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GENERAL STUDIES (TEST CODE : 1248)

Name of Candidate	Anil Basak	Registration Number	28487
Medium Eng./Hindi	English	Date	11/09/19
Center			

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	
13	15	
14	15	
15	15	
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।

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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.

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) provide standard ratings on company's profits, performance, debt profile, future prospects. They give these ratings based on standards prescribed by SEBI.

Significance

- ① More informed investor - better choice to invest in which company for optimal returns.
- ② Decreased NPA - as bank will give credit based on debt sustainability rating.
- ③ Self Polishing effect - will force companies to improve their financial situation.
- ④ Prevent systemic failures like seen in IL & FS crisis.

- Issues • Shell Companies - not able to identify
- Issuer pay Model - ~~ex~~ led to interest Conflict of Interest.
 - ~~fixed~~ Rating Shopping - inviting company which give best rating.
 - Lack of data provided by companies for assessment.
 - Lack of Competition - Only < 10 CRAs in Indian Market.
 - Long term friendships with Companies.

Way Forward.

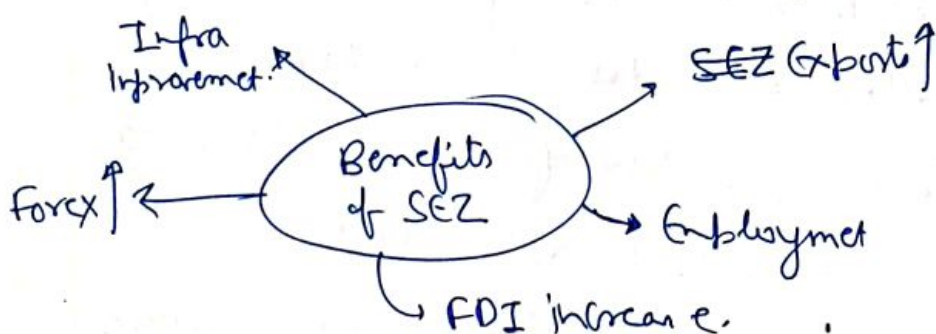
- Use of MCA-21 data.
- Proactive disclosure of liquidity situation
- More Competition - allowing more entrants.
- Display of rating by all CRA mandatory.

With suitable reforms, it will lead to penetration of Corporate Market which will lead to better transmission of Monetary policy by RBI.

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।

SEZs are deemed foreign area in Indian territory for custom purposes. They are regions with state of the art infra to boost export competitiveness & increase foreign exchange reserves.



Issues in SEZ

- Poor Connectivity - located far away from ports & coasts.
- Restrictions on access to domestic Market.
- Small size $\Rightarrow$ No Economies of Scale.
- Less govt. support $\Rightarrow$ Led by private sector for infra development.

Steps To be Taken

- Baba Kalyani Committee on SEZ suggest cross cutting reform.
 - a) Convert SEZ to EEZ (Economic & Employment Zones)
 - b) Do away Domestic Market access restriction.
Eg - Chinese Model $\Rightarrow$ More profitability
 - c) Connectivity to ports by Dedicated Freight Corridor & Industrial Corridor.
 - d) Cluster formation of smaller SEZ to bigger size as seen in China.
 - e) Incentives by govt. like Sunset Clause to be Continued.
 - f) Access to credit.
- Export Led growth Model as envisaged in SEZ model will help in putting India at the forefront of 4th Industrial Revolution by catering to global demand.

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।

Start-ups are the Company in infant Stage with <10 years of establishment.

They are engines of innovation & employment as envisaged by ES 2018-19

Opportunities.

- Young population with innovative minds.
- Large Market for demand.
- Govt. initiatives like Mudra Yojana, Startup India, Stand Up India, Atal Innovation Mission.

- Research facilities in IIT's, IISc,
- ICT infra, MOOC courses & Startup Guidance Programme.

→ Presently

India is 3rd largest ^{ICT} startup hub & have ~~2nd~~ highest fintech adoption rate.

Challenges.

- ① Access to Credit - In face of ^{large} NPAs.
- ② Incubators & Guidance programme to become Unicorns.
- ③ EODB ranking is low compared to USA & China.
- ④ Taxation like Angel Tax issues
- ⑤ Brain Drain to other countries
- ⑥ Data Localization norms.
- ⑦ Thwarted govt. initiatives for MSME
⇒ less incentive to grow big highlighted by ES 2018-19.
- ⑧ Digital Infra in remote areas which have immense potential.

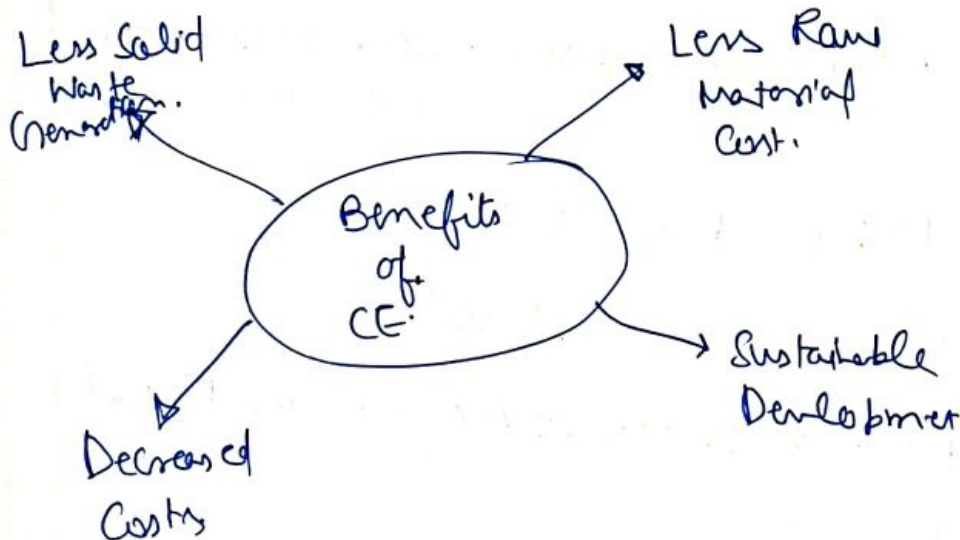
Startups & innovative minds need to be promoted to Convert India into a innovation driven economy. 24x7 Startup Guidance Channel on doordarshan & incubators is a step in right direction.

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 maximum value realization from a raw material

Tools of CE. { Reyle, Reuse, Reduce, Repair, Refurbish,



Relevance in India

- ① Large population has put immense pressure on resources

- Circular Economy will reduce this pressure.
- ② Clean India - by decreasing Waste.
- ③ Export Hub - by increasing Cost Competitiveness
- ⇒ ₹-₹ volatility ↓ & Current Account deficit ↓
- ④ New employment - in light of increased unemployment
 - ↳ low skill sectors - like repair.
 - ↳ high skill sectors - new technology for reuse & recycle
- ⑤ Achieving SDG. by 2030
- ⑥ Reaping economics of scale.
- ⑦ Promoting MSME sector by raw material availability.

India should pioneer in Circular economy in face of 4th Industrial Revolution. by investing in new technologies.

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 financial inclusion scheme which aims to increase penetration of saving accounts, insurance, pension, credit availability to all citizens.

Target - 80 crore new bank accounts by 2020.

Performance - 39 crore bank accounts opened of which
→ 53% are women account holders.
→ 59% are from rural sector.

- It increased digital payments by providing RuPay Card.
- Increased insurance cover by providing Accidental insurance of 1 Lakh per family.

- Increased business expansion by access to formal credit
(Earlier only 10% credit goes to rural sector).
- Overdraft facility helps people to start new business.
- Increased credit amount with bank.

Issues.

- Many zero balance accounts.
- People still fear of bank failure & keep money in home.
- Unaccounted money in PMJDY accounts during demonetization.

Way Forward.

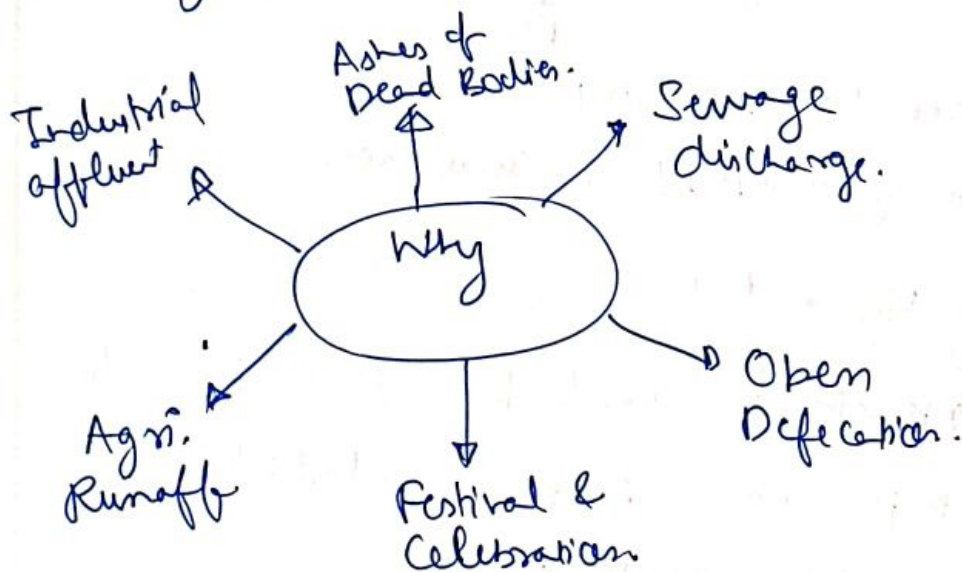
Clustering of PMJDY, Mudra Scheme & IPPB (India Post Payment Bank) for better synergy.

Domestic savings are biggest source of investment in India. Govt. should work on the principle of 'No customer too small & No deposit too little'.

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।

Recent data from Jal Mantralaya & CPCB shows that number of polluted river stretches increased to >350 in number with >50 stretches are extremely polluted.



Impact on Surroundings

- Foul Smell. $\Rightarrow$ Inhabitable env.
- Birds & animals which drink water get diseases & die.

- Loss of biodiversity in rivers Eg- Ganges
Dolphin at Risk
- Ground Water Contamination in nearby
areas.

Why Not Improved

- Industry - Politicians Nexus.
- Irrational use of Fertilizers.
- Poor Oversight, CPCB lack manpower
& SOPs.
- River Conflict b/w States
- Lack of individual awareness.

Way Forward

- Basin & Landscape level approach.
- Promoting STP & industrial water
waste treatment.
- Promoting self cleansing capacity,
by ecology level of flow.

Govt. need to raise awareness for
'Normal & Arival' Rivers to Achieve
SDGs.

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।

Project MANAV is first ever project to map human body at cellular, molecular, tissue & organ levels. It is launched by Do Biotechnology in MoS&T.

Significance

- Better information about functioning of human body.
 - It is implemented at two stage
 - ① At normal body.
 - ② At stage of disease attack.
- ⇒ Will help to learn about disease propensity & spread Mechanism.
- Given India faced 20% of global disease burden it will lead to better healthcare intervention.

- Inventing new drugs & vaccines
- Learning about Mutations & drug resistance
- Will differentiate different cells responsible for different functions $\Rightarrow$ Development of specialized cell possible in future.
- Will give valuable inputs for Stem Cell & Cloning research.
- Help in find out indigenous people traits.
India should collaborate with global efforts like HUMAN-Read & Write programmes to further enrich data.
It also do need to ensure cybersecurity of data collected & ensure no privacy breach.

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 material with high electrical conductivity & offer very less resistance to flow of current through it. Eg - Carbon nanotubes.

Applications

- ① In electronic industry.
→ for faster charging of Mobile phones & laptops.
- ② In space.
- ③ In Renewable energy
→ battery storage & PV cell to effectively harness solar energy
- ④ Harnessing energy from thunderbolt
- Research in USA.

- ⑤ In safety equipments - In homes allowing large current to pass through them in case of failure.

Constraints

- ① Lack of R&D
- ② Properties at home scale to be manipulated.
- ③ Efficiency is improved
- ④ Can cause electric shocks without safety equipment.

There is need to further R&D to refine properties for practical use.

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 have an unfortunate geographical location of being at crossroad of golden crescent (Pak, Iran, Afghanistan) in North & Golden triangle (Thailand, Myanmar, Cambodia) in east.

Major Transit Hub

- Porous boundaries. by rivers & high mountains remain unguarded.
- Friendship accords with ~~for~~ neighbour countries which have traffickers due to lack of oversight.
- Support for domestic elements to get illegal large money.

Major destinations

→ Increased drug intake due to stress, depression, easy availability.

→ Threat to Internal Security

→ Fuel other crimes by providing money for ~~the~~ arms trade & human trafficking.

→ Fuel terrorism by supplying arms.

→ Radicalize Youth & decreased productivity

Way Forward

- Better guarding of boundaries. — ICT Use
- Rehabilitation of addicts. (In Punjab & Manipur)
by deaddiction Plan.
- Curbing Drug & Narcotics Act loopholes which divert drug from medicinal purpose.
- Coordinate with neighbours.

To reap the demographic dividend & securing social fabric we need to curb menace of drugs

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 Programmes
is implemented by Ministry of Home
Affairs to improve Connectivity & Infra
in villages near the border.

Aim → Road Connectivity wherever
possible.

→ Basic infra of schools, hospital,
water & Sanitation.

→ Digital Connectivity.

How helpful in Border Mgt.

→ Deradicalize Youth by development
opportunities & thus using local population
as eyes & ear of army.

- Easy transportation of defence equipments to army bases.
- Army can use hospitals in case of war.
- ICT infra of army will be used efficiently with digital infra.

Issues

- Difficult terrain
- Slow Speed of Execution
- Hostile indigenous people in hills
— Arunachal Pradesh.
- Layered approach of boundary first
increase cost as path to boundary area is still not constructed.

Govt. should provide basic amenities in boundary areas & increase use of ICT to further improve cross border 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 refers to the process of hiring labour for a given time period. In this time period the workers will be available to all statutory benefits available to permanent workers.

Need of Fixed Term Employment

- Gig Economy on rise as 53% of new job created are by contract labour sector.
- Increase in freelancer contractors.
- Seasonality of Workload in a industry.
- Unemployment rate - 6.1% highest ever.

Benefits of FTE

- ① Cost of industry in hiring labour will decrease.
 - ② Inflation decrease due to more competitive prices.
 - ③ Skilling of workers in varied sectors will be seen.
 - ④ Disguised unemployment will decrease.
 - ⑤ EODB for company with easy compliance with labour laws.
 - ⑥ FDI will increase.
- Economic Survey 2018-19 supports FTE for EODB and Union govt. recently allowed FTE in all sectors & requested state govt. to do same.

→ Maharashtra already implemented FTE & has seen the results.

Issues with FTE

- ① Social security will decrease for workers.
→ Working Unions already protested for this.
- ② Suspicion of Crony Capitalism.
- ③ Might increase Child Labour as workers are not on payroll.
- ④ More Informalization of economy.

Govt. needs to balance the issues & address workers demand.

→ Code on Social Security should be Labour implemented fastly with Consensus of Industrialist & workers. Prior Notice on removal, Contract letters should be Written ensured.

In face of Gig economy & rising competition & 4th Industrial revolution, FTE with safeguards will be great step.

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।

India has the world's largest livestock population and world's leading producer in milk and other bovine products.

→ Livestock + Agriculture + Bee keeping +
Fishery = Mixed Farming
⇒ Increased avenues of
Income.

Benefits of Livestock Sector

- ① Decrease pressure on land as:
decreasing need of fertilizer & water
intensive crop for higher income.
- ② Most beneficial for rainfed areas
Eg - Rajasthan where one's can't

grow high price crops. like sugarcane & rice.

③ More income $\Rightarrow$ Education & better health led to human development & decrease poverty.

④ Milk considered as wholesome diet $\Rightarrow$ Decreased Malnutrition

$\rightarrow$ India witnessed the White Revolution with operation flood under Cooperative Movement in Milk production sector. This led to millions of rural people to come out of poverty.

Stagnation in Milch Sector

- $\rightarrow$ Less R&D
- $\rightarrow$ Disease in cattle
- $\rightarrow$ Less processing & higher value products.
- $\rightarrow$ Less exports.

Measure take be Taken

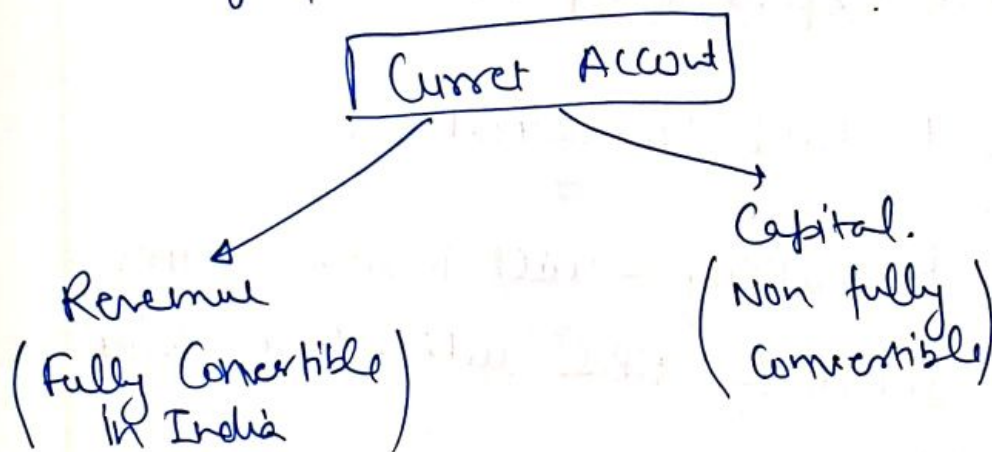
- ① Indigenous breed to be promoted under Nakul Mission - WHO Study highlight outstanding characteristics of Indian Cow.
- ② Focus on value added products like Cheese, Probiotic Curd, processed Meat (Pink Revolution) for better income
- ③ Cluster based approach for FPO's & Cooperative to reap economies of scale.
- ④ Testing facility for Sanitary & Phyto Sanitary measures to get access for export markets.
- ⑤ R&D in new specialized breed eg- Murrah for better productivity.

Livestock stock will play crucial role in doubling farmer income by 2022 as suggested by Ashok Dalhavi Committee.

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।

Current.
~~Capital~~ account of a country consists of export & import spending, ~~Remittances~~, FDI's, FPI, External Commercial Borrowings, etc. Remittances etc.



• Presently Capital Account is fully convertible for inflow of capital but not for outflow.

Benefits of Full Liberalization.

- ① Internationalization of Rupee - global acceptability.

- ② Ease of Investment for foreign Investors - FDI & FPI will increase.
- ③ More source of Capital availability for domestic industrialists - by Masala Bonds & External Commercial Borrowing (ECB)
- ④ More exports & imports growth.

Cons of Full Liberalization

a) ₹-\$ Volatility - will increase with less control of RBI which have limited intervention.

⇒ when ₹ strengthen exports will take hit & CAD increase to unmanageable levels.

b) Failure risk of Markets due to panic created by short term FPI withdrawal

c) RBI power for investor safeguard will decrease

d) Industrialists ECB from foreign market will substantially have -ve effect when ₹ weakens $\Rightarrow$ Debt trap & foreign control over indian industries.

Way Forward

$\rightarrow$ Taxopore Committee laid down parameters for gradual liberalization

$\bullet$ Stable Fiscal Deficit

$\bullet$ Manageable CAD.

$\bullet$ Low govt. debt (preferably $< 60\%$ of GDP).

$\rightarrow$ Promote FDI over FPI.

$\rightarrow$ Long term contract & borrowings with capital markets to be preferred.

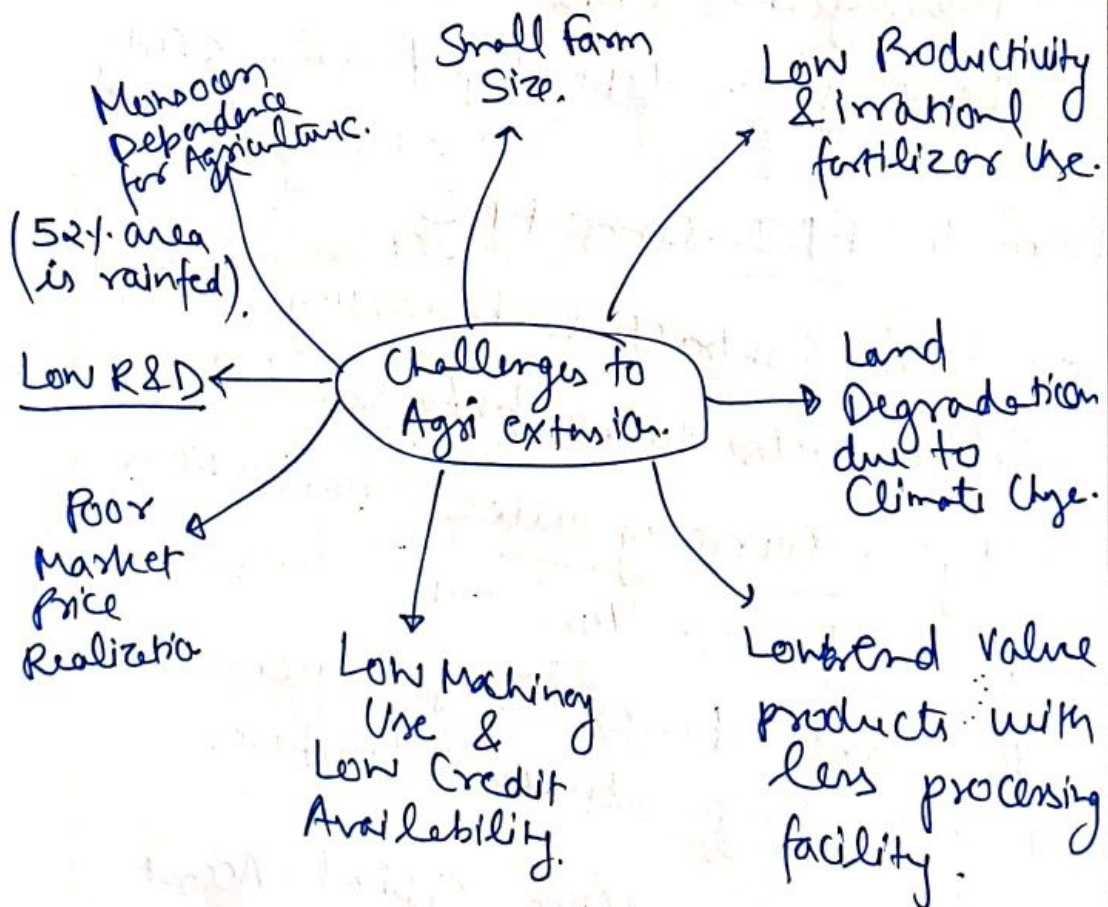
$\rightarrow$ Country & Currency wise liberalization
For eg - Japanese Yen with which India have Forex Swap agreement or USA with large Indian diaspora.

Govt. should liberalize Capital Account Cautiously & gradually to improve its ranking further in EODB index by WB.

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 sector employs 44.2% of Indian workforce & contribute around 17% of GDP as per data by GOI. Thus, it remained crucial sector for India's growth rate.



ICT and new technologies like AI, Big Data, Cyber physical systems, internet revolution has transformed agriculture in many countries. ICT is backbone of all these technologies.

ICT Use in Agri

- Smart Irrigation. - by using sensors for precision agri. systems $\Rightarrow$ increased Water use efficiency $\Rightarrow$ Decreased salinity & Desert bloom.
- Market price & MSP Price information
(NITI Aayog states that 60% farmer get to know MSP after sowing). Through dedicated apps & US ID features farmer can get information for Market price.
- Supply Chain - coordinating supply chain from start to end with

better communication about demand, supply & perishability & process-

- FPO creation by anganwadi communication in a group of large farmers.
- Land productivity by communicating information to farmers about fertilizer amount by land scanning through satellites & drones → To be used in Soil Health Card Scheme
- Connecting scientists to farmers by Mera Gharon Mera Gaurav app.
- Use of big data to assess productivity trends & suggesting suitable crops will further enhance Agro-climatic regions.

Thus, ICT along with traditional knowledge will help in transforming agriculture ensuring food security and better farmer income.

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 is a destination based indirect tax levied on both goods & services. In its 2 years it has many features in its cap & as well as issues. in performance.

Benefits provided by GST

- ① Decreased Cascading effect ⇒ Lowers prices of products. for common citizen
- ② Single Market Creation ⇒ Increased avenues of demand for producers.
- ③ Ease of filing taxes by Composition Schemes.
- ④ Decreased Logistics Cost by Incorporating e-Way Bill.

- ⑤ Increased tax base & no. of taxpayers.
For eg - In may months collection rose
above ₹ 1 Lakh crore and also Direct
tax payers increased by 65% in last
4 years.
- ⑥ Self Polishing effect ~~for~~ by Invoices &
Input Tax credits $\Rightarrow$ More registration &
Formalization of small producers.
- ⑦ Cooperative federalism - GST Council
incorporate states in decision making.
- ⑧ 0% tax on essential items $\Rightarrow$ Ease of
Livelihood.
- ⑨ Equal growth in NE states.
- Issues in GST ⑩ EODBT $\uparrow$ & FDI $\uparrow$

- a) Technical glitches in GSTN $\Rightarrow$ creating
panic among taxpayers.
- b) Delay in Input tax credits $\Rightarrow$ Less
credit with producers for business
expansion.

c) Multiple Tax slabs - 0%, 5%, 12%, 18%.
⇒ WB said that GST is most complex system.

d) Fluctuation in monthly collection ⇒
Govt borrowing ↑ & crowding out of private players.

e) States unhappy due to lost revenues in two periods.

f) Some products left out - Petrol, Electricity, Aviation Fuel.

Way Forward

- Cybersecure GSTN.
- Rationalization of slabs with as minimum as possible.
- Stability
- Ease of filing.
- Statutory status to Anti-Profiters Agency.

Above reforms will ensure "One Nation - One Market - One Tax" notion & improve.

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 is technique of forcefully pulling out Carbon content from atmosphere & then forcing it to other locations.

Carbon Storage can be as simple as storing Carbon in biomass, agri crops, forest cover & fossil fuels.

→ Carbon Capture will require Carbon Storage after capturing. Carbon Capture require advance technology & new chemicals to absorb CO_2 from Air.

Benefits

- ① Decreased Warming - ~~also~~ & Counter
holocaust of 2°C temp rise as highlight
by IPCC Report.
- ② Prevent sea level rise.
- ③ Prevent Melting of glaciers
- ④ Using stored Carbon for energy
production $\Rightarrow$ Energy security.
- ⑤ Increased forest cover $\Rightarrow$ Fresh Air.
- ⑥ Health benefits by preventing Air
pollution.

Challenges in India

- ① High technology Cost.
- ② Underdeveloped Technology of
Capturing.

③ Can't be converted to Mass movement
as local citizen can't invest in it.

Way Forward.

• With increased R&D in Capture &
Storage.

In meantime India should focus on
natural carbon capture by increasing
tree cover to 33% & moving to
use of renewable energy for less
production of CO_2 in atmosphere.

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।

Disaster Mgt. is complex task of Capacity building, immediate action in event of occurrence & then mitigating the ill effects & rebuilding the structure.

Gender Specific Challenges

- Women more vulnerable.
 - due to low physical strength.
 - pregnancy cases.
 - Child Care along with herself.
 - Slow movement.
- Widows rehabilitations

- Livelihood in aftermath of family loss due to low skills.

How to make more gender sensitive.

- First preference to Women & Children rescue.
- Rehabilitation & skilling after disasters.
- Capacity building with women specific SOP by Community training programmes.
- Use of ANM & ASHA for early identification of pregnancy cases.

Thus, a resilient women will help in effectively combating ill of Disaster.

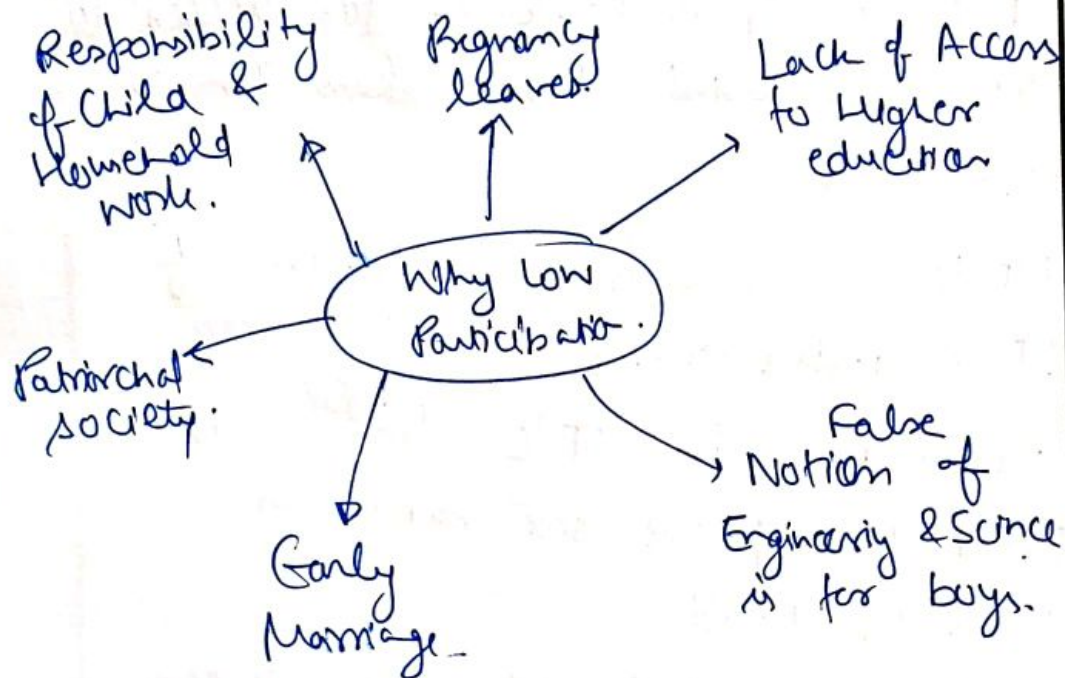
18. Though there are some notable individual achievements, the overall participation of women in scientific research has been abysmally low. Examine. What steps have been taken by the government in this regard? (250 words) 15

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 constitute <20% of scientific research & study workforce as per recent data by GoI. This highlights unserved potential of women agency.

Notable Individual Achievements

- Head of Chandrayaan 2 - Ritu Karikhal.
- Head of proposed Gaganyaan Mission
- ~~Increased~~ In the past; Kalpana Chawla & Sunita Williams but their mark in space.



Govt. efforts.

- KIRAN Scheme for Women in Science
- CURIE scheme for Scientific promotion.
 - Will give scholarships for women who have left the field due to household reasons.
- Nai Udaan for scholarships for Coaching & online course for preparation of JEE, NEET & other exams at Class XII level.

- MOOCs Open Courses for access to scientific material from class 9th to PhD level.
- NPTEL Courses from professors of IIT available online.
- Reservation in IITs for eg IIT Delhi to improve sex ratio in research field.
- PM Research Fellowships after B.Tech to promote research culture.

At Society Level

- Sukanya Samridhi Yojna, Beti Bachao Beti Padhao & BADLAV to change patriarchal mindsets.

Realizing Women agency can ~~be~~ convert India into a research hub and increase in intellectual property rights & Innovation driven economy.

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।

- NIA was created in aftermath of Taj Hotel attacks in 2008 to improve Counter-terrorism measures.
- UAPA Act aims to curb violent activities & exciting revolution against govt. machinery & disturbing social fabric.

Amendments in UAPA Act & NIA

- Power to designate individual terrorists rather than earlier norm of just tagging organisations.
- More power to NIA for investigation
- Allowing Inspector levels to conduct investigation relating to terror crimes.

→ Removal of need of Prior sanction for State Police IAs for conducting investigation. by NIA.

Benefits

- Terrorists like Hafiz Saeed, Dawood Ibrahim which continue to spread terror by changing names of org. will come under Radar
- Will fortify India's demand to designate Hafiz Saeed terror by FATF. & UNSC
- In line with other countries international practise like US & China.
- Will lead to faster investigation & speedy justice
- Strong deterrent for future crimes.
- Will counter increasing Lone Wolf Attacks. Eg - Pulwama Attack

- Will reduce personnel crunch for investigation by allowing inspectors who have adequate expertise in it.

Other Reforms Needed.

- Focus on Youth in J&K and Red Corridor by providing employment to decrease radicalization.
- Tie up with social media giants to curb terrorist network at the same time securing privacy.
- Strengthening security architecture by Cabinet Minister & rank & statutory status to NSA.

India should need to use international & regional forums like SCO, SAARC, UNGA to develop Comprehensive Convention on Terrorism to build a world of peace & harmony as envisaged in SDG16 ~~that~~

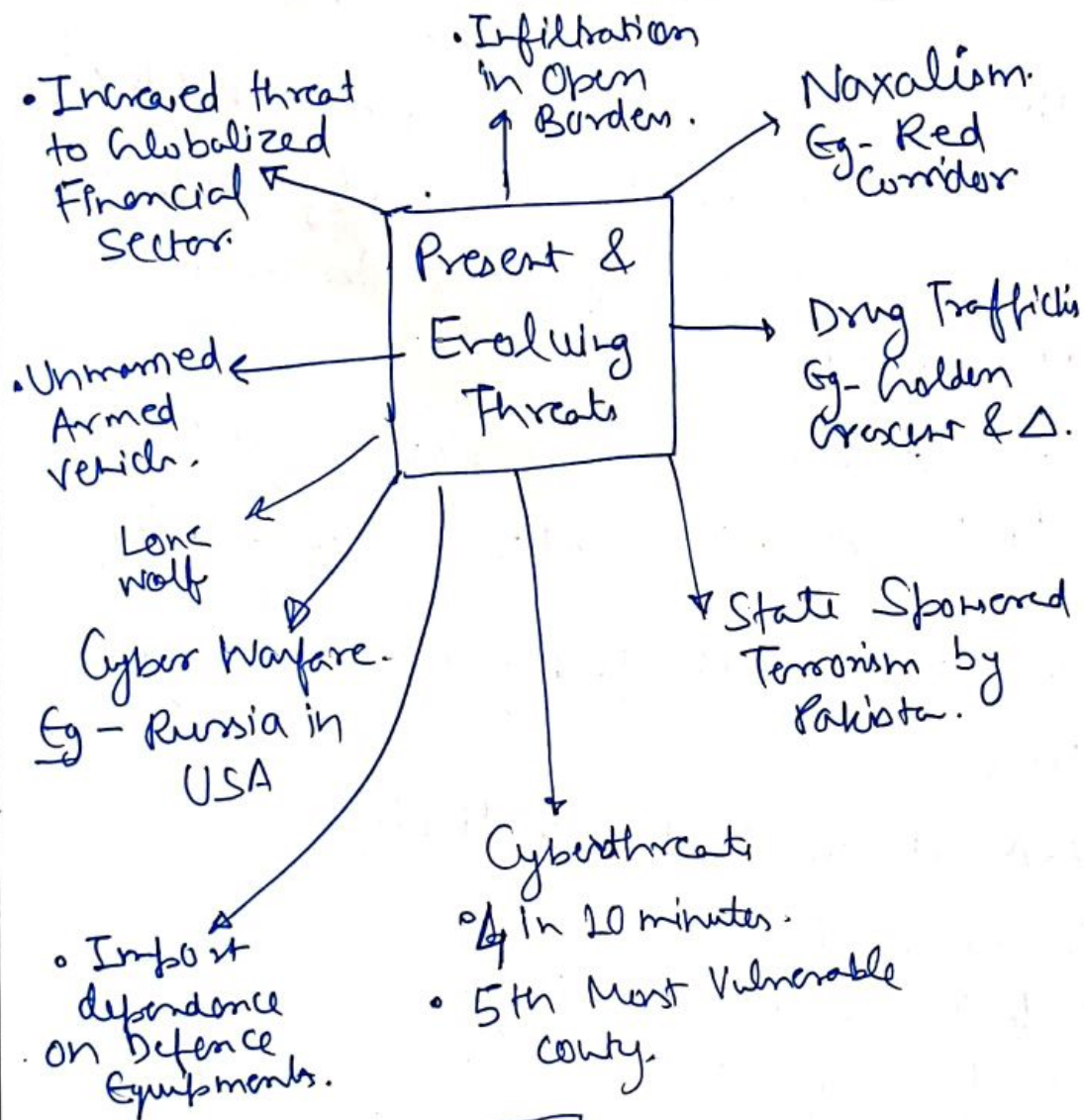
20. The national security architecture needs to be robust enough to deal with present and evolving threats. Elaborating on the statement, discuss the recent steps taken for modernisation of the national security architecture. (250 words) 15

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।

Institutions dealing with security of
Country in India are.

1. Cabinet Committee on Security (CCS) - PM + Home Minister + NSA + External Minister + Finance Minister.
2. National Security Council (NSC) - Same Membership as Cabinet Committee on Security.
3. NIA - formed in aftermath of Taj Attack.
4. CBI & RAW - investigation agencies.
5. ED - for economic threats.
6. Advisory Committee - with experts from different fields.

7. Defence Staff Committee - With heads of all three Armed forces.



Recent Steps Taken.

- Same membership of CCS & NSC for better Coordination.
- Permanent Chief of Defence Staff ⇒ Foster Action in emergency times.

- Integrated Dedicated Battalions - for strong response in emergency times.
- Make-II for Defence Procurement Procedure - to make India a defence Mfg hub & decrease import dependence in crucial strategic needs.
- CERT-In & CERT-Fin & National Cyber Coordination & Control Centre for Cybersecurity
- NIA Act Amendment giving more investigation power.
- UAPA Act to counter individual terrorism & lone wolf attacks.
- Use of ICT in border Mgt.

Above reforms will ensure a secure life

for Citizens. Also, India needs to build a global consensus for Convention on terrorism. for Coordinated multilateral efforts.