

ForumIAS

GENERAL STUDIES

Name Of Candidate

LOVISH GARG

Roll No.

1910063972

Date:

24/11/21

Time Allowed: Three Hours

Maximum Marks: 250

INDEX TABLE

Q. No.	Max. Marks	Marks Obtained
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Total:	250	

INSTRUCTION

1. Please do furnish Name, Email, Roll No and Mobile in the answer sheet.
2. There are TWENTY questions printed in ENGLISH & HINDI, all questions are compulsory.
3. The number of marks carried by a question/part is indicated against it.
4. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided.
5. Word limit in questions, if specified, should be adhered to. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off.

Any specific messages for ForumIAS Mentors/Evaluators with respect to your copy? Write it here.

Evaluator's Discretion:

For Student Only

Start Time | 9 AM

End Time | 12 PM

Total Marks:

Mode Of Examination:

Online Offline

Evaluator's Discretion: This is the marks awarded at the discretion of the evaluator based on your overall impression, on the basis of (but not limited to) your handwriting, presentation, use of diagrams, flowcharts, facts and figures or absolutely anything that he/she liked in your copy.

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ECN CODE:

EG:

Evaluation Date:

Note: You can discuss your evaluated copy with the Mentor. Raise a ticket from your portal or a mentor call or visit the offline centre to meet mentor (all 7 days, Timings - 11 AM to 6 PM). Further if you are unsatisfied with the evaluation, you can seek re-evaluation of the copy.

Parameters	Excellent	Very Good	Good	Average	Poor	Very Poor
Language						
Structure						
Presentation						
Handwriting						
Content						
Attempt						

ADDITIONAL REMARKS

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Q.1) The role of state in a liberalized economy is best suited as a facilitator and not as an engaged participant. Critically analyse this statement with respect to privatization drive of the government.

(10 Marks, 150 words)

उदारीकृत अर्थव्यवस्था में राज्य की भूमिका एक सहभागी के रूप में नहीं, बल्कि एक सुविधाप्रदाता के रूप में सबसे उपयुक्त है। सरकार के निजीकरण अभियान के संबंध में इस कथन का समालोचनात्मक विश्लेषण करें। (10 अंक, 150 शब्द)

Privatisation refers to disinvestment of government stake in public enterprises. In the Atmaishlesh Shresth reforms, government has stated to exit all sectors except for strategic sectors with bare minimum presence. eg: banking.

Why best facilitator

1. limited resources with the government
↳ eg 9% fiscal deficit.
2. Generally, poor efficiency due to lack of expertise, populism.
↳ eg: 98.7% operating profit of Railway
3. Fair facilitator can promote competition among private players.

4 Private sector can use untapped government resources better

↳ eg. National Monetisation Pipeline

5 Government can allocate resources better on critical issues.

↳ eg. defense.

However, in a liberalised state, presence of government as a participant is important.

Prevent exploitation of poor & vulnerable

Privatisation increases cost of operations



Private may not operate in low profit positions

spur investment in socially relevant projects

eg: concessional loans in Stand up India

The state should focus on providing essential services while inducting private bodies with clear regulatory oversight to prevent exploitation of poor.

Feedback

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Q.2) What are the major changes brought in the Deposit Insurance and Credit Guarantee Corporation (Amendment) Act 2021? How will it promote the interest of small account holders and depositors? (10 Marks, 150 words)

जमा बीमा और ऋण गारंटी निगम (संशोधन) अधिनियम 2021 में कौन से बड़े बदलाव लाए गए हैं? यह छोटे खाताधारकों और जमाकर्ताओं के हितों को कैसे बढ़ावा देगा? (10 अंक, 150 शब्द)

Deposit Insurance & Credit Guarantee Corporation (Amendment) Act aims to make withdrawal of money in failed banks easier & secure. It was prompted after failure of some cooperative banks eg PNC bank.

Changes Made

1. Increase of insurance amount to ₹ 5 lac from mere ₹ 1 lac.
2. Time limit for return of money reduced to 90 days.
3. Application to all forms of banks eg: Payment banks, cooperatives

4) basic process to claim refund in case of bank failure.

It will promote interest of small holders as

1) greater financial inclusion due to confidence of return of money.

2) timely return of money will reduce financial stress & increase liquidity.

3) Increase of amount of insurance imply that more money can be safely deposited.

4) Increase banking habit

5) Wider application on all banks i.e. united regional banks where small customers come

stricter regulation & solution to NPAs can strengthen financial institution & help make a

Financially ATMANIRBHAR BHARAT using JAM trinity.

Feedback
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Q.3) Discuss how the food processing sector can be the panacea for addressing the triple whammy of low value addition, high post-harvest losses and disguised unemployment associated inherently with the Indian agriculture. (10 Marks, 150 words)

भारतीय कृषि के साथ स्वाभाविक रूप से जुड़े कम मूल्यवर्धन, कटाई के बाद के नुकसान और प्रचलित बेरोजगारी के रूप में तिहरी मार की समस्या से निपटने के लिए खाद्य प्रसंस्करण क्षेत्र रामबाण कैसे हो सकता है। चर्चा करें।

(10 अंक, 150 शब्द)

Food processing refers to value addition to food & cereals to improve duration, value material and enrichment for better price.

eg: Making jam from fruits.

It can multiple benefits in solving the agrarian distress of India.

Low value Addition

1. Better return by processing into consumer goods
eg: Juice from fruits.
2. Increase quality of food grains
eg: biofortification, processing for minerals
3. Increase shelf life & sell during price rise
eg: radiation of onions.

1 About 10-12% of fruits & vegetables are currently wasted after harvest.

2 Quick processing at farm gate help

better extraction of resources

↳ eg: sugarcane crushing since it is weight losing industry.

3 Better duration & shelf life.

Disguised unemployment

1 Create more non farm jobs.

2 Better farm - factory, backward & forward

linkage creating jobs along supply chain.

3 Marketing of products create service sector jobs.

Only 1% of food is processed in India. PM Sarpada,

Mega Food Park, FPO should be further

promoted to help double farmer income & rural prosperity.

Feedback

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Q.4) What explains the paradox of higher farmer suicide rate in more prosperous states than in poorer states? (10 Marks, 150 words)

गरीब राज्यों की तुलना में अधिक समृद्ध राज्यों में किसान आत्महत्या दर के अधिक होने का विरोधाभास क्या बताता है? (10 अंक, 150 शब्द)

About 3 farmers commit suicide daily in Punjab which has the highest rural household income at ₹3.2 lakh per annum.

Reasons for Paradox

1. Stagnation of income after initial rise due to green revolution, MSF regime.
2. Price of inputs have increased substantially without complimentary rise of market price.
 - ↳ 4-5% annual rise of diesel but 2-3% rise of MSF.
3. Wheat - paddy monoculture has prevented diversification & reduced land productivity.
4. Less reliance on dairy, livestock which

provides buffer during crop failure

5 Societal pressure for good lifestyle,

expenditure

6 Wastage of money on non essential items
of wedding.

7 Issue of unemployment due to land fragmentation.

8 Threat from outsiders, banks on loan default.

9 Rise of drugs, alcohol due to initial success.

10 Labor jobs considered below worth to do.

At the same time, deaths have increased in poorer

~~states~~ areas also. There is a comprehensive

need to reform agriculture by climate smart

cropping, food processing & value addition in

accordance with Shata Kumar & Swamineth committee.

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Q.5) 98117 41075 1910063972 (2021-22) 26 23:38:37
comes. Critically examine this statement with special emphasis on plastic waste management in the country. (10 Marks, 150 words)

पर्यावरण नियमन पर भारत की नीतियां असंगत हैं, इरादे से बुलंद हैं लेकिन परिणामों पर कमजोर हैं। देश में प्लास्टिक अपशिष्ट प्रबंधन पर विशेष बल देते हुए इस कथन का समालोचनात्मक परीक्षण कीजिए। (10 अंक, 150 शब्द)

India has strong regulatory regime in the field of environment indicative from presence of multiple laws, special courts, decentralised bodies etc. but the outcomes are often mismatched with intent.

Reasons for mismatch

1. Multiple bodies with complex structure make responsibility fixing & work allocation difficult.
eg: Municipal corporation for treating household waste but Pollution control board for industry waste.
2. Policies are poorly enforced due to political & societal pressure.
 - ↳ eg: water tax not imposed
 - ↳ eg: stubble burning not fined.

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- 3 Huge pendency with NCT leads to slow & less violations penalised.
- 4 Weak enforcement & inspection regime along with collusion among officials.
- ↳ eg: Vizag LH has been did not have Noc for 15 years.
- 5 Collection of fees, fines less at local level
- ↳ eg: no fine for no segregation of waste.

The plastic waste management ~~act~~ rule aims to segregate, recycle & treat waste. It has goals including reducing plastic waste below 25 million, setting incineration plants & stopping waste dumping. At the same time, the government was mindful of not imposing ban on single-use plastic without devising suitable alternatives.

Hence, while many laws have lofty ideals they are necessary for achieving goal of clean environment.

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Q.6) Discuss the impact of illegal construction and encroachment on disaster vulnerability, biodiversity and ecology of mountain regions in the country. (10 Marks, 150 words)

देश में पर्वतीय क्षेत्रों की आपदा के प्रति सुभेद्यता, जैव विविधता और पारिस्थितिकी पर अवैध निर्माण और अतिक्रमण के प्रभाव की चर्चा कीजिए। (10 अंक, 150 शब्द)

Recent glacier outburst, flash floods & increased landslides in mountain regions have raised fears of illegal construction & encroachments. They have an adverse effect on all areas of mountain ecosystem.

Disaster vulnerability

1. Weaken the rock structure making the mountain less sturdy.
 ↳ eg: Himalaya are still young mountains & hence increase chance of landslides.
2. Alter the natural flow of streams.
3. Construction of wetlands prevent the natural seepage of water & block water channels.

- 4 Multiply threat during occurrence of any event
↳ eg multistorey buildings illegally constructed more vulnerable.
- 5 Artificial & synthetic material increase chance of forest fires in mountains.

Biodiversity & Ecology

- 1 Increase man-human conflict.
- 2 block natural animal corridors by construction.
- 3 Blocking, shifting of river hurt marine ecosystem eg: hanga dolphin health poor due to dams in upper reaches of river.
- 4 Increase presence of invasive alien species due to agriculture.

The IPCC report on mountains argue that illegal construction to be one of biggest threat to mountain ecosystem. Sustainable development by Gradient Impact Assessment should be necessarily followed.

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Q.7) What do you mean by scientific social responsibility (SSR)? In light of draft policy of SSR, discuss how can SSR strengthen science-society linkages and usher in a cultural change in the conduct of science for the benefit of society at large in the country? (10 Marks, 150 words)

वैज्ञानिक सामाजिक उत्तरदायित्व (SSR) से आप क्या समझते हैं? SSR की मसौदा नीति के आलोक में, चर्चा करें कि SSR विज्ञान-समाज संबंधों को कैसे मजबूत कर सकता है और देश में बड़े पैमाने पर समाज के लाभ के लिए विज्ञान के संचालन में सांस्कृतिक परिवर्तन की शुरुआत कर सकता है? (10 अंक, 150 शब्द)

Scientific social responsibility refers to the obligation of scientists, personnel in STEM sector, teachers & practitioners to spend some hours every month to teach science & technology to masses. It is seen as a furtherance of constitutional duty to foster scientific temperament among people.

Usher science society linkage

1. Information of latest development for the benefit of people. eg: replace coal chulha with cleaner gas technology.
2. Reduce irrational dogmas & spread awareness & spirit of reason.

3 Help scientist understand need of society
 much better & research accordingly.

4 Socially relevant productions can improve
 life of people
 ↳ eg: Robotic arms for sewage cleaning

Cultural change in science can also be brought
 by allowing inventions & new patents to
 be more market oriented. It can also
 help more students to adopt STEM sector
 as area of study. It will foster spirit
 of national inquiry and allow scientist
 to use traditional knowledge for better
 efficiency. Eg: Bowli system for water harvesty.

The SCR will not only deepen scientific
 temperament but allow science to be flexible
 moulded for better public welfare.

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Q.98117_41075_1910063972_2021-EP-26-23:38:37) sequencing in pandemic control.

(10 Marks, 150 words)

महामारी नियंत्रण में जीनोम अनुक्रमण के महत्वपूर्ण महत्व का विश्लेषण करें।

(10 अंक, 150 शब्द)

Genome sequencing refers to listing the base pairing of the genome of an organism. It helps understand composition, nature, adaptability & behavior of an organism better.

Importance for pandemic control

1. Efficient testing & detection of virus/bacteria. eg: Flu test use CRISPR/Cas.
2. Understand nature of zoonotic disease
 - ↳ eg: mutation possibility of virus
 - ↳ eg: spread factors.
3. Develop efficient treatment strategies by targeting effective genome.

- 4 Vaccine development especially in case of DNA & RNA vaccines
↳ eg: Moderna, Cadilla
- 5 Biofortification of food crops to improve natural immunity against pandemics
↳ eg: Golden rice, Mukotshri
- 6 Developing hosts which are resistant to virus/bacteria
↳ eg: reduce carrying capacity of Anles mosquito to carry dengue.
- 7 Better understanding of mutations of virus/bacteria etc.

Apart from genome sequencing, sharing of data among various health bodies is of crucial importance. Technologies like CRISPR, human genome project can help better prepare for future pandemics.

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Q.9) Examine the need of a clearly articulated National Security Strategy for systematic, consistent and coherent approach towards national security. (10 Marks, 150 words)

राष्ट्रीय सुरक्षा के प्रति व्यवस्थित, सतत और सुसंगत दृष्टिकोण के लिए स्पष्ट रूप से स्पष्ट राष्ट्रीय सुरक्षा रणनीति की आवश्यकता का परीक्षण करें। (10 अंक, 150 शब्द)

National security strategy list down the various parameters of national security, command structure & SOPs in the event of any transgression.

The need for a clear strategy is needed in national interest for following reasons -

- 1) Reduce 'silosisation' of various departments & help integrate knowledge across platforms.
- 2) Establish quantitative & qualitative parameters to judge security threats, response readiness & need for upgradation.
- 3) Involve policy makers, academicians, war historians by using their experience.

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- 4) Help create clear hierarchy, protocols to deal with various situations.
- 5) Integrate different armed forces, military forces with diverging objectives under single umbrella.
- 6) Better planning according to nature of tech border with future plans.
- 7) Deal with issues of internal security in coherent fashion
eg: fake news, radicalisation.

The suggestions of various bodies like Kargil Review Committee, Shekhar committee, Pakistan attack committee should be brought under single platform & updated with need of present times.

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Q.10) The issues associated with Left Wing Extremism (LWE) are both developmental and ideological. Analyze the trend in Left Wing Extremism (LWE) affected areas over the past decade and evaluate India's strategy to tackle LWE. (10 Marks, 150 words)

वामपंथी उग्रवाद (LWE) से जुड़े मुद्दे विकासात्मक और वैचारिक दोनों हैं। पिछले एक दशक में वामपंथी उग्रवाद (LWE) प्रभावित क्षेत्रों में प्रवृत्ति का विश्लेषण करें और एलडब्ल्यूई से निपटने के लिए भारत की रणनीति का मूल्यांकन करें। (10 अंक, 150 शब्द)

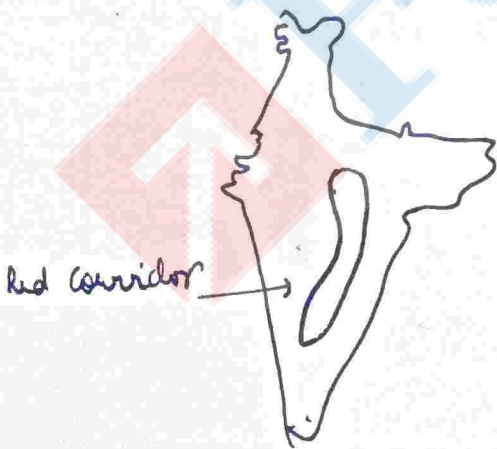
Left wing extremism erupted from the demands of 'Jal, Jangal, Zameen' but has manifested into multiple issues in present time.

Development Issues

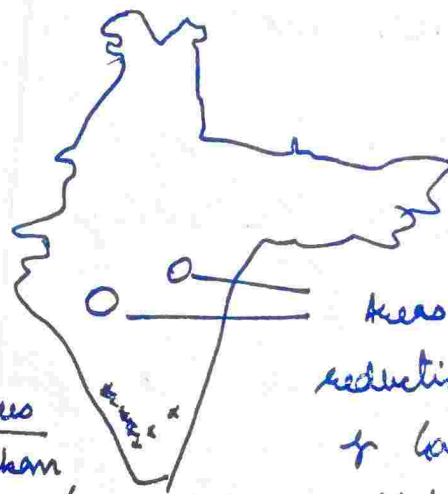
1. Poor administrative & governance vacuum.
2. Land titles not provided
3. Ecological destruction by mining mafias.
4. Poor health, education outbreak.

Ideological Issues

1. Cultural revolution
2. Overthrow established govt
3. Complete rule of people
4. Complete control over factor of production



LWE 2010



New areas of LWE
up Palakkad, Mandya, Mysore

LWE 2021

Areas of reduction of LWE in Madhya Pradesh, Maharashtra.

LWE has reduced in the last decade to be restricted to about 80 districts now from 161 districts. The problem however is addition of new areas like Mamupuram, Wayanad where influence of LWE has been seen.

India's strategy has been judicious mix of -

Development Measures	Law & order Measures
1 Health, education & infrastructure of Aspirational district	1 Specialised forces eg Andhra Pradesh, Maharashtra
2 land titles & implementation of PESA Act.	2 effective surrender - an - rehabilitation policy.
3 More areas under VI schedule for autonomy	3 Strengthen CRPF presence + Use of technology like drones
4 Van shiksha. MSP for minor forest produce	

Apart from these measures, decriminalisation programs & empowerment of gram sabhas can help solve both ideological & development issues of LWE.

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Q.11) While imposing a tax is a legitimate exercise of sovereign's power, retrospective taxation undermines the credibility of a nation as a stable legal regime and discourages international investments. Discuss in light of recent controversies. (15 marks, 250 words)

जबकि कर लगाना संप्रभु शक्ति का एक वैध परिपाटी है, पूर्व कराधान एक स्थिर कानूनी व्यवस्था के रूप में एक राष्ट्र की विश्वसनीयता को कमजोर करता है और अंतर्राष्ट्रीय निवेश को हतोत्साहित करता है। हाल के विवादों के आलोक में चर्चा करें। (अंक 15, शब्द 250)

Retrospective taxation refers to application of a new tax which takes effect from transactions conducted in the past. India recently annulled retrospective taxation on capital gains for offshore transactions with underlying assets in India.

- ↳ Cairn case
- ↳ Vodafone - Hutchinson case.

Exercise of sovereign power

1. Power to impose taxation flows from the Constitution.
2. Power to tax includes power to tax both retrospectively & prospectively.

3 International body or other country cannot interfere with the right ordinarily.

4 Main source for the government and hence reasonable restrictions & changes can be made in tax regime.

↳ eg: Heavy loss of FDI case is Hutchinson - Vodafone merger case.

At the same time, retrospective legislation while legal can have adverse impact on international investments -

1) Instability in law & governance affect business outlook, plans.

2) Increase suspicion by foreign investors for additional expenses in the future.

- 3) Heavy litigation & arbitration cost might have to be borne.
- 4) Affects ease of doing business due to increased legal compliance & legal uncertainty
 - ↳ low rank in enforcing contract in ease of doing business index.
- 5) May violate bilateral investment treaties
 - ↳ eg: India-Netherlands treaty in fairness
- 6) Risk of freezing of assets abroad if defeat.

Way forward

The sovereign right of taxation should be

- (i) reasonable
- (ii) proportional & (iii) stable

to increase foreign investment. Introducing tax charter, tax payer rights bill and consultation before tax change can help flourish foreign investment.

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Q.12) India's stressed asset and bankruptcy reforms started on a good note, but now seems to have lost steam. Identify various issues faced in effective implementation of Insolvency and bankruptcy code in the country. How can the newly created Bad Bank help in overcoming the problem of bad debt and stabilizing the financial system? (15 marks, 250 words)

भारत की दबावग्रस्त संपत्ति और दिवालियापन सुधार एक अच्छे नोट पर शुरू हुए, लेकिन अब लगता है कि यह महत्व खो रहे हैं। देश में दिवाला और दिवालियापन संहिता के प्रभावी कार्यान्वयन में आने वाले विभिन्न मुद्दों की पहचान करें। नव निर्मित बैड बैंक खराब कर्ज की समस्या पर काबू पाने और वित्तीय प्रणाली को स्थिर करने में कैसे मदद कर सकता है? (अंक 15, शब्द 250)

The Insolvency & Bankruptcy Code (IBC) was created in 2015 for quick resolution of NPAs by ensuring restructuring of corporate entity & liquidation for higher returns.



Positives created by reforms

1. Increase of salvage value from NPA.
2. Restructuring of bad loans & replacement

- of managements for better efficiency .
- 3 Reduced NPA burden on public sector banks to 8% .
 - 4 Strict timelines for resolution under IBC
↳ eg 270 days for resolution plan .

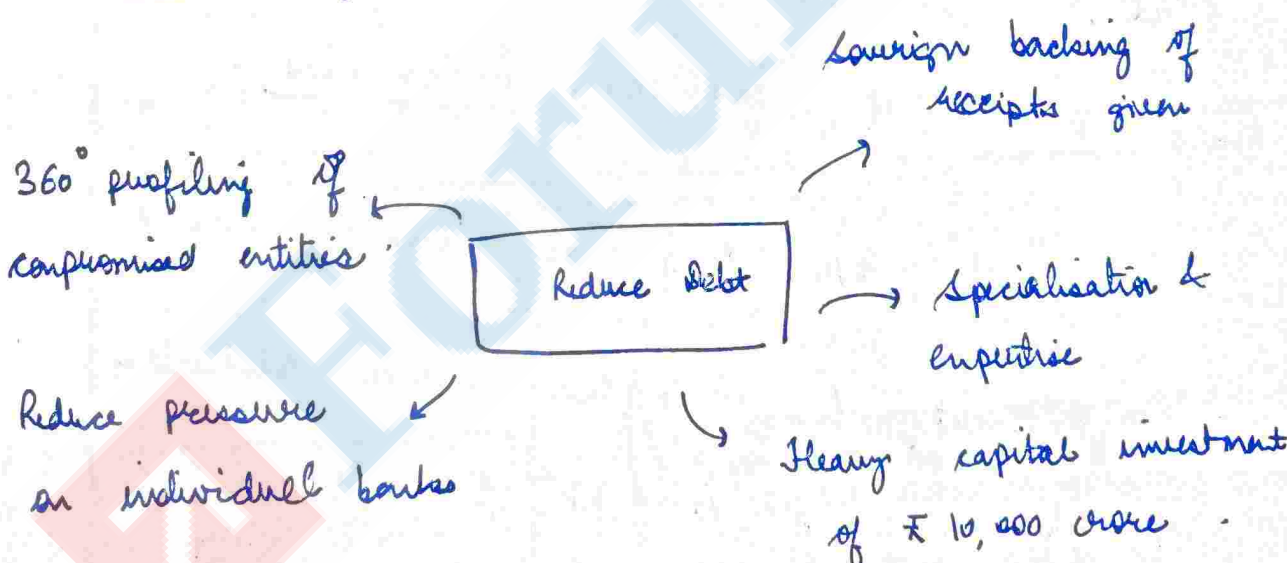
Challenges for IBC implementation

- 1 32/67 judges of the NCLT are not filled .
- 2 Less number of Insolvency Professionals .
- 3 Deadline of 270 days is normally violated .
- 4 Huge hair cut loss & less value realisation
↳ eg: upto 85% in Jet Airways
- 5 Restructuring in limited cases while over 90% NPAs are liquidated .

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- 6 Collusion between new owners & previous management (Parliament Committee)
- 7 Supreme Court interference & interpretation differences
 - ↳ eg: operational & financial creditors in Bhusha steel case.

Bad bank created by budget aims to take over NPA's from banks & effectively realise higher value through expert interventions



Bad bank can play integral role at a time when NPA's could increase to 15% post COVID. They should be filled with experts for maximum value realisation.

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Q15) Discuss how the new farm laws can help in development of farming as an enterprise and increasing the farm incomes. (15 marks, 250 words)

स्थिर कृषि आय, भारत में कृषि को एक उद्यम के रूप में विकसित करने के लिए एक मजबूत केस प्रस्तुत करती है। चर्चा करें कि कैसे नए कृषि कानून कृषि को एक उद्यम के रूप में विकसित करने और कृषि आय बढ़ाने में मदद कर सकते हैं। (अंक 15, शब्द 250)

Despite 60% of workforce engaged in agriculture, farm sector only contributes 16% to the GVA of country. Rising debt among farmers have also led to rising suicide among farmers (NCAAB data).

Reasons for stagnant income

1. MSP rates have not increased in conjunction with cost of input.
2. limited coverage of MSP-APMC to only 6% farmers (Shanta Kumar committee)
3. Impact of climate change & extreme weather events.
 - a. 60% monsoon dependent
 - b. 20-25% fall in income (Economic Survey)

4 Land fragmentation & small holdings of 1 hectare on average.

↳ 86% small & marginal farmers.

5 Absence of agro processing & food processing for better value realisation.

The farm bills could liberalise farm economy & provide higher returns by developing farming as an enterprise.

Agriculture (Trade & Facilitation) Act

Allow sale of crop outside APMC mandi

Connect with e-NAM for higher prices

Reduce dependence on arbitrage → reduce collusion

Introduce private players for better competition

Agriculture Insurance Act

- Regulate contract & corporate farming
- Better inputs, technology & capital investment.
- Protection against loss of crop; insurance.
- Reconciling dispute resolution

Essential Commodities Amendment Act

- Increase investment in cold storage, food processing sector.
- Reduce rent control, rent seeking by officials.
- Allow sale at higher price during food shortage.

The farm laws could help develop agriculture as an enterprise & double farmers income.
consultation should be opened with farm bodies to reintroduce laws after suggestions in spirit of 'SABLA SAATH SABKA UKAS'

Feedback (For OFFICE use only)	
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Q.14) What is climate smart agriculture? Despite its critical role in climate change mitigation and substantial state intervention to promote climate smart agriculture, the progress made in adoption of climate smart agriculture is unimpressive. Discuss. (15 marks, 250 words)

जलवायु स्मार्ट कृषि क्या है? जलवायु परिवर्तन उपशमन में इसकी महत्वपूर्ण भूमिका और जलवायु स्मार्ट कृषि को बढ़ावा देने के लिए पर्याप्त राज्य के हस्तक्षेप के बावजूद, जलवायु स्मार्ट कृषि को अपनाने में की गई प्रगति अप्रभावी है। चर्चा करें।

(अंक 15, शब्द 250)

Climate smart agriculture refers to a series of mitigation & adaptation techniques to reduce the risk vulnerability of farm sector to global warming.

↳ eg: Use of drought resistant crop variety.

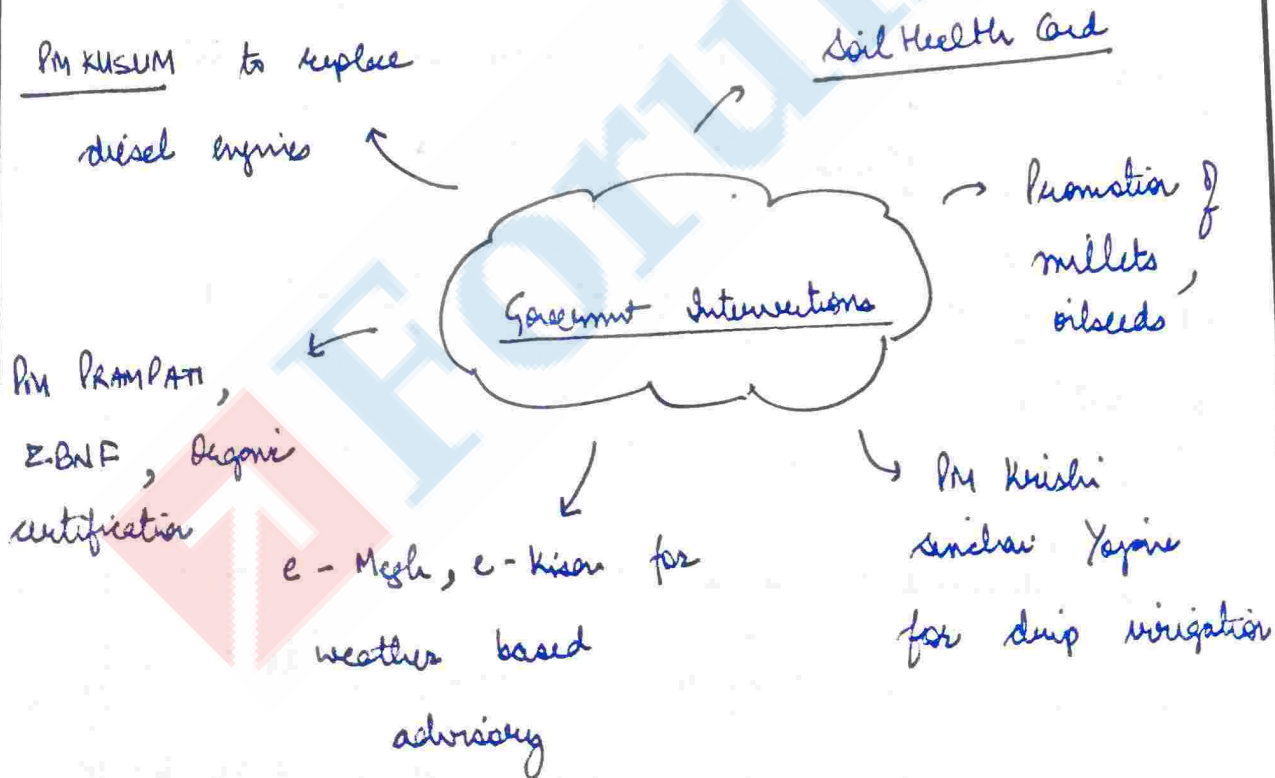
Role in climate change mitigation

- 1 Allow use of low-water suspending crops
↳ eg millets replace paddy.
- 2 Less mission of greenhouse gases eg:
methane from paddy
- 3 Use of soil health indicators to limit use
of fertilizers, chemicals.

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4 Drip irrigation, sprinkler system for better efficiency & water productivity.
 ↳ eg 80% of our freshwater used in sugarcane & paddy.

5 Adoption of zero tillage, zero budget farming, organic farming to limit harmful inputs & reduce carbon emission.
 ↳ eg: Urea release H_2O .



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However, progress in adoption of climate smart agriculture remains poor because -

- 1) less scientific and technical knowledge among farmers for adopting new technology.
- 2) small farms and poor economic condition prevent experimentation or investment.
- 3) less understanding of link between climate change & agriculture.
- 4) huge vacancy in rural agriculture scientist, government officers for awareness.
- 5) MSP on wheat & paddy incentives for continued production.

The climate induced harms on agriculturists will also increase with extreme weather events. Sensitization, incentivise for green agriculture & faster adoption of climate smart agriculture should be done.

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 Q.15) How is urban flooding different from rural flooding? Discuss the reasons for and implications of increased instances of urban flooding in recent times. (15 marks, 250 words)

शहरी बाढ़ ग्रामीण बाढ़ से किस प्रकार भिन्न है? हाल के दिनों में शहरी बाढ़ के बढ़ते मामलों के कारणों और प्रभावों पर चर्चा करें। (अंक 15, शब्द 250)

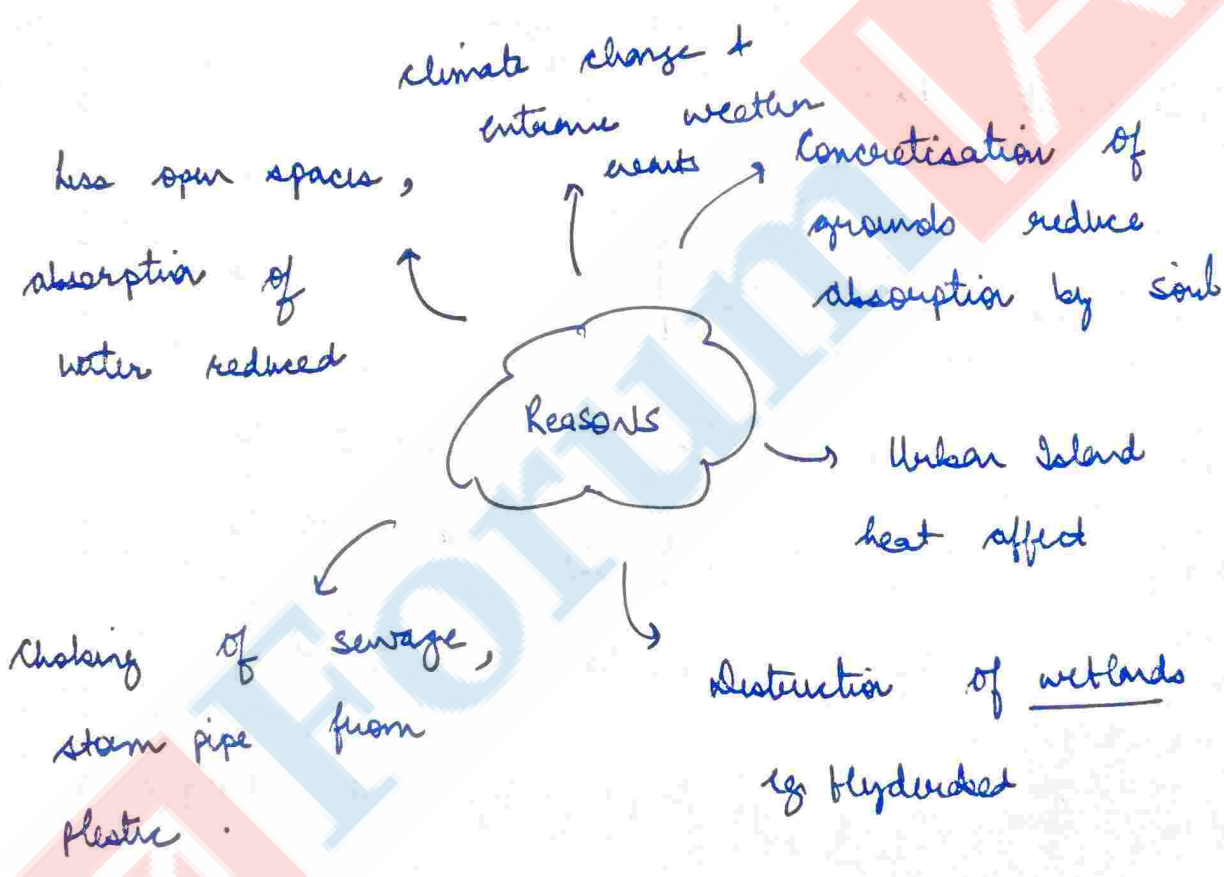
Recent flooding in Chennai, Hyderabad & Bangalore have raised concerns over urban flooding. It refers to inundation of cities due to occurrence of flash floods, cloud burst etc.

Difference from rural flooding

- 1 Causes include urbanization, destruction of wetlands while rural flooding is mainly due to faulty embankments, monsoon.
- 2 Higher loss to life & property due to increased density.
- 3 More chances of water induced diseases due to less clearances.

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- 4 Mixture of water from sewages, makes more frequent in urban areas.
- 5 Difficulty in rescue due to narrow lanes, boats ineffective, helicopter rescue less because of tall buildings.



The natural causes for urban flooding has been aggravated by anthropogenic factors like mindless construction, plastic waste etc.

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Implications of urban flooding

- 1 Heavy loss to life, property and economy of dense-cities.
- 2 less adaptation to flood like situation in urban areas
 - ↳ More panic, loss of life
- 3 Short circuits, jamming of lifts.
- 4 Increased water borne diseases
 - ↳ disproportionately affect slums, street vendors, side walk dwellers.
- 5 Render public transportation ineffective
 - ↳ slow relief & rescue.

Way forward

More adoption of urban forestry, sponge city concept, cleaning nallah before monsoon, diverting sewers, cleaning waste water bodies of plastic can help reduce instance of urban flooding.

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Q.16) What do you mean by a circular economy? Discuss how can this concept help in resolving the dilemma of achieving rapid economic growth and reducing environmental footprint.

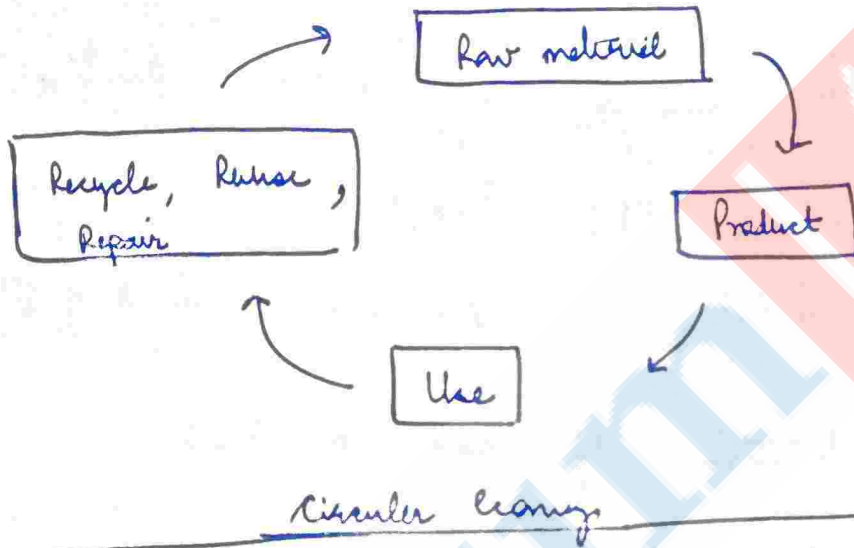
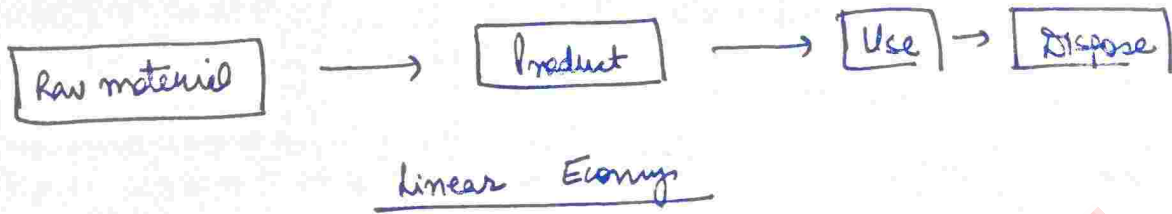
(15 marks, 250 words)

चक्रिय अर्थव्यवस्था से आप क्या समझते हैं? चर्चा करें कि यह अवधारणा तेजी से आर्थिक विकास प्राप्त करने और पर्यावरणीय फुटप्रिंट को कम करने की दुविधा को हल करने में कैसे मदद कर सकती है। (अंक 15, शब्द 250)

Circular economy refers to processes where end products are reused & recycled to serve as raw material for new products.

The dilemma of rapid economic growth & reducing environment harm visulize economy & environment to be antithetical to each other such that benefit of one come at cost of other.

↳ eg: More extraction of raw material for industrialisation.



It can help resolve dilemma by -

1. Reducing pressure on natural resources for extraction for new products
 ↳ eg. paper recycle instead of deforestation
2. Reduce carbon emission, water utilisation in creation of new products.

3. Shorter supply chains & reducing dependency on foreign countries
↳ eg: e-recycle for components.
4. Increase the usage of product lifetime by repair & upgradation.
↳ eg: mobile work for 2 years instead of 1.
5. Enable substitution of raw materials for various products.
6. Reduce land fills, incineration & dumping of waste.

Mit Aapz is India @ 75 has suggested adoption of circular economy for greater efficiency & economy. Steps like waste segregation, recycling plants, awareness should be promoted for diffusion of this idea among people.

Feedback
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Value Addition
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Q.17) Green hydrogen presents an opportunity for the economy to modernize without the need to 'carbonize'. Discuss the statement and suggest strategies for leveraging benefits of green hydro-
gen. (15 marks, 250 words)

ग्रीन हाइड्रोजन अर्थव्यवस्था को 'कार्बोनाइज' किए बिना आधुनिकीकरण करने का अवसर प्रस्तुत करता है। इस कथन पर चर्चा करें और ग्रीन हाइड्रोजन के लाभों का लाभ उठाने के लिए रणनीतियों का सुझाव दें। (अंक 15, शब्द 250)

Green Hydrogen refers to creation of hydrogen from green technology eg: renewable power. Compared to black, grey carbon it has minimal release of greenhouse gases in the production of it.

It can help economy without carbon by -

- 1) serves as alternative for fuel in industrial units, thermal plants
 - ↳ 80% less emission than carbon
- 2) Run vehicles, public transport on hydrogen
 - ↳ 60% pollution in Delhi due to vehicular emission.

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- 3) Alternatives to carbon in production of fertilizers, chemical industry.
- 4) Better efficiency & cheaper than hydrocarbon.
- 5) Abundant availability in the atmosphere.
↳ reduce oil import.
- 6) Increase electricity generation while being cleaner than carbon.

Strategies for Adoption

1. More research & development into hydrogen as fuel since concerns are not understood properly.
↳ only 0.6% GDP spent on R&D in total.

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2. Development of hydrogen fuel cells by public private collaboration
eg: CSIR - Tata Automobiles.
 3. Replacement of hydrogen as fuel in big industries by including it under Renewable Purchase Obligation.
 4. Development of safety measures since hydrogen is very combustible.
 5. Mixing with natural gas for vehicles
eg: Delhi introduced H-CNG buses.
 6. Devise cleaner methods for separation & generation of hydrogen.
- Hydrogen has the capacity to push India into next phase of development while adhering to Paris goals on climate. More research, safety protocols & testing can make it fuel of the future.

Feedback
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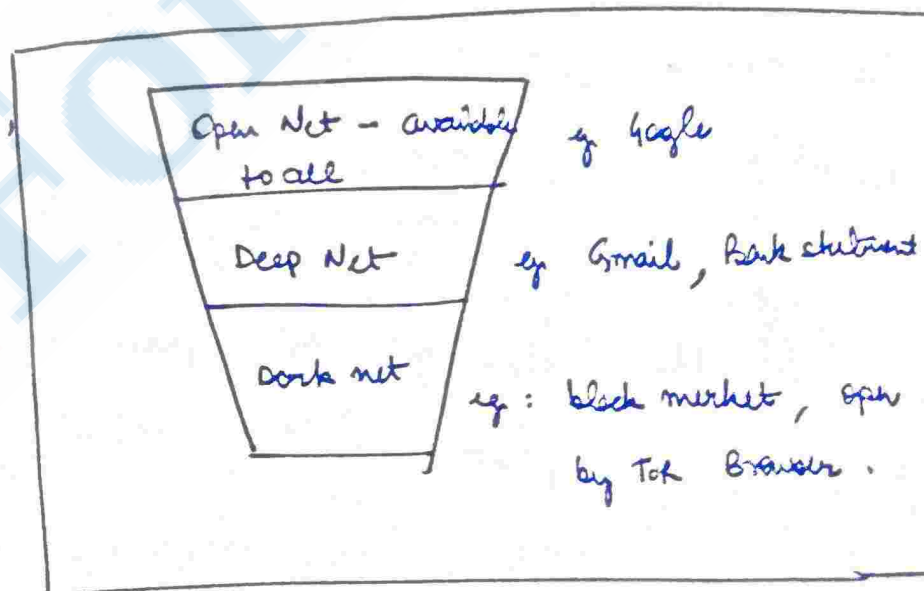
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Q.18) What do you understand by deep net and dark net? Highlighting various security threats posed by dark net, discuss challenges in its regulation. (15 marks, 250 words)

डीप नेट और डार्क नेट से आप क्या समझते हैं? डार्क नेट द्वारा उत्पन्न विभिन्न सुरक्षा खतरों पर प्रकाश डालते हुए, इसके नियमन में चुनौतियों पर चर्चा करें। (अंक 15, शब्द 250)

Dark Net refers to the encrypted part of internet which cannot be accessed through normal browsers. Deep net refers to internet space between open & dark net accessible easily by public & private decryption keys eg: passwords.

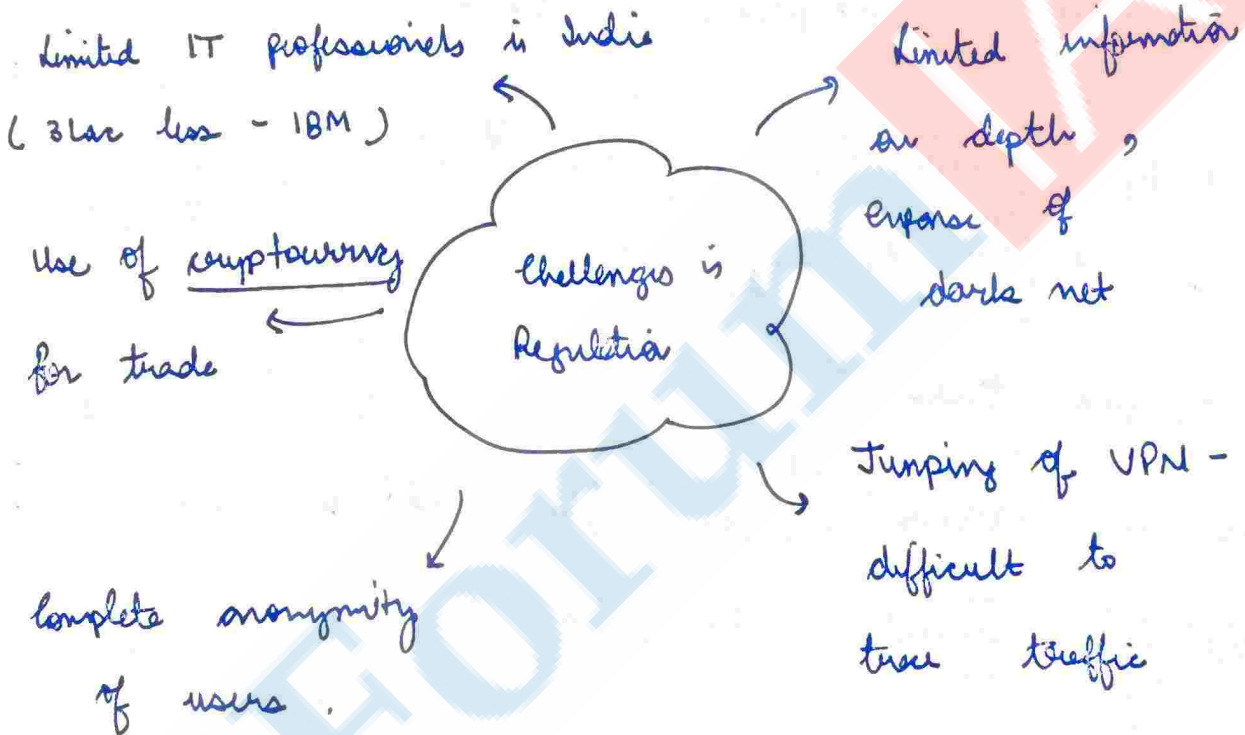
Fig:
Deep & Dark Net



Security Threat - Dark Net

- 1 Traffic coming from dark net cannot be intercepted
 ↳ eg: NETRA ineffective for dark net.
- 2 Huge market of banned products
 ↳ eg: child porn, drugs
- 3 Used by terrorist, criminals, organized groups for terror financing, fund transfer,
 weapon trade.
- 4 Used by terror groups for hosting training modules, propaganda videos.
- 5 No consumer protection, legal recourse for contracts entered on dark net bondfaddy.
- 6 Avenue for human trafficking, prostitution, child abuse.
- 7 Leakage of sensitive information, critical knowledge of individuals.

Dark Net also has advantages for communication by human rights activists etc to prevent government scrutiny. But, regulation is imperative for national interest and making internet safer to access.



Way forward

Increasing instances of cyber crimes, use of media to wage internet war require regulation of dark net. Use of Tor browser, decryption of traffic can help navigate the dark areas of internet.

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Q.19) Analyse the internal security implication of Taliban's rule in Afghanistan for India and suggest counter measures to address emerging security challenges. (15 marks, 250 words)

भारत के लिए अफगानिस्तान में तालिबान के शासन के आंतरिक सुरक्षा निहितार्थ का विश्लेषण करें और उभरती सुरक्षा चुनौतियों का समाधान करने के लिए काउंटर उपायों का सुझाव दें। (अंक 15, शब्द 250)

The fall of civilian government & rise of Taliban regime has left India vulnerable with respect to investments, cultural relations, territorial integrity & regional stability. It has severe implication on internal security of India.

Internal Security implications

1. Terrorism with inflow of Taliban, extremist, fundamentalist into Kashmir with ISI support. eg: Mujahed fueled unrest in 1980s after soviet withdrawal.

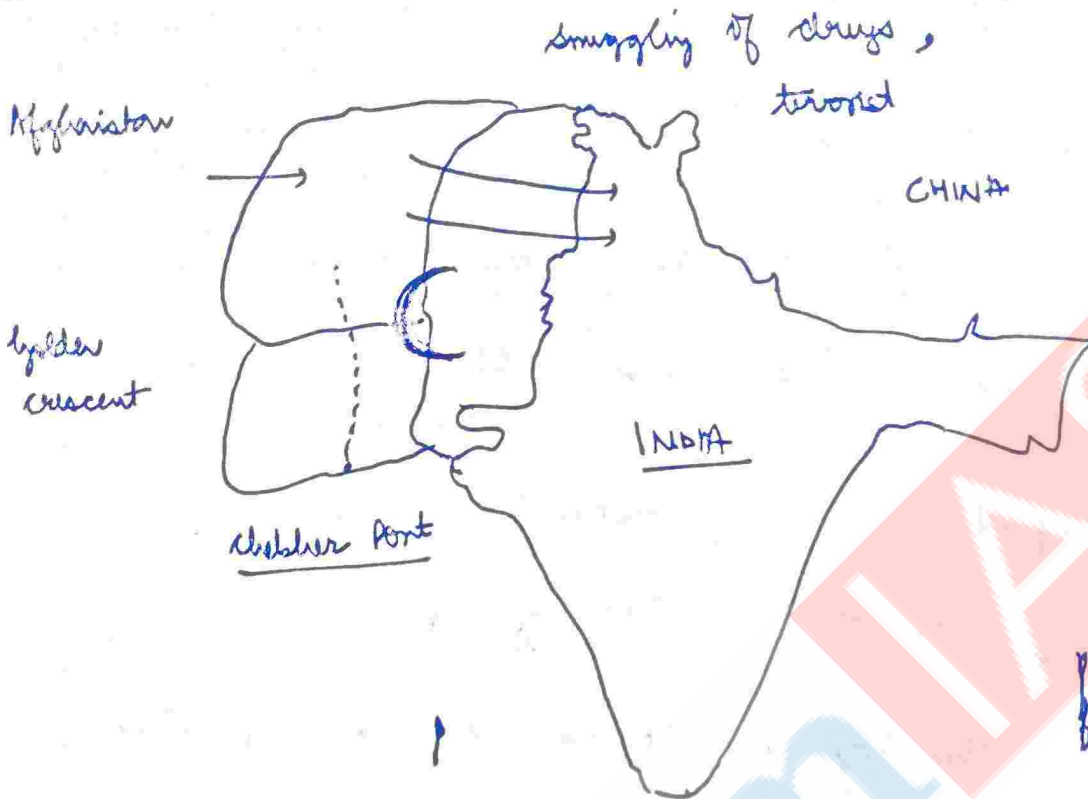


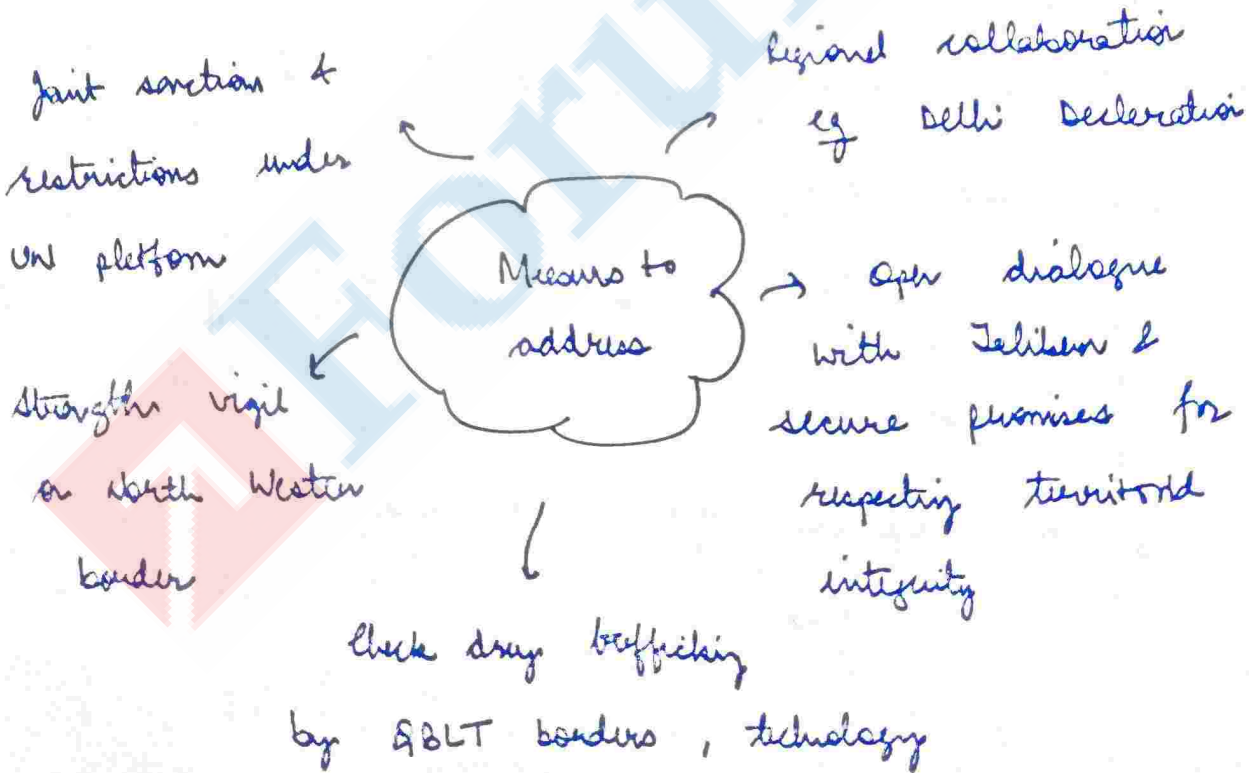
Fig: India - Afghanistan geopolitics

2 Inflow of drugs, opium into border areas like Punjab
 ↳ eg: opium use increased since rise of Taliban in 1900s in Punjab.

3 Make India more susceptible to two front war due to ↓ recognition of Taliban by China.

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- 4 Use of Haggarri network by ISI to create instability in India.
- 5 Issue of refugee crisis which might spill into India.
- 6 Hamper development of Chabahar port & access to Central Asia
↳ reduce geostrategic access to region
- 7 Development of CPEC into Afghanistan
↳ environment impact on Hindkush basin



The situation could be improved by fixing past accountability & future regulation of Taliban regime by regional powers.

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Q.20) Blurred lines between civilian and military use of technologies have created invisible enemies and new set of internal security challenges. Discuss in light of concerns related to use of drone, cyber and bio-technology. (15 marks, 250 words)

प्रौद्योगिकियों के नागरिक और सैन्य उपयोग के बीच धुंधली रेखाओं ने अदृश्य दुश्मन और आंतरिक सुरक्षा चुनौतियों का नया सेट बनाया है। ड्रोन, साइबर और जैव-प्रौद्योगिकी के उपयोग से संबंधित चिंताओं के आलोक में चर्चा करें। (अंक 15, शब्द 250)

Dual-use technologies have created additional risk in terms of identification, prosecution and restriction of wrongful users. This is visible from military use of various civilian technologies.

Drone

- 1 Use of now drone available for online purchase for dropping arms.
- 2 cheaper & more efficient than trafficking through humans.
- 3 easier to operate across borders without detection.
- 4 Potential for huge damages to critical infrastructure is of Jammu Air base attack.

- 5 Difficult to distinguish between
civilian
1 military drones.

Cyber Technology

- 1 Radicalisation, propaganda through social media.
- 2 Trade of weapons, dumps our dark net.
- 3 cryptocurrency for black money, money laundering.
- 4 single wolf attacks live streamed
↳ motivate others eg. Christchurch shooting.

Bio Technology

- 1 ease of transboundary harm due to poor detection.
- 2 Various facts for speed of military use
↳ eg: infected crops, animals, humans.
- 3 Supply of defective drugs, APIs.

→ Increase ~~from~~ germ-fare, chemical attacks.

The Wassenaar Agreement provides for stricter control of dual use technology. However, it is outdated & not legally binding. Stricter global norms & internal regulations ought to be taken to reduce potential harm.

→ Drones: Geo fencing, shooting by snipers, no fly around critical infrastructure, some rules 2020 adherence.

→ Cyber: Budapest convention should be modified for wider ratification, CERT IN, NATGRID & new cyber security policy.

→ Biotechnology: stricter inspection under Biological Weapon convention, study into COVID origin, more testing labs in India.

Feedback

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Mentor Feedback Questions

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Test Goal

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Outcomes

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Marking Scheme

Mark	Good	Average	Below average
10 Marker	3.75 – 5.0	3.0 – 3.5	< 3.0
15 Marker	5.75 – 7.0	4.0 – 5.5	< 4.0
✓	Key / Relevant Point		
✗	Vague / Irrelevant		

• Subject to change without prior notice.