

General Studies Full Length Test Test - 3 (GS - 3) Test Code - A21053503	Evaluator Code: Date of Assignment: CQ:
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NAME: BASAVARAJ JAWALI	Time allowed: 3 Hours
STUDENT. ID.: 19VR19323	Email:
UPSC ROLL NO.: 0323210	Submission Date: 21/07/2025
MOBILE NO.:	

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	Total	/250

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.

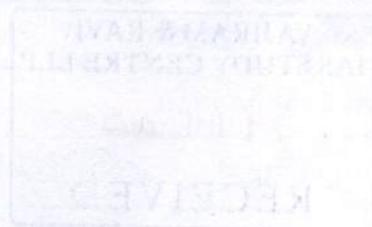
For Student Only

Start Time	VAJIRAM & RAVI IAS STUDY CENTRE LLP	End Time -	5:00 PM
Mode of Examination	21 JUL 2025	Online	Offline <input checked="" type="checkbox"/>
Receiving date -	RECEIVED	Dispatch date -	

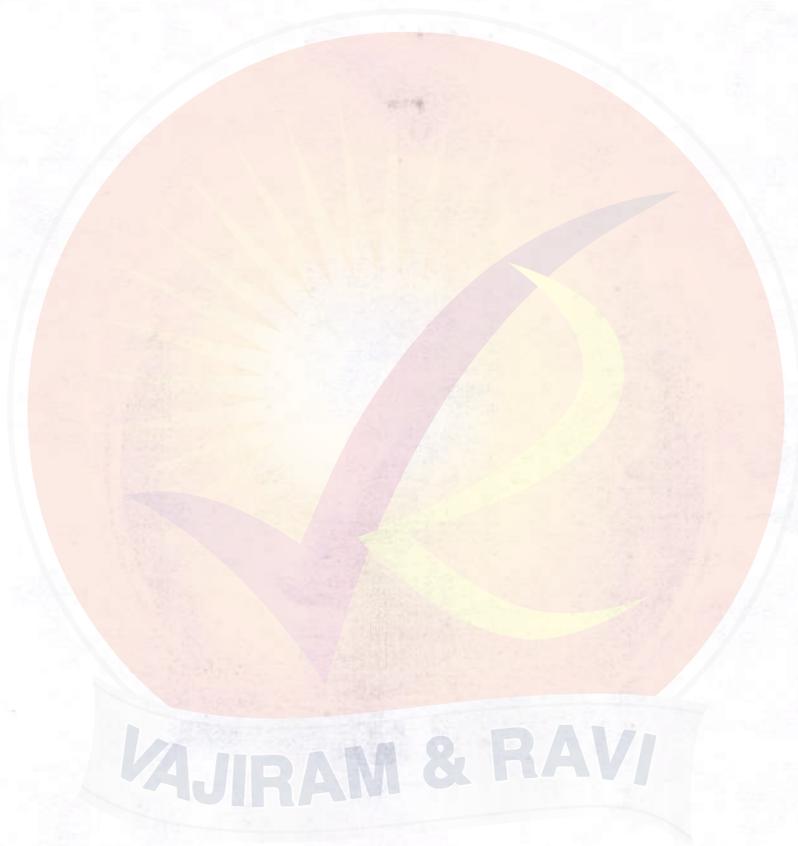
Parameters		Good	Average	Needs Improvement
Conceptual Understanding				
Understanding Demand of Question				
Structure	Introduction			
	Body			
	Conclusion			
Presentation-Illustrations, flowcharts, diagrams, etc.				
Language and Handwriting				
No. of Questions Attempted				
Adherence to Word Limit: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

Mentor's Feedback

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Evaluator/Reviewer Suggestions



Evaluator/Reviewer Suggestions



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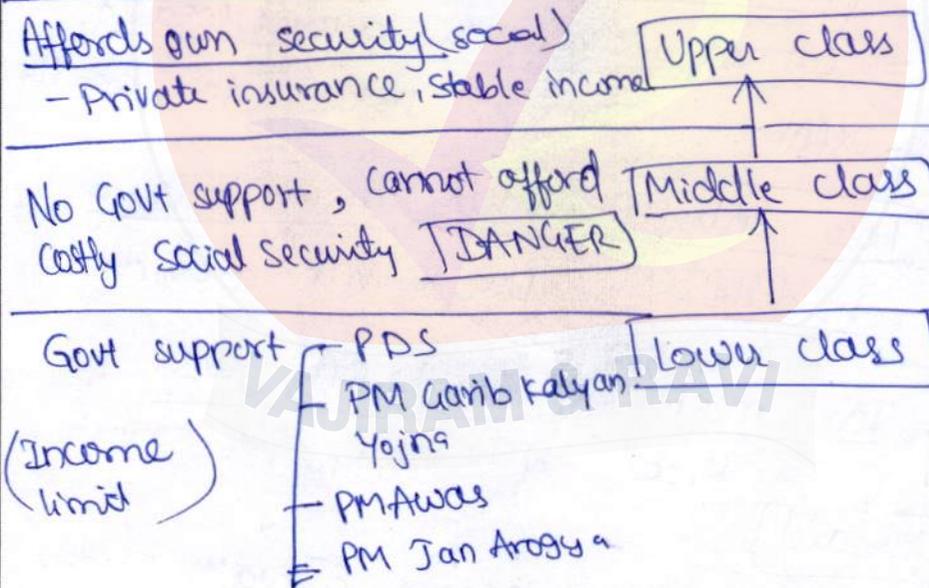
(Answer questions in NOT MORE than the word limit specified for each in the parenthesis. Content of the answer is more important than its length.)

1. Explain the concept of the "Missing Middle" in India's industrial ecosystem. How does it affect economic growth and employment generation?

(10 marks, 150 words)

Economic survey 2019-20 introduced concept of "Missing Middle" in light of insurance coverage deficiencies in Indian economy.

Concept of Missing Middle



Hence it is phenomenon/class where neither government is supporting (thinks they can do) and they fail short to fulfill all their needs for secure life

Income > 8 lakh < 30 lakh per ann

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Missing middle impacting economic growth & employment generation

- ① Increased out of pocket expenditure
(NFHS-5 - 48% still very high)
- ② No social & economic security in hard times
Eg: COVID-19 many private jobs lost saving
- ③ Perpetual consumption model
→ cannot save to acquire wealth.
Dxfam: Top 1% holds 40% wealth
- ④ Low entrepreneurship among missing middle: Due to risk aversion
- ⑤ Too much dependent on jobs
→ Risk of falling into poverty.

Way forward

- ① Universal Basic Income & health survey
NHS of Britain
- ② Govt support by scheme: start-up India
Special focus on missing middle with little nudge like Tax rebates and skill development will ensure Sabka VIKAS

Introduction

Body

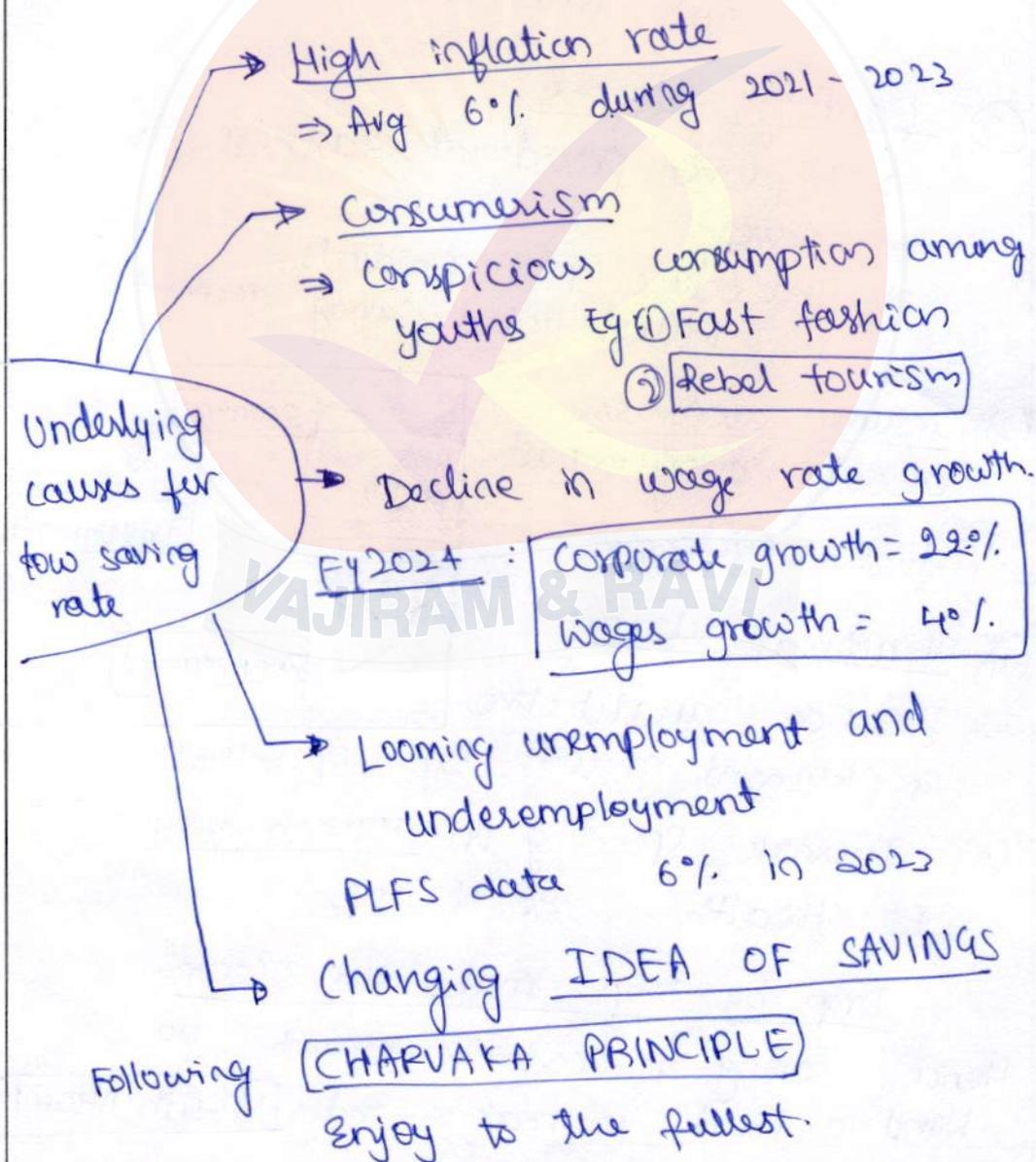
Conclusion

Presentation

Marks:

2. Household savings form a crucial pillar of domestic capital formation. In light of their recent decline, elucidate the underlying causes and propose strategies to strengthen savings behavior in India. (10 marks, 150 words)

Recently, RBI report highlighted the underlying risk in booming Indian economy - All time low saving rate among households.



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→ low incentive to save
⇒ low bank rates ~ 3-4%

Strategies to strengthen Saving rate

① Fiscal & Monetary policies

Eg: Tax benefits, Incentives (extra interest)

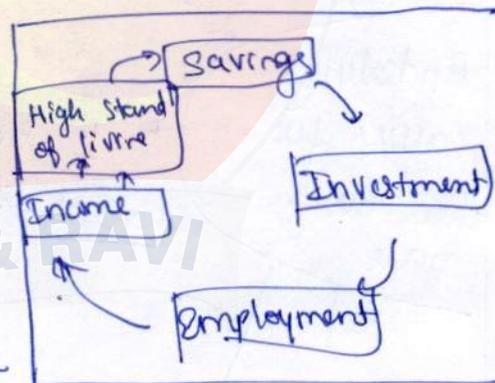
Eg: Sukanya Samridhi Scheme
Girls fixed deposit = 8%

② Banking reforms

⇒ Improve procedural easeness to save
⇒ Introduce new products.
⇒ Market linked saving account

③ Consumer awareness about saving impact.

Virtuous cycle



④ Structural reforms

→ Focus on qualitative employment growth by upskilling

⑤ Increase spending on Human resource devt
Eg: Health. 3% of GDP.

"Drop by drop makes the ocean"

Hence saving & economic growth go hand in hand in making India Viksit Bharat

Introduction	
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Marks:	

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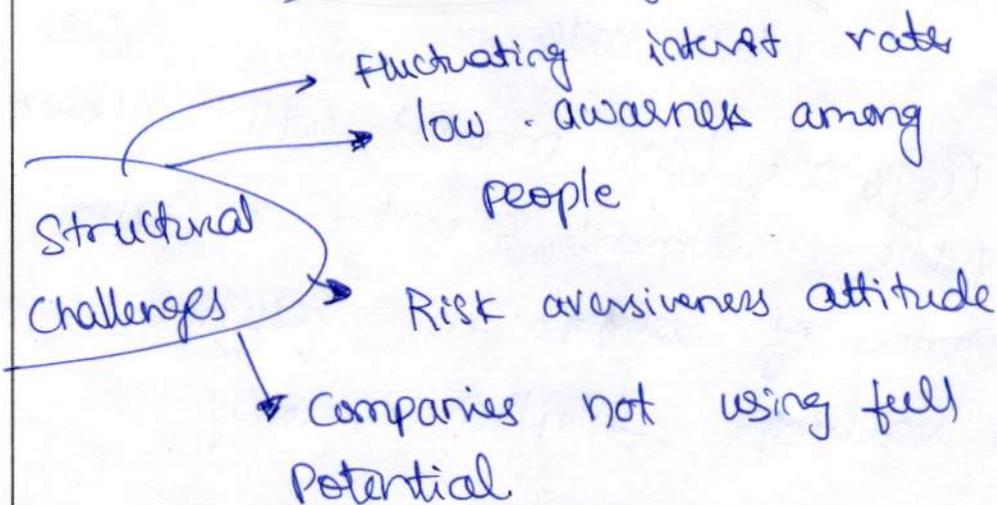
3. Despite its potential, the corporate bond market in India remains underdeveloped. Examine the structural and regulatory challenges impeding its growth.

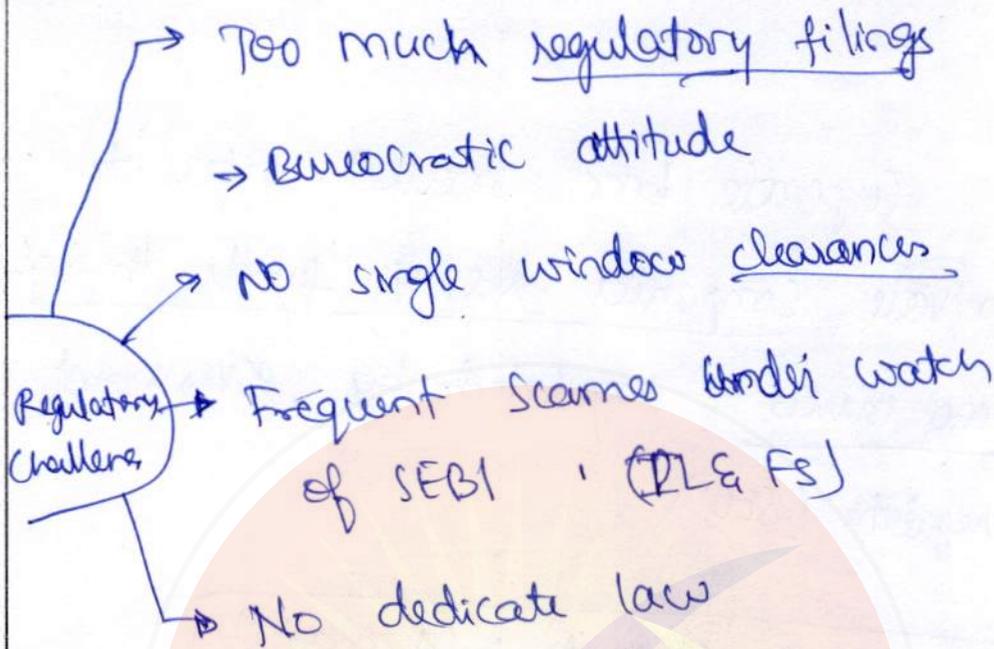
(10 marks, 150 words)

Corporate bond market refers to private companies raising funds through bond market regulated by government regulator (SEBI)

Potential of Corporate bond market

- ① Huge potential of growth ~~is~~ < 10% exploited
- ② Increasing reach of companies
- ③ Good regulatory mechanism \rightarrow SEBI \rightarrow huge public trust





Way forward

- ① Separate law & regulation
- ② Public awareness & trust generation
- ③ Allow free hand & stable interest rates.

Corporate bond market will enhance public investment & makes it equal partner of development resulting in reaching \$ trillion economy

Introduction	
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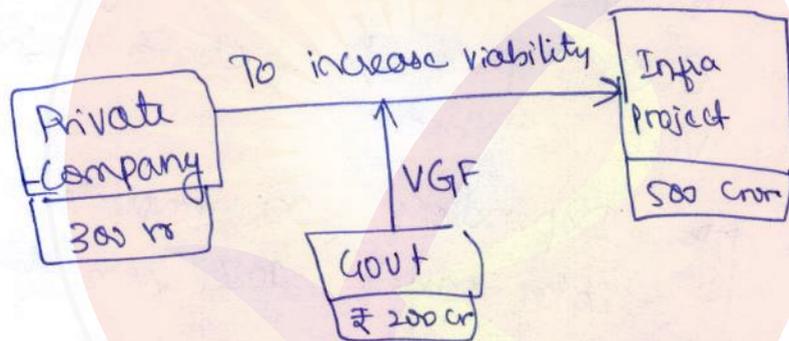
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4. In light of recent Budget 2025 allocations and the push for green infrastructure, analyze how Viability Gap Funding can be leveraged to promote renewable energy projects. (10 marks, 150 words)

Union Budget 2025, saw an substantial increase ~~for~~ in allocation for green infrastructure by allotting 33% more fund than last year.

Viability Gap Funding VGF



VGF to promote renewable energy projects

- ① Special fund allocation
→ 7400 crore for wind energy viability gap funding
- ② Deviates risk between government and Private company
- ③ Sets path towards sustainable growth
govt can direct projects in green path.

④ Attracts private firms in non-viable areas & underdeveloped areas.
Eg: special fund for North-East projects.

⑤ Generates employment for locals
Eg: Govt combining PM-Kaushal Yojna with VGF for local employment

⑥ Multiplying effect
VGF develops a investor friendly ecosystem
eg: One-stop window clearance for VGF scheme

Challenges

- Dependency on imports.
⇒ Solar panels 90% from china
- Transparency in bidding process
- Government cancelling in middle
eg: Assam cancelled projects for IREDA

Way forward

Integrity pacts (Ind ARE) and as Vijay Kelkar committee said there must be lock-in period to enhance VGF projects to promote renewable projects

Introduction	
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5. Why is self-sufficiency in pulse production crucial for India? Discuss the policy and technological interventions needed to achieve Aatma Nirbharata in pulses.
(10 marks, 150 words)

Union Budget 2015 aimed to achieve pulse "Aatma Nirbharata" within five years, to provide "nutritional and food security to all" (Art 21: Right to food)

Self-sufficiency in pulses crucial because

- ① India is largest

{	Producers	of pulses
	Consumer	
	Importer	

"Any threat to supply chain hurts prices & food security"
- ② Reduces trade deficit:
⇒ Currently India's Current Account deficit $\sim 1\%$ of GDP
- ③ Ensures "Overall health security"
Pulses \Rightarrow source of protein for many Indians
- ④ Increases our farmer income
Doubling farmer income (Dalwai committee)
- ⑤ Enhances our Agri productivity & industry employment generate.

Policy interventions needed

- ① Increase MSP for pulses
- ② Unlimited procurement and storage management for all pulses
Eg: Budget announced unlimited procurement for only 3 pulses
- ③ Ease norms under Essential Commodities act, 1955 : To help corporate farming
- ④ Increase funding on R&D
Today: 0.67% of GDP

Technological interventions

- ① Smart Agri management
IoT, Sensors, Fertigation
- ② Hybrid seeds & GM seeds
Climate resilient, higher yields
- ③ Better supply chain management (Block chain)
- ④ Food processing: PM-POSHAN (Ladli)

Hence it helps in achieving SDG-2 (Zero hunger) & Amadatta's welfare from sustainable Agriculture

Introduction	
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Marks:	

6. Examine how space-based solutions are addressing developmental challenges in rural India. What steps can further enhance their outreach and effectiveness?

(10 marks, 150 words)

India currently holds \$300 billion of space based economy potential by 2030
(InSA) Indian Space Association

Space based solution in rural India



Further steps to enhance outreach & effectiveness

① Digital literacy

PM Digital Saksharata Abhiyan

② Net neutrality

⇒ Internet for all. at affordable cost

③ Cyber security : Cyber Swatchta Kendras

④ Skill development in digital economy

⑤ Promote rural start up

⑥ IOT in rural Agriculture

This space-economy holds high potential to make rural India a "Developed Grama" by 2047

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Marks:

7. Delineate the linkages between urbanization patterns and rising PM 2.5 levels in Tier-II and Tier-III cities of India. What are the various mitigation measures and the government's initiatives to mitigate air pollution in India?

(10 marks, 150 words)

As per WHO, 99.98% of people in world are breathing air which do not comply to PM_{2.5} & PM₁₀ standards. India is at top of list with many polluted cities

Urbanization pattern and rising PM_{2.5} levels in Tier II & Tier III cities

① No proper zonation:
⇒ Tier II & Tier III cities lack master plan & implementation. : Intermix of industries and resident areas

② Pollution compliancy is low:
⇒ Due to no dedicate bodies like CPCB, SPCB

③ Mismanagement of waste
⇒ open burning site for solid waste with constant treatment capacity

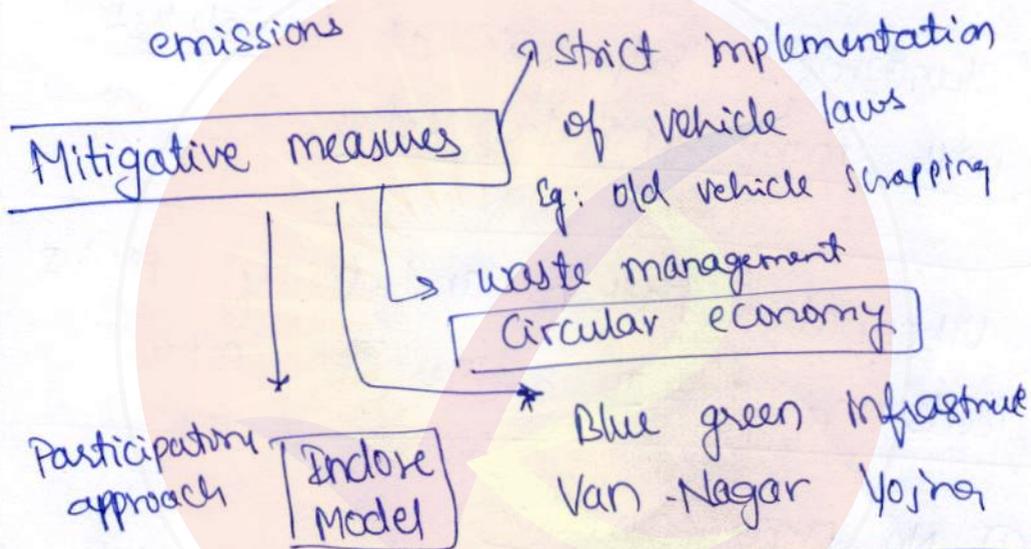
waste generation capacity

④ Lack of public participation and awareness

Eg: People use waste for heat during winter.

⑤ Rising number of vehicles

Added with low fuel quality: Max emissions



① National Clean Air Programme for 100 non-attainment cities

② VAYU portal for monitoring

Swachh Bharath Abhiyan (S) -> Waste management

③

④ - EV vehicle policy: FAME

⑤

E20 fuel for + BS VI vehicles.

Right to pollution free air is fundamental right (Art 21) (Ranjitsinha case) Govt must make it a JAN ANDOLAN

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8. Explain the structural and operational limitations of the Disaster Management Act, 2005. How far does the 2025 Amendment address these deficiencies through a shift towards anticipatory and technology-driven disaster governance?

(10 marks, 150 words)

Increasing disasters in India like Kumbh mela, landslide in Himachal, Plane crash calls for review and reblook at Disaster management framework in India

Limitations of Disaster management act, 2005

Structural	Operational
① No special reference to <u>Urban disasters</u>	① No synergy between <u>local police & SDRF</u>
② <u>Separate planning bodies</u> "SEC" instead of SDMA, DDMA	② Less adoption of technology
③ Funding issues between state & Centre	③ Lack of expertise involvement silkkiyara tunnel experts from Australia
④ Lack of transparency & accountability to yearly planning	④ No set operations for local needs

2025 amendment to DM act, 2005

Shift to anticipatory & tech driven approach

① Introduction of "Urban disaster management authority" (UDMA) (33% of India Urbanized 2011 census)
⇒ More tailored approach

② Use of technology: Drones, AI, GIS
to anticipate disasters.
⇒ Enhances Speed, cost & effectiveness

③ Localized planning:
At state, district and village levels
⇒ Participatory approach

④ Streamlining fund allocation - E-governance

⑤ Upskilling & training disaster management force

Few suggestions → Village level analysis through GIS mapping
↳ local volunteer forces

Thus new amendment upholds "Sendai Framework" in dealing with disasters effectively

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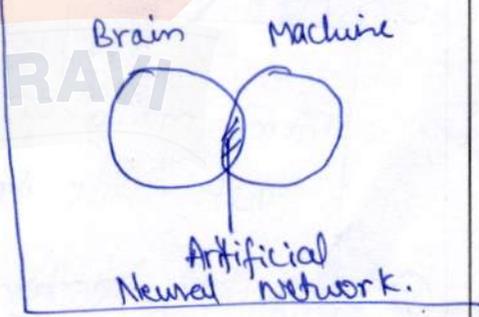
9. What do you understand about Artificial Neural Networks? List out its applications across various fields. (10 marks, 150 words)

Artificial Neural Network is advanced version of Artificial intelligence which mimics human brain in cognitive aspects with data neural links

Eg: Google's deepmind project.

Human brain	Artificial neural network.
⊕ Neurons, myelin sheath	⊕ Nodes, artificial data links
⊕ Absorbs energy in form of ATPs	⊕ Need external energy ⇒ Electricity

They work on principle of Interlinkages, Cross-connection of data Artificial intelligence



Thus it has fair chance of equating to human brains in future

Applications of Artificial Neural Networks

- ① Governance :
 - ⊕ Big data Analysis : Census 2026 data
 - ⊕ Predicting future changes : Silver economy
 - ⊕ Pattern analysis : Growth differentials
- ② Health :
 - ⊕ Augment doctors : Recognize/diagnose
Eg: AI & TB diagnosis disease
 - ⊕ Polymaking : Predicting disease spread rate
- ③ Manufacturing :
 - Smart Industry 5.0
 - Enhance productivity
streamline factories
- ④ Agriculture :
 - Farm management :
 - Weather prediction
 - VARUNA APP
 - Innovation of new hybrids
 - Sustainable Agriculture
- ⑤ Energy sector :
 - New biofuel discovery
 - Better energy usage technology.

Thus ANN has huge potential to many fields in helping humans to grow sustainably within given resources

10. "Internal security challenges in India are increasingly shaped by external and transnational dynamics." Examine the statement with relevant examples.
(10 marks, 150 words)

"Internal security is backbone of Peace and tranquility in the nation"

- Hon. Former PM - Manmohan Singh

Indian Internal security challenges shaped by external & transnational dynamics

① Looming terrorism in neighbourhood

Eg: state sponsored terrorism by neighbours
Eg: Pahgam attack

② Border security risks

⇒ smuggling of arms & drugs
India between Golden triangle & East

Golden crescent
west

③ Maritime risks :

By Piracy in Indian Ocean

Operation Sankalp by Navy

- ④ Ideological movements by transnationals
Eg: Khalisthan movement.
- ⑤ Cross border operations in north east
Eg: Army's Operation Sumat
- ⑥ Risk of Organized crime
→ Exploiting DTAA & Treaty Shopping.
Money laundering.

However there are internal actors too

- ① Left wing extremism: In Red Corridor
Reducing but persistent
- ② Ethnic conflicts: Manipur violence
- ③ Communalism Eg: Nuh violence
- ④ Regionalism: Sons of soil theory
Mumbai violence.

India must follow overall development with Jat-Jangal Jameen (internal) and active deterrence (operation Sindhur) for external to keep peace in the nation

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11. While tariff rationalization aims to enhance economic efficiency, it may also pose challenges to certain sectors. Critically assess the potential trade-offs involved in the Union Budget 2025-26's approach to tariff reforms.

(15 marks, 250 words)

Tariff reforms refer to rationalizing, revising and relooking at various taxes and its implication to increase tax efficiency & more targetted approach.

Tariff rationalization enhances economic efficiency

- ① Basic tax compliance
→ Reduces tax burden on people
- ② Avoids double taxation
- ③ Increases tax collection & transparency

- ④ Increases public / business trust on government

⑤ Enhances tax predictability
sets tone for growth & saving, investment.

⑥ Reduces administration cost
Due to easy compliance

Eg: ① GST online \Rightarrow easy & simple
② e-way taxes

Tariff rationalization poses challenges to certain sectors \rightarrow

① May increase tax burden
Eg: 12% GST on writing pens (Cobalt)

② Tax confusions due to burden of (Inverse tax)

\Rightarrow Input = more tax
Output = less tax

Happened for leather industry

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③ ~~Not~~ Not always positive for all

Eg: GST reduction on entertainment

④ loss to state exchequer

Way forward

① Pre planned consultation to all stakeholders

② Rationalize only benefits most people (Utilitarian approach)

③ Resolve issues of concerned sector with special focus

As Kautilya says "Tax" is one of seven pillars of governance it must be strong & efficient

Introduction

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Presentation

Marks:

12. A shift from fiscal deficit targeting to debt-to-GDP ratio as the fiscal anchor signals a more holistic approach to fiscal discipline. Do you agree? Give reasons in support of your arguments. (15 marks, 250 words)

In recent Economic Survey,
and Rangaraja committee report supported
India should shift targetting
debt-GDP ratio instead of fiscal deficit.

Shift from fiscal deficit to debt to GDP

Yes it is more efficient because

② shortcomings in fiscal deficit

① Combines good & bad debt.

If interest grows differential
is good & debt is not bad

② Leaves out outside debt

→ Borrowed by PSUs & special
vehicles

→ Ctg reported unhealthy
borrowing of Kerala by PSUs

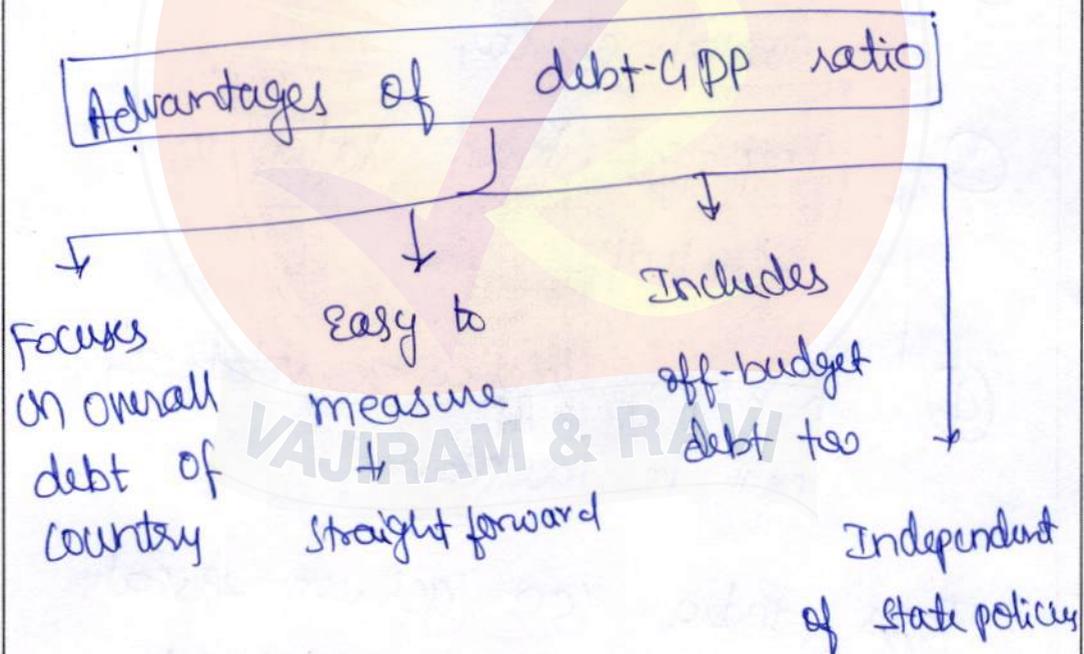
③ Not easy to target

→ FRBM, 2003 act not reached goals in 22 years

④ Due to structural flaws

⑤ Rigid laws under FRBM act

⇒ unable to cope up during difficult times



Target: 40% to centre
20% to states.

More steps

Combination of both | A tailored approach

- ① Debt-to GDP ratio (flexibility to states)
 - ① Must be revised continuously
 - ② State Specific
- ② Focus on internal debt sustainability
- ③ Keeping interest rates in control
- ④ Foreign exchange volatility must be maintained.

Thus India can achieve fiscal discipline with more structural & nuanced updates of data collection management to ~~enhance~~ ^{reach} targets of economy

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Marks:	

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13. India's food processing sector is moving towards greater formalization and efficiency. Critically assess how initiatives like the PLI scheme and Pradhan Mantri Formalisation of Micro Food Enterprises (PM-FME) contribute to this transformation. (15 marks, 250 words)

Indian food processing sector contributes 12% to GVA in total and one of largest (12 million) employes in manufacturing sector.

Moving towards formalization & efficiency

- ① PM Formalization of Micro^{food.} enterprises
 - ② Mega Food parks
 - ③ PM Kishi Sampada Yojna
 - ④ Greater efficiency
 - ⑤ PLI scheme
- Robotics
IoT
New marketing & Packaging

PLI scheme in food processing industry

- ① Gives incentive to extra income generated through production

- ② Enhances local Manufacturing Capacity
Along with Start up India &
Make in India
- ③ Attracts foreign technology &
management skills
⇒ In Packaging eg: UV packaging
- ④ Increases employment in region
- ⑤ Reduces food wastage
⇒ Dalwai Committee 316 million ton waste

PM Formalization of Micro-food industries

- ① Registers small firms through simple firms
- ② Simple taxation (Composite GST)
- ③ Tax incentives in initial years
Start up scheme, ~~ST~~
- ④ Promotes inclusivity
stand up scheme Women, SC ST

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- ⑤ Viability gap funding to procure machines
- ⑥ Interest Subvention in long term loans

Shortcomings

- ① slow implementation
⇒ <50% formalized
- ② PLI scheme only for extra revenue generated, local companies
- ③ Supply chain (cold) issues
⇒ Hurts formalized
- ④ Credit availability still low.
Econ survey ~32% non-institut

PM-POSHAN, Integrated Child Development Programme, Krishi Paripatnaya Yojna, and FSSAI must go for integrated approach for overall benefits

Introduction

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Marks:

14. Do you agree that granting a legal guarantee to Minimum Support Price (MSP) may create a fiscally unsustainable and economically inefficient agricultural system? Suggest viable alternatives to ensure fair farmer remuneration without distorting the market. (15 marks, 250 words)

Minimum support Price is a promise given to farmers of a ^{minimum} price of crop ~~below~~ ^{above} which market will operate:

In case of market crisis state procure crops at MSP.

Granting legal guarantee to MSP and fiscal & economical implications

Negative implications

- ① State financial viability: Burden on states
⇒ Already high fiscal deficit of 4.5% to centre & high debt of states (CAG report)
- ② Market distortion:
→ Disrupts 'free hand'
- ③ Environmental prices
→ Pollution, soil degradation reduced productivity

1. Explain the concept of the "Missing Middle" in India's industrial ecosystem. How does it affect economic growth and employment generation? (10 marks, 150 words)
2. Household savings form a crucial pillar of domestic capital formation. In light of their recent decline, elucidate the underlying causes and propose strategies to strengthen savings behavior in India. (10 marks, 150 words)
3. Despite its potential, the corporate bond market in India remains underdeveloped. Examine the structural and regulatory challenges impeding its growth. (10 marks, 150 words)
4. In light of recent Budget 2025 allocations and the push for green infrastructure, analyze how Viability Gap Funding can be leveraged to promote renewable energy projects. (10 marks, 150 words)
5. Why is self-sufficiency in pulse production crucial for India? Discuss the policy and technological interventions needed to achieve Aatma Nirbharata in pulses. (10 marks, 150 words)
6. Examine how space-based solutions are addressing developmental challenges in rural India. What steps can further enhance their outreach and effectiveness? (10 marks, 150 words)
7. Delineate the linkages between urbanization patterns and rising PM 2.5 levels in Tier-II and Tier-III cities of India. What are the various mitigation measures and the government's initiatives to mitigate air pollution in India? (10 marks, 150 words)
8. Explain the structural and operational limitations of the Disaster Management Act, 2005. How far does the 2025 Amendment address these deficiencies through a shift towards anticipatory and technology-driven disaster governance? (10 marks, 150 words)
9. What do you understand about Artificial Neural Networks? List out its applications across various fields. (10 marks, 150 words)

10. "Internal security challenges in India are increasingly shaped by internal and transnational dynamics." Examine the statement with suitable examples. (10)

11. While tariff rationalization aims to enhance economic growth, it also poses challenges to certain sectors. Critically evaluate the trade-offs involved in the Union Budget 2023 reforms.

12. A shift from fiscal deficit targeting to anchor signals a more holistic approach to budgeting? Do you agree? Give reasons in support of your answer.

13. India's food processing sector has witnessed significant growth and efficiency. Critically evaluate the role of the Pradhan Mantri Fasal Bima Yojana in contributing to this growth.

14. Do you agree that the MSP may not be a sustainable solution for agricultural remuneration?

15. Digital Public Infrastructure is expected to lead the economic growth. Give examples.

16. Analyse the reasons behind the region to landslides. What are the measures for control?

17. Forest fires are yet another symptom of environmental degradation. Analyse various causes for wildfire in forests. Suggest measures to control wildfires. Mention the policies and frameworks for managing wildfire in India.

Sure Shot Test Series 2025

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[Institute for IAS Examination]

GENERAL STUDIES

FULL LENGTH

Test - 3 (GS - 3)

Test Code - A21053503

Maximum Marks

Time Allowed: 3hrs

INSTRUCTIONS

CANDIDATES SHOULD ATTEMPT ALL QUESTIONS.
The number of marks carried by each question is indicated in the margin.

Important: Attempt questions in the "Answer" order in which they are printed in the question paper. Indicate the question number in the answer book.

Leave the first few pages left blank for rough work.

(Don't write anything in this part)

④ No long term efficiency
What is deadline until which farmer needs handholding?
⇒ No guarantee.

⑤ Disrupts crop diversity
⇒ Threat to nutritional security

⑥ Unbalanced management crisis
⇒ If procured management & storage issues persist

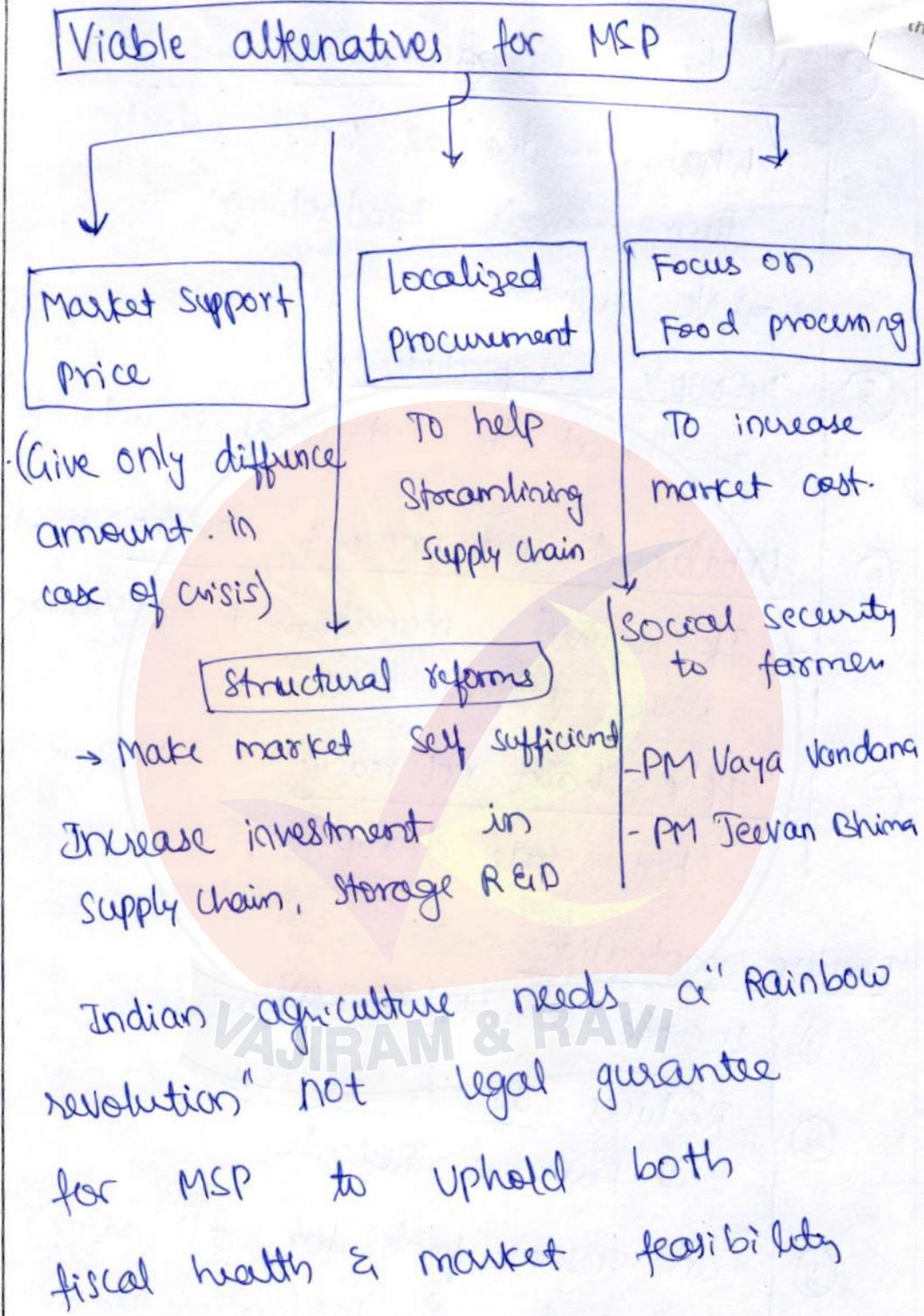
⑦ Supply chain not ready
For state disruption

Positive implication

- ① Income security to farmers
- ② Reduces again distress
→ Farmer suicide
- ③ Can ensure food for all (SDG-2)
(Universal food distribution system)
- ④ Fiscal burden less than
Corporate tax forgone (CAI report)
⇒ Need less than 2 lakh crore

(Don't write anything in this part)

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Marks:	

15. Digital Public Infrastructure (DPI) can empower developing countries to lead the global climate action narrative. Discuss with suitable examples.

(15 marks, 250 words)

Digital economy is poised to reach \$1 trillion by the end of 2025 as per Economic Survey 2024-25 (20% of GDP) Shows important role of DPIs in future

Digital Public Infrastructure

State owned digital infrastructure that provide critical services to public
Eg: Adhar, U-win, UPI.

DPI empowering developing economies to lead global climate action narrative

① Cost efficient energy transition

⇒ DPIs provide affordable transition options

Eg: National portal for solar energy
'PM Surya Char'

② Increases quick information dissemination

Eg: Mygov app used to during launch & spread of Life initiative

③ Reaches nook & corner of country

Higher reach compared to traditional sources
Eg: Kisan credit card for smart agriculture

④ Easy management of grids (electricity)

⇒ Digital management of electricity demands (with AI & big data)

⇒ Efficient use of electricity

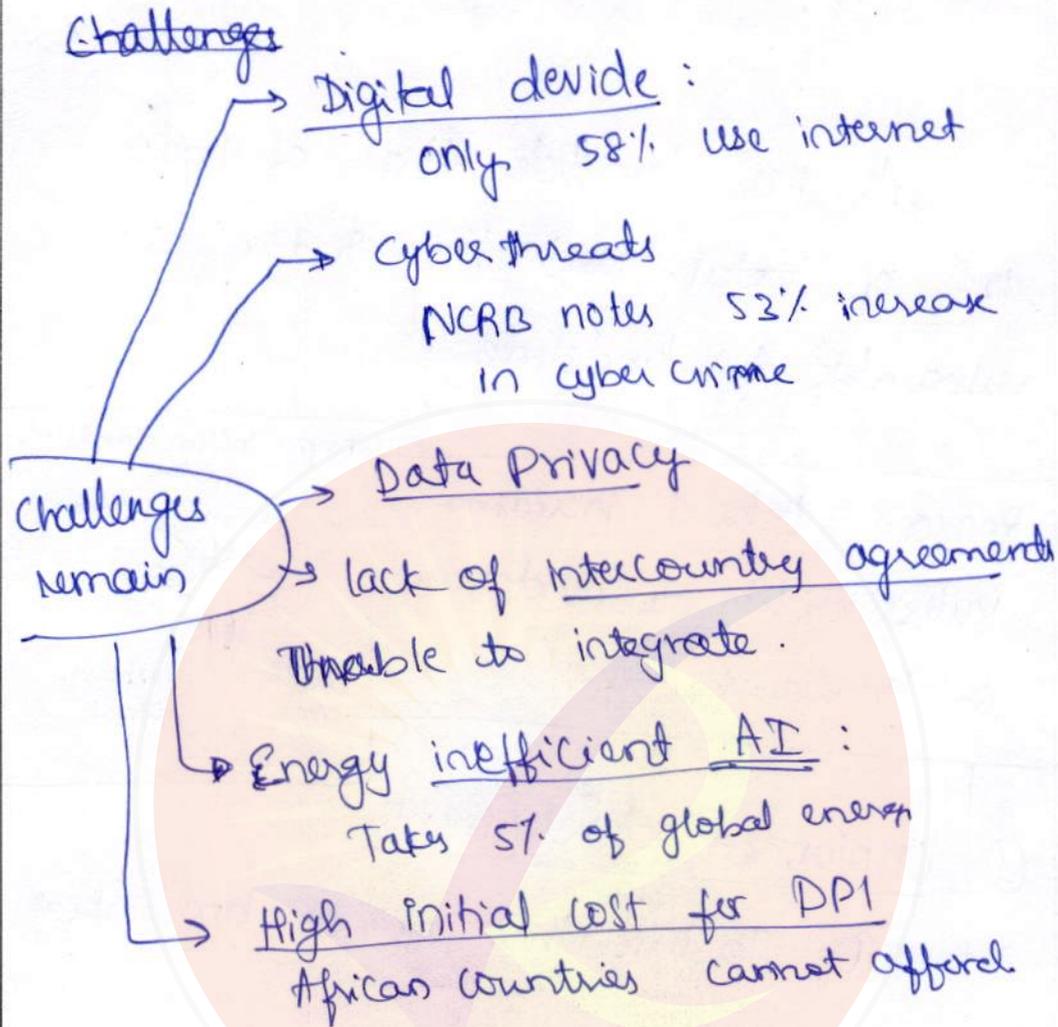
⑤ Push for decentralized growth

with JAM trinity information to adopt to environment. is freely available

Eg: Life initiative

⑥ Intercountry coordination

Open digital Code sources: U-win, CowIN, UPI for replication & integration



- Way forward Gulshan Rai Committee
- ① Increase multidisciplinary approach
Eg: GIS and forest fire mapping
 - ② Invest in R&D. indigenization of tech

"Jai Jawan, Jai Kisan, Jai Anusandhan"

A recent push for R&D will enhance role of DPI in climate justice (SDG-13)

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Marks:

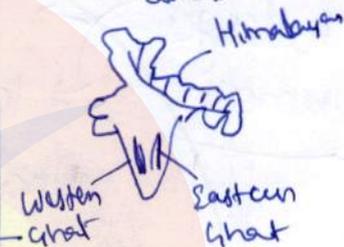
16. Analyse the reasons behind the increasing vulnerability of the Himalayan region to landslides. What steps can be taken for their management and control?

(15 marks, 250 words)

As per landslide Atlas of India 12% of total land in India is vulnerable to landslide

Reasons behind increasing vulnerability to landslides in Himalayan region

Map: Indian landslide areas



① Unplanned development

Eg: Joshimath case of land sinking

② Deforestation for agriculture
infrastructure

Eg: National highway for Chandam Yatra

③ Increasing erratic rainfalls

Eg: Flashfloods in Himachal Pradesh

④ lack of Public concern & accountability

Eg: Peoples Silence on degradation

- ⑤ Unscientific infrastructure development
→ Dams at seismically active zones
→ Roads with Steep slope.

- ⑥ Increasing population in hilly areas.

Over and above Carrying capacity

Eg: Kasturi Rangan Committee notes in western Ghats

steps to be taken for management and control : NPMA guidelines

- ① Increase investment in safety and scientific development.

Eg: Slope stabilization, retaining walls

- ② Prevent deforestation :

Promote afforestation in slopes
Holds soil

③ Environmental Impact Assessment

→ Stricter norms to hilly areas than plain areas

→ Revise NDMA guidelines

④ Climate Adaptation & mitigation measures

→ Through smart agriculture

⑤ Zonation of landslide areas

⑥ Early warning systems

Ex: GPS based study with GIS

⑦ Capacity development & training

Local panchayats & workers to ensure safe infrastructure

Government must adopt

"Environment and Economy: A balanced approach". Aristotle's Golden mean to ensure safety & development

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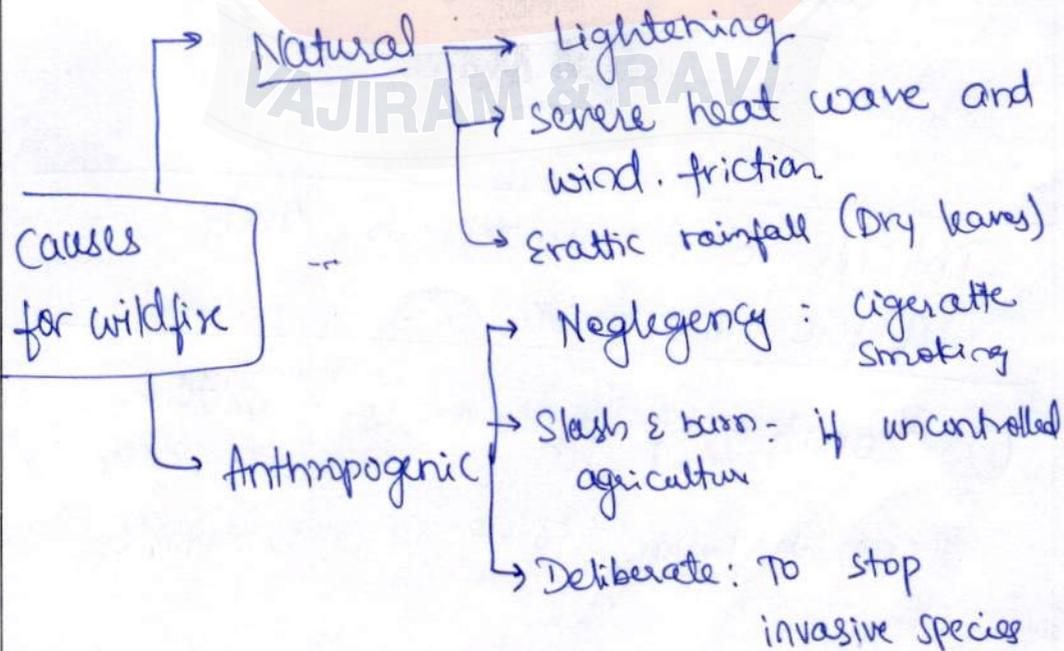
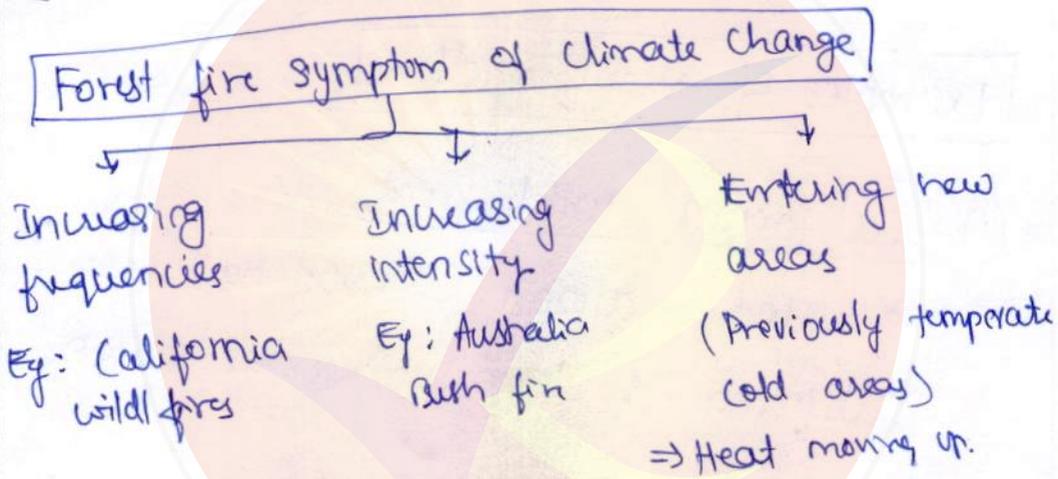
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Marks:

17. Forest fires are yet another symptom of climate change. Analyze the various causes for wildfire in forests. Give two examples of recent wildfires. Mention the policies and frameworks aimed at tackling wildfire in India. (15 marks, 250 words)

As per Ministry of Environment Forest and climate change 36% of forest are prone to forest fire

(India Forest report)



Analysis

It is usually mixture of both natural & anthropogenic that causes forest fire.

Eg: Long summer in Australia
(Positive Indian ocean dipole) } Forest fires
+ Human Camp fire

Examples of recent wildfire

① California wild fires

Engulfed almost 10000 ha in California ; long summer as reason.

② Uttarakhand wild fire (2025 - summer)

→ Due to delayed rain

Policies & framework to curb wildfire in India

① Zonation of forest areas - wildfire proneness

ISRO + Indian Forest Research Institute.

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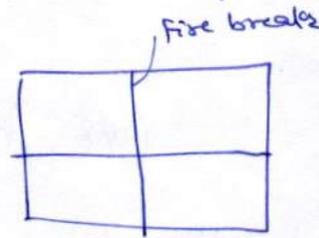
VAJIRAM & RAVI

(Don't write anything in this part)

② Dedicate App for Early warning

APP: VAN AGNI

③ Constant fire breaks
creation by forest official



④ Standard operating procedures under
Forest act & Environment Protection act

⑤ Using indigenous knowledge of tribes

Steps need to be taken

① Designate Forest fire as disaster
in NDMA, 2005

② Technological adoption

⇒ IISc developed AI drones for
forest surveillance & fire fighting

③ Peoples awareness : About do's &
don'ts

④ Restrict tourism in vulnerable areas.

'Forests are lungs of earth' hence

We need to protect them to ensure
& achieve SDG-3 (Health)

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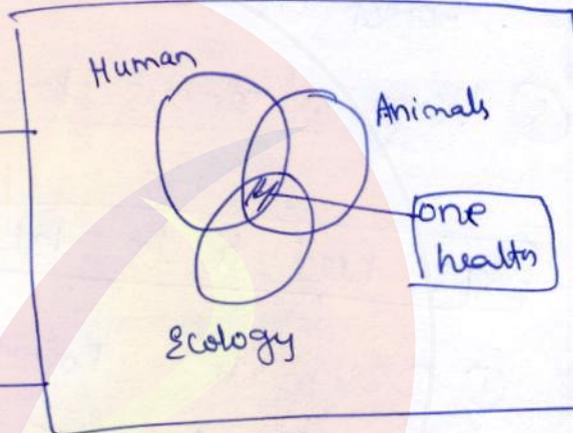
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Marks:

18. One Health approach is key to preventing future pandemics and preserving ecosystems. Analyze how the Biodiversity and Health Global Action Plan adopted at COP 16 aligns with this vision. (15 marks, 250 words)

One health approach combines health of humans, environment and biodiversity to make comprehensive approach.

One health is key to prevent Pandemics



- ① It acts as future predictor for any disease
Eg: Deforestation → zoonotic disease increase
- ② Keeps constant monitoring on ecology & animals
Eg: Virus load in cattle
- ③ Combines climate with health
Heat waves → Rise of communicable disease
↓
Less water → Sanitation issues ↗

One health preserves ecosystem

- ① Vouches for reforestation & afforestation
→ To prevent soil health & maintain soil bacteria.
- ② Advocates for conservation of top predators
⇒ Checks & balance for other animals
eg: Re-introduction of cheetah
- ③ Ecocentric approach : Treats all organisms equally.

Biodiversity & Health Global action plan adopted in COP 16

- ① Enhances intercountry cooperation
eg: To fight diseases, exchange genomic data.
- ② Increases funding for Ecological Conservation (under UNFCCC)
- ③ Participation of local people especially tribals

- ④ Integrated world monitoring of animals & humans
For emerging diseases
- ⑤ Cross-country operations & help during emergency.
- ⑥ Reduce Antibiotic resistance

Steps need to be taken

- ① Global pandemic treaty
⇒ Comprehensive treaty for pandemics.
- ② Support developing countries in funding
An separate fund for one health
- ③ Equitable approach
Across population, gender, ages and regions.

"Vasudhaiva Kutumbakam" principle must be upheld in order to bring 'one health' at centre of health debate

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19. In light of evolving national security threats, how do the New Criminal Laws address modern threats like cybercrime and organized crime? Outline the challenges perceived in its effective implementation.

(15 marks, 250 words)

India is 7th most affected in world due to terrorism, 3rd most vulnerable to cyber security and inter-layered security risk (WEF reports)

Evolving national security threats

1) Physical to digital

⇒ Cybercrimes increased at ~50% annual rate (NCRB 2022)

2) Transnational & multinational threats

Eg: State sponsored terrorism

3) New form of threats

Urban nationalism

Regionalism

Communalism (online)

New Criminal laws in addressing

I Cybercrime :

① Revised IT rules (2023)

→ Gives ethical code & intermediary guidelines

- ② Bharatiya Saksha Adhiniyam
⇒ Accepts digital records as proof
- ③ NATGRID, Indian Cyber Crime Coordination cell
⇒ Special institutions to deal with cybercrimes
- ④ National Blockchain mission
Aim to enhance cyber security with secure blockchain tech

II To fight Organized crime

- ① Fugitive Economic offenders act:
⇒ Addresses transnational money laundering
- ② Foreign Exchange Management act:
⇒ Revised DTAA, Bilateral treaties to avoid treaty shopping
- ③ Specialized institutions: NIA, ED, FIU
- ④ State specific acts:
Eg: Maharashtra organized crime act.
- ⑤ Technology incultation:
Magnetic sensor at ports, airports to fight smuggling of gold, drugs
- ⑥ Training to Police: ~~Research committee~~
→ Malimath committee

Challenges in implementing New laws

① Silo approach

⇒ Centre and state act independently

② Lack of expertise in government

⇒ Especially in cyber security wing.

Due to low economic remunerative.

③ Lack of training to Police personnel

Either implements old law or unaware of new one

Eg: Sedition acts still used in Chargesheet
(No Sedition in BNS)

④ Lack of funding in R&D:

⇒ For innovation in cybersecurity

Eg: Cyberdome for nations: not there

⑤ slow evolving laws

No act on AI & data management

"EU has one"

For national security. "People First"

with technology & continuous revision

are important pillars "security for all"

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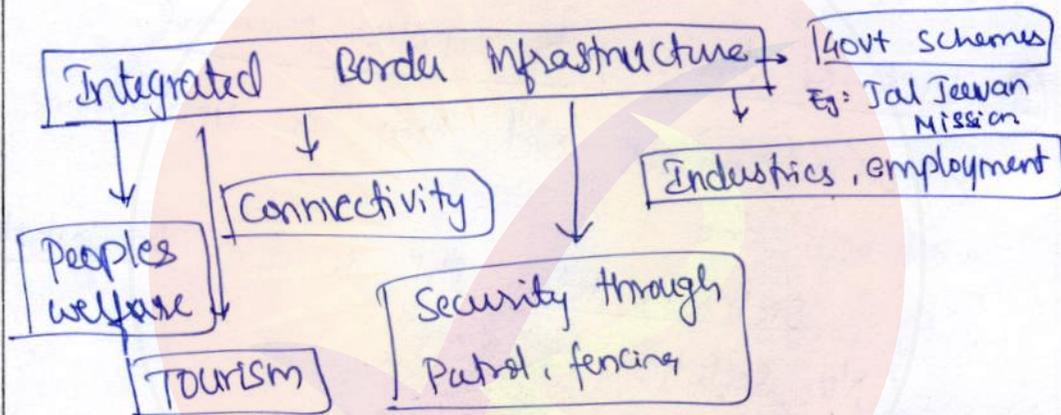
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Marks:

20. Discuss how integrated border infrastructure and management practices can balance security imperatives with the socio-economic development of frontier communities. (15 marks, 250 words)

"Border villages are not last villages but first villages to our country"

- Hon. PM Modi during Vibrant Villages Scheme launch



~~It~~ Balances security and socio-economic development of frontier communities

① Sense of security to communities:

⇒ ~~Creates~~ Trust on government &

Psychological peace

② Reduces ghost villages

By giving hope to people
Eg: Arunachal borders

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③ As a source of national growth
⇒ Border villages many resources like
Forest products (North East), mining
potential (Rajasthan) .. etc

④ Acts as Double security
Eg: Village security councils in J&K.
have licensed guns

⑤ Source of tourism :
Himalayan villages in Ladakh, Himachal
and Sikkim hosts many tourists
eg: Recent Kailash Sarovara Yatra

⑥ Upholds & Protects Cultural ingenuity of locals
Eg: Mishmi tribe Colourful festival
Phong Cham of Ladakh.

However there are challenges for
integrated border management

① Demarcation of boundary
⇒ Not clear with China & Pok region

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- ② Aggressive China in Western border
Eg: Doklam Standoff.
 - ③ Funding & modernization of borders
⇒ At slow pace (Ministry of Defence report)
Only 40% projects complete
 - ④ Territory & environment are fragile
Environment - landslide, flashfloods
Challenge to build road & infra.
 - ⑤ Ethnic differences: in north east.
- Way forward Kargil review committee
- ① Engage locals (Jan Bhardasi)
In planning, development
 - ② Dedicated funds for border development
⇒ like China
 - ③ PPP mode in infrastructure
 - ④ Expand Vibrant Villages Schemes to all areas.
"Winning hearts & mind" strategy
should be used to gain confidence of locals for better border management

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Space for Rough Work



Space for Rough Work

