision by 2047

Feedback

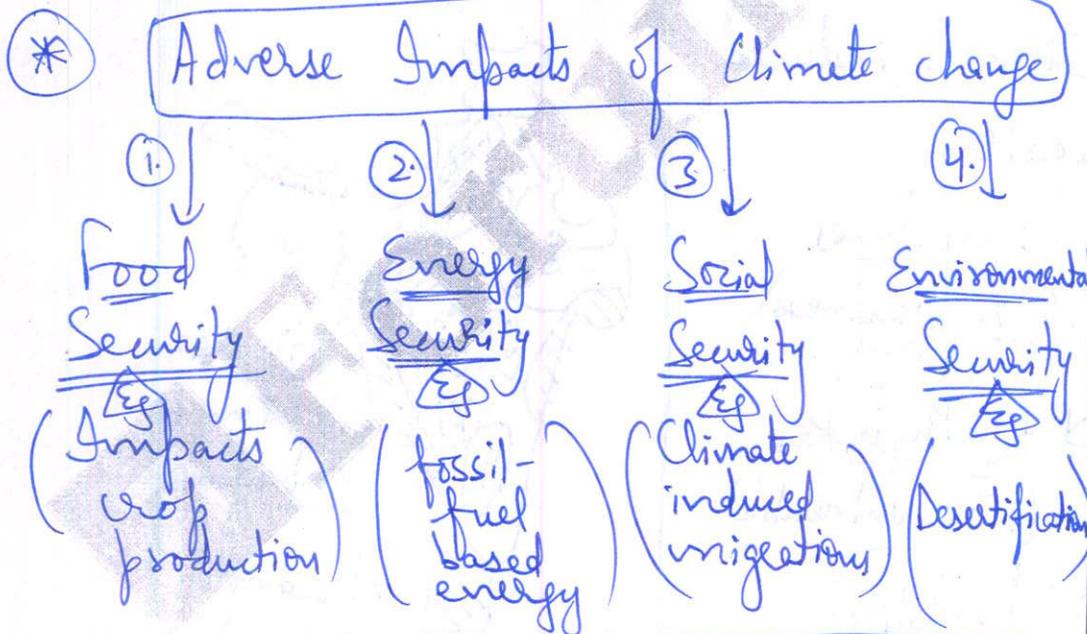
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Q.13) Why does India face significant vulnerability to the adverse impacts of climate change? Suggest some mitigative measures that can be taken.

जलवायु परिवर्तन के प्रतिकूल प्रभावों के प्रति भारत को अत्यधिक संवेदनशील क्यों होना पड़ रहा है? कुछ निवारक उपाय सुझाएँ जो अपनाए जा सकते हैं। (12 Marks)

Climate change impacts the security, stability and safety of a country, increasing its vulnerability to the vagaries to climate-induced disasters.



* Climate change Impacts : (7) Indian vulnerability : Reasons

① It creates conditions for food

scarcity; 68% landmass is vulnerable to droughts (WMO data)

② Hampers social security → rising sea levels creates chains of migration (unlawful). Eg Mauritius submerging 20-30 cm each year.

③ Increases chances of climate-induced disasters

- Eg
- cyclones (8% landmass prone)
 - earthquakes (59% vulnerable)
 - landslides (12.6% vulnerable)

④ Limited capacity development & training



- ⑤. Lack of coordinated efforts of ministries & departments (Silo's Approach)
- ⑥. Ineffective international frameworks
 Eg → UNFCCC's & UN CBD → voluntary commitments

* Mitigative Measures

- ①. land-mapping using drones and Early-warning systems
- ②. Capacity-building measures: Eg) CORI
- ③. Climate smart agriculture: Eg) Millet + Agri-tech
- ④. Integration of disaster plans & coordinated approach.
- ⑤. Renewed focus "from Mitigation to Adaptation and new sources of finances in International forums.

Thus, IPCC's reports of limiting global temperature to 1.5°C can serve as a wake-up call for nations

Feedback

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Q.14) The Green Credit Programme (GCP) could prove to be a significant step taken towards re-shaping financial systems for a more sustainable future. Analyse

ग्रीन क्रेडिट प्रोग्राम (GCP) अधिक संधारणीय भविष्य के लिए वित्तीय प्रणालियों को नया आकार देने की दिशा में उठाया गया एक महत्वपूर्ण कदम साबित हो सकता है। विश्लेषण करें।

(12 Marks)

The Green Credit Programme is an innovation in the field of environmental conservation and creates a desired balance between conservation & economic development.

* Green Credit Programme: Mechanism

- ① Selling and buying of carbon credits.
- ② Could be sold from surplus country to deficit country.
- ③ Makes use of financial markets.
↳ e-trading platforms for green credits.

④ Integrates financial market instruments with environmental conservation process: Eg Green Bonds

⑤ Fluctuating prices of green bonds → based on demand & supply matrix.

* ↓
1st issued by
Bangalore
Municipal Corporation

* Significance of GCF in financial systems re-shaping

① Results in more dynamic & nuanced trading market

② Encourages balancing developmental gains with environment protection

Eg → exchange of green credits could result in continuation of growth-based projects (industries)

③ Would help further concept of

Sustainable development. (Brundtland Report, 1987)

④ Results in establishing inter as well as intra-generational parity.

⑤ In line with government's conservation initiatives. (Eg) ESG

norms

⑥ Would encourage private investment
↳ crowd-in effect

⑦ Elevate levels of social harmony
↳ (↓) social cost of projects

Thus, Green Credit Programme is aimed at achieving equitable and environmentally sustainable growth by leveraging modern financial institutions; fulfilling SDG-8 and 13 obligations.

Feedback

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Q.15) The vision to make India a developed Nation by 2047 requires a new look at the Industrial policy. Discuss

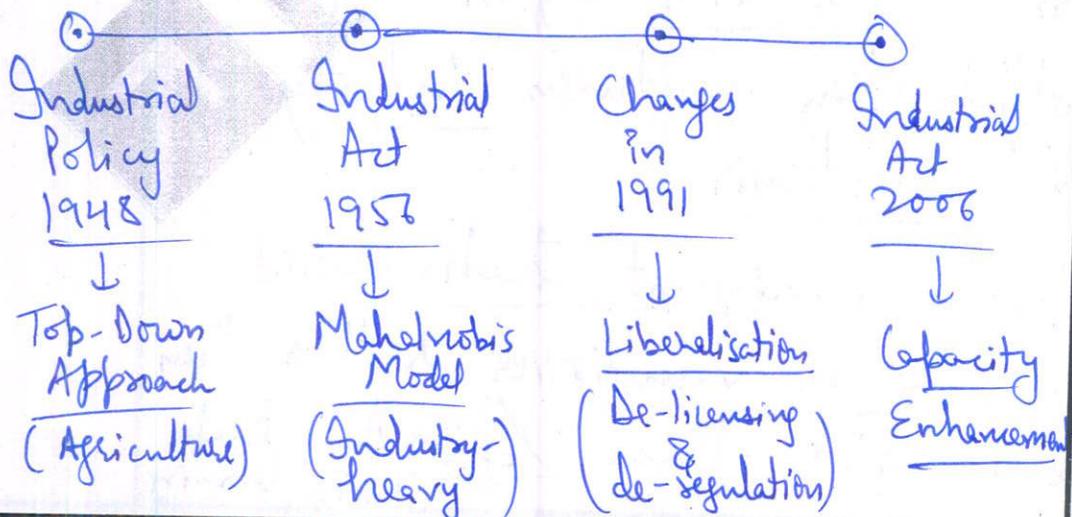
भारत को 2047 तक एक विकसित राष्ट्र बनाने के लिए औद्योगिक नीति पर नए सिरे से विचार करने की आवश्यकता है। चर्चा करें।

(12 Marks)

Development of a nation is a matrix of its capacity enhancement, growth trajectory and pace of industrialisation.

Developed India at 2047 necessitates re-invigorated Industrial policy landscape.

Industrial Policy Trajectory



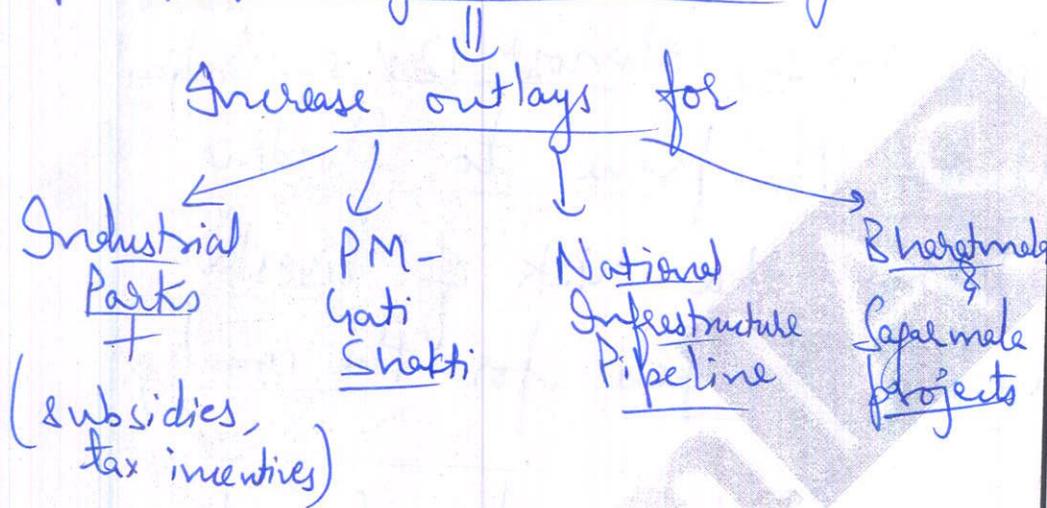
* Stagnation in current Industrial Policy

- ① Stagnation at 27% of GDP contribution
- ② Employs only 18% people, despite India being a labour-intensive nation
- ③ Skill-Academia mismatch
↳ shortage of skilled workforce
- ④ Over-emphasis on centralised approach

* New shape of Industrial Policy for Developed India at 2047

- ① Bridge the skill deficit by collaboration between industry and academia
- ② Create emergent technologies as a force multiplier rather than destructive forces (eg) AI, Deep IOT, learning

③ Reinvigorate investment through pump-priming the economy



④ Increase output efficiency with use of high-tech machines.

⑤ Focus on labour-intensive industries alongside new-age (to cope up with unemployment challenges)

Thus, vision of developed India at 2047 necessitates enrichment of industrial sector with 3 I's



Feedback

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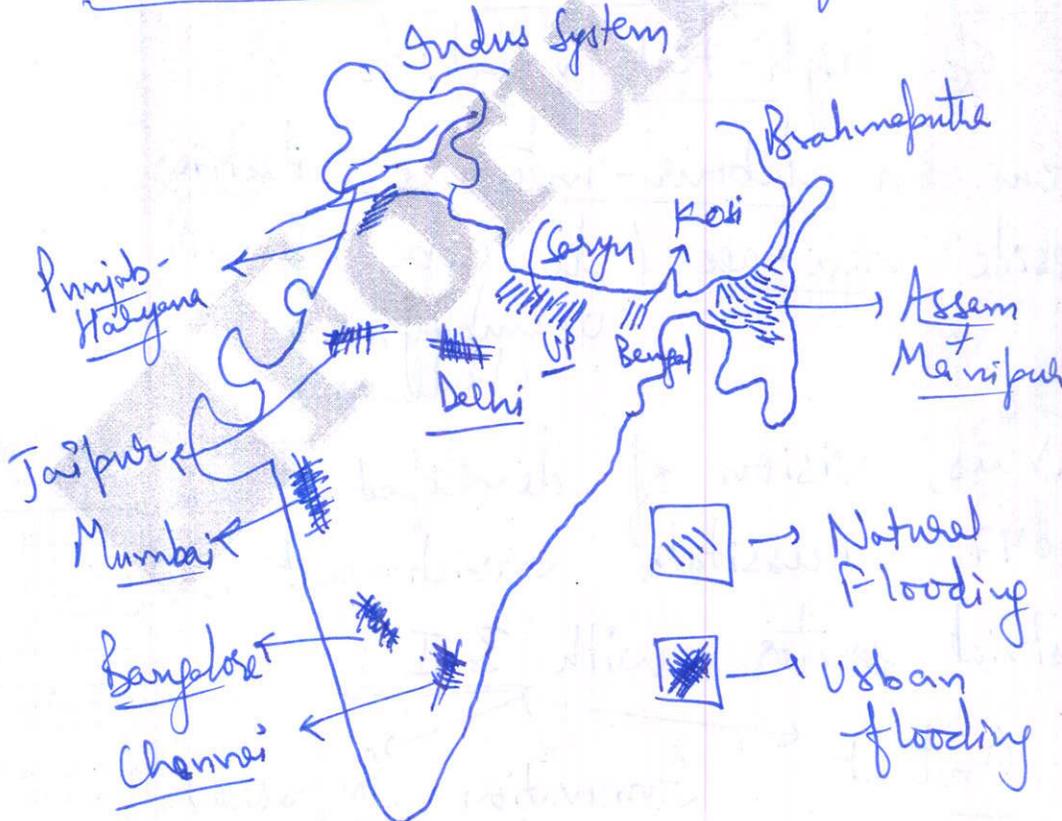
Q.16) List the various flood prone areas of India and identify the reasons for frequent flooding in those areas. What are the guidelines of NDMA for flood management?

भारत के विभिन्न बाढ़ प्रवण क्षेत्रों को सूचीबद्ध कीजिए और उन क्षेत्रों में बार-बार बाढ़ आने के कारणों की पहचान कीजिए। बाढ़ प्रबंधन हेतु NDMA के क्या दिशा-निर्देश हैं?

(12 Marks)

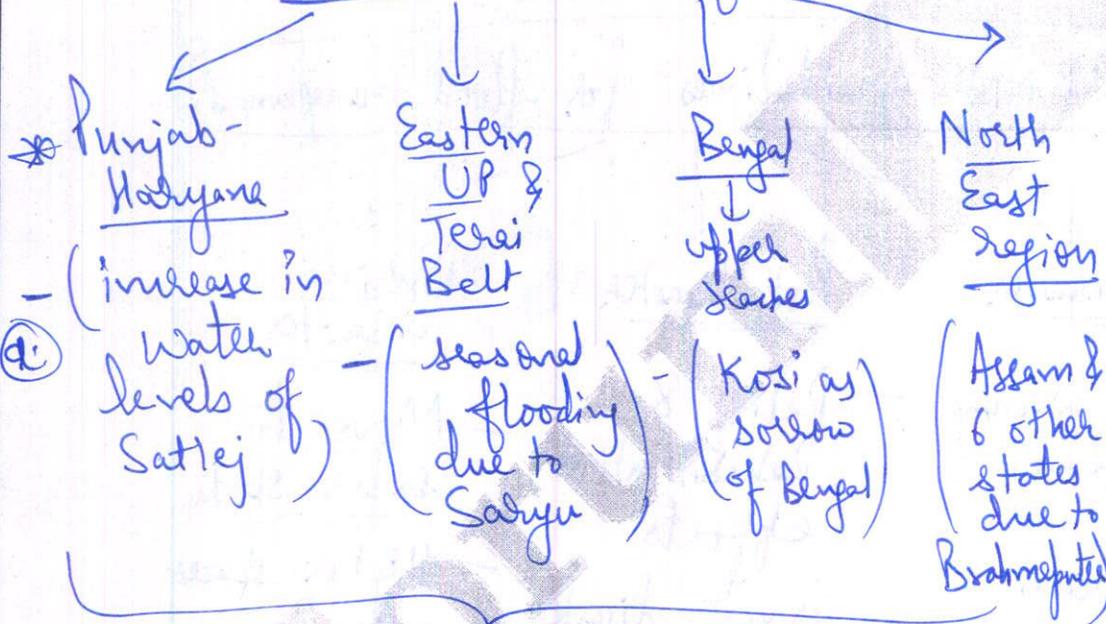
As per GSI, almost 12% of Indian landmass is prone to flooding highlighting the risk of disaster-vulnerable hotspots for the country.

* Various Flood Prone Areas of India



* Reasons for frequent flooding

① States with natural flooding due to course of river and increased water flow



② Over-capacity of urban sewage systems

③ Under-development of regions

④ States with urban flooding



⑤ Erratic Monsoon + heavy pre-monsoon rainfall

(b) Over populated → choked sewers
 spreads diseases ← overflow of water

(c) Deficit of urban sewage infrastructure expansion

* NDMA guidelines for flood management

- | | | |
|---|---|---|
| <p><u>Pre-disaster</u></p> <ul style="list-style-type: none"> - <u>Early warning systems</u> - <u>Different sirens for level of severity</u> - <u>Mock drills & preparedness</u> | <p><u>Post-disaster</u></p> <ul style="list-style-type: none"> - <u>Relief & Rehabilitative efforts</u> - <u>create disaster resilient infrastructure</u>
 (CDRI)
 (Smart Cities 2.0) | <p><u>During disaster</u></p> <ul style="list-style-type: none"> - <u>Move to safer spots</u> - <u>Higher spaces</u> - <u>Keep an emergency bag of food & medicines</u> - <u>NDMA as nodal agency</u> |
|---|---|---|

Thus, de-centralization of preparedness with participation of people can help tackle menace of flooding, coupled with infrastructural upgradation.

Feedback

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Q.17) Define invasive species and give examples from flora and fauna in India. What are the threats associated with the spread of invasive species? In this context, also discuss the measures to overcome these threats.

आक्रामक प्रजातियों को परिभाषित कीजिए और भारत में वनस्पति एवं जंतु जगत से उदाहरण प्रस्तुत कीजिए। आक्रामक प्रजातियों के विस्तार से जुड़े खतरे क्या हैं? इस संदर्भ में इन खतरों को दूर करने के उपायों की भी चर्चा कीजिए।

(12 Marks)

Invasive Species refers to the newly introduced alien species to a novel ecosystem, wherein it destroys the original occupants and reaches the survival stage by carrying out its ecological dominance in a niche.

* Examples of Flora in India

① Eucalyptus tree in North Delhi Ridge → destroyed original plantation → more water-consuming

② Genetic variety of cotton . Eg →

↳ Bt cotton when introduced in a new crop system becomes dominant variety.

* Examples of fauna in India

- ① Presence of crows & kites in Delhi
↳ one of the reasons for disappearance of sparrow.
- ② Introduction of cheetah needs re-assessment.

* Threats associated with spread of invasive species

- ① Decline in ecological, genetic & species diversity.
- ② May impact the life cycle/food web negatively.
- ③ Leads to pre-dominance of certain

crops / fruits → nutritional deficiency

④ May lead to desertification
 (Ex) → (Extension of Thar desert)

* Measures to overcome these challenges

① Try and test introduction in limited ecosystem ⇒ Biological labs

② In-situ rehabilitation and re-generative practices.

③ Ecological Sponges: control species that can counter invasive species.

④ Leveling Convention on Biological Diversity

→ Thus, maintaining ecosystem diversity is one of the key principles of an environmentally rich, culturally conscious and sustainable development of flora & fauna.

Feedback

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Q.18) FTP 2023 is a dynamic and open-ended policy that will accommodate the emerging needs. Comment

विदेश व्यापार नीति (एफटीपी) 2023 एक गतिशील और खुली नीति है जो उभरती ज़रूरतों को पूरा करेगी। टिप्पणी करें।

(12 Marks)

Foreign Trade Policy envisages a five-year policy in harmony with government's economic (fiscal targets). It is prepared by Ministry of Finance to encourage exports and competitiveness in global markets.

* FTP 2023: Dynamic & open-ended policy document

① Flexible Approach → It focuses on building flexible economic supply chains

↳ reduce reliance on few countries.

② Addresses Export Needs: emphasises upon growth-oriented sectors. (E)

Semi-conductors, IT-es and AI-backed services.

③ Multiplier of Economic Growth → creates opportunities for small & medium enterprises to increase their share in exports

④ Multi-pronged supply chains → creates multiple procurement as well as export channels.
↳ (open-ended nature)

⑤ Increase export competitiveness
↳ by giving export-incentives to the firms. Eg subsidies

* Challenges: FTIP 2023 interest⁺ subvention

① No concrete measure is provided

- in terms of quantifiable outcomes.
- ② Redundant and obsolete parts in policy → continued focus on least growing sectors.
 - ③ Missing linkages → with the demand of economy → to protect MSMEs in nascent phase.

Thus, FTP 2023 is a meticulously created document which needs to be coupled with other initiatives like fiscal consolidation and Make-in-India initiative to enhance multiplier effect on economy.

Feedback

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Q.19) In what ways have 'Constructed wetlands' emerged as a promising approach towards effective wastewater treatment along with other environmental and economic benefits?

किस प्रकार 'निर्मित आर्द्रभूमि' अन्य पर्यावरणीय और आर्थिक लाभों के साथ-साथ प्रभावी अपशिष्ट जल उपचार की दिशा में एक आशाजनक दृष्टिकोण के रूप में उभरी है?

(12 Marks)

'Constructed wetlands' are a panacea to the problems of untreated waste water alongside environment pollution and water scarcity.

to address urban jungle problems
 ↑
 Eg → concretization

⊛

Help prevent water pollution & scarcity

Need for constructed wetlands

to improve ground water percolation
 Eg → Traditional Tankas

proliferate flora & fauna

Eg → Enrich biodiversity

⊛

Constructed Wetlands: Solution for Effective Waste Water Treatment

- ① Can help create additional sources of ground water.
- ② Help in providing fresh water source to households.
- ③ Reduce the impact of grey water getting mixed with fresh water sources.
- ④ Help create an environmentally sustainable ecosystem
 - ↳ meeting water needs
 - ↳ reducing water stress.
- ⑤ Induce participatory approach
 - ↳ involvement of communities in management of wetlands sources.
- ⑥ * Other Benefits

Environmental

Economic

- Create a positive effect on biodiversity
 (Eg) ↳ attracts birds to wetlands
- Create India as a 'sponge-city'
 (China-model)
- Enhance compliance with SDG-6
 (Clean water and Sanitation)

- Help create more employment opportunities.
- Has a ripple effect on rural growth
 ↳ reducing expenditure on basic life needs
- Clean water too reduces out-of-pocket expenditure
 (39%)

Thus, constructed wetlands are an innovative solution to the problems of waste-water enhancing environmental & economic security.

Feedback

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Q.20) Microplastics has emerged as one of the most damaging and long-lived legacies of the plastic pollution crisis. Highlight the threat to human and ecological health caused by microplastic pollution and mention the initiatives taken to combat this threat.

माइक्रोप्लास्टिक प्लास्टिक प्रदूषण संकट की सबसे हानिकारक और दीर्घकालिक विरासतों में से एक के रूप में उभरा है। माइक्रोप्लास्टिक प्रदूषण के कारण मानव और पारिस्थितिक स्वास्थ्य के लिए खतरे पर प्रकाश डालें और इस खतरे से निपटने के लिए उठाए गए कदमों का उल्लेख करें।

(12 Marks)

Microplastics are plastic particles which are less than 5 mm in size and are a detrimental by-product of the plastic products, damaging environment.

* Microplastics: Damaging & long-lived legacies of Plastic Pollution Crisis

① It persists in environment for over millions of years (non-biodegradable)

② It enters the soil, water and air system → making way into crops, ocean fauna and human lungs. Eg → PM 2.5 & plastics (micro)

③ Leads to degradation and increased pollution

* Threat by Microplastics to:

Humans

Ecology

① → Bio-magnification

↳ enters food chain and intensifies

↳ causes diseases like cancer

② → Affects the gut health & hampers good bacteria.

↳ (↑) Out-of-pocket expenditure (39-1.)

③ → (↑) burden on economy; difficult to trace.

① → Enters food chain; affects marine flora & fauna negatively

② → Disturbs the balance between the various levels by adding unwanted inedible substances.

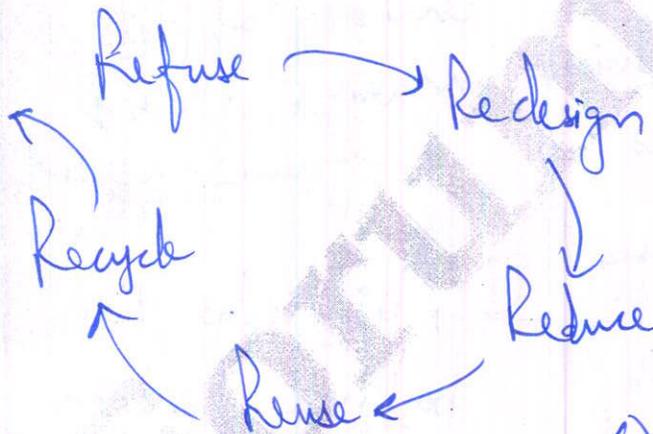
③ → Creates polluted soil, streams & rivers.
↳ (↓) drinking water

* Initiatives to combat Microplastics

1. Zero-Plastics Approach

↳ to curb/end plastic usage by 2026.

2. 5 R Approach : Circular Economy



3. Green Technologies : Ex → LPG (Gulljwala)

4. Renewed focus on traditional Knowledge systems ; Ex focus on paperless & jute bags.

5. Plastic Waste Management Rules 2016 ↳ EPR

Thus, combating microplastics is the need of the hour to create a sustainable, smart & sound ecosystem.

Feedback

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