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GENERAL STUDIES (TEST CODE : 1248)

Name of Candidate	SAURAV PANDEY		
Medium Eng./Hindi	ENG	Registration Number	11805
Center	KB	Date	30/8/2019

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	10	
2	10	
3	10	
4	10	
5	10	
6	10	
7	10	
8	10	
9	10	
10	10	
11	15	
12	15	
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16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
2. There are **TWENTY** questions printed in **ENGLISH & HINDI** इसमें बीस प्रश्न हैं अंग्रेजी और हिन्दी में छपे हैं।
3. **All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
4. The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
5. 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।
6. Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
7. 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।

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp Punjab & Sindh Bank), Dr. Mukherjee Nagar
Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

1. Explain the significance of Credit Rating Agencies (CRAs) in India and highlight the issues in their working. (150 words) 10

भारत में क्रेडिट रेटिंग एजेंसियों (CRAs) का महत्व स्पष्ट कीजिए और इनकी कार्यप्रणाली से संबद्ध मुद्दों को रेखांकित कीजिए।

Credit Rating Agencies (CRAs) are SEBI regulated agencies that provide information about financial capacities to return borrowing, repay loans to investors - retail and institutional.

Significance of CRAs is that investors can make informed decisions and there can be efficiency and competition in financial markets and prevents crashes, failures and crisis.

Issues in their working

- 1) "Issuer pays model" leads to conflict of interest → one can pay to get a better rating.
- 2) Failure in accurate ratings → crisis of IL&FS was never caught beforehand.

- 3) Lack of competition owing to monopoly of only seven CRAs in India -
- 4) Multiple regulations → SEBI, PFRDA, etc.
- 5) Legal cases are filed against CRAs if ratings are unacceptable to issuer company leading to delays and costs.

CRA's need more competition based on "regulator pay" or "investor pay model" in order to have a healthy financial market

2. What are the issues that have limited the success of Special Economic Zones (SEZs) in India? Mention some steps that can be taken to address them. (150 words) 10

भारत में विशेष आर्थिक क्षेत्र (SEZs) की सफलता को सीमित करने वाले मुद्दे क्या हैं? इन्हें दूर करने के लिए उठाए जा सकने वाले कुछ कदमों का उल्लेख कीजिए।

SEZ is a special enclave that is deemed to be a foreign territory for tax and duty.

Issues limiting their success.

- 1) Unutilized land → due to rigid land use rules.
- 2) Multiple type of SEZ such as coastal, corridor, inland.
- 3) Domestic Tax Area have weak linkages with SEZ.
- 4) SEZ pay higher taxes than Free Trade Partners like ASEAN.
- 5) Weak connectivity and poor logistics services.

Baba Kalyani Committee suggested following steps

- 1) Making land-use flexible to utilize more land.
- 2) Rationalize the kinds of SEZ.
- 3) Customs should be brought at par with Free Trade partners.
- 4) Improving last mile connectivity
- 5) From export-orientation to SEZ are crucial growth orientation
- 6) Provision of services → health, repair, design — to be improved.

SEZ are crucial for export, employment and investment. Urgent steps must be taken to make them successful.

3. The opportunities for start-ups in India are immense, but so are the challenges. Discuss. (150 words) 10

भारत में स्टार्ट-अप्स के लिए असीमित अवसर हैं, लेकिन चुनौतियां भी उतनी ही हैं। चर्चा कीजिए।

India is the third largest start-up hub in the world with 20% in tier 2 and tier 3 cities.

opportunities for start-ups

1) Government focus

- ↳ Start-up India mission
- ↳ National Policies on Electronic and Software products
- ↳ Yuva Sahakar → Cooperative Start Up Fund
- ↳ Defence offset Fund.

2) Demographic Dividend → median age 28 yrs and next 40 years will be youthful population as compared to all major economies.

3) Urbanization will be 50% by

- 2050 → Smart City
- Hyperloop
- Bullet Train

- 4) New Technology → Cyber Physical System
→ AI, Industry 4.0.

Challenges

- 1) Weak ~~holding~~ hand-holding despite several schemes.
- 2) Focus more on services and ignored rural sector.
- 3) Weak Industry - Education linkage
- 4) Low investment in Research and Development.

However, with Industry Alliance Program, Atal Tinkering Labs and other schemes, start-ups in India can provide rapid growth.

4. The term 'Circular Economy' is often seen in news. What are the principles that it is based on? Bring out its relevance for India. (150 words) 10

'चक्रीय अर्थव्यवस्था' (सर्कुलर इकॉनमी) पद प्रायः सुर्खियों में रहता है। वे कौन-से सिद्धांत हैं जिन पर यह आधारित है? भारत के लिए इसकी प्रासंगिकता स्पष्ट कीजिए।

Circular Economy is based on the principle of decoupling resources from economic growth. It is based on ~~Rease~~ Reduce, Reuse, Recycle, Refurbish and Re-manufacture.

Reduce → Reduce consumption of unnecessary and harmful products.

Reuse → products such as plastics, electronics. as much as possible.

Recycle → Paper, plastic, clothes.

Re-furbish → e-waste, metal waste can be re-made.

Re-manufacture → using old products as raw material.

Relevance for India

+) Low pollution → both in air and water if we dump fewer

articles and don't have to burn waste.

2) Employment generation, e.g. Anvikapur (Chhattisgarh) has generated employment in recycling.

3) Lower dependence on raw materials and inputs.

4) Revenue generation from waste products like Delhi has an adventure park made out of scrap material.

Circular Economy is a rational way to counter consumerism, and provide sustainable development.

5. Assess the performance of Pradhan Mantri Jan-Dhan Yojana in achieving its stated objective of financial inclusion. (150 words) 10

वित्तीय समावेशन के अपने निर्धारित उद्देश्य को प्राप्त करने में प्रधानमंत्री जन-धन योजना के प्रदर्शन का आकलन कीजिए।

PMJDY is a national mission on financial inclusion which targets bank accounts for all population.

Performance

- 1) Overall it has increased in its coverage as Global Findex Database stated that 80% of all adults have a bank account now.
- 2) Zero bank accounts have declined from 50% in 2015 to 15% in 2019. Inoperative bank accounts have declined from 19% to 12% in same period.
- 3) Financialization of savings has led to → more savings
→ more deposits to improve bank's health.

- 4) Diversification of finance as it provides insurance, over draft, etc.
- 5) Plugging of corruption channels through Direct Benefit Transfer in accounts.

Some limitations

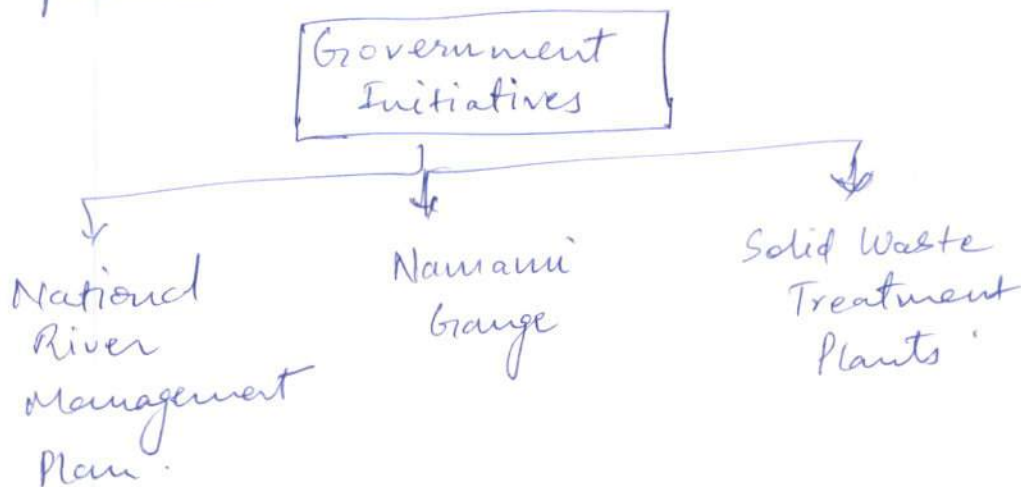
- 1) Low digital literacy
- 2) Multiple accounts to avail government benefits.
- 3) Cost of Banking Correspondence
- 4) Persisting dependence on money-lenders due to low accessibility to loans.

PMJDY is a massive effort in the direction of financial inclusion and must be taken to desired outcome.

6. How does pollution in rivers impact the surrounding ecosystem? Explain why such pollution has not shown signs of improvement, despite various government initiatives. (150 words) 10

नदियों के प्रदूषण से आसपास का पारिस्थितिकी तंत्र कैसे प्रभावित होता है? समझाइए कि विभिन्न सरकारी पहलों के बावजूद इस प्रकार के प्रदूषण में सुधार के संकेत क्यों नहीं हैं।

Indian rivers are highly polluted; as per CPCB data 45 rivers have minimum two metal pollution. Ganga has 5-metals in pollution level. organic waste is another large pollutant.



Impact on river/surrounding ecosystem

- 1) Eutrophication → due to nitrogenous, urea waste, high BOD leads to dying ecosystems.
- 2) Marine life such as Dolphins are impacted in reproductive cycles.

- 3) Human health impacts.
 - ↳ Nitrogen → Blue Baby Syndrome
 - ↳ Arsenic → Black Foot.
- 4) Frothing / fires → in river bank, nearby lakes, decaying organic materials and hydrocarbons.

Why no improvement?

- 1) Non-point sources → agriculture fields use nitrogenous fertilizers, often in excess, which are difficult to channelize.
- 2) Only 44% wastewater treated before dumping into rivers.
- 3) Lack of data and technology.
- 4) State Level Monitoring Committees not set up according to CPCB.
- 5) Lack of awareness and urban consumerist lifestyle.

River pollution is an urgent problem as 175 out of 351 rivers are polluted severely. Urgent steps are needed.

7. What is project MANAV launched by the Department of Biotechnology?
Highlight the significance of this project. (150 words) 10

जैव प्रौद्योगिकी विभाग द्वारा आरंभ की गई मानव (MANAV) परियोजना क्या है? इस परियोजना के महत्व पर प्रकाश डालिए।

MANAV project is a human atlas project made from information from cell, tissue, organ and organism levels.

MANAV project will comprise of data on cells and tissues in "normal" condition and "diseased" condition.

Significance

- 1) Help in controlling, remedying resolving diseases.
- 2) Better research and targeting in newer diseases or diseases that pose threats regularly.
- 3) Good for medical research in India as it will build knowledge and skill.

MANAV project should be scaled and collaborated with other stakeholders - domestic and global - to achieve stated objectives.

8. Highlighting the properties and applications of superconductors, discuss the constraints related to their practical use. (150 words) 10

अतिचालकों के गुणों और अनुप्रयोगों पर प्रकाश डालते हुए, इनके व्यावहारिक उपयोग से संबंधित बाधाओं की विवेचना कीजिए।

Superconductors are materials that conduct electricity with zero resistance, without any loss of power.

Properties

- 1) offer lowest resistance which is obtained at near-zero Kelvin temperatures. (theoretically).
- 2) Recently, FIISc has developed a superconductor at room temperature.
- 3) They offer no heat-loss.

Significance/Application

- 1) Power transmission will be without losses.
- 2) Bullet trains / Maglev trains.

3) ~~Cost of power~~

3) Faster communication as wired signals will travel exponentially fast.

4) It will help in space technology as power losses will be less.

Constraints

1) No resistance will pose a problem of controlling electricity as resistance has that purpose in electric circuitry.

2) Higher costs to develop prototype and scaling it

3) Responses to different signals / waves still unknown.

Superconductors will be path-breaking material, opening up new possibilities and applications.

9. Discuss the reasons behind India becoming a major destination as well as a transit hub for drug trafficking in South Asia. How does this effect India's internal security? (150 words) 10

दक्षिण एशिया में भारत के मादक पदार्थों की तस्करी के प्रमुख गंतव्य स्थल के साथ-साथ पारगमन केंद्र बनने के कारणों पर चर्चा कीजिए। यह भारत की आंतरिक सुरक्षा को कैसे प्रभावित करता है?

India is a major hub for drug-trafficking because

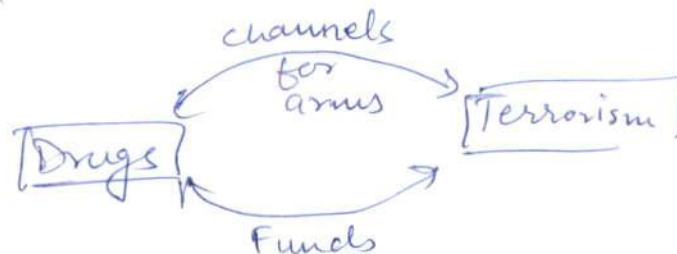
- 1) High rate of poverty → a large number of vulnerable population
- 2) Regional location → sandwiched between Golden crescent (Iran, Pakistan, Afghanistan) and Golden Triangle (SE Asia), which are hubs of opium trade
- 3) Weak law enforcement → corruption
- 4) Porous borders through NE (Myanmar) and eastern India (Nepal) and northern India (Pakistan → despite not being porous border).

9

Impact on Internal Security

1) Drug trafficking funds secessionist movements (NSCN-IM, ULFA) and naxalism

2) Nexus between organized crime and terrorism



3) Narco-terrorism weakens youth, radicalizes them and pushes them into poverty where they turn into armed militants, naxals etc.

A strong hand and fine scalpel needs to break the drug trafficking network to restore internal security.

10. The development of border areas is an important element in border management. In this context, discuss how the Border Area Development Programme (BADP) seeks to ameliorate the problems faced in border areas. (150 words) 10

सीमावर्ती क्षेत्रों का विकास वस्तुतः सीमा प्रबंधन का एक महत्वपूर्ण घटक है। इस संदर्भ में, चर्चा कीजिए कि सीमा क्षेत्र विकास कार्यक्रम (BADP), सीमावर्ती क्षेत्रों की समस्याओं में कैसे सुधार लाना चाहता है।

Border Area Development Program (BADP) was started for troop movement but has now included social welfare and development too.

Border areas face poverty, inaccessibility and unemployment.

BADP aims at

- 1) Providing accessibility to 50 km range areas from borders.
- 2) Employment opportunities
- 3) Infrastructure related to health and education.

Better connectivity will enable movement of goods and services and thus raise standard of living of border areas who face difficult terrains, heavy rain or snowing.

BADP needs to align with other schemes, use technology and strengthen our border communities for robust security.

11. Examine whether Fixed Term Employment will be able to achieve the objectives of ease of doing business, achieving labour welfare and job creation.
(250 words) 15

परीक्षण कीजिए कि क्या नियत अवधि का रोजगार, ईज ऑफ़ डूइंग बिज़नेस, श्रम कल्याण और रोजगार सृजन के उद्देश्यों को प्राप्त करने में सक्षम होगा।

Fixed Term Employment means employing workers outside payroll based on a contract that defines salaries and conditions at the outset itself.

Government has recently extended it to all sectors which was earlier only to apparel sector only. This is aimed as a step towards Labour Reforms objectives of ease of doing business, labour welfare and job creation.

Ease of doing business

- 1) It will enable to companies to hire employees for specific projects and specific time period bringing predictability in labour markets.
- 2) It will reduce protests and related cost, time overruns.
- 3) It provides pre-mature termination

of contracts in cases of low performance
frauds, etc

Labour Welfare

- 1) Salaries will be fixed.
- 2) Statutory benefits will be extended to workers.
- 3) In case of a worker having worked for 3 months, two-week notice will be required before termination.

Job creation

- 1) Companies will be able to provide jobs in special projects
- 2) Better contracts will enable more jobs.

Challenges/Shortcomings

- 1) Wage negotiations will weaken
- 2) Rules under Factories Act, Industrial Dispute Acts, etc may be bypassed

- 3) It might make company factories a mere sweatshop, causing hire and fire by misuse of rules.
- 4) Structural issues of job creation are unaddressed.

Labour reforms such as FTE will work better in a system with stronger social security system of health and insurance.

12. A growing livestock sector augurs well for the low income households to augment their income and escape poverty. Discuss. Further, suggest some strategies for ensuring sustainable livestock sector growth in India. (250 words) 15

एक वृद्धिशील पशुधन क्षेत्रक निम्न आय वाले परिवारों के लिए अपनी आय में वृद्धि करने और गरीबी से बाहर निकलने हेतु शुभ संकेत है। चर्चा कीजिए। इसके अतिरिक्त, भारत में पशुधन क्षेत्रक का संधारणीय विकास सुनिश्चित करने हेतु कुछ रणनीतियों का सुझाव दीजिए।

Livestock sector provides much needed agricultural diversification in non-farm sector, given that 75% of farmers are small and marginal owning 25% of crop land.

Income and poverty alleviation

- 1) As per NABARD All India Financial Inclusion Survey, only 43% rural household receive incomes come from farming.
- 2) Desert areas have 70% agricultural GDP from livestock and semi-arid regions have 40%.
- 3) Production in milk, fishery sectors in India are high.
- 4) Additional incomes help to reduce poverty as well as allow investment

in agriculture to increase productivity.
5) with climate change, floods and droughts, livestock sector is a much needed safety net.

Sustainable livestock sector growth

4) Policy focus towards.

↳ Value addition in Dairy sector.

↳ Mariculture Policy → Fishery.

↳ Piggery, small ruminant ⇒ Dryzone, North East

↳ Apiculture and Sericulture policy.

2) Establishing cooperatives, Farmers product organization in all the above sectors.

3) Food Parks, Processing units.

4) Mariculture → using satellite imaging, zoning for fisheries, legal, leasing issues in EEZ, waterways, etc.

- 5) Focus on services → such as dehorning, tagging, vaccinations, quarantine.
- 6) Protection from zoonotic and non-zoonotic diseases such as Foot and Mouth disease, Brucellosis.

Livestock must be a crucial part to watershed development and agro-ecological based agricultural diversification.

13. Examine whether the time has come for India to usher in full liberalisation of the Capital Account. (250 words) 15

परीक्षण कीजिए कि क्या भारत के लिए पूंजी खाते के पूर्ण उदारीकरण की शुरुआत करने का समय आ गया है।

Capital Account is the account of assets and liabilities. India does not have capital account free like its current account. Full liberalization means free flow of FDI and FPI in and out of country.

Why should it be done

- 1) It complements current account convertability and benefits financial sector.
- 2) It brings efficiency through competition in financial markets
- 3) It helps to bring funds and investments to help in welfare infrastructure, etc
- 4) It allows mergers and acquisition overseas.

5) It will encourage domestic start-ups to not register in countries with easier norms like Singapore - Ease of Doing Business

However, caution is needed for full liberalization because.

1) It will allow outflow of domestic capital -

2) It will make tax avoidance even more convenient.

3) Uncertainty and volatility due to "hot money" will be a probability and lead to crisis like Asian Financial crisis.

S.S. Tarapore Committee offered recommended full convertibility of capital account with some safeguards such as $\Rightarrow$

- 1) Low fiscal deficit
- 2) Low/controlled inflation
- 3) Low Non-Performing Assets.

Capital Account liberalization has its benefits but must be brought in a gradual, phased and cautious manner.

14. Highlighting the challenges to agriculture extension in India, discuss how ICT can help in addressing them. (250 words) 15

भारत में कृषि विस्तार के समक्ष चुनौतियों पर प्रकाश डालते हुए, चर्चा कीजिए कि इन्हें दूर करने में ICT से कैसे सहायता मिल सकती है।

Agriculture Extension means services of Information, Education and Communication to the farmers. It enables technological growth of the sector based on changing times.

Challenges to agriculture extension

- 1) 126 million farmers are small and marginal with low awareness in allied agriculture services.
- 2) More than 85% of women do not own land, are left out of such education and awareness program.
- 3) Low literacy and digital adoption in small landholdings.
- 4) Weak lab to land connectivity

Role of ICT (Information Communication Technology)

- 1) Better data can be provided.
- 2) Early warning system (EWS) can help mitigate against floods, cyclones and drought.
- 3) Soil Health Card / Mriduparikshak devices can provide micro-nutrient level information for soil requirements.
- 4) Mobile phones pictures can provide easy disbursement of crop insurance in cases of failure.
- 5) MITI Aayog and IBM are implementing Precision Agriculture techniques.
- 6) OP → has extended training programs for farmers.
- 7) Krishi Vigyan Kendras are providing training to women farmers.

~~Extens~~

8) eNAM, Food Park schemes provide
sms-based information on prices,
improving market accessibility.

Extension services are going
to be strengthened using ICT to
provide necessary support to a
distressed farming sector, enhancing
productivity.

15. Now that it has been two years since introduction of GST in India, do you think the system is on the path to achieve its intended objectives? Support your answer with relevant facts. (250 words) 15

अब जबकि भारत में GST को लागू हुए दो वर्ष हो गए हैं, क्या आप मानते हैं कि यह प्रणाली अपने अपेक्षित उद्देश्यों को प्राप्त करने के पथ पर अग्रसर है? प्रासंगिक तथ्यों से अपने उत्तर की पुष्टि कीजिए।

GST had objectives of financial inclusion, digitization and plugging of leakages in government benefits to poor.

Areas where obj

Goods and Services Tax (GST) was arguably the biggest tax reform aimed at rationalizing indirect taxes, integrating national market and enhancing revenues

Achievements so far

- 1) Rationalization of multiple indirect taxes under one tax
- 2) One market as all states have adopted it.
- 3) Plugging tax evasion → because input tax credit requires seamless

billing in a transparent way.

4) Ease of movement across states due to e-way bill.

5) Formalization $\Rightarrow$ with digitization, more units have come under GST net causing rise in direct taxes as well $\Rightarrow$ increase in Revenue Base.

However, GST has faltered in some ways.

1) Multiple rates $\rightarrow$ 4 tax brackets defeat the goal of One Nation One Tax.

2) Exemption to alcohol, petroleum real estate leaves out 45% of indirect tax net.

3) Lower than Revenue Neutral Rate has caused lower collection as per Union Budget 2019.

4) Different states still have some different taxes such as Road Tax.

GST needs to respond to rising issues through better implementation and bringing in exempted categories

16. Write a brief note on Carbon Capture and Storage. Mention its potential benefits and discuss the challenges that need to be addressed for its wide-scale deployment in India. (250 words) 15

कार्बन अभिग्रहण और भण्डारण पर संक्षिप्त टिप्पणी लिखिए। इसके संभावित लाभों का उल्लेख कीजिए तथा भारत में इसके व्यापक पैमाने पर परिनियोजन में आने वाली उन चुनौतियों की विवेचना कीजिए जिन्हें दूर किए जाने की आवश्यकता है।

Carbon Capture and Storage means capturing the excess CO_2 in the atmosphere through artificial means or accelerating natural phenomena. It has gained importance as Mauna Loa Observatory noted that CO_2 has crossed more than 415 ppm in atmosphere.

Types and

- 1) Ocean fertilization → increasing phytoplanktons in oceans.
- 2) Accelerated weathering → to absorb CO_2 through weathered chemicals and their reactions of ~~geo~~ biogeochemical cycles.
- 3) Afforestation will increase absorption of CO_2 through photosynthesis.

4) Aerobic and anaerobic combustion
or processes which absorb CO_2 , e.g.
using Biochar.

CCS can counter the rapid release
of CO_2 in atmosphere and supplement
natural carbon cycle which is
disturbed.

Challenges

- 1) Lack of technology in India in
solid waste management, agricultural
waste treatment, etc.
- 2) Lack of funds given other urgent
developmental obligations.
- 3) Lack of seriousness and awareness
regarding capture of atmospheric
carbon in policy circles.
- 4) Weak implementation, e.g. CAMPA
funds are lying unused.
- 5) Weak centre-state coordination.

Carbon Capture and Storage can be taken forward with international cooperation by strengthening Paris deal and loss and damage mechanism.

17. Highlight the gender specific challenges faced during disaster management. In this regard, discuss how the disaster management cycle can be made more gender sensitive. (250 words) 15

आपदा प्रबंधन के दौरान सामने आने वाली लैंगिक विशिष्ट चुनौतियों पर प्रकाश डालिए। इस संबंध में, चर्चा कीजिए कि किस प्रकार आपदा प्रबंधन चक्र को लैंगिक रूप से और अधिक संवेदनशील बनाया जा सकता है।

Globally in disasters, 75% of those who are displaced are women and children. They have higher vulnerability and lower capacity in disaster events.

Gender-specific challenges

- 1) Vulnerabilities → sexual violence, reproductive health, domestic violence are extra vulnerabilities faced by women.
- 2) Non-recognition of roles → They are merely treated as victims and their roles in procurement of emergency relief, relocation and care is not recognized.
- 3) Social considerations of caste also plays on gender. They are overburdened.

To make disaster management cycle more gender sensitive.

1) Risk management

↳ Disaggregated data based on gender based vulnerability and capacity.

↳ Identification of poor and marginalized women.

2) ↳ Investment in education and awareness of women about disasters.

2) Relief → Gender based provisions regarding health → sexual and reproductive.

↳ Recognition of role in disaster relief work.

3) Case Study Myanmar Nargis cyclone 2008 → post relief UNESCO implemented Education Program based on

gender to increase awareness,
communication and future policies.

Gender based disaster management
will be more efficient and inclusive.

18. Though there are some notable individual achievements, the overall participation of women in scientific research has been abysmally low. Examine. What steps have been taken by the government in this regard?

(250 words) 15

भले ही, कुछ उल्लेखनीय व्यक्तिगत उपलब्धियाँ हों, लेकिन वैज्ञानिक अनुसंधान में महिलाओं की समग्र भागीदारी अत्यंत निम्नस्तरीय रही है। परीक्षण कीजिए। इस संबंध में सरकार द्वारा क्या कदम उठाए गए हैं?

Women participation has been abysmal in science due to various socio-economic factors.

Status

- 1) Only around 15% women enrol in science and engineering at undergraduate level.
- 2) women workforce in science is only around 12%.
- 3) Faculty in institutes like IITs, IISc, have 12-14% women
- 4) In 61 years of Shanti Swarup Bhatnagar Award, only 20 women have won it.

Reason

- 1) Social mindset based in patriarchy and men-dominated workforce.
- 2) Marginalization in power, politics, economic spheres.
- 3) Economic empowerment is low owing to lack of income, low investment in girl child vis-a-vis boy-child.

Government Steps1) KIRAN Scheme

↳ Curie Scheme → to develop women tech-parks

↳ Mobility → re-entry of women in workforce who have to migrate due to family, parents ^{or} education of children.

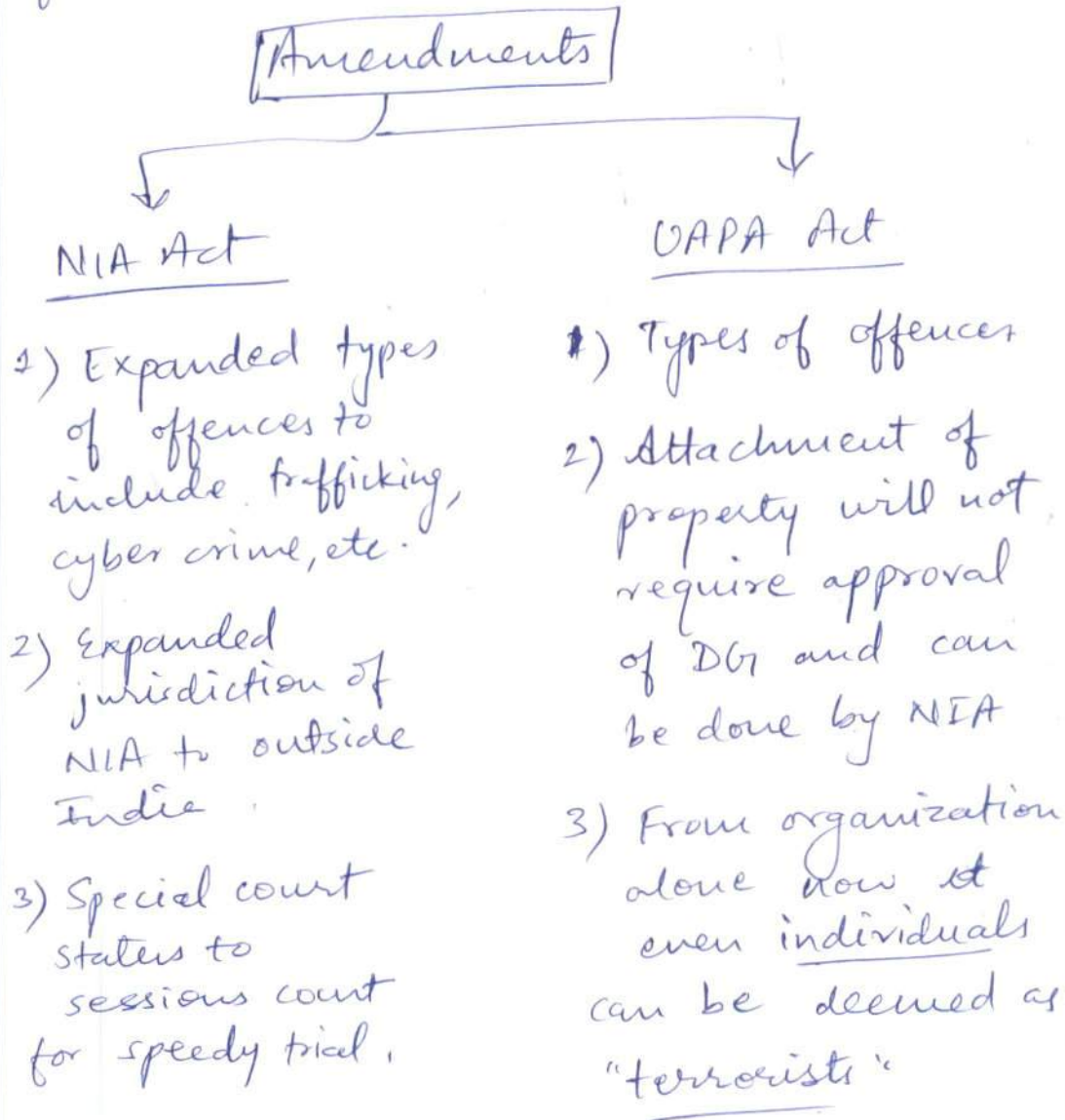
- 2) India-US STEM participation to train women in engineering and medicine.
- 3) BioCARE scheme to involve women in biotechnology.

Participation of women in science is good for technology growth, innovation, economy based on principle of equality and justice.

19. Discuss the significance of the recent amendments made in the NIA act and the UAPA Act for countering terrorism. (250 words) 15

आतंकवाद का मुकाबला करने हेतु NIA अधिनियम और UAPA अधिनियम में हाल ही में किए गए संशोधनों के महत्व की विवेचना कीजिए।

Recent amendments in NIA Act and UAPA Act have been made to counter the scale and types of terrorist activities.



Significance

- 1) Terrorists have deep nexus with organised crimes and these amendments will target that.
- 2) Newer forms of terrorism such as lone-wolf attacks, cyber-attacks need a comprehensive approach.
- 3) Terrorists escape punishment once outside country, as we saw in case of Masood Azhar, David Hadley
- 4) Other countries too have such supra-national boundary powers.
- 5) Faster seizure of properties and court procedures will provide swift actions.

Concerns

- 1) misuse of "terrorist" tag
- 2) Effectiveness of amendments with international treaties and other country laws will be a challenge.

Since terrorism is growing the world over, such steps signify the urgency and seriousness of counter-terrorism operations.

20. The national security architecture needs to be robust enough to deal with present and evolving threats. Elaborating on the statement, discuss the recent steps taken for modernisation of the national security architecture.

(250 words) 15

वर्तमान और भावी (उभरते) खतरों से निपटने के लिए राष्ट्रीय सुरक्षा संरचना को पर्याप्त सुदृढ़ करने की आवश्यकता है। इस कथन का सविस्तार वर्णन करते हुए, राष्ट्रीय सुरक्षा संरचना के आधुनिकीकरण हेतु हाल ही में उठाए गए कदमों की विवेचना कीजिए।

National security architecture
needs to adapt to newer security
threats, maintain swiftness as
well as institutional and democratic
accountability

India's National
Security Architecture

1) Cabinet Committee on Security (CCS)

Headed by the PM, members are
ministers of defence, external affairs,
home and finance.

2) National Security Council

Top executive body comprising of
Special ~~Role~~ Strategic Policy Group

3) National Security Advisors

NSA reports to PMO and heads the NTRO (National Technical Regulatory Organization) and NSAB (Advisory Board).

4) military → Three forces, headed by army, navy and air force chiefs and The President as chief commander -

5) Paramilitary

CAPE → domestic threats

CTSF → Industrial properties / critical infrastructure

NSG → counter terror.

6) Local Police.

Recent Steps:

1) SPG to be headed by NSA.

2) Chief of Defence Staff to head all three forces.

↳ Provide integration in training

↳ Better command in operation

↳ Efficient acquisition of arms

3) CIBMS (Comprehensive International Border Management System) → to

monitor border areas with tough terrain.

- 4) RISAT → all weather border surveillance; hand-held devices
- 5) Communication broadband with dedicated bandwidth for defence.
- 4) New equipments to detect land mines in naakal-areas will reduce loss of CRPF personnel.
- 5) Bullet proof jackets to personnel deployed in sensitive areas.
- 6) NSG → state of the art training and equipment for counter-terror operations.
- 7) Acquisition → Rafale, ^{war} Spice missile, aircraft, MIG21 upgrades, Brahmos cruise, Agni V → Ballistic nuclear capable
- 8) NAVIC → Regional surveillance within 1500 km of border.