

## VAJIRAM &amp; RAVI

SURE SHOT TEST SERIES FLT - 2025

<b>General Studies</b> <b>Full Length Test</b> <b>Test - 7 (GS - 3)</b> <b>Test Code - A21053507</b>	<b>Evaluator Code:</b> <b>Date of Assignment:</b> <b>CQ:</b>
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<b>NAME:</b>	DEV DUDEJA	<b>Time allowed: 3 Hours</b>
<b>STUDENT ID.:</b>	2 1 V R 3 2 1 7 2	<b>Email:</b>
<b>UPSC ROLL NO.:</b>	5 4 0 8 8 7 4	<b>Submission Date:</b>
<b>MOBILE NO.:</b>		10/08/2025

**QUESTION PAPER SPECIFIC INSTRUCTIONS**

Please read each of the following instructions carefully before attempting questions:

There are **TWENTY** questions printed in **ENGLISH**. All the questions are compulsory.

The number of marks carried by a question/ part is indicated against it. Word limit in questions, wherever 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.

Q No.	Marks	Q No.	Marks	Q No.	Marks
Q1	/10	Q8	/10	Q15	/15
Q2	/10	Q9	/10	Q16	/15
Q3	/10	Q10	/10	Q17	/15
Q4	/10	Q11	/15	Q18	/15
Q5	/10	Q12	/15	Q19	/15
Q6	/10	Q13	/15	Q20	/15
Q7	/10	Q14	/15	<b>Total</b>	<b>/250</b>

**Instructions:-**

- Legible Scanning:** Exercise due diligence in scanning your scripts for clear legibility
- Submissions** marred by poor scanning, notably those with illegible sections or blackened pages due to improper scanning, risk being excluded from the evaluation process.
- Non-Adherence Consequences:** Failure to comply with the aforementioned instructions may lead to the disqualification of your submission.

**For Student Only**

<b>Start Time -</b> 14:30	<b>End Time -</b> 2:30
<b>Mode of Examination</b>	Online <input type="checkbox"/> Offline <input type="checkbox"/>
<b>Receiving date -</b>	<b>Dispatch date -</b>

RECEIVED

Parameters		Good	Average	Needs Improvement
Conceptual Understanding				
Understanding Demand of Question				
Structure	Introduction			
	Body			
	Conclusion			
Presentation-Illustrations, flowcharts, diagrams, etc.				
Language and Handwriting				
No. of Questions Attempted				
Adherence to Word Limit: Yes/No				

### Mentor's Feedback

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VAJIRAM & RAVI

## Evaluator/Reviewer Suggestions



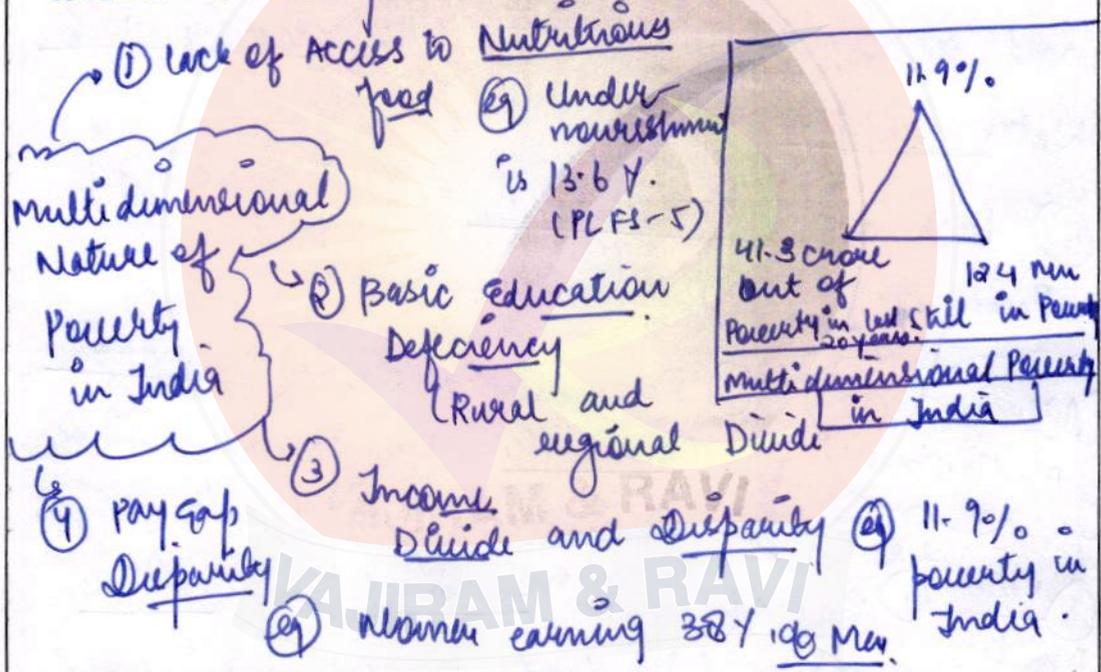
## Evaluator/Reviewer Suggestions



(Answer questions in NOT MORE than the word limit specified for each in the parenthesis. Content of the answer is more important than its length.)

1. Despite the multidimensional nature of poverty in India, consumption expenditure continues to dominate its official measurement. Discuss the limitations of this approach and suggest alternative frameworks for designing inclusive welfare policies. (10 marks, 150 words)

Poverty in India is measured through Consumption expenditure as given by Jendulkar Committee. Recent Household Consumption Expenditure survey (HCES) showed increase in Rural and Urban consumption.



Limitation of Consumption expenditure method

1. Lack of Qualitative Analysis :- Only quantification of expenditure rather than actual cost of living.

② Doesnot take into account socio-economic poverty and development :- Regional and Caste based data is missing

③ Human Resource Deficiency :- doesnot take into account, lck of education and Health opportunities. ④ Out of Pocket expenditure is still 87%

④ Basic Amenities :- doesnot reflect nature and access of amenities like cooking fuel, Water supply etc

⑤ Lack of Holistic picture :- provides just income based poverty.

Alternative methods → ① Recommendation of Rangarajan Committee for Poverty estimation including and diversifying non-food expenditure.

② ease of living standards :- Quantification of basic Amenities

③ National multi dimensional Poverty Index (NITI Aayog)

Thus, for achieving Vishat Bharat, we need to update the methodological for Poverty Estimation with spirit of Salika Satu Salika Utkas

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2. The 2025 Economic Survey has highlighted deregulation as a tool for financial deepening. In this context, enumerate the potential benefits and risks of deregulation in the financial services sector. (10 marks, 150 words)

Deregulation refers to backtracking of government regulations and decriminalisation of minor offences for ease of doing business and providing autonomy to financial system.

- Deregulation as tool for deepening financial system as per 2025 Budget
- ① Inclusion of private players. (eg) Paytm, MobiKwik
  - ② Competitive environment (eg) inclusion of NPFCs
  - ③ Ease of giving loans :- (eg) by microfinance institutions
  - ④ Budgetary support and policy supports by Government.

## Potential Benefits of Deregulation

- ① Increased competitiveness due to inclusion of private players, non-Banking financial institutions (eg) Housing financial institutions
- ② less litigations and delays in system → minor offences creates red tapism in

the system -

③ Promotion of Quality Standards :- to be induced by private players for efficiency and effectiveness.

④ Increase Capital formation :- Investment in income due to investment friendly environment.

① monopoly of few players causing lack of level playing field.

Challenges → ② Corrupt practices by financial institutions

③ Consumer interest → Bad loans crisis in 2008 (19%)  
④ Lack of deterrent effect → may be compensated in safeguarding credit guarantee.

Way forward → ① Independent Authority for Governance redressal

② Stakeholder approach including vulnerable sections.

Less deregulation can promote financial system, yet caution in implementation is required.

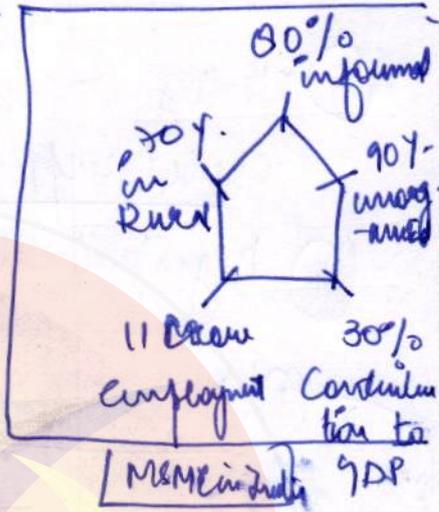
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3. Assess the impact of the revised MSME definitions on the growth and formalisation of micro and small enterprises. (10 marks, 150 words)

India has been regarded as Missing Middle having dominance of MSME in industrial sector.

Government in Budget 2022 has revised the definition of MSME.

	micro	small	medium
Invest	2.5 cr	25 cr	125 cr
Turnover	10 cr	100 cr	500 cr



## Impact of Revised Definition of MSME

### ① Growth :-

- ↳ (i) promotion of MSME by inclusion in Credit Guarantee scheme and Government support.
- ↳ (ii) Better support leading to growth opportunities.
- ↳ (iii) Export orientation by MSMEs leading to economic growth.

## (i) Formalisation of economy & MSME

↳ (i) Inclusion of more startups and industries

↳ (ii) Better access to regulations and credit support

↳ (iii) Registration through Champion Parks

↳ (iv) Deregulation :- Threshold not breached due to lack of incentives out of MSME.

Challenges (i) Global supply chain issues

(ii) Rising NPA in MSMEs

(iii) skilled labour :- missing leading to skill gap

Way forward (i) PLI scheme benefits to integrated

(ii) Export promotion through "Brand India"

(iii) Champion Parks

Thus, MSME are backbone of India's quest for \$5 trillion economy

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4. Evaluate the merits and demerits of maintaining rigid Priority Sector Lending (PSL) quotas versus adopting market-driven credit allocation mechanisms to achieve inclusive growth. (10 marks, 150 words)

Priority Sector Lending refers to dedicated and specific lending to targeted sectors like Agriculture, Housing etc. - (e.g.) RRBs have to lend 75% towards PSL

## Merits and Demerits of rigid PSL

Prior Sector Lending	Market Driven Allocation
<p><u>Benefits</u> :-</p> <ul style="list-style-type: none"> <li>(i) Supporting the <u>Agriculture</u> <u>was</u> having <u>financial</u> <u>constraints</u>.</li> <li>(ii) <u>Equitable opportunities</u></li> <li>(iii) <u>Checking Banking</u> <u>Behaviour</u> and <u>regulation</u> of <u>Bad loans</u>.</li> <li>(iv) <u>Promotion</u> of <u>welfare</u> <u>schemes</u> for <u>vulnerable section</u></li> </ul>	<p><u>Benefits</u> :-</p> <ul style="list-style-type: none"> <li>(i) As per <u>requirements</u> of <u>economy</u> (e.g.) <u>Construction Sector</u> in <u>COVID</u>, <u>semiconductor</u> in <u>present times</u></li> <li>(ii) <del>Reduces</del> <u>help</u> in <u>growth</u> in <u>employment</u> and <u>economic growth</u></li> <li>(iii) <u>Banking autonomy</u> in <u>dealing</u> with <u>credit</u>.</li> </ul>

### Demerits :-

- ① Lack of autonomy for banks - leading to squashed capital.
- ② Lack of objective parameters for checking wastage

### Demerits :-

- ① Risk of exclusion of marginalised sector.
- ② Lack of regulation
- ③ Issues of NPA in market driven allocation

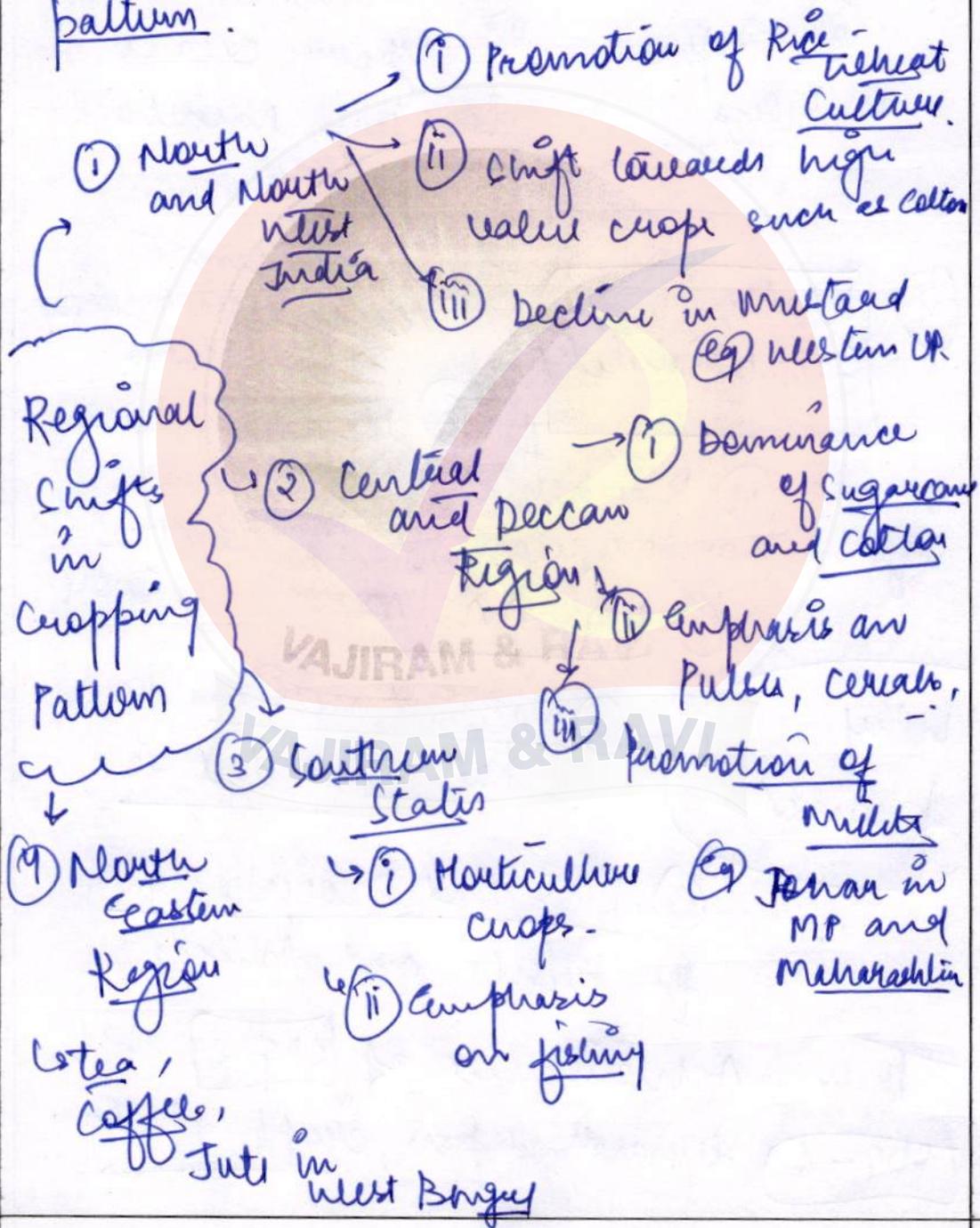
- Way forward
- ① Revamped PSL with 2-5 yearly review by the Government
  - ② Opening Market driven allocation within PSL sectors @ Household
  - ③ BASEL III Norms as guideline.

Thus, Regulated Market driven allocation can complement PSL with flexibility for Banks

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5. Analyse the regional shifts in the cropping patterns of India. Discuss the long-term implications of this shift on nutritional security and water sustainability.  
(10 marks, 150 words)

India has highest available land in the world having different climatic zones having significant role in cropping pattern.



## Long term impacts of this shift

① Nutritional Security

- (i) Promotion of millets can help in nutritional security
- (ii) Over reliance on wheat. Rice system creates long term nutritional issues.
- (iii) Emphasis on pulses

② Water Sustainability

- (i) Sugarcane in water deficit Deccan trisul issues
- (ii) Need for promotion of millets in central India.
- (iii) Rice wheat system has 30% water use efficiency
- (i) PM - AASH

Way forward

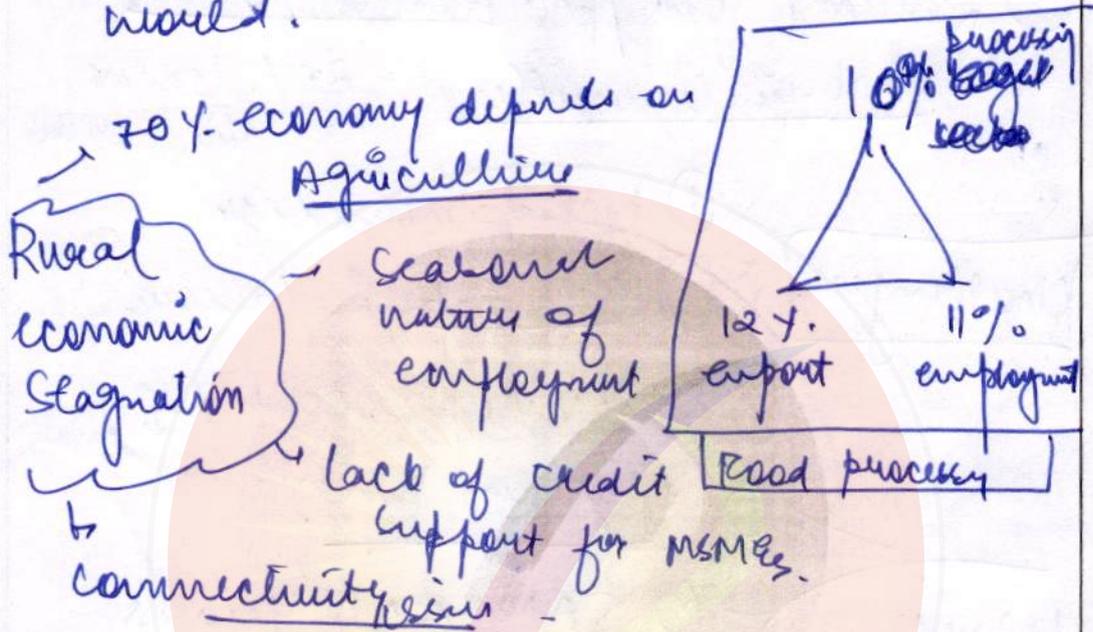
- (2) National mission for Pulses (Budget 2024)
- (3) PDS and Procurement for Pulses and Millets

Thus, Achievement of SDG-2 and SDG-6 demands upon cropping pattern

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6. Despite diversification, rural India faces economic stagnation. Discuss how value chain integration through food processing can revitalise the rural economy.  
(10 marks, 150 words)

Food Processing is a sunrise sector in India being 6<sup>th</sup> largest sector in the world.



Food Processing can revitalise-

- ① Formalisation of Rural economy
  - ↳ (i) integration of MSME in food processing
  - ↳ (ii) Contract farming to promote farmers to sale of produce
- ② Employment & Capacity to generate

additional 1 crore employment.

③ Reduced dependence on Agriculture.  
↳ diversification of food chain

④ Reduced food / post harvest wastage  
↳ Dalmeida Committee - 30%, leading 1.52 lakh crores loss

Challenges

- (i) Lack of technology
- (ii) Skill gap in labour
- (iii) Only 10% processing in India.

Way forward

- (i) merge food park
- (ii) SAMPADA Yojana
- (iii) PLI for FPI chain
- ↳ (iv) Integration of Agri Supply Chain with FPI.

Thus, From to Factory to Foreign model can help in several economy through food processing

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7. What is ground-level ozone pollution? How is it formed, and what are its effects on human health and the environment? In what way is it becoming a serious concern for Indian cities? (10 marks, 150 words)

Ground level Ozone pollution is presence of poisonous and toxic ozone in atmosphere leading respiratory diseases in Human.

## Formation of Ground level Ozone

Environment pollution as Nuclei + Oxygen in atmosphere  $\xrightarrow{\text{in presence of sunlight}}$  Ozone ( $O_3$ ) in ground level

## Effects on Human Health

- ① Carcinogenic Diseases  $O_3$  is a toxic gas causing carcinogenic condition in human body.
- ② Respiratory disease like Nausea and accumulation of ozone in respiratory track.

⑤ Human Health diseases including Heart and lung Diseases

## Environmental Consequences

① Pollution in Atmosphere leading to diseases in Acidic species.

② Rainfall leading to contamination of Marine ecosystem.

③ Air pollution causing Earth's premet-urely gary.

→ ① Quaternary Protocol

→ ② Kigali Amendment (HFO usage).

Way forward

③ Controlling GHGs emission

④ One Health approach

Thus, Ozone pollution can cause significant challenge on Human and Environment health

Introduction

Body

Conclusion

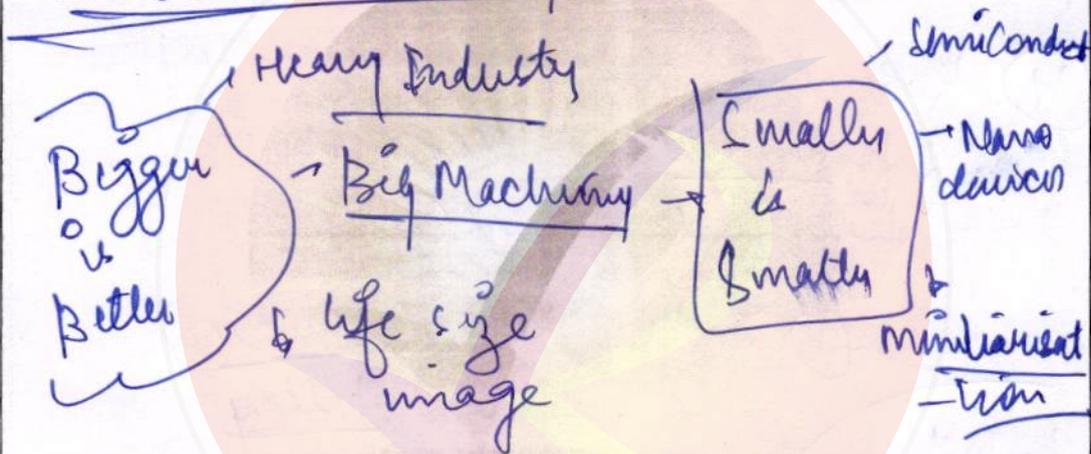
Presentation

Marks:

8. Nanotechnology represents a paradigm shift from 'bigger is better' to 'smaller is smarter'. In this context, examine the transformative potential of nanotechnology in the fulfilment of India's environmental goals.

(10 marks, 150 words)

Nanotechnology utilizes the nanoparticles with at least one dimension at nano scale of 1-100 nanometers having transformative potential in achieving environmental goals.



Transformative potential in Env. goals

## ① Renewable Technology

- ① Helping in solar PV cells for solar energy.
- ② Help in goal of 50% renewable installed capacity

② Conservation of Trees habitat & Nanoparticles helping in trekking tree diseases and soil productivity,  
↳ achieved 30% tree cover

③ Carbon sequestration of 1 km town  
↳ Nano particles

④ Reducing dependence on input of fossil fuel - Nanotech in fuel vehicle.

- Way forward
- ① Indian Nanotechnology policy
  - ② Dedicated Research in IIT & IISc.
  - ③ Budgetary allocation

Thus, Nano is future and Nano is crucial

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9. What is 'Indirect Prompt Injection' in the context of AI chatbots? Examine its potential impact on the reliability of digital assistants and the privacy of end users. (10 marks, 150 words)

Indirect Prompt Injection are automated response systems based on algorithmic data base for automated replies  
eg Zomato's chat bot on Complaint

Potential Impact on Reliability

- ↳ (i) Automated & objective responses based on previous questions (FAQs)
- ↳ (ii) One size fits all approach having lack of personalised feedback
- ↳ (iii) Algorithmic bias eg Amazon's hiring AI tool against women.

Potential Impact on Privacy of end

user :-

- ↳ (i) Data sharing for future response -

(i) Privacy risk in context of Data sharing

(ii) Nature of Data is unknown and Data sharing is unregulated

(iv) Lack of informed consent of Data sharing

→ (i) Blitzkrieg Declaration and Rome Declaration

Way forward

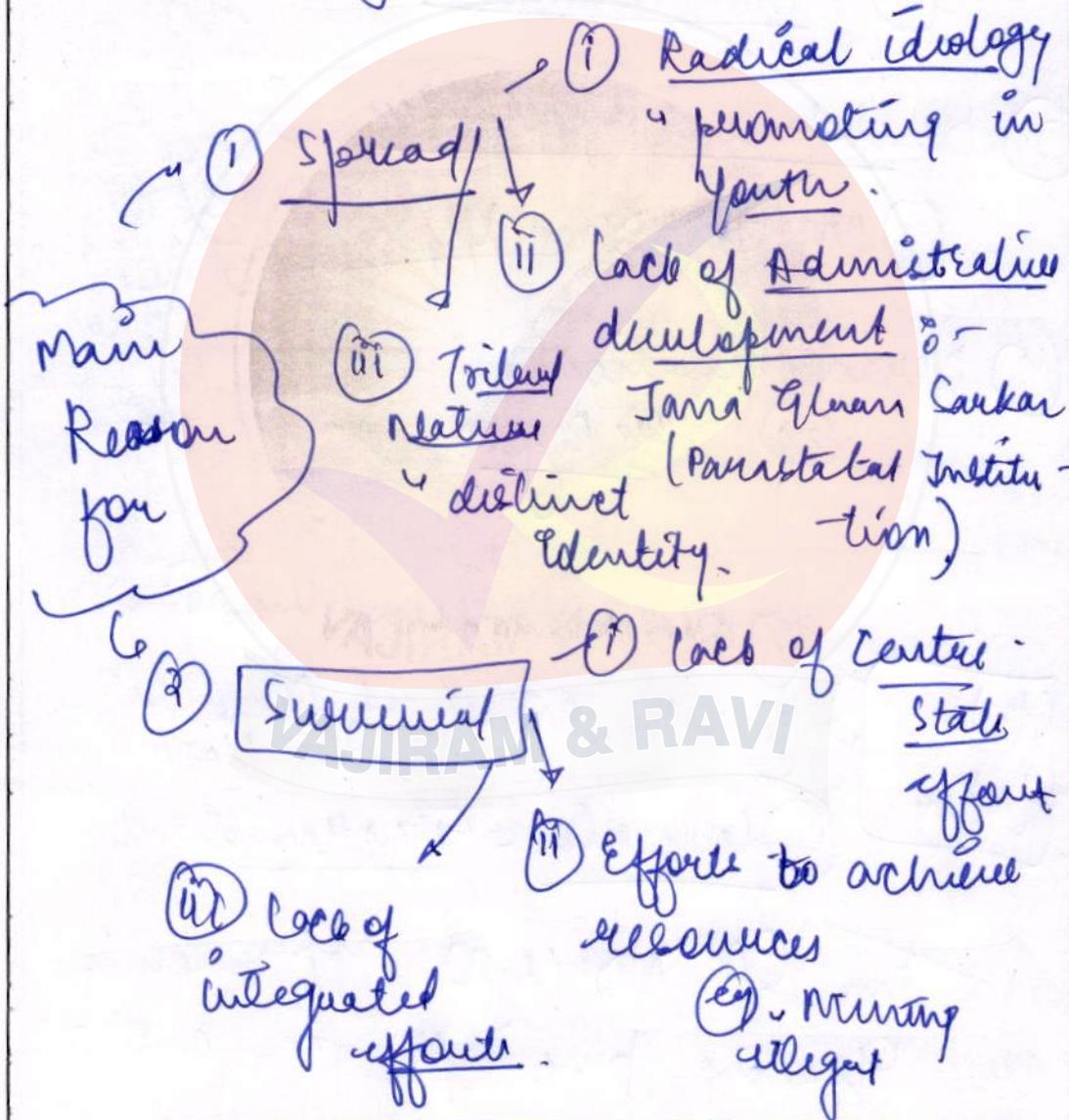
(ii) UNDP: AILA for Sustainability and responsible AI

(iii) Regulation through Digital Services Act, EU.

Thus, AI have potential challenges for privacy and reliability

10. Analyse the major reasons for the spread and survival of Naxalism. What solutions do you suggest to curb it? (10 marks, 150 words)

"Entireism takes birth in womb of poverty and flourishes in society where people feel excluded and marginalised (Kafi Annan!)



Solutions for curtailing Naxalism

# VAJIRAM & RAVI

① Mixtures of coercion and Development approach

eg Security Related Investment scheme  
Operation UPAAN Odisha

② Utilising the Technology  
eg Drone surveillance

③ Development opportunities

eg PM-Jan Dhan Yojana

④ Decentralisation

eg of Region



- Steps taken**
- ① End Mandalism by 2026
  - ② WB's Model of Clean and Hoely
  - ③ Coercion - Grey Hounds etc.

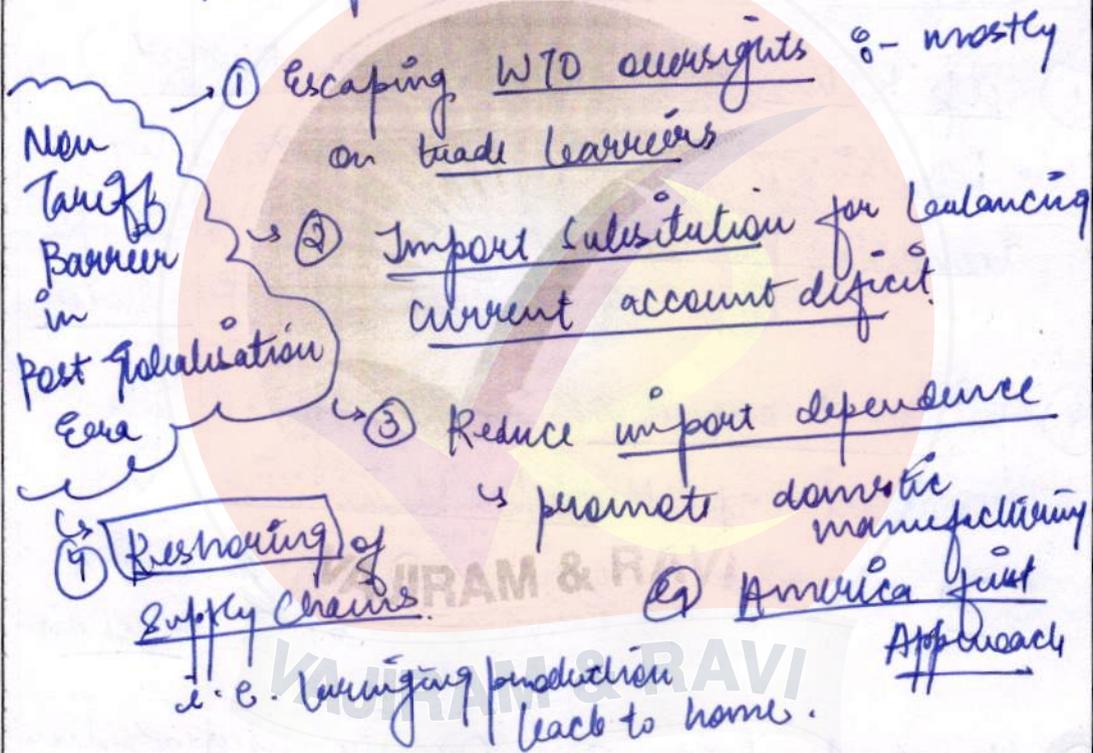
→ This SAMADHAN approach is the guiding principle for anti-Mandal drive

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11. "Non-tariff measures have become a key instrument of economic diplomacy and protectionism in the post-globalisation era." Evaluate how India can balance compliance with global trade rules while safeguarding its economic interests.

(15 marks, 250 words)

Non-tariff measures are non-monetary instruments placed for deliberately reduce imports citing hygiene, phytosanitary or Quality standards eg Carbon Border Adjustment Tax by European Union



## Challenges posed by Non-Tariff Barriers on India

- ① Import Reduction :- leading to higher Current Account deficit eg presently 1.6%
- ② Interest of farmers and agriculture workers

- ↳ Lack of income and debt pressure.
- ③ Stagnant Dispute Resolution Mechanism in WTO
- ④ Dominance of western countries in WTO negotiations.

Balancing Compliance with trade Rules with Economic Interest

- ① Self Reliance (Atmanirbhar Bharat)
  - ↳ Domestic demands to fulfilled by domestic production (eg) largest consumption market in India
- ② Bilateral Agreements :- Provisions for removal of Non-Tariff Barriers in FTA, CEEA etc. (eg) BTIA with EU in negotiation
- ③ Standardisation and Quality upgradation
  - ↳ through standards like Ecomark, Agromark etc in promoting exports.
- ④ Collective Negotiation with countries having similar interests (eg) Plaza

South cooperation in WTO based on free and fair trade principle.

5) Retailer tariffs for safeguarding economic interest of farmers, fishermen and livestock farmers (as argued by PM Modi)

6) Promotion of exports through APEDA, NAPED etc.

1) Guiding principles of WTO i.e. free and fair trade around world.

Way forward

2) Dispute Resolution Mechanism to be made functional

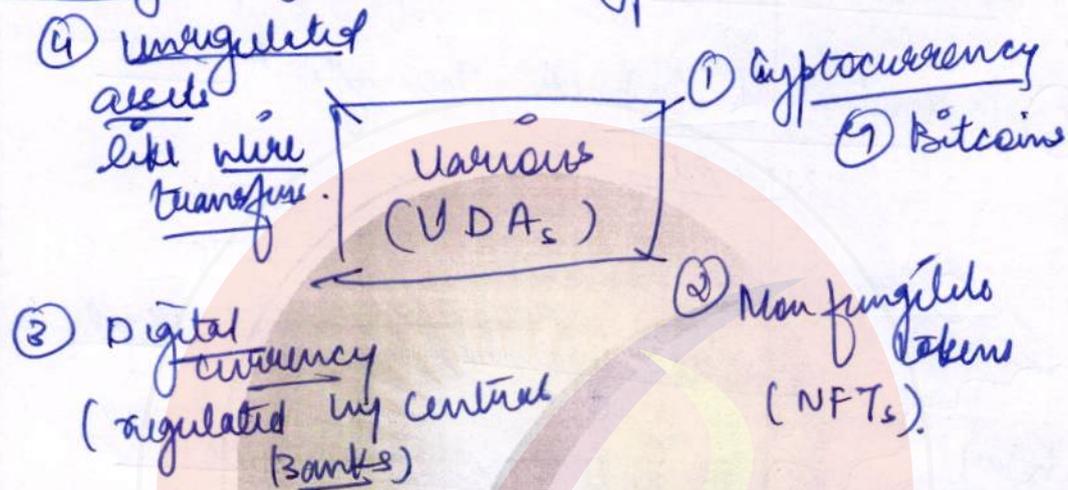
3) Atma Nirbhar Bharat for import dependency

Thus, Non tariff barriers can pose challenges for Indian economic interest which needs to be dealt with dialogue, negotiations and action approach.

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12. Discuss the macroeconomic risks posed by unregulated Virtual Digital Assets. How can India reconcile its financial stability objectives with the opportunities offered by blockchain innovation? (15 marks, 250 words)

Virtual digital assets are financial instrument having monetary value held in digital form (eg) Cryptocurrency.



Macro economic risks posed by unregulated Virtual Digital Assets

(1) Distortion of financial system :- posing risk to stability in financial market.

(2) Anonymous and Unregulated Nature :- leading to tax evasion and potential money laundering risks

(3) Individual Risk :- lack of guarantee

posing monetary risk for losing the money.

④ Utility and Un-pledged Nature :-  
UDAs are not backed by any valuable assets rather having unique identity leading to utility in the market.

⑤ Reverse financing and Organised crimes  
↳ (eg) manipulation of financial system.

Reconciling financial stability with blockchain  
Innovations

① Digital Currency - Based by Central Bank  
↳ reducing transactional cost of currency  
↳ formalisation of economy  
↳ check money laundering and tax evasion

(eg) e-₹ in India, Land dollars in Bahamas etc

② Use of Blockchain for tackling organised crime

(eg) Tax Evasion and Money laundering

③ Secured financial system :- Blockchain models provides added security for financial transaction.

④ Reducing leakages in financial system  
↳ Direct Benefit Transfers and loan disbursement becomes easy.

Way forward

- ① RBI report on utilisation of Blockchain in financial system
- ② Investment in research and development of Blockchain in India
- ③ Academia-Industry linkage

Thus, Blockchain based assets are double edged sword having potential risk along with potential opportunities.

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13. Despite progressive measures, gender budgeting in India has not translated into substantial gender equity." Discuss the major bottlenecks in its implementation and suggest government measures to make it more impactful.

(15 marks, 250 words)

Gender Budgeting refers to policy making and allocation of Budgetary expenditure based on gender sensitive parameters.

- Gender Budgeting in India
- ① Started in 2005-2006 Budget.
  - ② Only 6 ministries have dedicated gender budgeting cells.
  - ③ continued limited Budgetary allocations.
  - ④ Lack of care economy integration.

Major Bottleneck in its implementation

- ① Gender Sensitivity :- lack of gender sensitivity due to lack of women in leadership position.
- ② lack of Holistic Budgeting :- neglect of care giving work and uneconomic/non-monetary nature of care work.

③ Over-Emphasis on Subsidies :- lack of Capacities and Skill Development mechanism for women in Budget.

④ Financial Constraints :- squashed govern-ment resources due to Global economic Instability.

⑤ Institutional Challenges :- lack of dedicated Gender Budgeting cells in the ministries.

## Measures to promote Gender Budgeting

① Tackling institutional bottlenecks  
↳ Gender Budgeting units in two ministries.

② Methodological Efficiency :- Quantification of women dominant fields including Care work.

③ Recommendation through Finance Commission, including Gender Budgeting

in terms of reference of finance Commission.

④ Dashboard based parameters for checking efficiency and effectiveness of schemes

eg) MUDRA Yojana :- having 20% women beneficiaries

⑤ Inclusion of women in policy making for gender sensitive approach

- Way forward
- ① Japanese Model of womenomics
  - ② Amartya Sen's Capabilities Approach.
  - ③ Tipper Model of Rwanda for inclusion of women in policy making

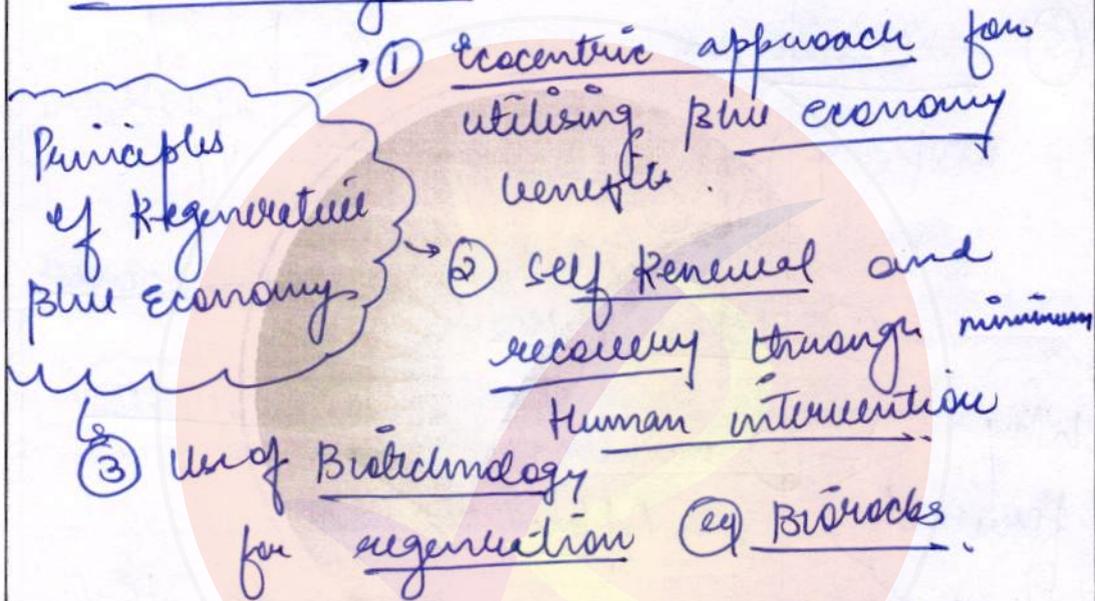
Thus, as argued by BR Ambedkar, the progress of society can be visible by progress made by women in the society. Nari Shakti is essential for uttrist bhavat

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14. What is a Regenerative Blue Economy? How does it differ from conventional blue growth models? Highlight the role of the Regenerative Blue Economy in mitigating climate change and halting biodiversity loss.

(15 marks, 250 words)

Regenerative Blue Economy refers to circular economy based on principles of self-Renewal, reuse and recycle in marine ecosystem.



Differences between Regenerative Blue Economy and Other models

<u>Regenerative Blue Economy</u>	<u>Conventional models</u>
① Based on <u>Eccentricism</u> and <u>balance</u> between <u>ecosystem services</u> and <u>ecosystem management</u> .	① Based on <u>utilitarianism</u> approach for <u>harnessing</u> benefits from <u>marine ecosystem</u> .

② Use of Biotechnology for regeneration and renewal for the resources.

③ Based on circular economy with efficient resource use.

④ Focus on giving time for self renewal and recovery.

② Use of conventional technology like fish rearing etc.

③ Based on linear pattern of utilising the benefits from Blue water.

④ Exploitative in approach.

## Role of Regenerative Blue economy in

① Tackling Climate Change :-

④ (i) Promotion of climate sustainable practices (eg) Coral reef management

④ (ii) Minimum Anthropogenic intervention ↳ emphasis on self-renewal.

④ (iii) Sustainability in mitigation and adaptation (eg) Aji system by Apatani tribes.

## ② Halting Biodiversity loss

- ↳ (i) Protection of aquatic species like Mangroves, Corals etc.
- ↳ (ii) Reduced exploitation of fisheries and shrimp farming.
- ↳ (iii) Balancing sustainability and economic exploitation of the resource.

### Challenges

- ↳ (1) lack of technology
- ↳ (2) lack of skilled farmers and awareness
- ↳ (3) input cost is high.

### Way forward

- (i) Integrating Regenerative Blue Economy with PM-Matsya Sampada Yojna
- (ii) Evergreen Revolution for pickpicking (PM Modi)

Thus, Regenerative Blue Economy can help in achieving TWIN TARGET of Climate Sustainability and economic growth.

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15. Do you think India's ethanol blending programme can significantly enhance energy security in the coming decade? Justify your answer.

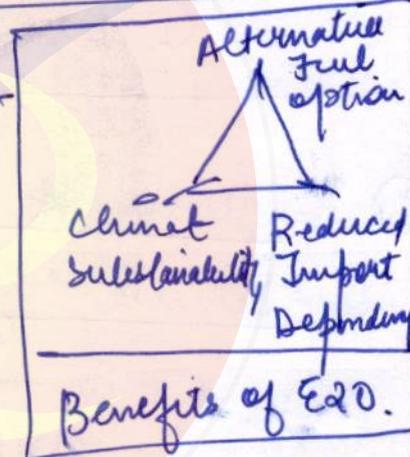
(15 marks, 250 words)

India achieved 20% ethanol blending targeted under ethanol blending programme in 2024 having potential benefits for energy security.

## Role of ethanol blending programme in Energy Security

### ① Alternative Fuel Options:-

↳ (i) Blended fuel having higher octane level leading to efficiency of engine.



↳ (ii) Promotion of flex fuel vehicle leading to energy security

### ② Reduced Import Dependence:-

↳ (i) Oil imports can be reduced helping in reduced burden and dependency

↳ (ii) Indigenous utilisation of ethanol as fuel option

## ③ Tackling climate Change

↳ (i) Reduced CO<sub>2</sub> emission in blended petrol :- indirectly related with energy security

↳ (ii) Utilisation in emission positive areas e.g. Transport sector.

Challenges with respect to Ethanol Blended programme

① Readiness of Market :- lack of E20 compatible engine. Dominance of E10 engine in market.

② Lack of Technology :- for electrolysis and pyrolysis :- dependency on foreign providers.

③ Lack of Utilisation of organic crops for ethanol production.

Q1) efficiency of E20 Engines :- Question in news reports and scientific studies -

→ ① E20 as a transition towards Green Economy.

key  
points

→ ② Alternative fuels like Green Hydrogen in complementing efforts.

→ ③ Private players in manufacturing of E20 fuel engines.

Thus, for effective utilisation of etanol blending programme, Government support should be complemented by Industrial Readiness and Consumer's Willingness.

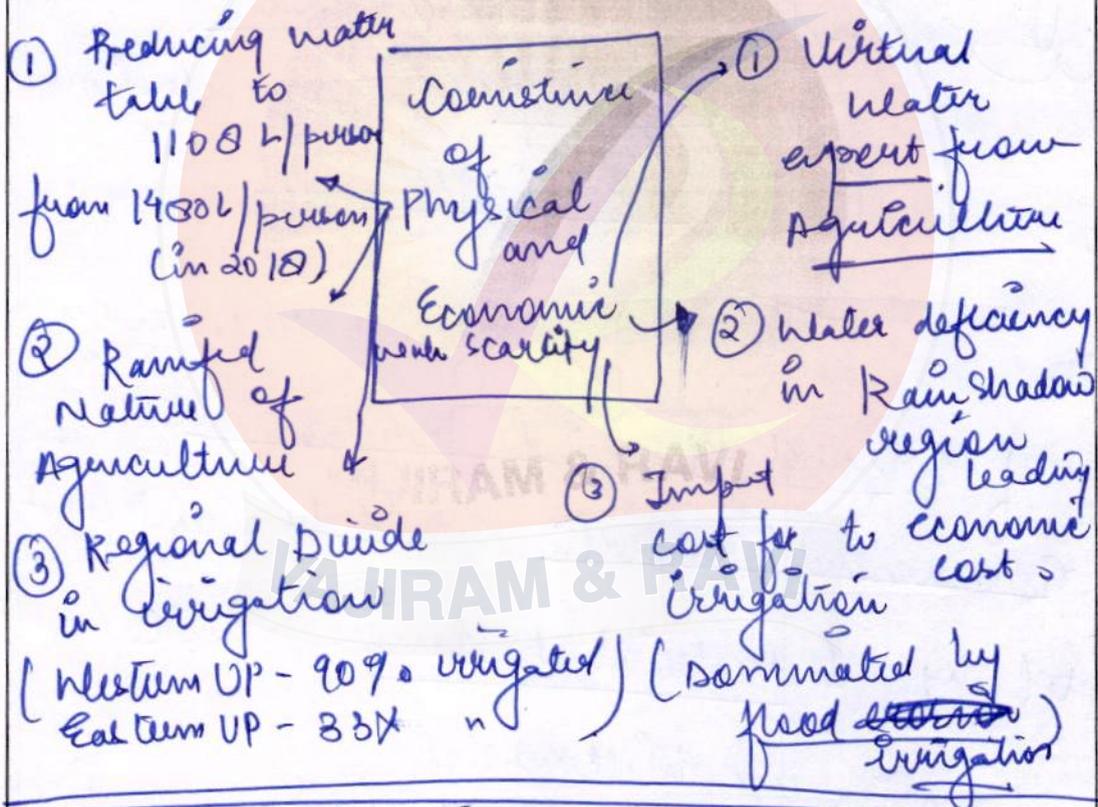
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16. The coexistence of physical and economic water scarcity in Indian agriculture reflects a deeper crisis in water governance. Examine the factors contributing to this and suggest reforms to make irrigation more equitable and sustainable.

(15 marks, 250 words)

~~Water governance~~

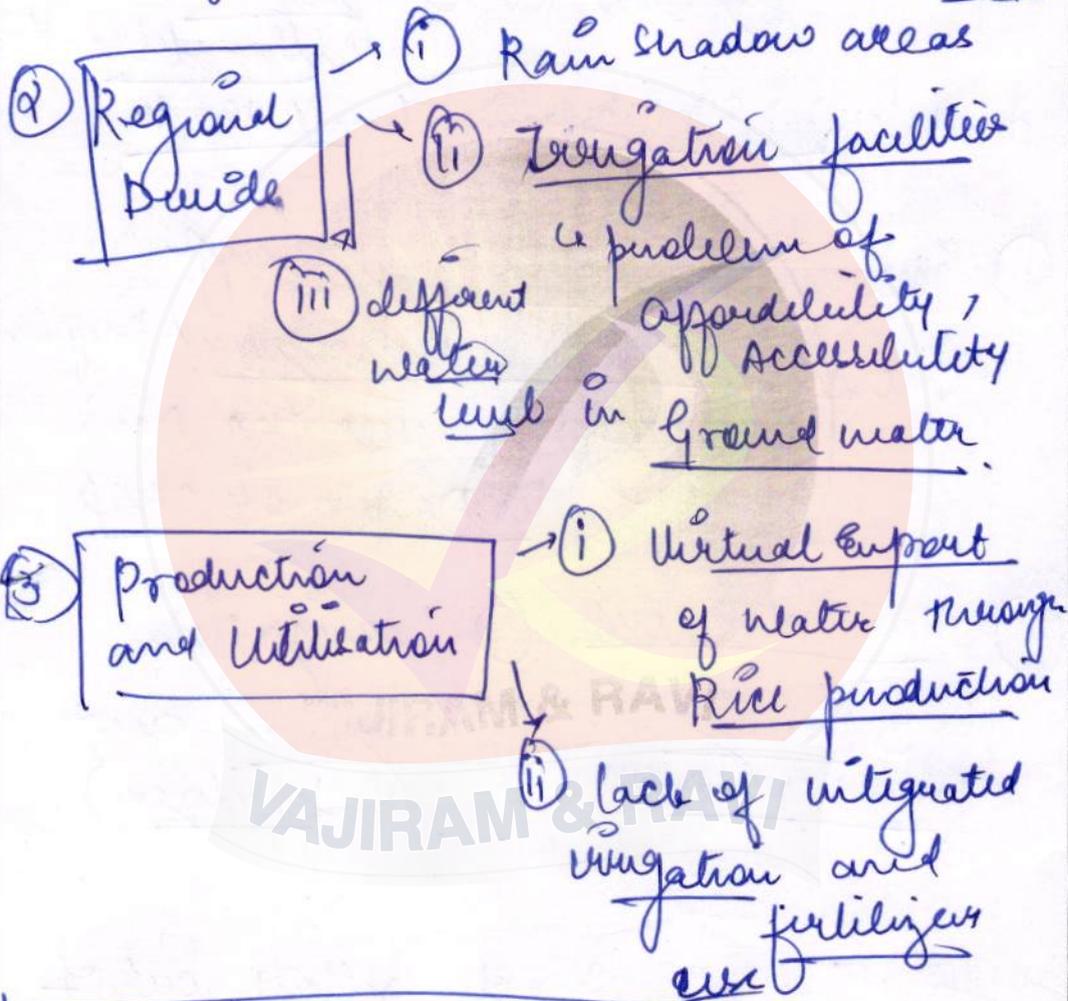
Water Governance deals with management of water in various field including Agriculture. Being Rainfed nature, Indian Agriculture is dependent on 70% Groundwater.



### Factor contribution to deeper crisis

- ① Agriculture Based inputs → i) lack of water use efficiency in irrigation (only 30-40%)

- ↳ (ii) Distorted cropping patterns like sugarcane in Maharashtra - requiring irrigation in water deficient region
- ↳ (iii) Lack of Drip Irrigation (Prevalence of Tube wells and canals (around 80%))



## Reforms for Solving Crisis

- ① Promotion of Sustainable water management irrigation
- ② Drip Irrigation

② Technological innovation → (i) SRI system of Rice Cultivation  
→ (ii) Direct Seeding of Rice  
(eg. Zero-tillage)

③ Traditional Methods

(eg) Chal Khal system in Uttaranchal  
and Tyari system in Tamil Nadu

④ Government Support through Integrated Water Management Programs  
(eg) Har Khet ko Pani  
Per Drop more crop

⑤ New Techniques (eg) Fertigation  
(Integrated Irrigation and farming system (Irrigation and fertilizers))

Thus, India is not getting out of water, rather <sup>water</sup> is getting out of India

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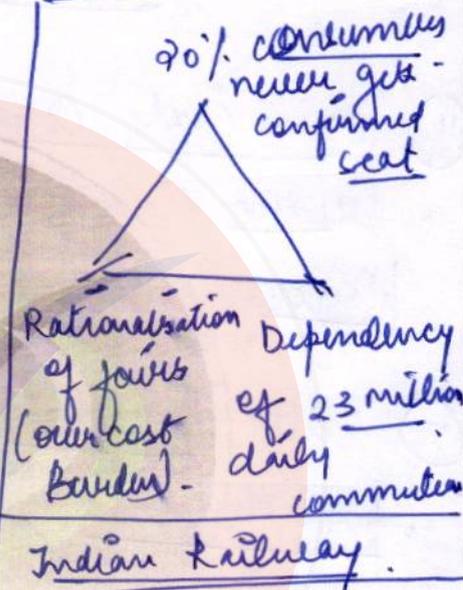
17. The absolute monopoly of Indian Railways has constrained its capacity for modernisation and efficiency. In this context, do you agree that privatisation is a viable solution? Substantiate your answer.

(15 marks, 250 words)

Railway Vision 2030 of Indian Government has emphasised upon privatisation of Railway for reforming Indian Railways

Absolute Monarchy  
Constraining its Capacity

① Over dependency on Railway for both passenger and freight movement.



② Burden for rates rationalisation and populist measures

③ Lack of efficiency and work culture due to lack of competition.

Thus, Privatisation has been seen as viable option

① Enhanced Efficiency → ① due to competition  
→ ② Reduced Burden with sharing with private players

## ② New Techniques and Technology

⑨ Hybrids of technology  
by IT7 madra

③ Dividing Passenger and freight movement  
with Indian Railways      with private players.

④ Financial Constraints will be reduced with coming of private players.

⑤ Better Accessibility and facilities in private trains.      ⑩ Maharaja Express.

However, Three are challenges

① Affordability :- Daily commuters find it expensive and uneconomical in nature.

↳ New Class of Haves and Have nots

⑨ Affordability a issue in Hande Brand train itself

- ② Regulation of Private Players :-  
Accountability for disaster and efficiency very difficult to set.
- ③ Resistance from Indian Railway - fear of loss of jobs and employment.
- ④ Monopoly of few players :- defeat the purpose.

- Way forward
- ① Reopening Indian Railway
  - ② Railway Vision 2030
  - ③ Private players in Infrastructure management ④ Amrit Bharat Station
  - ④ Dedicated freight corridors → include private players.

Thus, Privatization of Railways in India is not just policy issue rather a political one, Any way forward should include discussion and consensus.

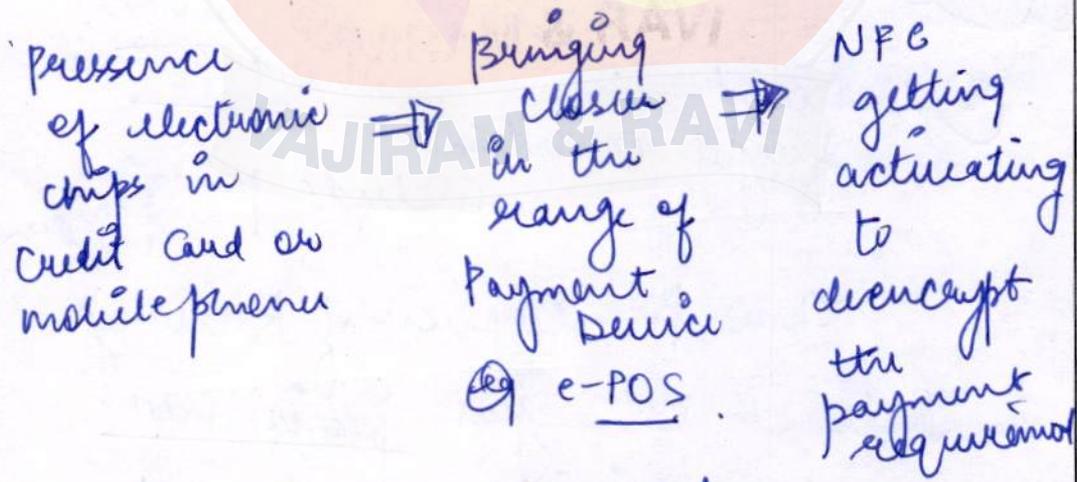
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18. What is Near Field Communication (NFC) technology, and how is it enabling tap-to-pay transactions? Highlight its benefits and limitations? Does it carry any potential risks? (15 marks, 250 words)

Near field communication technology is an upgradation over Radio frequency identification technology requiring reduced proximity and localised circuit.

- ① within 5-10 centimeters
- ② High speed network
- ③ lower to zero latency
- ④ safe payment system

## NFC enabling Tap to pay transactions



Payment transaction leased on Passkey or automatic pay as per user convenience

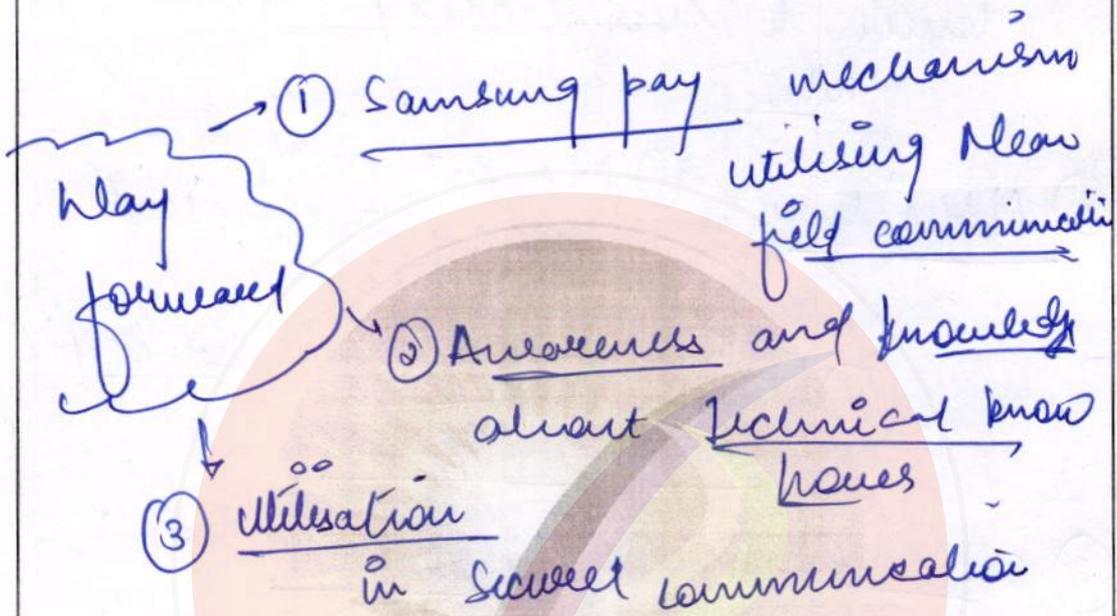
## Potential Benefits of Near field Communication

- ① Higher speed and reduced latency
  - ↳ multiple times higher than WiFi.
  - ↳ closer to Zero latency rate in NFC.
- ② Applications
  - ↳ (i) Payment mechanism (mostly individual entities)
  - ↳ (ii) Data sharing and Delivery
  - ↳ (iii) Internet connectivity
- ③ Safe and secured Encrypted sharing
  - ↳ safe for passwords, payments, etc.
- ④ Utilisation in communication
  - ↳ (eg) Military communication

## Potential Risk associated

- ① Hindrances in field → corrupted devices and deliberate intrusion.
  - ↳ leading to frauds and Cyber security issues
- ② Affordability leading to digital divide

③ Automatic Payment :- side for user formed in direct closeness to the device.



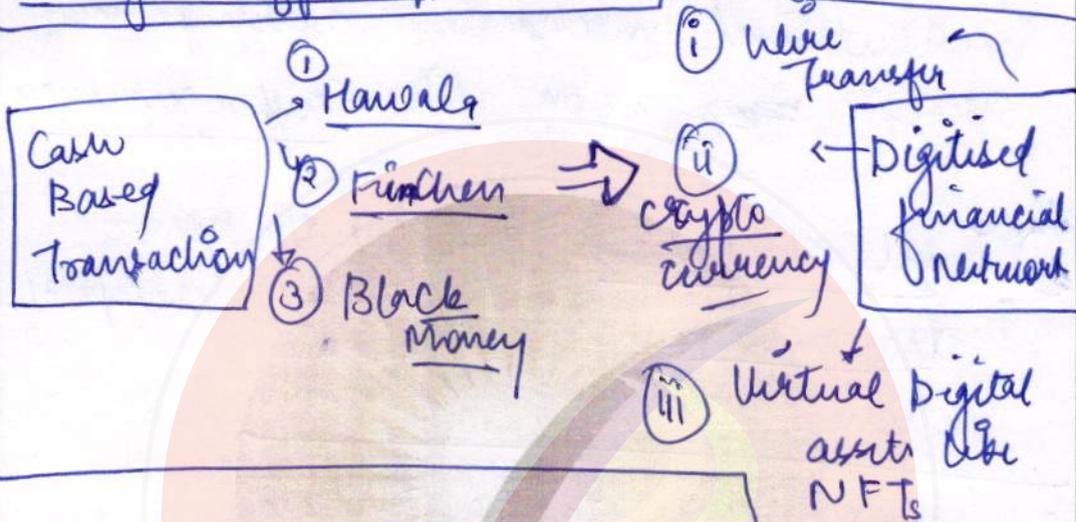
Thus, Near field communication is the future of technology in various field from payment to Data sharing.

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19. Discuss how the shift from cash-based transactions to digital financial networks in drug trafficking and money laundering poses new challenges for enforcement agencies. What countermeasures should be taken to prevent the same?

(15 marks, 250 words)

With advancement in technology, financial network facilitating money laundering and Drug Trafficking has been digitised.



This shift has posed new challenges for enforcement agencies

① Traceability and Identification :-  
↳ difficult due to lack of transactional proof and movement of the payments.

② Anonymous and Unregulated  
↳ lack of identity of sender and receiver rather just needs and block address,

③ Technological limitations :- Skilled Human resources are missing leading to working and investigating challenges

④ Institutional Mechanism :- lack of institutional mechanism dealing with specific ~~issues~~ areas like Cryptocurrency

⑤ Legal grey areas :- due to non-convention limiting the scope of action.

## Counter Measures to be taken

① Recommendations of Gulshan Rai Committee for tackling Cyber space challenges

↳ Online transactions can be traced with payment intermediaries.

② Utilisation of existing mechanisms

① FIV - FID (financial investigating unit)

CERT - In (for tracking the payments)

- ③ Technological upgradation :- Training on enforcement officers on Blockchain and associated technologies
- ④ Dedicated division in organisations including ED, NIA etc.

Thus, Digital payments and financial system poses significant threat for promoting money laundering and Drug trafficking.

This require 'Wholesale Government' approach to tackle the issue with

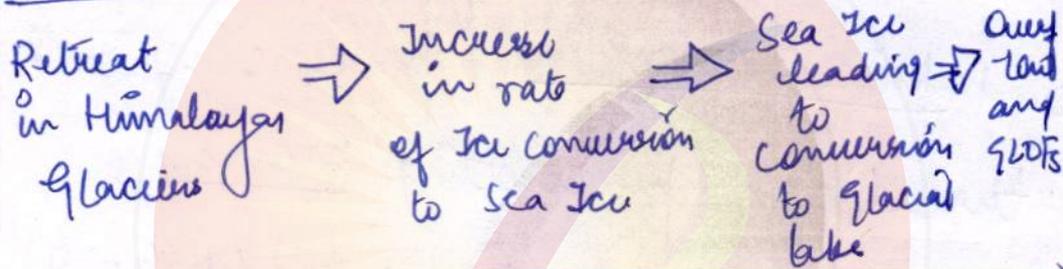
- ① Funding
- ② Freezing
- ③ Recovering

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20. The retreat of Himalayan glaciers, driven by global warming, has increased the frequency and intensity of Glacial Lake Outburst Floods. Discuss the underlying causes of Glacial Lake Outburst Floods and recommend adaptive strategies to manage such disasters effectively.

(15 marks, 250 words)

The retreat of Himalayan glaciers are occurring at rate of 1.4 metres/decade posing threat of reduction of 15% of Hindukush by 2035 (IPCC).



## Underlying Causes of GLOFs

① Geographical causes → Rainfall in Himalayas leading to overflow of glacial lake  
 ↓  
Cloudburst in Himalayas leading to intense down-pour  
 (eg) Humla, Nepal

② Climate Change → (i) Reducing glacial ice  
 (ii) Overflowing of sea level

## (ii) Anthropogenic Causes

(i) Dam structural efficiency and Health.

(ii) Development destroying the Glacier ecosystem  
(eg) Urre Glacier  
(eg) Khosak Lake GLOF

## Adaptive Strategy to manage disaster

(1) Comprehensive National GLOF Management Guidelines by NDMA.

(2) Timely Review and Checks of Dam Health in the Glacier ecosystem.

↳ Supporting structure should be implemented.

(3) Early Warning System with Data from BHOUAN can be integrated with Adaptation

④ Hazard zonation and creation of  
Man-Development Area based on  
Environment Impact Assessment

⑤ Long term - ① Reducing GHG emissions  
Adaption → ② Promoting sustainable  
ecosystem conservation

→ ① Supporting of large glacial  
lakes

Way forward

→ ② JIT Madras - Numeric  
system for creating early  
warning system

③ Hydrodynamic assessment by  
Central Water Commission

④ UN Year of Glacial Conservation (2024)

Thus, GLOFs should be countered with  
mitigation and adaptation strategies  
based on Sendai Framework.

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# Space for Rough Work



# Space for Rough Work

