

TEST CODE 7 7 1 3 1 1

SPS 2024 – UPPSC MAINS

Time Allowed : Three Hours

समय : तीन घंटे

Forum IAS

Maximum Marks : 200

अधिकतम अंक : 200

## GENERAL STUDIES / सामान्य अध्ययन

Name Of Candidate

परीक्षार्थी का नाम

Avantika Singh

Roll No./अनुक्रमांक

1910186525

Medium/माध्यम

English हिंदी 

Center Code/परीक्षा केंद्र

1910

Date/दिनांक

03-06-2025

\*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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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।

Total/कुल अंक 200

## For Student Only / केवल परीक्षार्थी प्रयोग हेतु

Examiner's Discretion/मूल्यांकन कर्ता का विवेक :

Start Time/प्रारंभ करने का समय :

End Time/समाप्त करने का समय :

Total Marks/कुल अंक :

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

\*Examiner's Discretion is the marks awarded at the discretion of the examiner based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, 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।

## For Office Use Only / केवल कार्यालय प्रयोग हेतु

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.

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## EXAMINER'S REMARKS

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### CRITERIA FOR THE FEEDBACK SECTION AT THE END OF EACH QUESTION

1. **AWIS = Answered What is Asked.** This means whether you have addressed the core demand of the question or not. Addressing the core demand 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) Discuss the major causes of poverty in India and analyse the government initiatives aimed at poverty alleviation in India.

भारत में गरीबी के प्रमुख कारणों पर चर्चा करें और भारत में गरीबी उन्मूलन के उद्देश्य से सरकार की पहल का विश्लेषण करें। (8 Marks)

Poverty refers to the inability of a person to afford the basic needs of daily life. India has been consistent to take its people out of poverty with 25 crore people taken out in the last decade. (NITI Aayog).

### Major causes of Poverty

- 1.) Inflation - One is unable to afford buying things due to sky rocketing inflation.
- 2.) Unemployment - India experiencing a phase of jobless growth with around 6% unemployed youths.
- 3.) Population crisis - Poor people stuck in the loop of the theory of "helping hands" having more children to work.

4.) Income Inequality - Hits all-time worse with top 1% holding 40% of wealth and bottom 10% holding only 1% of wealth. (NITI Aayog)

## Government initiatives to tackle poverty

- 1.) Ensuring food security - via schemes like PDS, NFSA 2013.
- 2.) Tracking multidimensional poverty - with National Rural Livelihood mission, empowering through SMILE mission.
- 3.) Financial security - PM KISAN for farmers, Micro Credit Mudra Scheme for small businesses, PM Drona didi for STCs, PM Dhan Lakshmi.
- 4.) Empowering through Skill Development - PM Vishwakarma Yojna, MXVA, Surya Mitras etc

Thus, government has been trying to eradicate poverty with results been shown and efforts taken to soon reach equality for Indian people.

### Feedback

(For OFFICE use only)

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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.2) How does union budget 2025-26 aim to improve agricultural productivity and rural prosperity?

केंद्रीय बजट 2025-26 का लक्ष्य कृषि उत्पादकता और ग्रामीण समृद्धि में सुधार कैसे करना है?

(8 Marks)

Recently, our finance minister has announced the budget of year 2026-25 putting special focus on the four categories - farmers, youth, women and socially backward.

## Budget for improving Agriculture productivity

- 1.) Funds for PM-KISAN - Huge allocation is made for the scheme due to its precedent success.
- 2.) Fertilizer subsidies - Around 0.5% of GDP close to, are allotted for fertilizers.
- 3.) PM Paramparagat Krishi Yojna. - Recent shift to organic farming methods is incentivized.
- 4.) PM Krishi Suraksha Yojna - for providing security to farmers.

## Budget mentions for Rural Prosperity

- 1.) PM Aadarsh Gram Yojna - Encourages villages to build model village developments.
- 2.) PM Gram Sadak Yojna (Phase VI) - To improve road connectivity and ensure a pucca road to every village.
- 3.) PM Awas Yojna (Gramin) - Around 5 cr houses already constructed, a target of 2 cr houses approx. is set for current financial year.

Thus, Budgetary allocation for the current financial year has focused more upon uplifting and sustaining the uplifted.

### Feedback

(For OFFICE use only)

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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.3) Evaluate the role of food processing in enhancing food security and reducing post-harvest losses in India.

भारत में खाद्य सुरक्षा बढ़ाने और कटाई के बाद होने वाली हानि को कम करने में खाद्य प्रसंस्करण की भूमिका का मूल्यांकन करें। (8 Marks)

Food processing has been a successful sector in the Indian economy with production increasing from 50 metric tons in pre Economic reforms to 350 metric tons. (~~was~~) (World Bank)

Role of food processing in enhancing food security

- 1.) Crop diversification favoured - Rather than rice-wheat centric approach.
- 2.) Greater yield - with adoption of farm mechanization and better cropping system
  - ⊕ Inter cropping yield > monoculture style
  - ⊕ Increased inclusive growth - with farmers adopting Agriculture with Allied services.

- 4.) Ensures food for poor - Better storage facilities  
improved better procurement for Restoring  
to PDS shops.
- 5.) Increase exports - Better access to export  
markets with institutions like APEDA, MPEDA
- 6.) Marine resources and fisheries sector boom -  
with UP being - the largest fisheries (inland)  
producer.
- 7.) Increase forward and backward linkages -



Thus, food processing industry has proved to be a boon for farmers and Indian economy.

### Feedback

(For OFFICE use only)

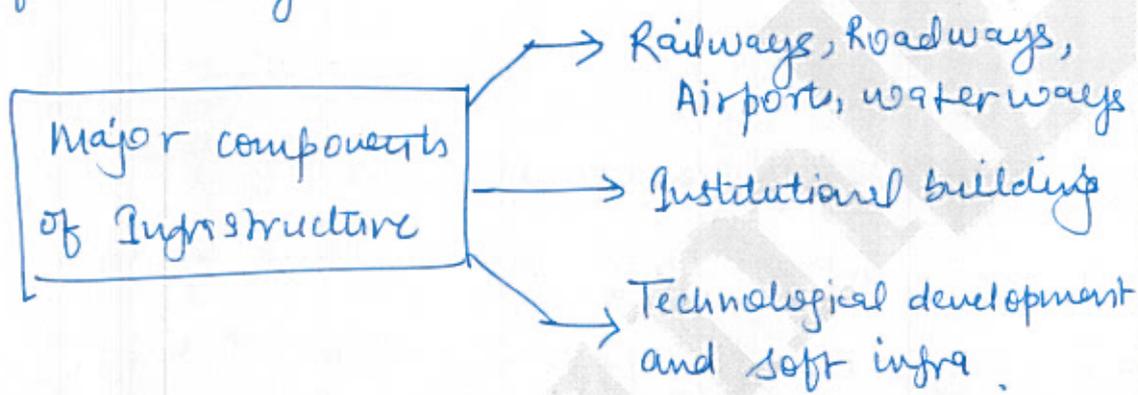
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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

Q.4) Discuss the role of infrastructure in fostering economic growth and development in India.

भारत में आर्थिक वृद्धि और विकास को बढ़ावा देने में बुनियादी ढांचे की भूमिका पर चर्चा करें।

(8 Marks)

Infrastructure plays a major role in the growth of economy and overall development of a country.



Role of infrastructure in economic growth

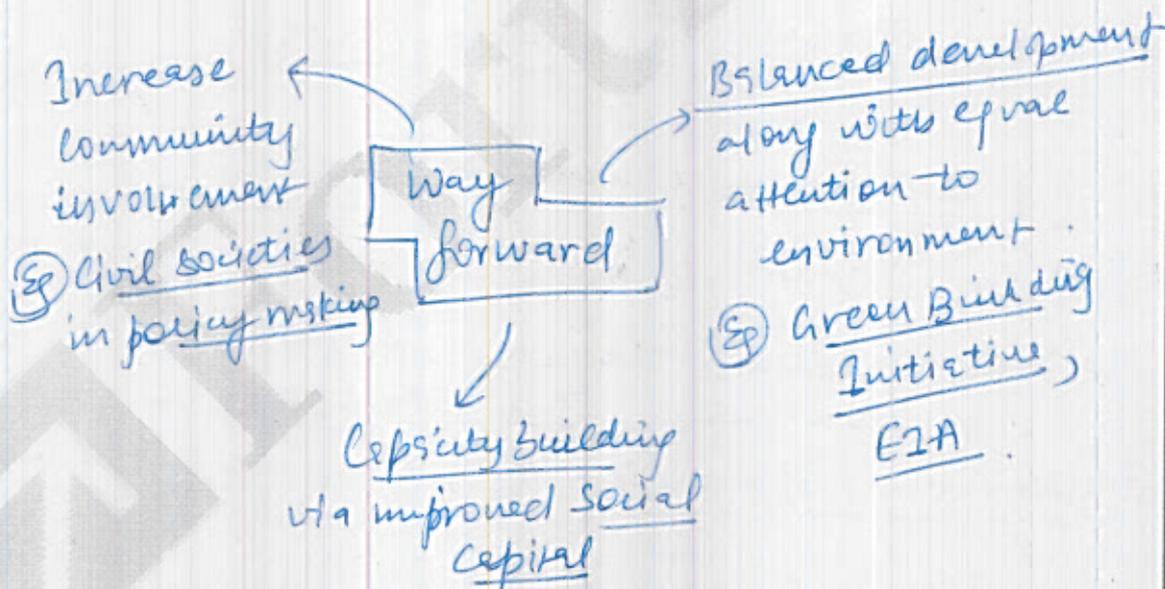
1.) Provides seamless multimodal connectivity -

(Eg) Proper infrastructure enhances switching between Roadways, Railways, Airports etc. Bharatmala, Sagarmala initiatives.

2.) Employment opportunities - With population getting work and improving economy's growth.

3.) Peace and security - Development fosters peace, Unemployment invites crimes, etc.

- 4) Urbanisation - with infrastructure development Indian cities are transformed into model urban cities. Ex Smart cities mission
- 5) Inclusive growth and development - with help of government schemes like PPP model, PM Gati shakti Yojna.
- 6) Improved digital development - with government focus on improving rural economy and bridge the gap Ex PM WAN I, PM SWAMITVA Yojna.



Thus, Infrastructure can change the economy of India from slow and steady growths to fast and effective growths.

### Feedback

(For OFFICE use only)

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TOTAL MARKS			

Q.5) Discuss the role of indigenous technological advancements in strengthening India's defence capabilities.

भारत की रक्षा क्षमताओं को मजबूत करने में स्वदेशी तकनीकी प्रगति की भूमिका पर चर्चा करें। (8 Marks)

Recently on the line of Pahalgam attack, India launched retaliatory attacks on Pakistan with some of the indigenous technology use that proved to be equivalently effective to contain enemy attacks.

Roaring indigenous developments of India's tech

- AKASH missile by DRDO
- Brahmos missile
- Anti satellite system.

Role of indigenous technology in Strengthening India's defence capabilities

1.) Reduce dependency - On foreign defence equipments, purchased with an eye of suspicion due to threat of sensitive data leaks.

- 2.) Foster Global imagery - With India's indigenous technology being purchased by other nations. (Ex) Brahmos deal with Philippines.
- 3.) Increased importance of Indian Institutions - DRDO and ISRO have been continuously achieving success and recognition from other nations as well.
- 4.) Strategic Importance - Counter China-Pakistan nexus and contain the expansionist policy of China.
- 5.) Create deterrence effect - Showcasing indigenous technology might during Operation Suidoor.

Thus, Indian government needs to realize the importance of indigenously build defence equipments and should focus on incentivizing home built technology rather than depending on foreign cheques and technology.

### Feedback

(For OFFICE use only)

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Please put tick marks in the above table. Here G is Good, A is Average and F is Poor.			
TOTAL MARKS			

Q.6) Critically assess the role of patents in promoting or hindering technological innovation in India.

भारत में तकनीकी नवाचार को बढ़ावा देने या बाधा डालने में पेटेंट की भूमिका का आलोचनात्मक मूल्यांकन करें।

(8 Marks)

Patents are those intellectual property rights that are provided to the person or organisation to hold a copyright of their invention while discouraging its use without giving them recognition.

## Patents promotion in India

- 1.) Better policy framing - Government should focus on framing rules that help those who create or generate new technology.
- 2.) Curbing theft - With increasing cases of technology theft, right regulatory laws are needed.
- 3.) Encourage researchers - Boost their morale, by providing protection to patent filing and encourage them to work more in that direction.

## Challenges

- 1.) Lack of awareness - Many innovators are unaware of the laws and hence lose the right to secure their invention.
- 2.) Unclear policy framing - creates confusion among the inventors and researchers.
- 3.) Regulatory hurdles - Too much complexity in filling patents leads to demotivation among researchers and innovators.

Thus, India needs to work more in the direction of securing patent filling rights and provide better platform to its individuals. Currently India stands at position 42<sup>nd</sup> on the Intellectual Property Rights ranking.

### Feedback

(For OFFICE use only)

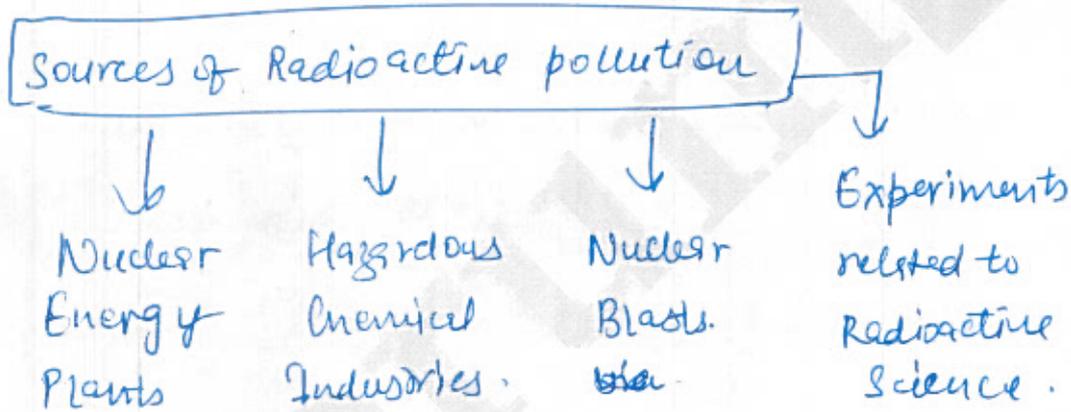
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TOTAL MARKS			

Q.7) Explain the sources of radioactive pollution and its potential impact on human health and the environment.

रेडियोधर्मी प्रदूषण के स्रोतों और मानव स्वास्थ्य और पर्यावरण पर इसके संभावित प्रभाव की व्याख्या करें।

(8 Marks)

Radioactive pollution is one of the most hazardous form of pollution that creates inherited problems in the generations of human lines.



Potential impact on human health

1.) Changes the genetic traits - Altering the functioning of human body.

⊕ Bhopal gas tragedy.

2.) Creating harmful impact on environment -

Releases harmful gases in the atmosphere

⊕ Uranium rich, etc.

3.) Deteriorating the local environment -

⊕ Chernobyl disaster led to permanently scalding the area due to radioactive radiations still active.

4.) Half lives of Radio active materials - Extended

half lives leads to after effects ⊕ Plutonium has an ~~after~~ half life of 8,400 years.

5.) Disaster threat - Radioactive elements could

do undo harm have resisted by local

people also ⊕ Thorium based plant in Tamil Nadu resisted by locals.

Thus, Nuclear and Radio active elements are sensitive for use and must be put to operation with effective precautions.

### 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.8) Discuss the National Disaster Management Authority (NDMA)'s approach to disaster mitigation in India.

भारत में आपदा न्यूनीकरण के लिए राष्ट्रीय आपदा प्रबंधन प्राधिकरण (एनडीएमए) के दृष्टिकोण पर चर्चा करें।

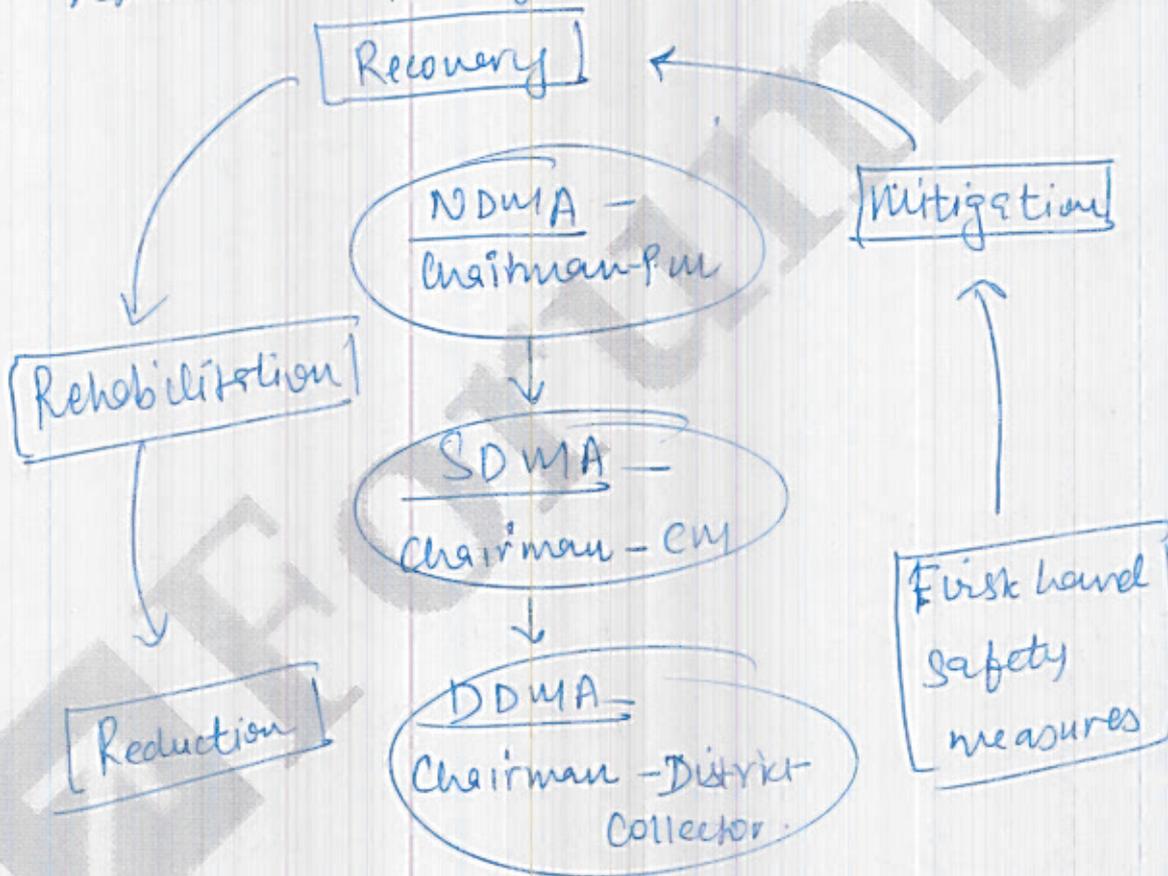
(8 Marks)

NDMA is a statutory body of the Indian government that provides guidelines and issues operations during a disaster or manmade threat.

NDMA's approach to mitigation of Disasters

- 1.) Secure evacuation drive - Ensure safe evacuation from disaster site.
- 2.) Timely operations - (Eg) Helicopter operation during floods. in kedarnath, 2013.
- 3.) Provides relief measures - Food for the affected people and safety measures.

- 4.) Rehabilitation drive - To those affected by earthquake or flood disasters.
- 5.) Proper mitigation strategies before happening of any disaster.
- 6.) Speedy Recovery - Forces try to use all the resources to speedily normalise the situation.



Thus, NDMA has a decentralised approach to tackle the mishappenings in any part of the country.

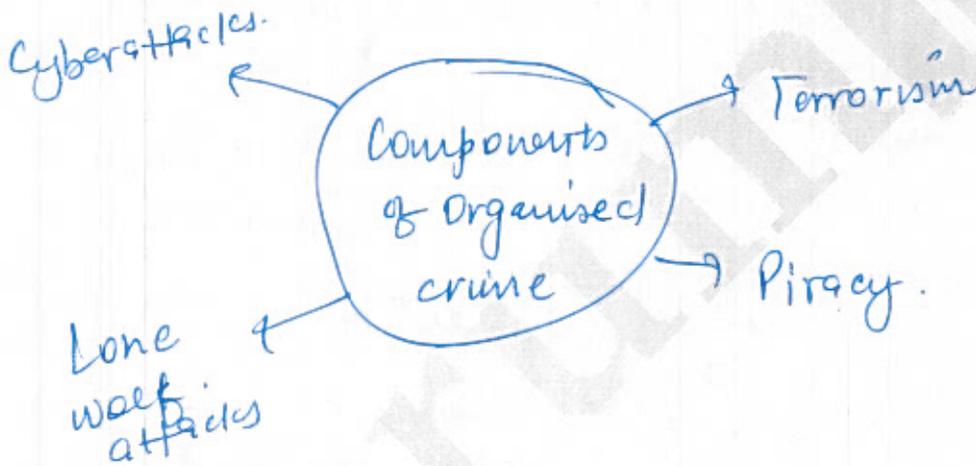
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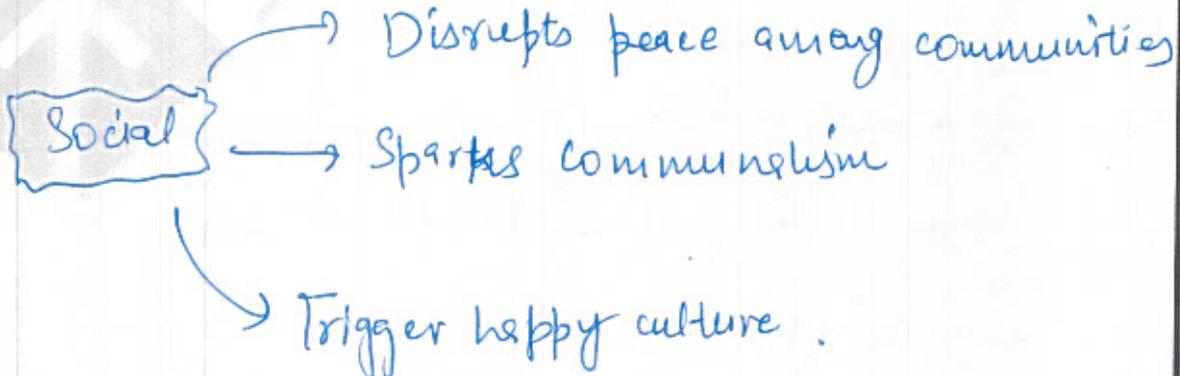
Q.9) Evaluate the concept of organized crime and its impact on the socio-economic and political fabric of India.

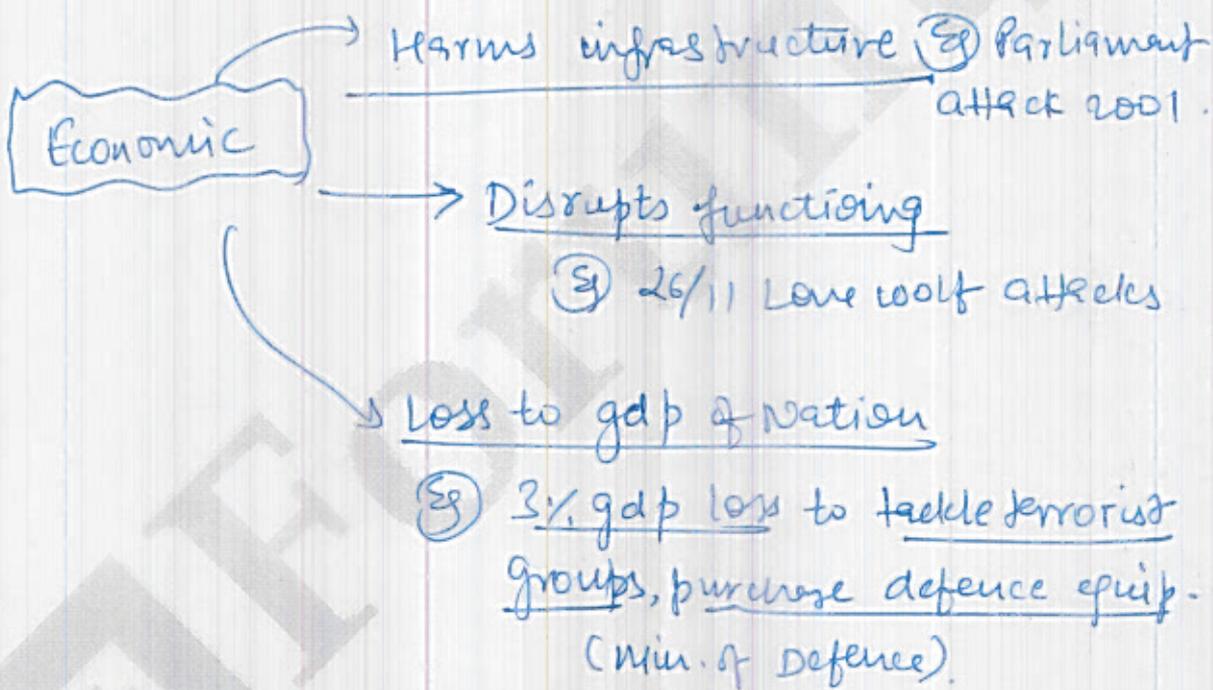
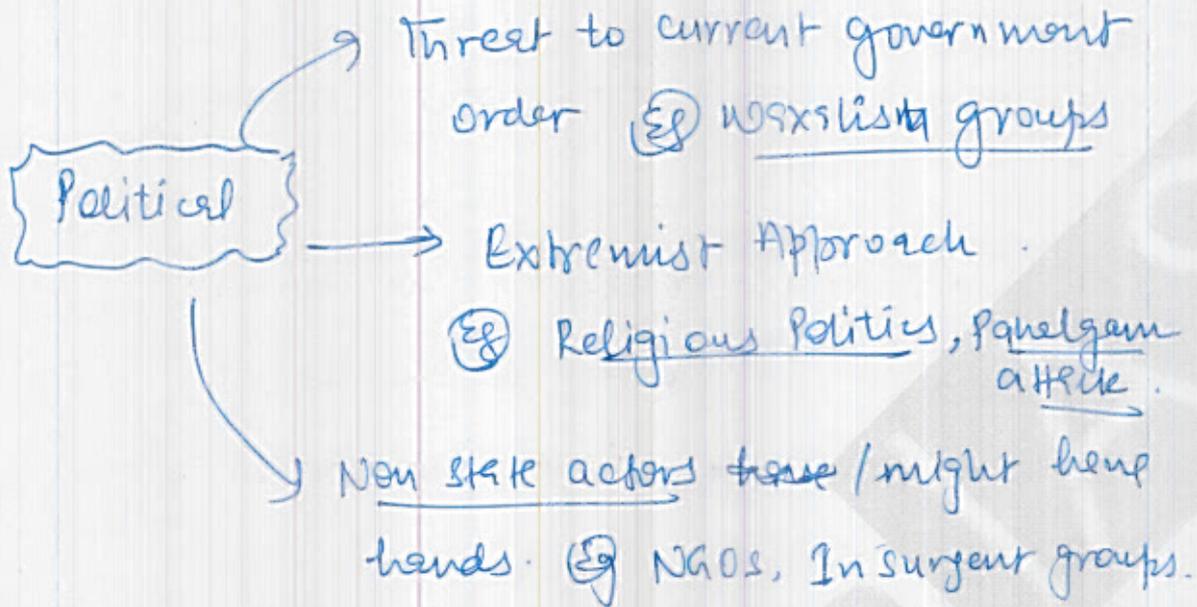
संगठित अपराध की अवधारणा और भारत के सामाजिक-आर्थिक और राजनीतिक संरचनाओं पर इसके प्रभाव का मूल्यांकन करें। (8 Marks)

Organised crime refers to - the crimes that are preplanned in order to disrupt the security, economy, religion, etc of a nation.



Impact of organised crimes on socio political and economic fabric of India





Thus, organised crimes are the silent predators that rots the apple from India inside and renders the nation into tears.

### Feedback

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Please put tick marks in the above table.			
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TOTAL MARKS			

**Q.10)** Discuss the significance of the 'Anti-Terrorism Conference-2024' organized by the National Investigation Agency (NIA) in New Delhi. How does it align with India's policy of 'zero tolerance against terrorism'?

राष्ट्रीय जांच एजेंसी (एनआईए) द्वारा नई दिल्ली में आयोजित 'आतंकवाद विरोधी सम्मेलन-2024' के महत्व पर चर्चा करें। यह भारत की 'आतंकवाद के खिलाफ शून्य सहिष्णुता' की नीति के साथ कैसे संरेखित है? (8 Marks)

Recently, NIA organised Anti Terrorism Conference 2024 in New Delhi to showcase the importance of curbing terror activities and enhance security to tackle any mishap.

Anti terrorism conference 2024 and India's zero tolerance policy

1.) Focus on security development - Ensure

security operations on all the zones.

↳ Secure Borders

↳ Secure Naval bases and maritime security

↳ Secure the air bases.

## 2.) Take actions on malicious activities

- ↳ Tracking activities of enemies .
- ↳ Surveillance on Border Areas .
- ↳ Better guarding forces deployed .

Thus, India needs to enhance its zero tolerance policy to create deter among the enemy states and improve India's stance as a Net security providing country .

### Feedback

(For OFFICE use only)

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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			

## LONG ANSWER QUESTIONS

दीर्घ उत्तरीय प्रश्न

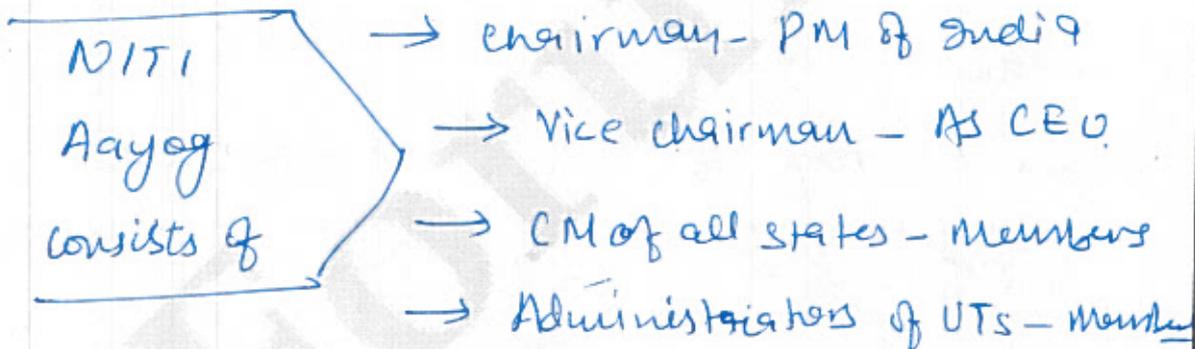
Section-B / खण्ड-ब

Q.11) What are the key functions of the NITI Aayog? Analyse its contribution to the formulation of national policy frameworks in various sectors.

नीति आयोग के प्रमुख कार्य क्या हैं? विभिन्न क्षेत्रों में राष्ट्रीय नीति ढाँचे के निर्माण में इसके योगदान का विश्लेषण करें।

(12 Marks)

NITI Aayog is the principal think tank of the government of India. It was established on 1st January 2015 replacing the erstwhile planning commission.



Key functions of NITI Aayog

1) To provide expertise in policy framing -

NITI Aayog bridges the gap between expert advice needed by government officials.

- 2.) Inclusive development - Fostering the development initiatives of government taking care of rural as well as urban areas.
3. Cooperative federalism - Importance to the States as with formulating of any new schemes  
 (Eg) Meetings of Centre and State on a level platform.
- 4.) Competitive federalism - Enhances the feeling of competition among states to do better via Index Reporting (Eg) SDG development Index report, MPI, Swachh Bharat Index etc

Contribution of NITI Aayog in various sectors

- 1.) Empowering Employment opportunities -  
 With policies like MGNREGA, e-Shram Yogi Portal.

## 2.) Improving Education System

↳ Innovation via Atal Innovation Mission,  
Atal Tinkering Lab.

↳ Growth of smart schools via Smart education with AI tools

## 3.) Better Health facilities - Policies like PM-JAY

have been framed to provide health security to poor.

## 4.) Insurance coverage - Atal Pension Scheme,

PM Jivan Jyoti Bim Yojna.

Thus, NITI Aayog has been doing a top notch work with improving financial inclusivity and adhering to Inclusive Growth in - our country.

### 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) Critically analyse the role of e-commerce platforms in expanding the market for agricultural products.

कृषि उत्पादों के लिए बाज़ार के विस्तार में ई-कॉमर्स प्लेटफॉर्म की भूमिका का आलोचनात्मक विश्लेषण करें।  
(12 Marks)

e-commerce platforms have been a game changer in every sector, promoting ease of doing business, its expansion in agriculture sector could yield great benefits if utilised properly.

## Benefits of e-commerce platforms

- 1.) Access to market - Farmer's produce will get opportunities to access market on a larger front. (eg) e-NAM supports online sale and purchase
- 2.) Intelligence sharing - The markets can easily share the benefits and problems to avoid market disruptions.

- 3.) Avoid the issue of surplus and scarcity -  
With farmers able to sell their produce to markets where there is scarcity of crops.
- 4.) Emcompassing middle Agents - Direct dealing of the produce is available.
- 5.) Multilevel market opportunities - Freelancing can overcome the issue of market price speculations, price hikes.

However, certain challenges remain to be addressed

- 1.) Lack of Awareness - many farmers are unaware of the benefits of e-commerce.
- 2.) Resistance to change - comfortable in cliché market type.

3.) Threat of Private players - Farm produce can be taken up in bulk at low prices due to less knowledge to farmers.

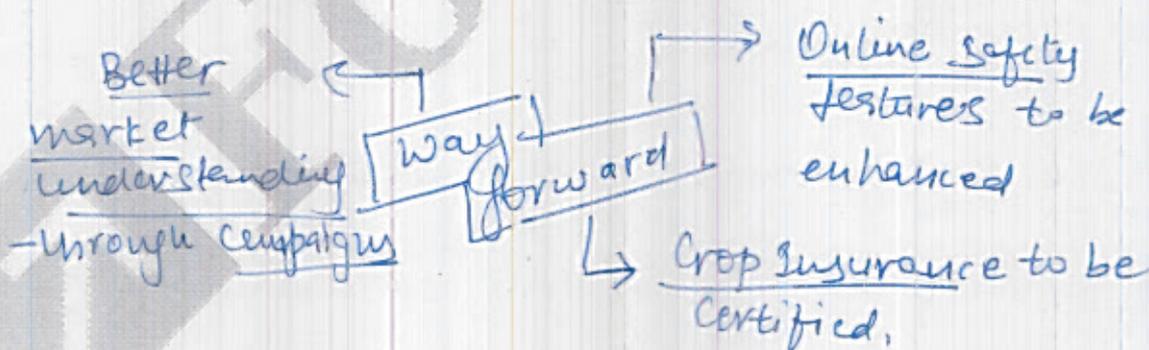
4.) Average farmers age is around 59 years in India. Decreasing their probability to understand online market.

5.) Security challenges and storage issue -

Enough storage facilities not available

⊕ Lack of warehouse, cold storages

restricts farmers to sell produce in nearby Mandi.



Thus e-commerce platform holds immense potential to change the Indian Agriculture and make it a surplus sector.

### Feedback

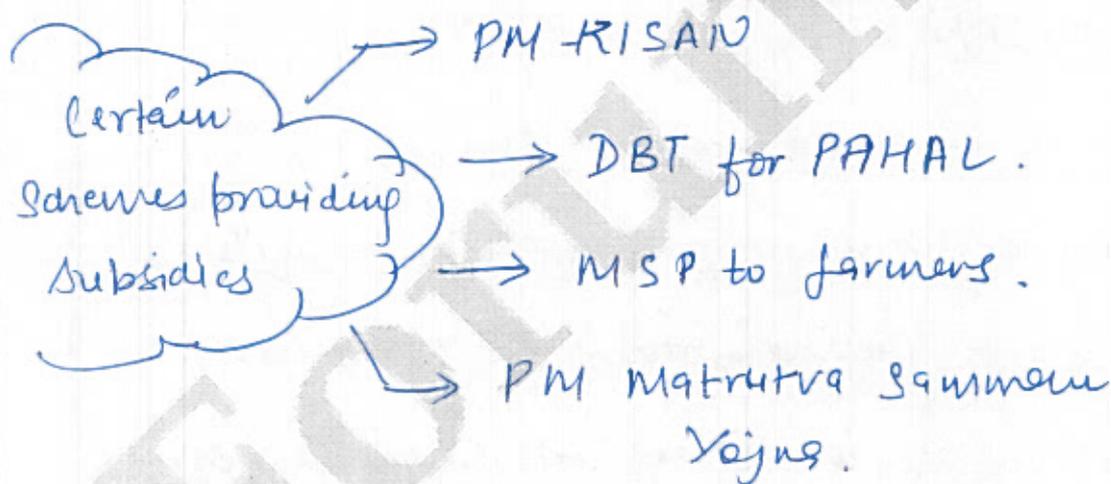
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Please put tick marks in the above table. Here G is Good, A is Average and P is Poor.			
TOTAL MARKS			

Q.13) Critically analyse the role of subsidies in addressing socio-economic disparities. Are subsidies an effective tool for poverty alleviation, or do they create inefficiencies in the economy?

सामाजिक-आर्थिक विषमताओं को दूर करने में सब्सिडी की भूमिका का आलोचनात्मक विश्लेषण करें। क्या सब्सिडी गरीबी उन्मूलन के लिए एक प्रभावी साधन है, या वे अर्थव्यवस्था में अक्षमता पैदा करते हैं? (12 Marks)

Subsidies are provided by the government to facilitate the rural population and save them from market uncertainties like Inflation, unemployment, etc.



Benefits of Subsidies in Addressing Socio-economic disparities

- 1.) Provides financial security - In case of uncertainties or unforeseen events like Covid  
 (Ex) Crop Insurance Scheme, Aarib Kalyan Yojna

- 2.) Inclusive Development - Bridging social Barriers for vulnerable and marginalized.
  - ⊕ ICDS, PM NAMASTE, SMILE scheme
- 3.) Food security - Makes sure poor people get food on time ⊕ PDS schemes, NFSA.
- 4.) Protects farmers - In case of crop failure via providing ₹6000 per annum through PM KISAN.
- 5.) women empowerment - through taking care during maternity ⊕ Maternity benefits Act ₹6000 to lactating mothers to compensate labour work in Integrated Child Development Scheme

Certain challenges also arise

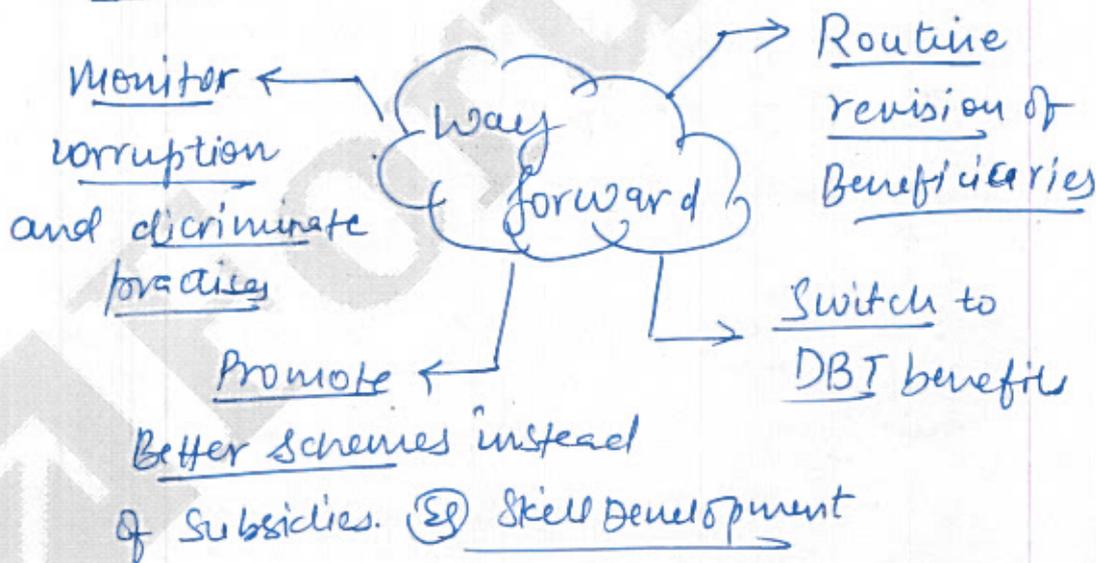
- 1.) Exclusion and Inclusion errors -
  - ⊕ PDS shops reported to have 61% inclusion

and 31% exclusion errors (FCI).

2.) Inequality and differentiated approach

⊕ Ration not provided to needy due to lack of documents vs Ration given to one with fake documents

3.) Rural vs Urban divide - Many schemes are rural centric, leaving urban migrants helpless.



So's economic development is a must for Indian society without which it is far to realise the Dream of Viksit Bharat @2024

**Feedback**  
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Please put tick marks in the above table.  
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TOTAL MARKS	
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Q.14) How can nanotechnology contribute to sustainable energy solutions and environmental protection?

नैनो प्रौद्योगिकी टिकाऊ ऊर्जा समाधान और पर्यावरण संरक्षण में कैसे योगदान दे सकती है? (12 Marks)

Nanotechnology is one of the nascent technology that has taken a leap forward in revolutionizing every sector of economy.

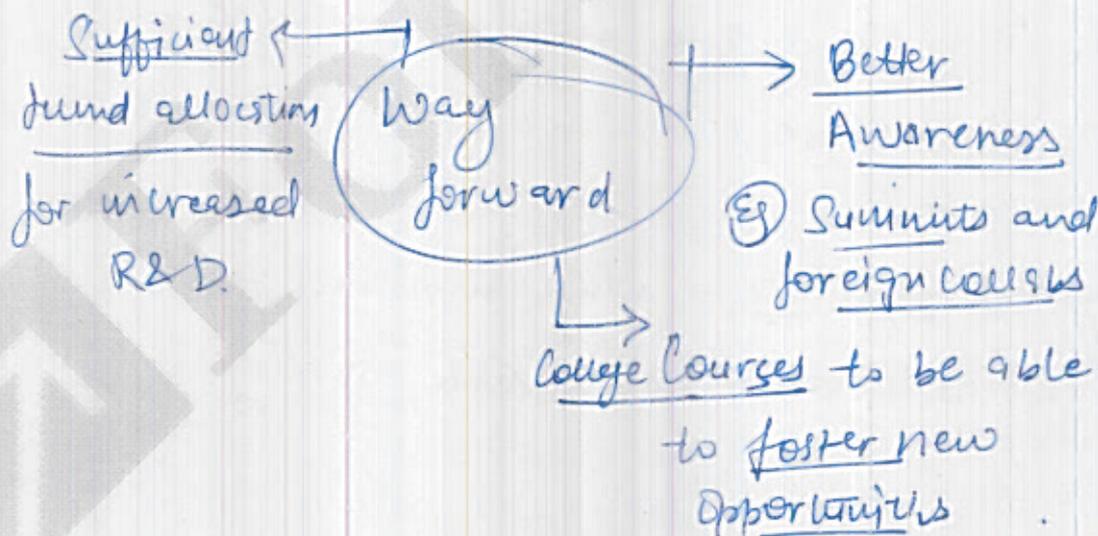
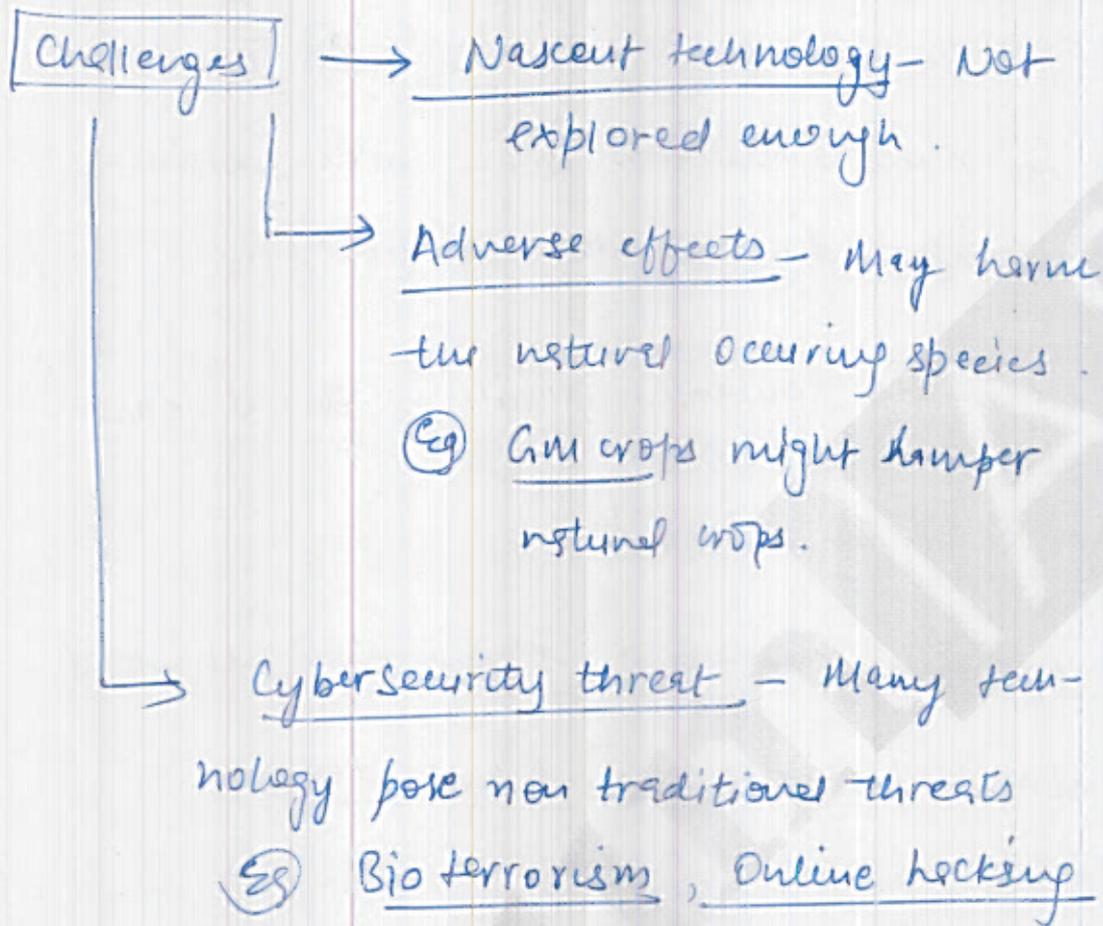
Nanotech  
empowering  
sectors  
through

- Research and Development via Nano particles.
- Innovation in fields of Agriculture, Environment
- Helpful in enhancing Sustainable practices

Contribution of Nano technology in sustainable energy solutions

1) Better Output - In comparison to older methods of technology.

- 2.) Reduced level of emissions - (eg) The use of semi conductors have been possible with improved nano atoms technology.
- 3.) Positive step towards achieving global goals - Net zero by 2070 targets.
- 4.) Genetically modified crops - With enhanced resistant properties. (eg) Nano Urea.
- 5.) Improve health services - with use of nano tech, medical services have achieved high. (eg) Telemedicine.
- 6.) Energy security - with improved tech many alternatives are possible reducing CO<sub>2</sub> level emissions.



Thus, Nanotech can prove to be an economic boom but careful usage is always necessary.

### Feedback

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Please put tick marks in the above table.  
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TOTAL MARKS	
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Q.15) Discuss the key provisions of the Wildlife Protection Act, 1972. How has it contributed to wildlife conservation in India?

वन्यजीव संरक्षण अधिनियम, 1972 के प्रमुख प्रावधानों पर चर्चा करें। इसने भारत में वन्यजीव संरक्षण में किस प्रकार योगदान दिया है? (12 Marks)

Wildlife protection Act, 1972 was passed in the Indian parliament to increase awareness about the need to protect wildlife for better and sustainable future.

## Key provisions of Wildlife Protection Act

1.) Classification of flora and fauna

↳ On the basis of their vulnerability via checking IUCN Status

2.) Four schedules enacted

↳ With Schedule I providing the highest level of security

⊕ Tiger is listed in Schedule I

3.) Stringent punishment for violation

↳ Defaulters to be punished with imprisonment and fine.

⊗ Salman Khan on hunting Black buck deer.

4.) Put a check on illegal hunting and poaching

5.) Curb smuggling of their body parts.

Certain challenges remain

1.) Unreporting of cases - Many reporting are settled under table via corruption

2.) Poor record keeping - Correct and accurate number of species in the villages especially is unreliable.

3.) Exceptions to tribals exploited provision by the traders of wildlife.

Way forward

1.) Amendments needed - to ensure the feasibility of the Act and to increase its relevance.

2.) Widen the scope of schedules - to include other endemic species that are still not on the list.

Thus, wildlife protection Act 1972 was one of the most important laws in the field of Environmental conservation as wildlife is the essence of any biodiversity.

**Feedback**

(For OFFICE use only)

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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.16) How does cyber warfare pose a threat to national security? Examine India's preparedness against cyberattacks and the need for a robust cybersecurity framework.

साइबर युद्ध राष्ट्रीय सुरक्षा के लिए किस प्रकार खतरा पैदा करता है? साइबर हमलों के विरुद्ध भारत की तैयारी और एक मजबूत साइबर सुरक्षा ढांचे की आवश्यकता का परीक्षण करें। (12 Marks)

Cyber warfare is nowadays labelled as the 5th domain of warfare after land, air, water and space.



Cyberwarfare as a threat to National Security

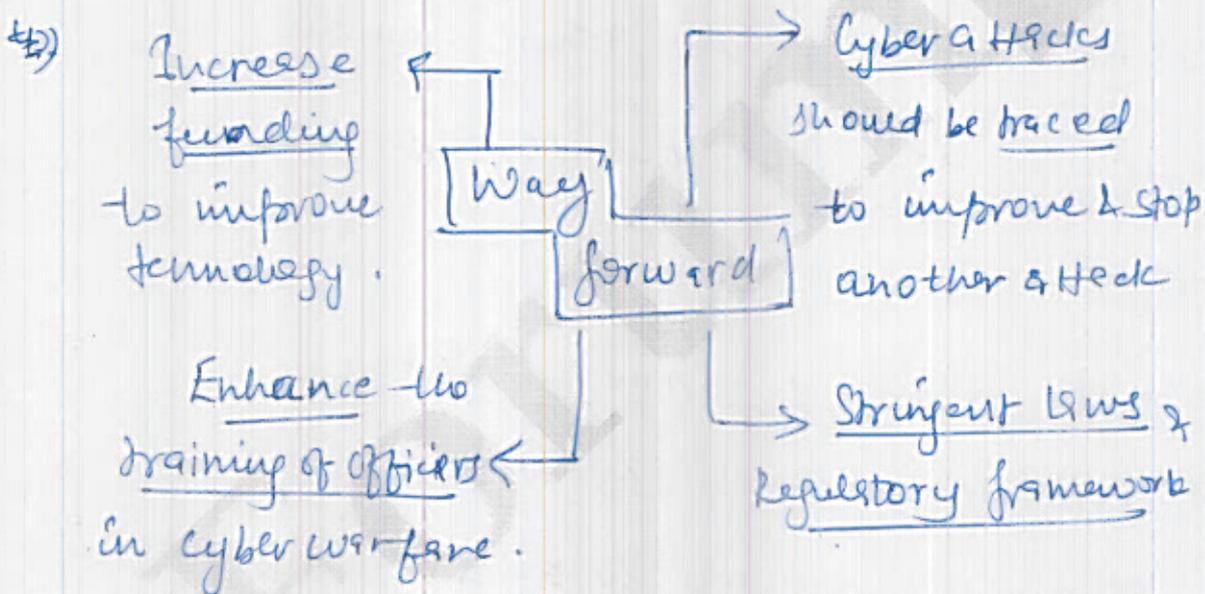
- 1.) Data Security - Data theft, cyberattacks poses threat to data sensitive for National security.
  - ⊗ Ransomware, whimsy affects Twitter account hacks.

- 2.) Can hamper air space - via radar hacking, invisible attacks. (Ex) Technology's that are untrackable on radar system.
- 3.) Terrorism - Online recruitment, brain washing of youths, Arms suppliers, etc.
- 4.) Online smuggling - of Arms, human trafficking, drug trafficking pose serious threat.
- 5.) Use of Technology Terrorism Nexus - (Ex) Satellite phones in 26/11 attacks, GPS enabled satellites in Batake Pathankot attacks.

## India's preparedness against cyberattacks

- 1.7 Self made navigation system to be put to use sooner - NavIC system

- 2.) Data localization - Issued by RBI to prioritise data safety and security.
- 3.) International collaboration - To tackle the cyberwarfare together (Eg) Defense security dialogues, Online workshops.



National security is the utmost priority of any state and we must adhere to improve the situation by switching from a nascent security provider to a Net Security Provider.

### Feedback

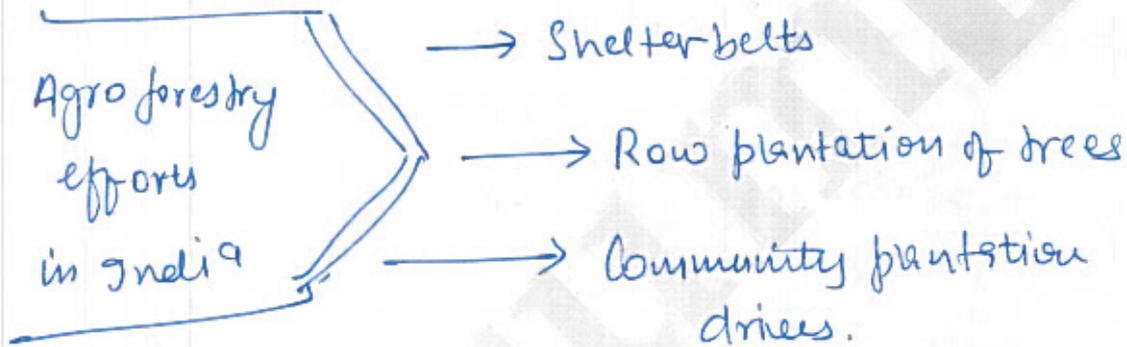
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TOTAL MARKS			

Q.17) Examine the challenges faced in the large-scale adoption of agroforestry in India. Suggest measures to overcome these challenges.

भारत में कृषि वानिकी को बड़े पैमाने पर अपनाने में आने वाली चुनौतियों का परीक्षण करें। इन चुनौतियों से निपटने के उपाय सुझाएँ। (12 Marks)

Agroforestry refers to the involvement of environmental conservation efforts along side the Agricultural practices.



## Challenges faced in adoption of Agroforestry

- 1.) Resistance to change - Many farmers reluctant to adopt new practices.
- 2.) Lack of proper training - Agroforestry new concept for rural population there is mostly involved in Agriculture.

- 3.) Bureaucratic hurdles - Lack of interest of officials to encourage agroforestry.
- 4.) Improper implementation - Leads to dying out of the planted sapplings.
- 5.) Lack of incentives - To take care of the plants and enhance its growth.

## Ways to Improve Agroforestry

- 1.) Incentivize farmers - with monetary benefits to take care of the plants and trees in their farm.
- 2.) Educate, communicate the benefits - Importance of Agroforestry.
  - ↳ Checks wind erosion in fields
  - ↳ Maintain soil nutrition by checking soil erosion

↓

Organise community Agroforestry programs

3.) Government intervention - State govt.

Can enhance community plantation drive.

↳ ⑧ UP government sets a record by planting 2.83 cr saplings on a single day during Life Mission

↳ ⑨ Haryana government scheme Van Mitra to provide monetary benefits on taking care of the planted saplings with selfie uploading.

Thus, Agroforestry is the new opportunity of tackling environmental issues and it should be given preference to ensure sustainable practices.

### 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.18) What are the security challenges posed by fake news and misinformation on social media in India? Discuss the measures that can be taken to address this threat to national security.

भारत में सोशल मीडिया पर फर्जी खबरों और गलत सूचनाओं से उत्पन्न सुरक्षा चुनौतियाँ क्या हैं? राष्ट्रीय सुरक्षा के लिए इस खतरे से निपटने के लिए उठाए जा सकने वाले उपायों पर चर्चा करें। (12 Marks)

Recently, during the Bangladesh protests in August, 2024. Many online posts were circulated that Indians are prosecuting the minority sections that were coming from Bangladesh, later it was clarified that the news was fake.

Security challenges posed by fake news and misinformation on social media

- 1) Communal Unrest - Where one community tries to hamper peace by circulating fake news. Ex Recent Pahalgam attack led to prosecution of Kashmiris by Hindus.
- 2) Misinformation infodemics - Hiding

true facts and increasing violence by posting half truths. (eg) A man was beaten to death fearing child kidnapper due to fake news on whatsapp.

- 3.) Encouraging violent practices - Manipulate facts to create distorted images of other religions. (eg) Bangladeshi minority population facing backlash online.
- 4.) Induce terrorism - Killing of Muslims for extorting cows and buffaloes blame.
- 5.) Extremist groups - Creation of extremism through groups like TNF, Gaurakshaks, etc.

Measures to tackle the situations

- 1.) Improve government intervention

Via active online tracking of misinformation

Ex) PIB tracks misleading info and label it fake.

2.) Bureaucratic Activism - District officers should be given online training to hire expertise and track them down.

3.) Monitor Online hatred - via showing correct facts and resolving conflicts.

Thus, India needs to keep its eyes and ears open to understand the threats related to misinformation, tracking social media platforms will be a step in right direction.

### 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.19) Discuss the importance of technology transfer for the economic development of India. How can India leverage technology transfer to strengthen its industrial and manufacturing sectors?

भारत के आर्थिक विकास के लिए प्रौद्योगिकी हस्तांतरण के महत्व पर चर्चा करें। भारत अपने औद्योगिक और विनिर्माण क्षेत्रों को मजबूत करने के लिए प्रौद्योगिकी हस्तांतरण का लाभ कैसे उठा सकता है? (12 Marks)

Technology transfer refers to - no system of allowing the manufacturing unit to transfer the essential knowledge needs to replicate the formation of same technology elsewhere.

Importance of technology transfer for economic development

1) Improve space exploration - India is one of the prosperous nation that has achieved heights in space sector. With technology transfer we can see our astronauts to space (SP) ROSCOSMOS collab with ISRO

- 2.) Improved Defence engineering -  
 (Ex) Rafale technology if provided can prove helpful for India in future developments.
- 3.) Energy security - Engineering methods to tap Nuclear energy was a step forward. Similarly, LIGO mission with technology transfer can unfold science mysteries.
- 4.) Deep Ocean missions - India is very optimistic about exploring deep oceans its Matsya 6000 has been designed with indigenous technology as well as transfer of technology.
- 5.) Healthcare services - Patent technology of drugs given to nations for human development, IPR rights are willingly compromised.

B.) Improved developmental activities

Through new tech adoption in construction sector (Ex) Bullet train technology from Japan

Thus, technology transfer is one of the most important for the overall development of Humans and prizes the efforts of the host nation or person.

**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.20) What were the key objectives and scientific achievements of Chandrayaan-3? How does its success enhance India's lunar exploration capabilities?

चंद्रयान-3 के मुख्य उद्देश्य और वैज्ञानिक उपलब्धियाँ क्या थीं? इसकी सफलता भारत की चंद्र अन्वेषण क्षमताओं को कैसे बढ़ाती है? (12 Marks)

Chandrayaan-3 has been a very successful mission that landed on the far side of moon on 23rd August 2024, marking India to be the 4th nation to achieve this stance.

## Chandrayaan-3 key achievements

- 1.) Lander and Orbiter - Smooth landing and orbiting exercise by Chandrayaan-3.
- 2.) Aim was to bring real samples from moon to research the quality of material.

- 3) To check the presence of water in the soil of the moon surface.
- 4.) Observe the gravity and underground surface of moon.
- 5.) Look for presence of hydrogen and helium.
- 6.) Observe the far side of the moon and how its different from the side visible.

**Feedback**

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

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### Mentor Feedback Questions

- 1 .....
- 2 .....
- 3 .....
- 4 .....
- 5 .....

#### Test Goal

- 1 .....
- 2 .....
- 3 .....

#### Outcomes

- .....
- .....
- .....

### Marking Scheme

Mark	Good	Average	Below average
10 Marker	3.75 - 5.0	3.0 - 3.5	< 3.0
15 Marker	5.75 - 7.0	4.0 - 5.5	< 4.0
20 Marker	7.75 - 10	6 - 7.5	< 6
	Key / Relevant Point		
	Vague / Irrelevant		

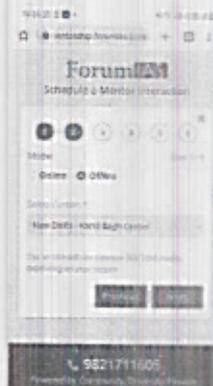
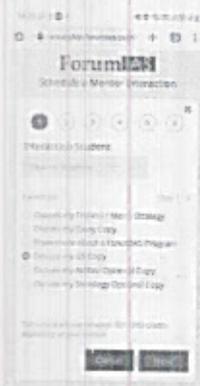
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