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GENERAL STUDIES (TEST CODE : 3611)

Name of Candidate	Animesh Jain		
Medium Eng./Hindi	Eng	Registration Number	1305161
Center	ORN	Date	25/7/25

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
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3	10	
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9	10	
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11	15	
12	15	
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15	15	
16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना अनिवार्य है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are TWENTY questions printed in HINDI & ENGLISH.
इसमें बीस प्रश्न हैं हिन्दी और अंग्रेजी में छपे हैं।
- All questions are compulsory.
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- 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. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

Is student recommended for One-to-One mentoring?

Recommended

Strongly Recommended

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Interactional Competence
5. Strategic - Presentation Competence
6. Cultural Competence

Overall Marks / Comments / Feedback / suggestions in Answer Booklet:

1.

2.

3.

4.

5.

6.

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यूनिफाइड लेंडिंग इंटरफेस (ULI) भारत में कृषि ऋण की दीर्घकालिक चुनौतियों का समाधान किस प्रकार करता है?

How does the Unified Lending Interface (ULI) address the longstanding challenges of agricultural credit in India? (Answer in 150 words) 10

Unified Lending Interface is a application recently launched to provide a common platform to banks to share the customer data and facilitate loans.

ULI will address longstanding challenges of agri credit by :-

- 1) Prove credit worthiness of farmer through data sharing among banks
 @ past credit record.
- 2) Tackle the problem of documentation by bringing all records on one platform.
- 3) Facilitate putting agriculture assets as a collateral in taking loans
 @ Land, farm machinery.
- 4) Ease of credit to small and marginal farmers, @ 85% of total

- 5) Tackle the challenge of Agri NPA by ensuring due diligence among banks.
- 6) Integrate with other schemes like Fasal Bima Yojana, Kisan credit card to avail loans.
- 7) Boost financial inclusion of farmers by extension of banking services to them.
- 8) Remove opaqueness and discretion in lending decisions through transparency.
- 9) push digital banking / m-banking thereby tackling challenge of poor banking infrastructure.

Institutional Agri lending is key to save farmers from indebtedness, boost income creation and improve agricultural productivity.

स्वयं सहायता समूहों (SHGs) के सदस्यों के लिए संधारणीय आजीविका गृहित करने पर ध्यान केंद्रित करके, लक्ष्मि दीदी योजना महिलाओं के आर्थिक उत्थान में एक मील का पत्थर मिद्ध हो सकती है। विवेचना कीजिए।

By focusing on creating sustainable livelihoods for members of Self-Help Groups (SHGs), the Lakshmi Didi scheme can become a milestone in women's economic upliftment. Discuss. (Answer in 150 words) 10

Self-Help groups are peer controlled group of people who have come together for common economic aim like productive activity. There are 9M SHGs supporting 12 crore women.

Role of Lakshmi Didi scheme in creating livelihood for women in SHG, ÷

- 1) Capacity building of women through skilling initiatives - @ maintenance of farm machinery -
- 2) Boost income by connecting women SHG product to markets @ use of GeM portal
- 3) Value addition of SHG products feeding to higher remuneration @ food processing sector

- 4) Provide credit for business expansion thereby achieving economic of scale
eg NABARD-SHG Bank linkage programme.
- 5) Reduce dependence on farm employment thereby creating alternative source of livelihood.
eg Drame didi scheme.
- 6) Peer learning from best case studies thereby feeding its knowledge exchange of Kudumbashree Model

Challenges faced :

- + Low economic of scale
- + poor access to credit
- + poor value addition, marketing of products.

SHGs are key to boost female labor force participation and help achieve

SDG-5 - gender equality .

3.

देश भर में फसल प्रतिरूप में हुए हालिया परिवर्तनों के लिए उत्तरदायी प्रमुख कारक क्या हैं?
What are the key drivers behind the recent changes in cropping patterns across the country? (Answer in 150 words)

10

Cropping pattern refers to the type of crops being planted in different regions in different seasons.

Recent changes in cropping patterns:

- 1) Shift of Rice-wheat system northwards towards UP, Punjab, Haryana.
- 2) Plantation crops being shifted to higher altitudes in Himalayas.
- 3) Rising cultivation of millet, horticulture etc.

Reasons/drivers of these changes:

- 1) Changing weather pattern - due to climate change causing wheat cultivation in colder regions of North.
- 2) Increasing climate stress has led to

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shift toward climate resilient crop like millet.

3) Government policy is incentivising growth of millet through subsidies/ credit.

4) Market dynamics - rising demand for horticulture due to consumer spending.

5) Export dynamics - demand for Indian coffee, fruits \Rightarrow T. cultivation

6) Availability of irrigation has led to water intensive crops like rice in stressed regions like Rajasthan.

As climate change further leads to shift in cropping pattern, government policy needs to adapt to ensure food security and remunerative agriculture.

4. मेगा फूड पार्क रोजगार केंद्र और कृषि उत्पादों के निर्यात इंजन के रूप में उभर रहे हैं। भारत में कृषि को सशक्त बनाने में उनकी भूमिका पर चर्चा कीजिए।

Mega Food Parks are emerging as job hubs and export engines for agricultural products. Discuss their role in empowering agriculture in India. (Answer in 150 words) 10

Food parks are a platform for food processing in India. Through Mega food park scheme, government is providing plug and play facility to food processors.

Role of food parks in empowering Agri) :-

- 1) provide job opportunities thereby tackle rural unemployment & 50 lakh employed (MoSPI)
- 2) Reduce food wastage by converting food into processed varieties & 92000 cr wastage could be tackled (IPHET study).
- 3) Boost farmers income - provide better prices for their crops.
- 4) Boost to agriculture exports => earning foreign exchange

- 5) Infrastructure creation like Cold chains which can be used to store excess food/crops.
- 6) Add to Agri GVA → @ 10% contribution to Agri GVA
- 7) Check distress migration from rural areas by providing jobs
- 8) Reduce burden on government for agriculture subsidies by making agriculture remunerative.
- 9) Incentives shift away from wheat-rice systems by creating value chains for other crops.
- 10) Help in overall rural development through development of other infrastructure @ needs

Meat Food Park need to be further pushed through facilitating credit, ease of doing agri business and nurturing agripreneurs.

5.

प्रौद्योगिकी में हुई प्रगति ने भारत में आपदा प्रबंधन को किस प्रकार बेहतर बनाया है?
How have advancements in technology improved disaster management in India? (Answer
in 150 words)

10

Disaster management refers to the process of planning for, managing and responding to disaster.

→ Early warning systems through GPS based SMS alert ⇒ reduce exposure

→ Vulnerability assessment leads to better planning & use of seismic zonation.

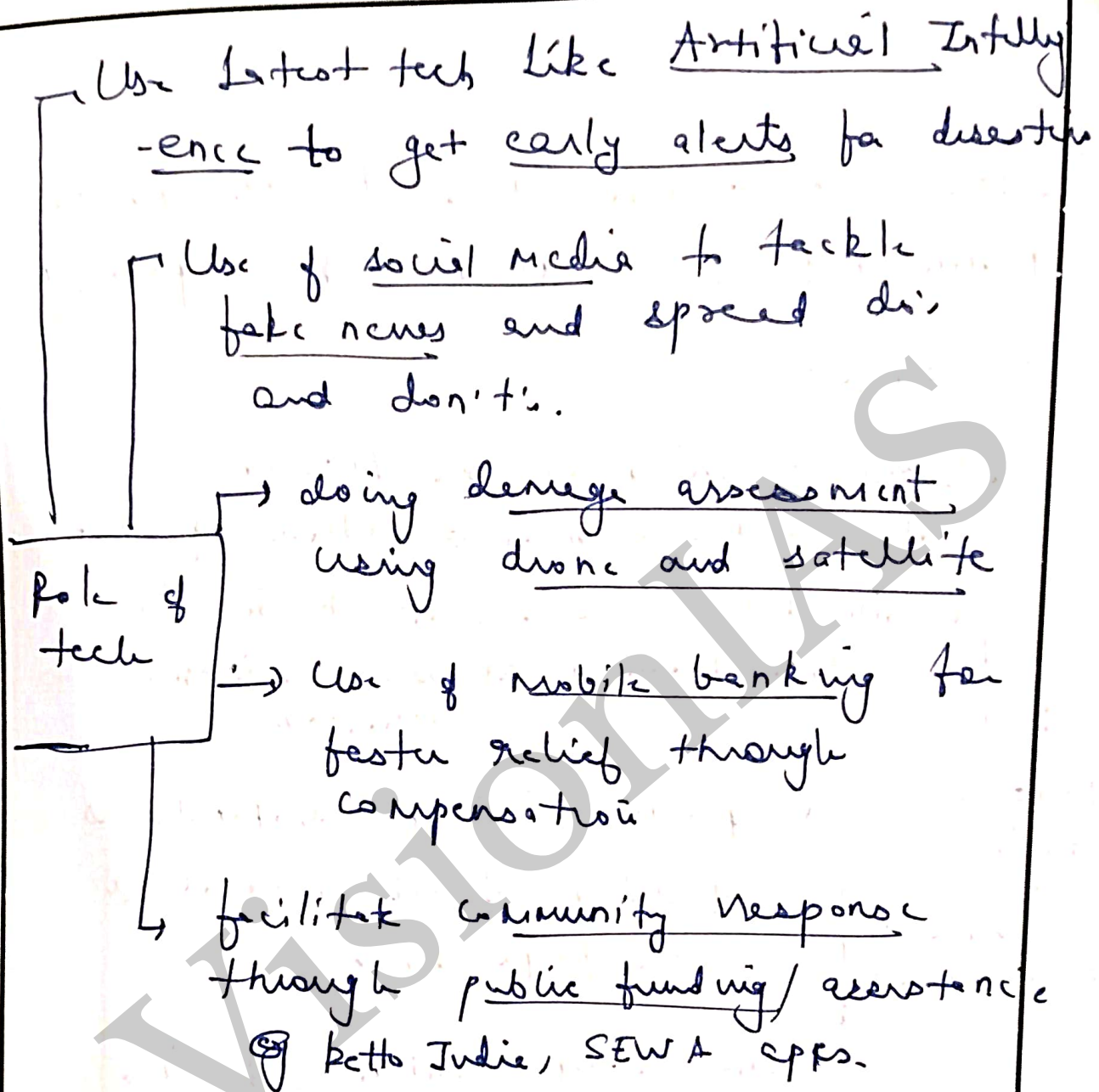
Role of tech in disaster management

→ Capacity building of stakeholders & using virtual simulation for preparedness

→ Increasing resilience of infra structure through technology & use smart materials that can withstand floods.

→ Information dissemination during disasters through public announcement system, social media

→ Monitoring and surveillance using drones and CCTV during disasters



Way forward :

- + Integrate use of advance tech in disaster management SOP.
- + capacity building of disaster management personnel in advance tech.

Recent disaster management (amendment) Act 2024 also stress on use of tech in managing disaster thereby achieving Sandhi Target.

6.

कैम्पा (CAMP A) निधि के उद्देश्य क्या हैं? इसके कार्यान्वयन में क्या चुनौतियां विद्यमान हैं?

What are the objectives of the CAMP A fund? What are the challenges in its implementation? (Answer in 150 words)

10

The Compensatory Afforestation fund was formed to collect fines from violations of environmental norms and use it for compensatory afforestation.

Objectives of CAMP A fund :-

- To facilitate polluter pay principle
- Collect fines for violations of EPA, 1986, Forest Conservation Act, 1980 etc.
- Increase forest cover to achieve forest policy, 1988 goal of 33% cover.
- Maintain ecological balance
- Provide a formal mechanism for environ-mental governance

However, there are multiple challenges associated :-

Challenges :

- 1) Large fund collected without being used @ ₹ 45000 crore lying
- 2) Lack of monitoring of afforestation leading to damage to plants.
- 3) Misuse of funds for other purposes rather than afforestation.
- 4) Bureaucratic hurdles in usage due to red tapism.
- 5) Non-levy of fines on violating companies @ Hesdeo case.
- 6) CAMPA seen as a formality to carry out environmental law violations.
- 7) Lack of external audit/oversight @ no parliamentary control.

To improve, effective oversight, proper utilisation of funds etc is needed to ensure environmental sustainability.

7.

विज्ञान और प्रौद्योगिकी के क्षेत्र में डॉ. सी.वी. रमन के महत्वपूर्ण योगदानों पर चर्चा कीजिए।

Discuss the important contributions of Dr. C.V. Raman to science and technology.
(Answer in 150 words)

10

Dr. C.V. Raman was a Indian physicist Nobel Laureate whose work is recognised in form of celebrating National Science Day on his birthdate of 28th February.

Contribution of Dr. C.V. Raman :

1) Discovering the Raman effect - it is about scattering of light in the presence of particles in a solution.

Raman effect found application in many fields including electronics, space, chemistry etc.

Thus, Dr. C.V. Raman remains a pioneering figure whose work continues to inspire the generations of scientists.

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8. वेब 3.0, वेब विकास के अगले चरण का संकेत देता है और इससे कई नए अवसर उत्पन्न होने की उम्मीद है। सविस्तार वर्णन कीजिए।

Web 3.0 signals the next phase of web evolution and is expected to bring forth many new opportunities. Elaborate. (Answer in 150 words) 10

Web 3.0 refers to a decentralised web based on blockchain technology. Here users are the co-creators of applications.

Web 1.0	Web 2.0	Web 3.0
Users as passive consumers - e.g. Yahoo	Users could share and create also e.g. Facebook.	Users could control the applications thru decentralised

New opportunities from Web 3.0 :

- 1) Decentralised internet leading to creation of peer controlled applications.
- 2) Enhance privacy of data as data is managed collectively.
- 3) provide scope for innovation - create new forms of social media applications.

- 4) provide platform for new ~~de~~ ^{developers} to innovate and experiment
- 5) Bring down the cost of developing new applications.
- 6) Democratise the technology
- 7) provide competition to big tech like MACA companies.
- 8) Wide applications in fields like decentralised finance, gaming, etc

challenges :-

- ↳ Lack of understanding of blockchain tech i.e. high skill set needed
- ↳ high costs of initial models

Government of India is pushing activity in this space through National Blockchain Mission, NITI strategy for blockchain and SKILL PRIME initiative

9. धन शोधन (मनी लॉन्ड्रिंग) वैश्विक वित्तीय प्रणाली के समक्ष एक बड़ा खतरा है, जिससे आर्थिक स्थिरता और सुरक्षा कमजोर होती है। इस संदर्भ में, धन शोधन से निपटने में वित्तीय कार्रवाई कार्य बल (FATF) की भूमिका पर चर्चा कीजिए।

Money laundering poses a significant threat to the global financial system, undermining economic stability and security. In this context, discuss the role of the Financial Action Task Force (FATF) in combating money laundering. (Answer in 150 words) 10

Money laundering is the process of converting money obtained from illegitimate source into clean money through the process of placement, layering and integration.

Money laundering ⇒ threat to global financial system :-

- 1) Creation of hot money leading to liquidity crisis of FDI in India from Mauritius
- 2) Reduce trust on government and banks.
- 3) Inflate asset prices like gold, real assets leading to bubbles
- 4) Creation of tax havens leads to erosion of country's tax base.

Role of FATF in Combating money
Laundering:

- 1) Lays down standards for banks
of KYC norms
- 2) Capacity building of enforcement agencies
of E-D in India
- 3) Sharing of intelligence across jurisdic-
tions to tackle black money/money
laundering.
- 4) Use of Grey list and black list
to pressure countries to change laws.
- 5) Provide a standard for anti-money
laundering legislations i.e Model Law.
- 6) Work with financial institutions
to fix leapholes in systems.

Money Laundering is not only a financial
issue but also has links with organised
crime and thus need international
cooperation for tackling it.

भारत के स्पेशल ऑपरेशंस फोर्स (SOF) राष्ट्रीय सुरक्षा संबंधी उद्देश्यों को प्राप्त करने हेतु महत्वपूर्ण हैं। इस संदर्भ में, भारत के स्पेशल ऑपरेशंस फोर्स की भूमिका पर चर्चा कीजिए।

India's Special Operations Forces (SOF) are integral to achieving national security objectives. In light of this, discuss the role of India's SOF. (Answer in 150 words) 10

India's national security objectives include - protecting sovereignty and territorial integrity, create deterrence against adversaries and protect civilians.

Role of Special Operations Forces in achieving these objectives:

- 1) Neutralise enemy infrastructure & terror launchpads. Surgical strikes
- 2) Create deterrence through power projection & area domination exercises.
- 3) Share collect and share intelligence with other organs like IB, CRPF and army.
- 4) Crisis situation resolution through timely interventions.

- 5) Hot Pursuit of insurgents across borders of Op Sunrise in Myanmar
- 6) Strengthen border security by checking infiltration of terrorists.
- 7) Engage and neutralise high value targets inside India of LeT, JcM terrorists.
- 8) Uncover new of terrorism with frontal organisations like NGOs of popular front of India.
- 9) Investigate high profile terror cases like pathogen attacks
- 10) Engage in extra-territorial co-operations of Sri Lanka, Afghanistan

Special Operations Forces need to be institutionalised through more funding, technological upgradation and improved training to counter the Multi-dimensional threats

11.

भारत में नगरपालिका की अवसंरचना और सेवा वितरण में विद्यमान चुनौतियों का समाधान करने के लिए नवोन्मेषी सार्वजनिक-निजी भागीदारी (PPP) रणनीतियों की क्यों आवश्यकता है?

Why is there a need for innovative Public-Private Partnership (PPP) strategies to address the challenges in municipal infrastructure and service delivery in India? (Answer in 250 words)

15

India's municipal governance is marked by poor service delivery leading to crisis of living in cities as evident from traffic congestions, poor quality of water etc.

Need for PPP to address challenges in municipal infra and service delivery

- 1) Lack of funds with government due to low municipal tax base.
- 2) Lack of specialised manpower/experts to tackle modern day urban challenges.
- 3) Lack of accountability in government centralised delivery model.
- 4) Increasing population of urban areas leading to stress on infrastructure of 50% by 2050 (World Bank)

- 5) High corruption in urban projects like road tenders \Rightarrow poor quality
- 6) poor use of technology in governance and service delivery.
- 7) Rising demands of citizens on quality service due to rising awareness
- 8) Lack of capacity of government to alone solve urban crisis.
- 9) Monopoly of government create inefficiency of monopoly of DISCOMS
- 10) Lack of focus on quality and maintenance of infrastructure.
- 11) private sector can bring finance for infra upgradation of \$ 100 trillion infra finance needed (NITI Aayog).

12) Private sector brings best case studies from across globe

eg China's sponge city model to tackle floods.

13) Tackle emerging challenges like climate change

14) create job opportunities through PPP model eg Urban MGNREGA can be envisaged.

15) Integrate technology in service delivery.
eg use of AI, GPS for monitoring infrastructure.

16) Ensure fee collection for services rendered => sustainability of operations.

Innovative PPP strategies can make cities a growth hub and provide ease of living to citizens ensuring SDG-11 - sustainable cities and communities.

12.

सरकार ने MSME क्षेत्र को भारतीय अर्थव्यवस्था के एक पावरहाउस के रूप में अपनी पूर्ण क्षमता प्राप्त करने में किस हद तक सहायता प्रदान की है?

To what extent has the government aided the MSME sector in realizing its full potential as a powerhouse of the Indian economy? (Answer in 250 words)

15

MSME sector is a powerhouse of Indian economy contributing, 40% to GDP, 50% to exports and providing 11 crore jobs!

Government has aided MSME sector through:

- 1) Easy credit through PSL norms, ~~PSL norms~~ extended credit line scheme, 59 million ₹ loans etc.
- 2) changing classification formula to increase the coverage of MSME under benefits
 @ 5% profit and 25% turnover is new.
- 3) Ease of Regulation through Udyog portal - single point registration

4) Facilitate their expansion by buying from MSME. on GeM portal
 of 50% buying from MSME.

5) Creating a negative buy list in defense where procurement done from domestic MSMEs.

c) Other schemes

- + Corporate tax cuts to 15%
- + Labour law reforms
- + GST tax reforms.
- + CHAMPIONS portal.

However despite this, challenges persist :

- 1) dwarfism in the sector - dominance of micro/small MSME of > 80% are these.
- 2) Lack of capacity utilisation due to poor demand in economy of 70% capacity utilised.

- 3) Competition from big players domestic as well as international of retail sector.
- 4) Lack of technological integration leading to poor productivity.
- 5) Rent taxation increasing the business costs for MSME.
- 6) Challenges faced in GST due to input tax credit issue, export subsidy issue.
- 7) Regional and sectoral imbalance of MSME in North East underdeveloped.
- 8) Lack of awareness of government schemes among MSME of PSL loans.

MSME can become the engine of Vikas Bharat by facilitation through handholding, capacity building and provision of easy credit for expansion.

भाग में बेहतर आय वितरण प्राप्त करने के लिए औपचारिक क्षेत्र में गुणवत्तापूर्ण नौकरियों के सृजन के महत्व का परीक्षण कीजिए। इस संदर्भ में विनिर्माण क्षेत्र के विस्तार की भूमिका पर चर्चा कीजिए।

Examine the importance of creating quality jobs in the formal sector for achieving better income distribution in India. In this context, discuss the role of expanding the manufacturing sector. (Answer in 250 words)

15

Formal sector refers to that sector of economy where job security is there along with social security provisions like pension and insurance. In India 85% of people work in INFORMAL sector.

Importance of creating jobs in formal sector :-

- 1) Higher remunerative jobs of IT sector average pay is 8k-1 lakh p.m.
- 2) Creates higher demand in economy leading to vicious cycle of growth.
- 3) Boost to associated service sector like entertainment, food industry of Delhi, Mumbai

- 4) Higher tax base for government which can be spent on human capital formation.
- 5) Best benefits labor force participation rate tapping the demographic dividend.
- 6) Leads to formalisation of economy leading to higher economic efficiencies.
- 7) Correct the sectoral imbalance by reducing the numbers in agriculture @ 43% there presently.
- 8) Tackles the problem of underemployment and disguised unemployment.

Role of expanding manufacturing sector

- 1) Manufacturing sector contributes only 15% to GDP → high potential to increase it to 30%.

- 2) high employment potential specially in areas like textile, leather => provide jobs at mass scale.
- 3) Absorb 70 lakh people entering labor market every year.
- 4) provide jobs in tier 2 & tier 3 towns reducing pressures on Tier 1 towns.
- 5) can become India's comparative advantage due to presence of cheap labor.
- 6) capture China + 1 moment and shifting supply chains.
- 7) Multiple effects in form of long term economic strength & self-reliance.

Manufacturing sector needs to be pushed through factor market reforms, incumbency investments, facilitative trade policies etc to realise the goal of Viksit Bharat by 2047.

14.

भारत भर में सभी फसलों के लिए कानूनी रूप से गारंटीकृत MSP लागू करने की व्यवहार्यता का समानोचनात्मक परीक्षण कीजिए। खरीद और वित्तीय स्थिरता सुनिश्चित करने में सरकार को किन चुनौतियों का सामना करना पड़ेगा?

Critically examine the feasibility of implementing a legally guaranteed MSP for all crops across India. What challenges would the government face in ensuring procurement and financial sustainability? (Answer in 250 words)

15

MSP is provided for 23 crops on basis of recommendations of Commission for Agri Cost and prices. However, only 6% crop is procured as per Shanta Kumar Committee leading to legally guaranteed MSP demands.

Feasibility :-

Legal guaranteed MSP is feasible :-

- 1) As per Yogendra Yadav, it would cost not more than 3 lakh crore.
- 2) Would help tackle agriculture distress.
- 3) help ensure food security for farmers.

However, following things make it an infeasible idea :-

- 1) high cost of procurement - becomes difficult when government already running high fiscal deficit.
- 2) Lack of storage facilities with F.C.I for all procurement.
- 3) distorts the agriculture market by distorting the price of crops.
- 4) Goes against WTO subsidy norms.
- 5) creates perverse incentives against reducing dependence on government.
- 6) Lack of procurement infrastructure in terms of mandis, market connectivity.
- 7) failure to procure can lead to lengthy legal battles in courts.

Challenge in procurement and financial sustainability :-

PROCUREMENT :-

- Reaching last mile for providing service
small farmers can't reach mandi.
- Creating infrastructure for collection
like weighing machine, storage facilities
- Identification of farmer and checking
misuse of MSP to divert cereals from
other states

financial sustainability

- Lead to high fiscal deficit as - 3 lakh
crore is needed.
- shrink the budget for Agri R & D
- might need to close other Agri subsidies
like fertilizer

Instead of telescoping MSP, farming sector
needs to be made more remunerative
by implementing recommendations of ASHOK
DALWAI
COMMITTEE

15. क्या आप सहमत हैं कि भारत की पत्तन अवसंरचना में महत्वपूर्ण बदलाव आया है, जो दक्षता एवं प्रतिस्पर्धात्मकता में उल्लेखनीय सुधार को दर्शाता है? अपने उत्तर की पुष्टि कीजिए।

Do you agree that India's port infrastructure has significantly transformed, demonstrating notable improvements in efficiency and competitiveness? Justify your answer. (Answer in 250 words)

15

India has a long coastline of 11000 km. It has tapped this through port-led development model under SAGAR MALA initiative.

Port infrastructure has significantly transformed :-

- 1) turnaround time at ports has reduced from 94h to 52h between 2014 & 2024.
- 2) Increase in greenfield port development as evident from recent approval for Vadhawan port.
- 3) higher logistical efficiency through use of technology in loading / unloading goods.

- 4) Boosting port connectivity with industrial hubs through best in class infra-structure.
- 5) Increasing the draft levels at port through dredging process.
- 6) Schemes like PM Gati Shakti with ports as one of the component has taken an integrated approach.
- 7) Improvement in logistics performance index rank to 38 from 62 earlier.
- 8) Reduce time in port clearances through single window clearance system & check red tapism.
- 9) Better Centre-state coordination through PRAGATI platform.
- 10) Use of PPP models in efficient port management like port landlord model.

However challenges persist :

- 1) India's parts lack deep drab of 18M leading to challenges for bigger ships.
- 2) Lack of technology in smaller parts → reliance on manual loading / unloading.
- 3) Red tapism causing delays in approval of assignments.
- 4) poor connectivity of parts with industrial hubs increasing overall transport time/cost.
- 5) Government control over major parts leading to inefficiencies and bureaucratic hurdles.

To further improve India's part infras-
- structure government has come up with
Major parts authority Act 2021, maritime
audit vision Real 2030 etc

Don't
anything
margin
read your
kya hai

16.

आपदाओं का प्रभावी रूप से शमन करने के लिए भारत में समुदाय-आधारित आपदा प्रबंधन को सुदृढ़ करना क्यों महत्वपूर्ण है?

Why is strengthening Community-Based Disaster Management in India crucial for effectively mitigating disasters? (Answer in 250 words) 15

India is highly vulnerable to disasters.

It's 68% land to earthquakes, 62% to floods, 12% to landslides, and 60% to cyclones as disaster prone.

Strengthening community based disaster management ~~is~~ is crucial because:

- 1) Increase disaster preparedness through capacity building of people
 & mock drills for floods, earthquakes
- 2) Increase awareness of do and don'ts during disasters so as to minimise damage to life / property.
- 3) ~~Reduce~~ Increase resilience of infra-structure by engaging community to use shelters, double storey houses for floods etc

- 4) Limited state capacity to act during disasters => People themselves have to be empowered.
- 5) high population → to minimise exposure to hazards → people need to be made aware.
- 6) Community can respond quickly and state's response may come with a time lag & role of NSS volunteers.
- 7) Mobilise local infrastructure and personnel (NGOs, SHGs, civil society) for quick relief.
- 8) Use community knowledge & fishers are aware for signs of cyclones; to raise alarm and warnings.
- 9) high social capital can ensure faster recovery through mutual aid and support.

10.) Community aware of local emergency routes and terrain for faster emergency rescue.

11) Making people eyes and ears of disaster management authorities by highlighting loopholes of risky bridge → can collapse.

To engage community :

- Capacity building of people
- Train youths as 'Apda Mitras'
- create local level disaster committee to undertake frequent drills.
- learning from best practices of Odisha cyclone model.

Community engagement need to be mainstreamed not just in mitigation but also in Management and response phases as suggested by SENDAI Framework.

17.

प्लास्टिक प्रदूषण भारत में एक प्रमुख पर्यावरणीय मुद्दा है। इस मुद्दे से निपटने के लिए विभिन्न शमन उपायों और इस संबंध में सरकार द्वारा अपनाई गई पहलों पर चर्चा कीजिए।

Plastic pollution is a significant environmental issue in India. Discuss the various mitigation measures to deal with this issue and also the government's initiatives in this regard. (Answer in 250 words) 15

India is the largest producer of plastic waste with 3.2 mt waste generated annually (Nature).

plastic pollution ⇒ environmental issue

- 1) Burning of plastic waste release toxic gases like Furans and Dioxins
- 2) plastic clogs and accumulate in rivers/ponds causing water pollution.
- 3) Affect soil fertility by affecting its alkalinity and pH values.
- 4) Affect biodiversity since animals like cows ingest plastic and die.
- 5) plastic seeps into food chain in form of microplastics and lead to bioaccumulation.

Mitigation measures to deal with this issue :

- 1) Replacing plastic with alternatives like jute/cloth etc.
- 2) Use of technology like FAST PETase enzyme to degrade accumulated plastic.
- 3) Disposing plastic using deep well injection or burning with Carbon capture and storage.
- 4) Removing single use plastic.
- 5) Recycling plastic and reusing it in areas like road construction.
- 6) Raising awareness among people to reduce reliance on plastic.
- 7) Proper collection and segregation of plastic waste for proper disposal.

Government initiatives for this] :

- 1) Plastic waste management rules ²⁰¹⁶ with emphasis on extended producer responsibility.
- 2) phasing out of single use plastics like straws, cups etc.
- 3) Increasing the thickness of plastic bags to 120 microns from 75 micron earlier.
- 4) Creating waste to wealth plants.
- 5) Using plastics in road construction.
- 6) schemes like Swatchh Bharat Mission focussing on collection and segregation.
- 7) Engaging on platforms like UNEP plastic treaty for global regulation.

sustainable plastic management is key
+ achieves SDG-14 - life below water ^{SDS} 15 - life on land

8.

यद्यपि, स्टेम सेल थेरेपी विभिन्न स्वास्थ्य समस्याओं के लिए आशाजनक परिणाम प्रदान कर रही है, तथापि इसमें कुछ चिंताएं भी विद्यमान हैं। विवेचना कीजिए।

Stem cell therapy, though, offering promising results for various health issues is fraught with certain concerns. Discuss. (Answer in 250 words) 15

Stem cells are undifferentiated cells that can grow into any cell type. The therapy based on the usage of these cells is called stem cell therapy.

Stem cell therapy results for various health issues :

- 1) Help tackle diseases like cancer.
- 2) tackle genetic disorders like sickle cell disease.
- 3) potential to create new organs in future => tackle organ failure issues.
- 4) Application in anti-ageing therapy.
- 5) Can slow down muscle degeneration and tackle diseases like Alzheimer's.



However, it is fraught with these concerns:

- 1) Create health inequities as high treatment cost would benefit rich.
- 2) Lack of regulation in stem cell field ⇒ potential misuse.
- 3) long term health impact of stem cell therapy still unknown.
- 4) Can become basis for Eugenics ⇒ performance enhancement based on stem cells. e.g. athletic field.
- 5) collection and storage of stem cell at birth is unregulated.
- 6) Issue of consent since child can't give it while stem cells are collected at birth.

7) Misuse 'in reproduction 2) stem cell can be used as egg/sperm leading to disputes over parentship of child - guardianship

Way forward ↓

- regulate the development in field through ICMR guidelines.
- Bring a regulatory law defining provisions like consent and penalties.
- public research to bring down the costs of treatment 2) health equity.

In a country like India, stem cell therapy with its promise of tackling diseases can help in creating a swastha Bharat given its benefits reach all sections of society.

भारत में आंतरिक सुरक्षा सुनिश्चित करने और सीमा-पार अपराधों में निपटने में केंद्रीय मशम्र पुलिस बलों के अंतर्गत आने वाली विभिन्न सुरक्षा एजेंसियों द्वारा निभाई जाने वाली भूमिका पर चर्चा कीजिए।

Discuss the role played by various security agencies covered under Central Armed Police Forces in ensuring internal security and managing trans-border crimes in India. (Answer in 250 words)

15

CAPF is an umbrella force tasked with managing both border security as well as internal security threats.

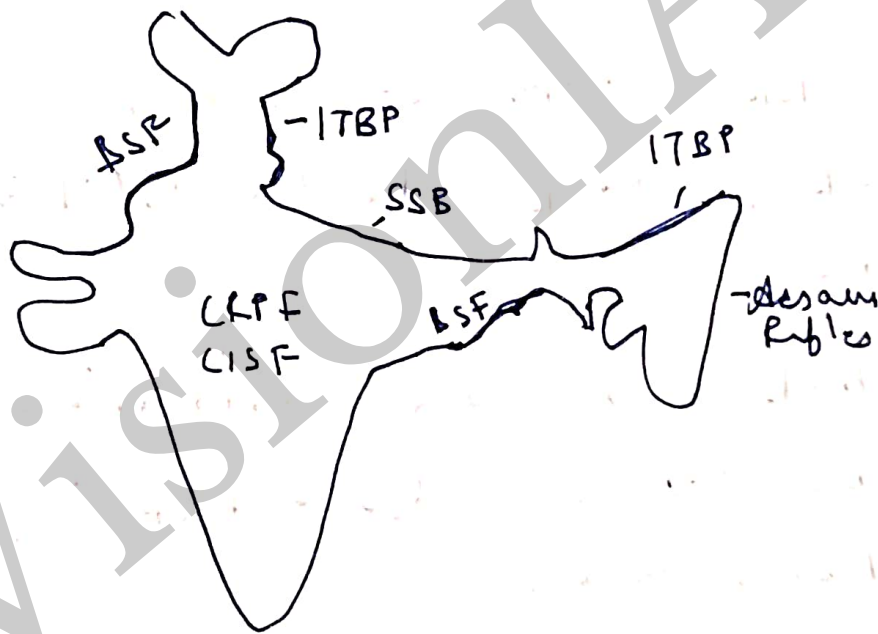


Fig. Various CAPF forces

Role played in internal security and managing trans-border crimes:

- 1) Tackle Maoist insurgency in Red Corridor of CRPF battalions deployed

- 2) Provide security to various industrial establishments from terror / other threats of ELSF role in airports, nuclear establishments
- 3) Security to people in riot like situations + policing role of CRPF
- 4) Tackle North East Insurgency by tackling groups like NSCN, NDFB etc
- 5) Check cross border infiltration across porous border of BSF in Pakistan border
- 6) Check illegal immigration along Bangladesh border (BSF) and Myan-mar border (Assam files).
- 7) Check drug trafficking along golden crescent and golden triangle routes of along Myanmar border

- 8) Tackle human and animal trafficking along Bangladesh border.
- 9) Check on organised criminal groups operating in border areas based on drugs / trafficking.
- 10) Tackle the flow of fake currency notes across borders.
- 11) Provide security in high density and vulnerable routes like - Amarnath Yatra.
- 12) Deployed for day to day security on festivals, special occasion across country.

CAPF are the backbone of security architecture and needs to be strengthened through technology upgrade, training and better coordination among different forces.

20.

डार्क वेब जैसे संचार नेटवर्क साइबर अपराध और आतंकवाद को किस प्रकार बढ़ावा देने हैं? भारत को इन चुनौतियों से निपटने के लिए क्या कदम उठाने चाहिए?

How do communication networks like the dark web facilitate cybercrime and terrorism?
What steps should India take to address these challenges? (Answer in 250 words) 15

Dark web is the inaccessible part of internet used by terrorists/criminals for illegal activities.

dark web facilitate cybercrime and terrorism by :

- 1) providing anonymity to communicators.
- 2) government can't track the communication and financial transactions.
- 3) dark net provide platform for sharing of sensitive information among terror groups & site for potential attacks.
- 4) personal data of victims circulated and traded which can be used for ransomware attacks.
- 5) platform to cybercriminals providing

'ransomware as a service' to customers

6) provide interface platform between terrorists and organised criminals/gangs.

7) Facilitate cross country financial transactions to individual terrorists

8) platform to buy/sell terror equipments like bombs/guns etc

9) Act as a platform to hire and brainwash potential terrorists through propaganda.

10) Makes available cyber crime tools like malware, viruses etc a lot.

11) deploy dark pattern to directly plant virus on computer of a user if he/she is not careful on dark web.

Steps India should take :

- 1) Push for global level coordination to regulate / crackdown on dark web & summits like ground zero summit can be organised.
- 2) Capacity building of cybersecurity agencies like CERT-In, ~~NCIIPC~~ NCIIPC etc to track communication on dark web.
- 3) Create a specialised force of cyber experts to track dark web and provide intelligence.
- 4) Create awareness among public about dark web and its misuse.
- 5) Focus on cyberhygiene to prevent and preempt cyber attacks.

India needs to boost its cybersecurity capabilities to tackle the challenges emerging from dark web.