

391141_813415_1910115524_(2025-08-04 10:00:43)

Question No.
प्रश्न संख्या

U.P.S.C.

for practice
use only
सिर्फ अभ्यास
के लिए

Roll no = 1910115524

Name - Jayant Singh

Test = MGP-FLT AS 2

Time = 10am - 1pm

FORUM IAS

Instructions: All questions are compulsory. The number of marks carried by a question/part is indicated against it. Quality of the answer is more important than the length of the answer.

निर्देश : सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न द्वारा धारित अंकों को उसके सामने इंगित किया गया है। उत्तर की गुणवत्ता उत्तर की लंबाई की तुलना में अधिक महत्वपूर्ण है।

Q.1) Explain the significance of the recent changes made to the Periodic Labour Force Survey (PLFS) with respect to labour market data estimation in the country. (10 Marks, 150 Words)

देश में श्रम बाजार डेटा आकलन के संबंध में आवधिक श्रम बल सर्वेक्षण (PLFS) में किए गए हाल के परिवर्तनों के महत्व को समझाइए। (10 अंक, 150 शब्द)

Q.2) Discuss the implications of the rising trend of protectionism and tariff wars in global trade for India's macroeconomic stability. (10 marks, 150 words)

वैश्विक व्यापार में संरक्षणवाद और टैरिफ युद्ध की बढ़ती प्रवृत्ति के भारत की व्यापक आर्थिक स्थिरता पर पड़ने वाले प्रभावों पर चर्चा कीजिए। (10 अंक, 150 शब्द)

Q.3) "Genome-edited crops have the potential to strengthen food and nutritional security in the country." Examine. (10 Marks, 150 Words)

"जीनोम-संपादित फसलों में देश में खाद्य और पोषण सुरक्षा को सशक्त करने की क्षमता है।" परीक्षण कीजिए। (10 अंक, 150 शब्द)

Q.4) Assess the role of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) in expanding irrigation coverage and improving on-farm water use efficiency. (10 Marks, 150 Words)

सिंचित क्षेत्र का विस्तार करने और खेत पर जल उपयोग दक्षता में सुधार करने में प्रधानमंत्री कृषि सिंचाई योजना (PMKSY) की भूमिका का आकलन करें। (10 अंक, 150 शब्द)

Q.5) Starlink, a satellite internet service provider, has recently been granted a license to operate in India. What is satellite internet? How does it work? What are its advantages and limitations? (10 Marks, 150 Words)

सैटेलाइट इंटरनेट सेवा प्रदाता, स्टारलिंग को हाल ही में भारत में परिचालन का लाइसेंस मिला है। सैटेलाइट इंटरनेट क्या है? यह कैसे काम करता है? इसके क्या लाभ और सीमाएँ हैं? (10 अंक, 150 शब्द)

Q.6) What is a Geographical Indication (GI)? What are the legal frameworks governing it? How does it differ from a trademark? How can GI infringement be tackled? (10 Marks, 150 Words)

भौगोलिक संकेतक (GI) से क्या अभिप्राय है? इसे नियंत्रित करने वाले विधिक ढाँचे को स्पष्ट करें? यह ट्रेडमार्क से कैसे भिन्न है? GI उल्लंघन से कैसे निपटा जा सकता है? (10 अंक, 150 शब्द)

Q.7) What are the salient features of Mission Mausam launched by the Government of India? Why is such a mission needed? What are the likely challenges in its effective implementation? (10 marks, 150 words)

भारत सरकार द्वारा शुरू किए गए मिशन मौसम की मुख्य विशेषताएँ क्या हैं? ऐसे मिशन की आवश्यकता क्यों है? इसके प्रभावी कार्यान्वयन में संभावित चुनौतियों का वर्णन करें? (10 अंक, 150 शब्द)

Q.8) Highlight the key provisions of the Disaster Management (Amendment) Act, 2025. How would the amendment help strengthen the disaster management framework in the country?

(10 Marks, 150 Words)

आपदा प्रबंधन (संशोधन) अधिनियम, 2025 के प्रमुख प्रावधानों पर प्रकाश डालिए। यह संशोधन देश में आपदा प्रबंधन ढाँचे को सुदृढ़ करने में किस प्रकार सहायक होगा? (10 अंक, 150 शब्द)

Q.9) 'Operation Sindoor' signals a strategic evolution in India's approach to cross-border terrorism. Analyze. (10 Marks, 150 Words)

'ऑपरेशन सिंदूर' सीमा पार आतंकवाद के प्रति भारत के दृष्टिकोण में एक रणनीतिक बदलाव का संकेत देता है। विश्लेषण करें। (10 अंक, 150 शब्द)

Q.10) 'Cyberspace has emerged as a distinct domain of warfare, posing serious threats to national security.' Discuss this statement and suggest counter-measures. (10 Marks, 150 Words)

'साइबरस्पेस युद्ध के एक विशिष्ट क्षेत्र के रूप में उभरा है, जो राष्ट्रीय सुरक्षा के लिए गंभीर खतरा पैदा कर रहा है।' इस कथन पर चर्चा करें और सुरक्षात्मक उपाय सुझाएँ। (10 अंक, 150 शब्द)

Q.11) What are the key objectives of the Insolvency and Bankruptcy Code (IBC), 2016? To what extent has it been successful in achieving them? (15 Marks, 250 Words)

दिवाला और शोधन अक्षमता संहिता (IBC), 2016 के प्रमुख उद्देश्य क्या हैं? यह उन्हें प्राप्त करने में किस हद तक सफल रहा है? (15 अंक, 250 शब्द)

Q.12) Despite phenomenal growth in recent years, India's startup ecosystem lags in innovation across strategic sectors. Identify the factors responsible for this inadequate focus on deep-tech and suggest strategies to bridge this gap. (15 Marks, 250 Words)

हाल के वर्षों में अभूतपूर्व वृद्धि के बावजूद, भारत का स्टार्टअप पारितंत्र रणनीतिक क्षेत्रों में नवाचार के मामले में पिछड़ रहा है। डीप-टेक पर इस अपर्याप्त ध्यान के लिए उत्तरदायी कारकों की पहचान करें और इस अंतर को पाटने के लिए रणनीतियाँ सुझाएँ। (15 अंक, 250 शब्द)

Q.13) What is floriculture? How is it helpful in enhancing farm income and boosting agri-exports? (15 Marks, 250 Words)

फूलों की खेती क्या है? यह कृषि आय बढ़ाने और कृषि निर्यात को बढ़ावा देने में कैसे सहायक है? (15 अंक, 250 शब्द)

Q.14) "Women play a crucial role in Indian agriculture, yet continue to face systemic exclusion." Discuss with reference to land ownership, access to credit, and agri-extension services. What initiatives has the government taken in this regard? (15 Marks, 250 Words)

"महिलाएँ भारतीय कृषि में महत्वपूर्ण भूमिका निभाती हैं, फिर भी उन्हें व्यवस्थागत बहिष्कार का सामना करना पड़ता है।" भूमि स्वामित्व, ऋण तक पहुँच और कृषि-विस्तार सेवाओं के संदर्भ में चर्चा कीजिए। सरकार ने इस संबंध में क्या पहल की हैं? (15 अंक, 250 शब्द)

Q.15) Launched on 25th June 2025, the Axiom-4 (Ax-04) mission has been much in the news since then. What are the key features of the mission? What significance does it hold for the Gaganyaan project and India's long-term space ambitions? (15 Marks, 250 Words)

25 जून 2025 को लॉन्च होने वाला एक्सओम-4 (Axiom-4; Ax-04) मिशन तब से ही काफी चर्चा में है। इस मिशन की मुख्य विशेषताएँ क्या हैं? गगनयान परियोजना और भारत की दीर्घकालिक अंतरिक्ष महत्वाकांक्षाओं के लिए इसका क्या महत्व है? (15 अंक, 250 शब्द)

Q.16) Energy storage technology is one of the major components of renewable energy integration and decarbonization of world energy systems. Briefly discuss any three such technologies, citing their key merits and demerits. (15 Marks, 250 Words)

ऊर्जा भंडारण तकनीक, विश्व ऊर्जा प्रणालियों के नवीकरणीय ऊर्जा एकीकरण और कार्बन-मुक्तिकरण के प्रमुख घटकों में से एक है। ऐसी किन्हीं तीन तकनीकों की संक्षेप में चर्चा कीजिए और उनके प्रमुख गुण-दोषों का उल्लेख कीजिए। (15 अंक, 250 शब्द)

Q.17) Global Pandemic Agreement (2025) recognizes the 'One Health' approach as critical to pandemic prevention, preparedness, and response. Highlight the key features of the agreement, and elaborate on how the One Health approach can help in preventing future pandemics. What steps are needed to integrate this approach into India's environmental and health governance? (15 marks, 250 words)

वैश्विक महामारी समझौता (ग्लोबल पैंडेमिक एग्रीमेंट; 2025) महामारी की रोकथाम, तैयारी और प्रतिक्रिया के लिए 'वन हेल्थ' दृष्टिकोण को महत्वपूर्ण मानता है। इस समझौते की प्रमुख विशेषताओं पर प्रकाश डालिए और विस्तार से बताइए कि वन हेल्थ दृष्टिकोण भविष्य की महामारियों को रोकने में कैसे मदद कर सकता है। भारत के पर्यावरण और स्वास्थ्य प्रशासन में इस दृष्टिकोण को एकीकृत करने के लिए क्या कदम उठाने की आवश्यकता है? (15 अंक, 250 शब्द)

Q.18) The frequency and intensity of heatwaves, particularly in urban centres, have increased in recent years. Describe the various causes and effects of heatwaves. What policies and frameworks have been adopted in India towards extreme heat risk management? (15 Marks, 250 Words)

हाल के वर्षों में, विशेष रूप से शहरी क्षेत्रों में, हीटवेव की आवृत्ति और तीव्रता में वृद्धि हुई है। हीटवेव के विभिन्न कारणों और प्रभावों का वर्णन कीजिए। भारत में अत्यधिक ऊष्मा के जोखिम प्रबंधन के लिए कौन सी नीतियाँ और ढाँचे (फ्रेमवर्क) अपनाए गए हैं? (15 अंक, 250 शब्द)

Q.19) Discuss how emerging technologies and globalization contribute to terror financing. Elaborate measures to tackle the menace of terror financing both at national and international levels. (15 marks, 250 words)

चर्चा कीजिए कि उभरती प्रौद्योगिकियाँ और वैश्वीकरण किस प्रकार आतंकवाद के वित्तपोषण में योगदान करते हैं। राष्ट्रीय और अंतर्राष्ट्रीय दोनों स्तरों पर आतंकवाद के वित्तपोषण के खतरे से निपटने के उपायों पर विस्तार से चर्चा कीजिए। (15 अंक, 250 शब्द)

Q.20) Explain the key components of the National Policy and Action Plan (2015) that have contributed to the significant decline of Left-Wing Extremism (LWE). What additional steps would you suggest to eliminate LWE in the near future? (15 Marks, 250 Words)

राष्ट्रीय नीति एवं कार्य योजना (2015) के उन प्रमुख घटकों का वर्णन कीजिए जिन्होंने वामपंथी उग्रवाद (LWE) में उल्लेखनीय गिरावट में योगदान दिया है। निकट भविष्य में वामपंथी उग्रवाद को समाप्त करने के लिए आप कौन से अतिरिक्त कदम सुझाएँगे? (15 अंक, 250 शब्द)

D) Periodic labour force survey is released by NSO detailing condition of labour market in India. Parameters such as workers participation rate, labour force participation rate and unemployment rate is captured

Recent changes introduced

- 1) Monthly PLFS survey for both rural and urban areas. [weekly status]
- 2) continuation of quarterly survey for urban and also included quarterly rural survey
- 3) yearly PLFS for rural and urban as [usual status]

Significance of changes

D) Better insight :- About unemployment rate for policy formulation

- 2) Date based Governance :- Through increased frequency of survey.
- 3) Timely availability :- Ensure monthly tracking from earlier quarterly for urban and yearly for rural areas.
- 4) Impact on policies such as RBI's monetary policy discussion and government's fiscal measures.
- 5) Better control over unemployment :- Through timely interventions such as MNREGA etc.
 - 1) Ensure data quality
 - 2) Use of technology for data sanity
 - 3) Statistical sample should be increased.

Measures

Recent changes is a step towards data driven governance would ensure better planning and policy interventions.

- 2) Economic survey between 2020-2024 more than 24000 trade ~~restrictions~~ restrictions were introduced pointing towards rising protectionism.

Implication of the rising trends of protectionism and trade wars,

Positive implication

1) USA-china trade war :- opportunity for India to increase share in global trade from 1.9%.

2) Friendshoring and nearshoring :- china +1 strategy would increase FDI investment and manufacturing in India,

Negative implication

1) Downgrading / Devaluing ₹ :- Due to trade

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restrictions and PDI outflow ₹ is worst performing major currency.

2) Impact on growth :- Recent USA tariff @ 25% on India's could threaten \$86bn export to USA.

→ Reduce growth by 50 bps.

3) Rising import bills :- ₹ Devaluation and restriction on Russian crude, import oil import bills of India.

4) Threat of rising unemployment due to fall in exports and lack of new contracts.

Measures

- 1) FTA negotiation with USA
- 2) Diversification of Trade
- 3) Focus on boosting domestic private consumption
- 4) Support to industries and better infrastructure.

Thus India need a pragmatic trade policy and better integration with global supply chains to overcome rising trends of protectionism

3) Only Bt cotton is the genetically edited crop allowed in India since 2003.

Genome edited crops :- Are the crops whose genome have been edited without introduction of any foreign gene. Recently Rice variety released. "Komala"

Potential of genome edited crops

1) High yield :- genome edited crops gives higher yield

2) Protected from pest :- Resilient from pest attacks and conducive for application of various pesticides.

3) Drought and water stress :- genome varieties can be developed which require lesser

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irrigation and tolerant to higher temperature

✓ ~~Eg~~ HRM99 → Apple variety can be grown even in humid climate.

4) Shorter Duration :- Genome edited varieties can be harvested after shorter duration can help overcome issue of stubble burning and farmer risk,

Challenges

- 1) Regulatory clarity is missing
- 2) Low level of acceptance by farmer
- 3) Limited R&D in agriculture sector

Measures to be taken

- Policy certainty
- Farmer awareness → KVK
- Higher budgetary allocation
- Field Trials

Thus Genome edited crops hold potential to ensure food security and farmer better income. Need is more research and better adoption.

- u) Pradhan Mantri Kuisi Sinchayee Yojana is a central sponsored scheme for promoting better irrigation access and efficiency.

Vision of scheme

- Per drop more crop
- Har Khet Ko Pani.

Role of PMKSY in expanding irrigation

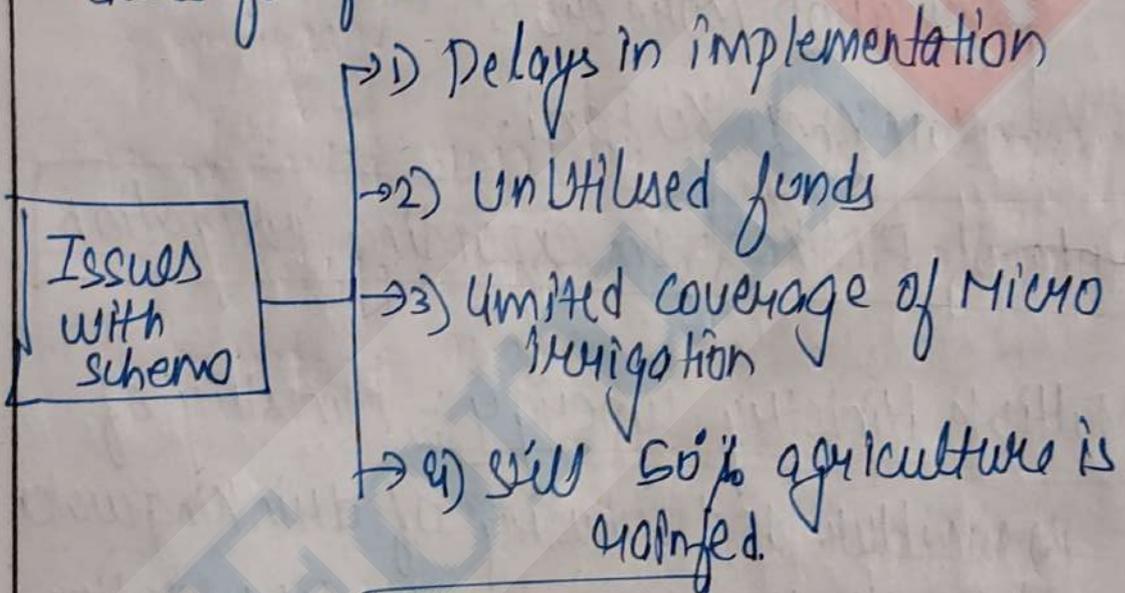
- 1) Multiple Ministry synergy :- Ministry of Agriculture and Ministry of drinking water coordinating for expanding irrigation.
→ India's 50% land under irrigation.

- 2) Micro irrigation :- Financial support to farmer for micro irrigation.
Micro irrigation fund under NABARD.

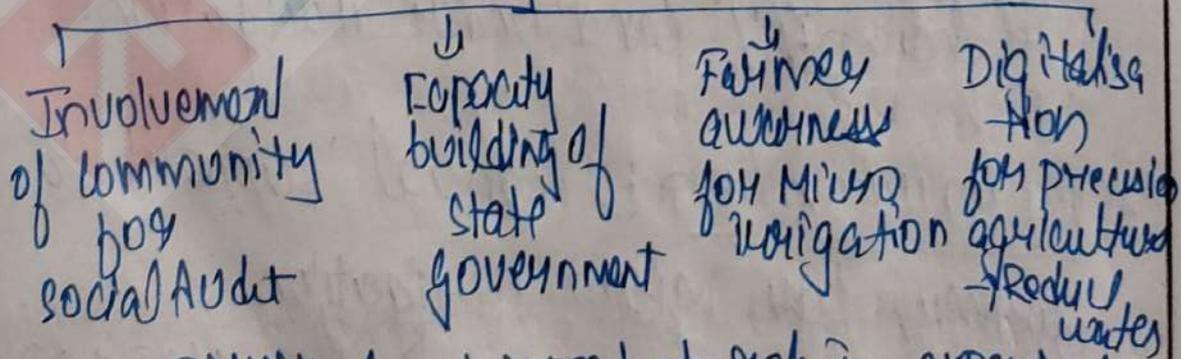
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3) completion of Irrigation project :- HAY
Khet to Pani component focusing on timely
completion of irrigation project.

4) Integrated watershed development :- For
better water conservation and irrigation
access for farmers.



Measures



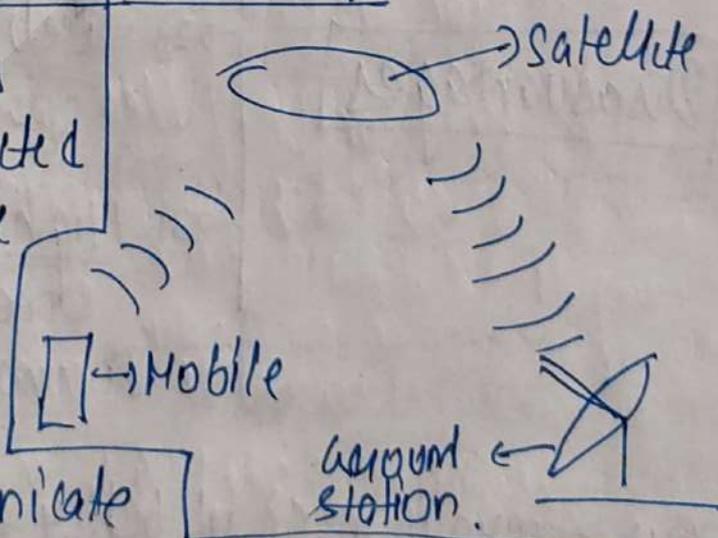
Hence PMKSY played important role in expanding irrigation however more reforms and better fund utilisation is need of an hour.

- 5) Starlink has partnered with Telecom companies Jio and Airtel for provision of Internet satellite based internet in India.

Satellite Internet

- 1) It is the service of providing internet access using low earth satellites web.
- 2) companies involved are Starlink, One Web and Amazon.

Working of satellite internet

- 1) Here mobile is directly connected with satellite instead of any tower.
 

The diagram illustrates the connection between a mobile phone and a satellite. A box labeled 'Mobile' is connected by a line to a satellite in orbit, which is labeled 'satellite'. The satellite is connected to a ground station on the earth, labeled 'ground station'. Wavy lines represent the signal path between the mobile phone and the satellite, and between the satellite and the ground station.
- 2) Satellite communicate with ground station. Replace need for use of Telecom towers and cables

Advantages of satellite internet

- 1) Reduce need for towers and cables
 Eg → Indus companies - Telecom tower
- 2) Disaster resilient :- satellite internet not disrupted by disasters such as cyclone, flooding.
- 3) Unconnected areas or difficult terrain
 → satellite internet help reach unconnected remote areas.

Disadvantages

- 1) Higher cost
- 2) Web of satellites → space debris
- 3) High latency → slow speed of internet
- 4) Dominance of western countries

Thus there is need of better regulations and partnership to increase access of internet via satellites in rural areas and unconnected regions,

b) Geographical indicators are the intellectual property rights provided for goods which have special characteristic due to production in specific region.
eg Mathura Peeda
Darjeeling Tea.

Legal framework

1) Law :- Geographical Indications Act

→ Director General of Geographical Indication provide GI Tag.

2) National register of GI Tags.

3) Provided for various goods for 10 year and renewable.

Difference between Trade mark and GI

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Trade Mark

- 1) Identification mark for any specific product
 - 2) Brand recognition
 - 3) Specific to company or producer
- Eg Haldiram.

GI

- 1) GI due to special characteristic of product due to geography.
- 2) Protect producers of that region and identification of product
- 3) Any producer can use GI tag producing in specific region

Infringement Tackling

- 1) Violation or Misuse is a punishable offence
- 2) complaint can be filled for misrepresentation of goods with GI issuing agency or civil court

Recent controversy over Purodo sandals highlight the need of stringent GI enforcement to prevent cultural appropriation and protect artisan's interest.

- 7) Mission Mausam is launched by government to make India climate ready and strengthen early warning system in India.

Salient features of Mission Mausam

- 1) Early warning system expansion :- More doppler radars and weather stations
- 2) Use of AI system and super computing for weather forecasting.
- 3) Multiple agencies :- IMD, National Tropical Weather Institute etc.

Risk for Mission Mausam

- 1) Rising natural disasters Eg cyclones in Arabian sea.
- 2) Climate change :- Erratic weather system

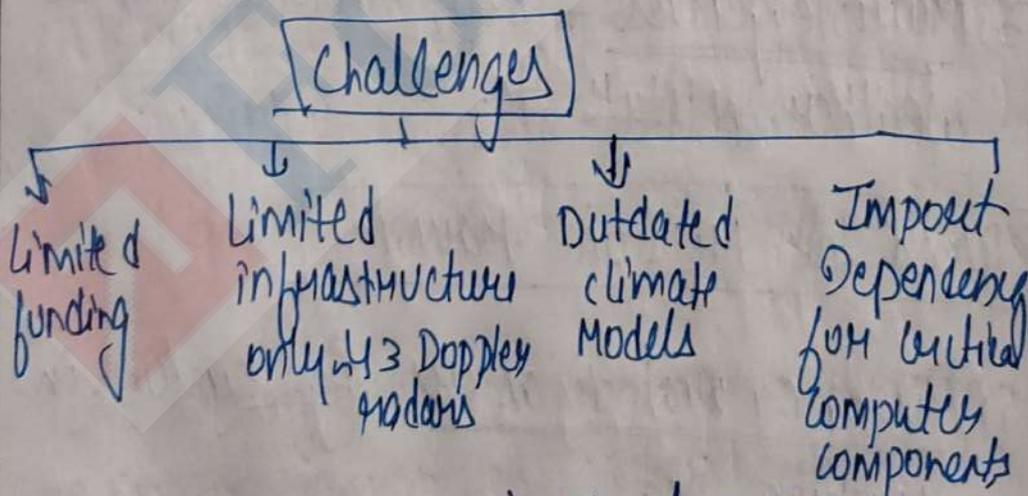
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eg → Rising frequency of extreme rainfall during monsoon.

3) Protect fragile infrastructure and disasters preparedness
eg → Urban flooding preparedness.

4) International commitment :- Mandate under Sendai framework.

5) Climate proofing :- Ensure better awareness of climate events to public
eg → SMS based alerts for cyclone, Thunderstorm,



Thus Mission Mausam is timely intervention however more funding and domestic production capacity for radars etc is needed.

- Q) Recently disaster Management (Amendment) Act 2025 is passed to overhaul the disaster management structure and strengthen local capabilities for disaster response.

Key provisions of Act

- 1) Statutory status to National Crisis Management Committee
- 2) Expand scope of National disaster Management Authority in preparing disaster management plans.
- 3) Creation of Urban disaster Management Authority at city level for major cities
- 4) Mandatory setting up of state disaster relief force for state governments.

Strengthen the disaster Management

1) Better coordination of various Ministries for disaster preparedness and response through NCMC

2) Urban Resilience :- National Urban Disaster Management Authority = Ensure planning for flooding, strengthening infrastructure

3) Timely response through SDRF

Issues with Amendment

Allegation

of centralisation

Non involvement of NAO's civil society

Removal of provision of basic necessity mandated under law

DDMA limited capacity and resources

Thus though Disaster management Amendment strengthen disaster management architecture further involvement of civil society and more allocation of funds is needed to reduce Disaster risk

9) Operation Sindoor was launched against Panalgaon terrorist attack highlight zero tolerance policy of India towards terrorism.

Operation Sindoor signal strategic evolution in India's approach

1) Zero tolerance :- India increased cost for terrorist organisations and supporting countries ✓ for any misadventure

2) No looking back due to Nuclear threats of Pakistan

3) No difference between terrorists and countries backing terrorism. Cross border attack in Pakistan.

4) Use of all available options eg. suspension of Indus water treaty.

b) Increase capabilities to respond and use of drones and missiles to attack cross border terrorism camps.

Measures further required

- 1) Clear doctrine to respond in future
 - 2) Strengthen cross border infrastructure
Integrated border Management System.
 - 3) Global isolation of Pakistan and
Black listing by FATF
 - 4) Strengthen local intelligence to prevent
future attacks
 - 5) Global cooperation for adoption of
Comprehensive convention against terrorism
- Thus Operation Sindoor highlights evolving
India's approach to counter cross border terrorism
and create a deterrence effect for future attacks

10) Rising instance of cyber attacks on critical infrastructures and use of digital tools along with conventional weapons highlight the need to recognise cyberspace as new domain of warfare.

Ex Increase cyber attacks in India during Operation Sindoor.

Ex USA - Israel cyberattack on nuclear facilities of Iran.

Cyberspace as new domain of warfare

1) Grey zone warfare : cyber attack on critical infrastructure Ex Mumbai Power grid attacked during Indian clashes.

2) Rising use of digital technology : Ex Autonomous weapons and systems by army.

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3) Non state actors :- Terrorist groups using cyberspace attacks against government
→ low cost and difficult to trace.

4) Critical infrastructure :- cyberattack on critical infrastructure can cause huge damage

eg Kudankulam Nuclear plant cyber attack → offensive

5) Rising cyberspace capabilities
eg Stuxnet virus of Israel → defensive

Measures to country

- 1) Institutional arrangement
 - Sectoral cent in
 - Monocapacity of Defence cyber agency
 - offensive capacity building
- 2) Defensive → Isolation of critical Infrastructure and fire wall

Thus India need clear policy framework and integration of private capacity to strengthen cyberspace from attacks and ensure appropriate response

- 11) Insolvency and Bankruptcy Act 2016 was introduced to ensure resolution of huge banking sector Non performing assets issues and preparing plan for revival of companies facing debt default.

Key objectives of IBC

- 1) Reduce and timebound resolution of Insolvency issues
- 2) Increase recovery of lenders from missing Non performing assets.
- 3) Professional resolution of debt default issues and creation of regulatory body
- 4) Overcome chakravarti problem :- Difficulty in exit from Indian market.

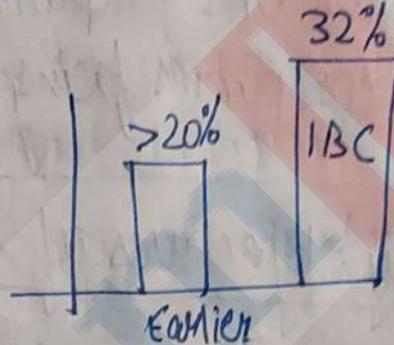
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5) Promote ease of doing business.

Success of IBC

1) Time limit for resolution :- 330 days
for completion of corporate insolvency
resolution plan.

2) Increased recovery



3) Strengthen Home buyer protection :-
As a operational lender Home buyer can
initiate insolvency proceeding

4) Prepack insolvency system for MSME

5) Regulatory system :- IBBI, Resolution
professionals and credit registry created

6) Reducing NPA of banks :- Below 3%

7) Ease of doing business :- Rankly improve
ment of India

Issues still faced in IBC

- 1) Delay in resolution :- Avg time 600+ days
- 2) Falling recovery :- from 40%+ to 32%+
due to delays in resolution
- 3) Huge Hair cut :- Bankers and other lenders
had to take 80%+ haircut.
- 4) Limited NCLT benches :- Rising case
pendency and delays in resolution.

Measures

- 1) Pre-pack insolvency for other borrowers
- 2) Increase NCLT benches
- 3) Code of conduct and ethics for resolution professionals and committee of creditors
- 4) Regulatory oversight by IBBI in case of delays in CIRP

Thus there is need to further strengthen IBC to ensure quick resolution and preserve value of assets to reduce haircut for lenders.

12)

India emerged as world's third largest ecosystem for startups. However majority startup concentrated in non strategic sectors such food delivery, quick commerce and services sector.

Factors responsible for inadequate focus on innovation across strategic sectors

1) limited risk taking capacity of startups
eg → venture capital focus on sure shot success sectors

2) long gestation period of deep tech sectors eg → skyroot in space sector

3) Need of huge funds and limited customer base for strategic sectors

eg → nuclear technology, space technology

- 4) Lack of government support :- R & D Budget of .8% of GDP versus more than 3% by South Korea, China, USA, Japan.
- 5) Lack of industry and academia linkages for marketable technology research and collaborative product development
- 6) Lack quality skilled manpower :- Majority universities lack facility for research and skill building.
- 7) Reducing funding :- Funding for startups reducing due to lack of sustainable business and huge cash burn.

Measures to be taken to promote startup in deep tech and strategic sector

D) Regulatory streamlining \nearrow Increase participation of private in nuclear technology, GIS and space technology sector

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2) Dedicated fund for deep tech ~~Eq~~ Budget FY25-26 dedicated deep tech fund established

3) Industry academic linkage :- Regular exchange programme and synergy in research.

→ Technology transfer by universities for industry to rollout.

4) Increase skill development ~~Eq~~ PM PRIME scheme for technology skill development.

5) Promote risk taking and creativity through NITI Aayog Atal Tinkering lab and Atal innovation mission,

Thus India's need regulatory changes and sustained funding for startups to pivot towards strategic sectors along with skill development for manpower availability.

- 13) Floriculture refers to growing of flowers for purpose of earning income. India is major exporter of flowers to western European countries.

Floriculture helps in enhancing farm income

- 1) Diversification of agriculture away from food crops such as wheat and Rice
- 2) Higher price :- Floriculture products are priced higher and increase farmer's income
- 3) Commercial farming ~~Eq~~ Eg. Lavender farming :- Purple revolution in Kashmir
- 4) Reduce inputs :- Floriculture requires lower amount of water, pesticides and fertilizers

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Boosting agriculture exports

- 1) Demand in Developed countries :- Huge demand of flowers in western Europe and USA
- 2) Boost India's exports :- India's agriculture exports ~~was~~ \$50 billion can be increased further.
- 3) Conducive climate :- ~~Eq~~ cold climate in Himalayan region is conducive for better quality production for exports.

Challenges in Floriculture

- 1) Limited and seasonal demand in domestic market
- 2) Post Harvest losses :- Due to lack of cold storage and other infrastructure.

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- 3) Lack of farmer awareness of floriculture technique and limited market linkages.
- 4) Lack of price assurance for floricultural farming.
- 5) Need of High labour for floriculture production.
- 6) Poor Export infrastructure and farm to Port linkages

Measures
to be taken

- 1) More research in better varieties
- 2) Farmer handholding for production and awareness
- 3) Cold storage dedicated for flowers
- 4) Promote in international market to buyer seller meet

Thus floriculture can diversify agriculture income of farmers. There is need of high research and farmer support to increase coverage under floriculture

- 14) Indian women account for 60% agriculture labour yet own just only 14% of agriculture working women own land resources. Highlighting systemic exclusion.

Issues faced by women in agriculture sector

- 1) low land ownership :- Only 14% own land resources.
- 2) limited credit access :- Due to lack of security for formal credit.
Overall still 26% farming credit provided by informal sector.
- 3) limited agriculture extension services
→ Lack of knowledge and illiteracy among female farmers.

4) Women work as casual labour on farms
→ Informal nature of work

5) class, caste and gender integration: Exclusion
of women from multiple initiatives and
threat of violence.

6) women as supplementary unpaid labour
→ without recognition

7) Feminisation of agriculture: ~~the~~
small land holdings Avg 1.1 hectare
→ Male migrate to urban cities, women
work on ~~the~~ small farms.

Initiatives taken by government

1) Kisan credit cards for formal credit
to farmers including women.

2) Establishment of Kisan Vigyan Kendras
and various helplines for agriculture

extension services.

3) PM SVAMITVA scheme :- Mapping of rural abadi land. Conclusive titling including for women.

4) Establishment of Mahila bank for dedicated financial access

5) PM Jan Dhan Yojana :- Women bank Accounts > 50%. Financial inclusion.

6) Drone Didi scheme :- Training women on using of drones for agriculture activities.

Thus women account for large share of agriculture labour, yet lacking in multiple fronts. Need of dedicated scheme for female farmer welfare and easy access to credit would ensure women empowerment.

- 13) Axionomy mission led to India returning to space after more than 4 decades whereas Shubanshu Shukla went to International Space Station.

Key feature of Mission

- 1) Private space mission led by Axion with support of NASA and launch by SpaceX
- 2) 4 crew members went to ISS. Including Indian Shubanshu Shukla.
- 3) Various microgravity experiments were conducted during the mission by crew member.
- 4) Stepping stone for India's Gaganyaan mission, ISRO collaborated and learnt

from Axiom-4 mission

Significance for Gaganyaan Mission

- 1) Crew Training :- Two Indians were trained for Axiom-4 mission
→ also part of Gaganyaan Mission
- 2) Technology :- Indian space agency learnt protocols for docking with ISS and access to other technologies.
- 3) Experiment in ISS :- Experiment on crop cultivation, impact on body, microgravity impact on technology etc.
→ would help in future space mission
- 4) Increase collaboration between NASA and ISRO, helpful for Gaganyaan Mission success.

India's long term ambition

- 1) Gaganyaan Mission :- Become 4th country to place humans in space
- 2) Establish Bharatiya Space Station by 2035 by extending Gaganyaan Mission.
- 3) Increase India's share in space sector from current 2% to 10%
- 4) Chandrayaan-4 :- Sample return mission from Moon and eventually later → Human/Manned mission to Moon.
- 5) Building ~~new~~ Reusable Rocket → New generation launch vehicle to increase launch capacity and reduce cost.

Thus, Axiom-4 mission ~~will~~ would help ISRO in achieving its long term ~~its~~ ambitions and crucial learning would fast track the Gaganyaan mission

b) India achieved 50% of installed capacity from renewable energy. However storage capacity still lagging at slow threatening the grid stability and increasing difficulty in raising share renewable in production of electricity -

Importance of storage tech

- 1) Grid stability
- 2) Overcome intermittent challenge of renewable energy
- 3) Increase use and share of renewables in electricity use.
- 4) Boost domestic employment and growth.

Three technologies for renewable energy storage

1) Battery storage technology :- Li-ion batteries and advanced batteries.

Merit

- 1) Availability of technology
- 2) Government support such as PLI scheme.
- 3) Easy to establish

Demerit

- 1) Import dependency
~~Li-ion~~ China,
- 2) Need of critical minerals such as Lithium and Graphite.
- 3) Limited domestic production.
- 4) High cost

2) Sodium heating or salt heating technology

Merit

- 1) No critical metal and component

Demerit

- 1) Nascent technology
- 2) Underdeveloped

- 2) No geographical constraint. | 3) Lack of government support

③ Water lift Technology :- Pump storage technology

Merit

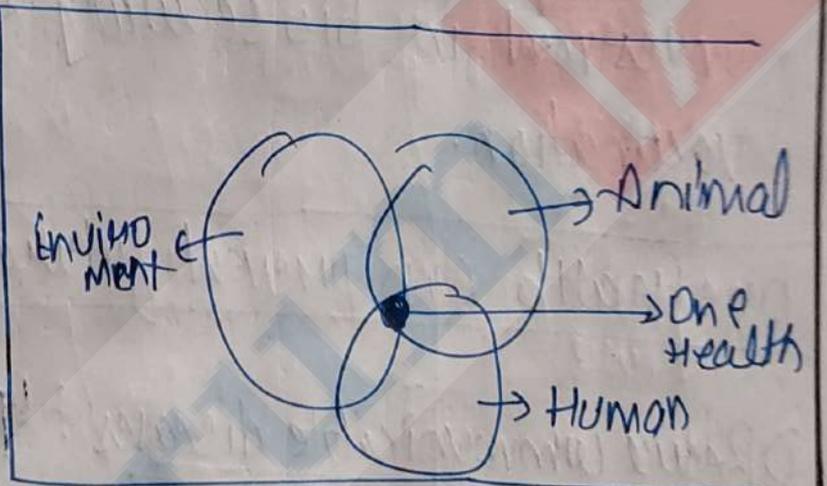
- 1) Availability of Technology
- 2) Integration with hydro power.

Demerit

- 1) Geographical constraints
- 2) Huge funds required for construction.

Thus India need to use multiple storage options for renewable energy to overcome barriers in their increased utilisation. Dedicated funding, research and incentives are required.

17) One Health approach integrates the health of animals, environment and humans to prevent infectious diseases and future Pandemic



WHO recently adopted Global Pandemic Agreement to strengthen prevention preparedness and response.

Features of Agreement

1) Sharing of information - Genetic information of pathogen across the nations

2) Dedicated sharing of vaccines and access
to WHO for investigation of new
pathogen spread.

3) Building response capabilities :- Through
investment in bio security labs and
vaccination.

One Health can prevent future pandemics

1) Reduce communicable diseases :- 40% deaths
in India due to communicable diseases

2) Integrated Management :- Animal are
carrier of major zoonotic diseases.

3) Reduce ecological damage :- leading to
spread of deadly pathogens.

4) Future preparedness and prevention :- Reduce

human interaction with animal pathogen and timely treatment of zoonotic diseases.

Steps India need to take to integrate this approach

- 1) Policy formulation :- One health policy for integrated research and funding.
 - 2) Increase surveillance capabilities :- Integrate disease control programme needs to be expanded.
 - 3) Training and capacity building in animal diseases. Research on animal diseases
 - 4) one health centres for responding to communicable diseases.
 - 5) Increase human expansion in forest areas and vaccination of vulnerable section
- Thus These policies need to be implemented to integrate one health approach in India's environment and health governance.

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- Urban areas and lack of green spaces.
- 3) Pollution and aerosol :- Increase temperature
Greenhouse effect.
 - 4) Equatic Monsoon :- Dry seasons and long
break during summer → Heat waves.
 - 5) Deforestation :- lack of green spaces in
urban centres.
 - 6) El Niño condition :- a global higher temperature
 - 7) coastal heatwaves :- water absorb 50%

of excessive heat generated in earth.

Effect of
Heatwaves

- 1) Health hazard → strokes and cramps
- 2) Reduce productivity
- 3) More impact on manual
labour such as construction
workers
- 4) Impact on Agriculture
2022 wheat crop
Damage.

Policy framework for tackling

1) Urban cities Heat Action plan



Ahmedabad heat action plan

2) IMD Heat waves colour coded warning
for disaster preparation.

3) Guidelines for tackling Heatwaves

1) Increase access to water

2) Hospital preparedness

3) Staggered timing of offices and schools

Other Measures

→ Increase Urban Infrastructure

→ Better awareness among workers

→ Reduce urban heat island → Urban roof ventilation

Thus with rise in temperature threat of heatwaves would rise. Need to declare heat waves as notified disaster is need of an hour.

14) Emerging technologies and globalisation has made fund movement ~~to~~ ~~easy~~ easy for terror groups and threat of money laundering using crypto currency and dark net has increased

Emerging technology and Globalisation contributing to terror funding

1) Integration of financial sectors :- Inter linkage of financial institutes made fund movement easy for terror groups.

2) Tax heavens and poor KYC norms by few institutions and countries.

eg Myanmar, Iran, N. Korea on FATF blacklist.

3) Crypto currencies :- No regulatory control

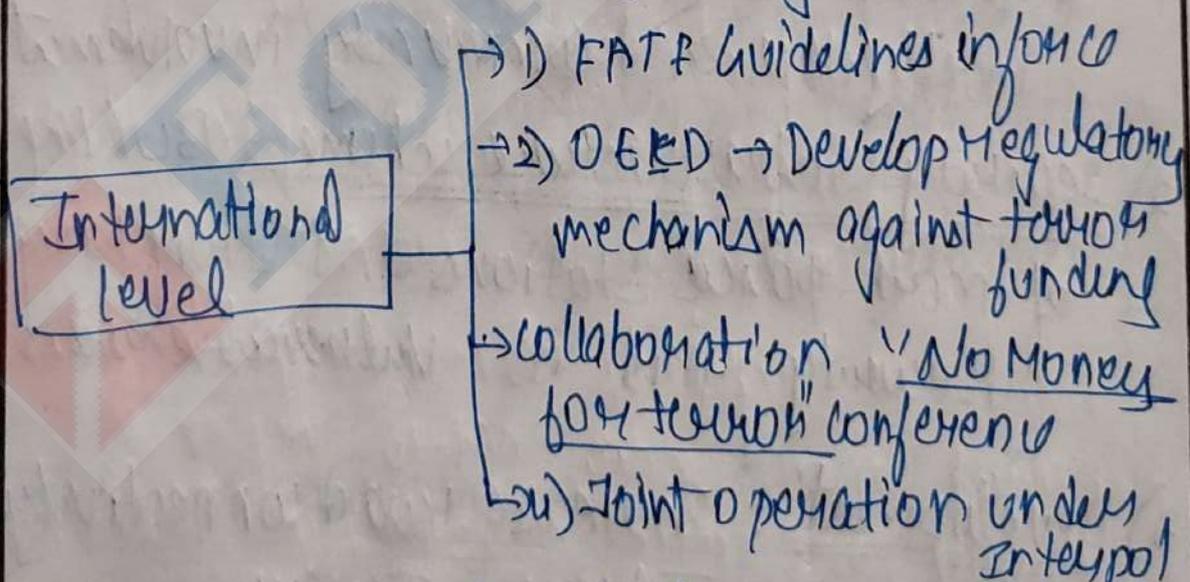
eg cyber threatansom in crypto currencies

- 4) NFT and use of other technologies :-
conceal the identity of actual beneficiaries
- 5) Online gaming :- used for money laundering
Eg. Mahadev Gaming app etc
- 6) Lack of money trail :- Difficulty in tracking
money in cybers domain
- 7) Darkweb :- used for transactions such
as drug trade, human trafficking
and weapon trade.
- 8) Lack of collaboration between financial
agencies and countries against
✓ join action
Eg. Non adoption of ~~Abt~~ Convention
against terrorism.

Measures to tackle

Domestic level

- 1) KYC norms to be strengthened and regular reporting by entities to financial intelligence unit
- 2) CBDC promote instead of bitcoins and regulation on crypto exchanges.
- 3) Regulatory measure :- TDS provision for crypto transaction for tracking of money.
- 4) Strengthen regulatory capacity :- Proactive approach ~~to~~ control and oversight in dark web and online gaming sector.



Thus considering boundaryless nature of digital space joint collaborated approach of all nations would only make cyberspace ~~safe~~ safe from terrorism funding

20) Over the past decade left wing extremism related deaths and violence has reduced by 80%. Red corridor districts come down to 18 only

Key component of National Action and Policy against LWE

- 1) SAMADHAN Strategy :- Multimodal approach integrate smart policing, intelligence and community involvement
- 2) Security infrastructure scheme :- Building of more police stations and strengthening security grid in vulnerable areas
- 3) Development :- Increase road connectivity
Telecom Towers
Electricity connections

- 4) Soft infrastructure: Health facilities and Ekavya Residential Model school for promotion of education
- 5) Dedicated trained forces: COBRA Battalion of CRPF and Weyer hounds of Andhra Pradesh.
- 6) Strengthening of governance in affected region
- 7) Additionally surrender policy launched
Eg in Chhattisgarh → provision of training, incentives and rehabilitation
- Further steps needed to eliminate
LWE
- 8) Focus on improve governance and integration: Track social parameters and improve connectivity

2) Increase public services for goodwill generation

- Water supply - Jal Jeevan Mission
- Protect forest rights → Forest Rights Act
- Representation → PESA Act

3) Improve economic development :- Industrial growth and sustainable development.
→ Minor forest produce collection and processing.

4) Coordination between states for joint operations against Naxalism and specially in border areas.

5) Control flow of funds and weapons :- Strengthen intelligence grid in vulnerable areas.

To achieve target of eliminating Naxalism by March 2026 India need to implement development and improved governance measures along with state level collaboration.