

VAJIRAM & RAVI

SURE SHOT TEST SERIES 2025

General Studies
Full Length Test
Test - 3 (GS - 3)
Test Code - A21053503

Evaluator Code:
Date of Assignment:
CQ:

NAME:

M. Venkatesh Prasad

Time allowed: 3 Hours

STUDENT ID.:

21VR31190

Email:

UPSC ROLL NO.:

1027724

Submission
Date:

16-08-2025

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 - 11:00 am

End Time - 2:00 pm

Mode of Examination Online

Online Offline

Receiving date -

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

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. 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)

"Missing middle" implies that either small industries (or) large industries are present without any "middle industries".

(e.g.) Udyam registered - 95%, MSMEs are micro industries.

Reasons for "missing middle"

① "Dwarfism" in Indian industry (Economic Survey - 2017)
↓
due to perceived loss of subsidies.

② Upgradation to middle industries from

Small (or) micro ⇒

- 1) Regulatory compliance.
- 2) Implementation of labour codes
- 3) Wage standardisation.

(Don't write anything in this part)

VAJIRAM & RAVI

(Don't write anything in this part)

③ Presence of large industries due to

- a) economies of scale achieved.
- b) Capital intensive and
- c) Technology upgraded.

(es.) BHEL, automobile industry.

d) easier permissions due to heavy investment.

Effect on economic growth

employment.

① Informalisation of economy

① Reduced employment intensity

② low credit growth and informal sources \Rightarrow indebtedness.

② lack of social security & minimum wages

③ low export potential and cannot compete with global firms

③ lack of occupational safety

Initiatives like PLI, NRLM, Udyam registration and Deregulation initiatives are a step in right direction to achieve (25%)

manufacturing goal.

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)

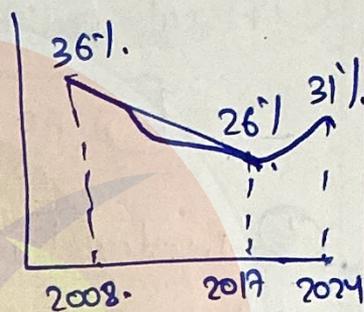
Saving rates in India has declined from about 36% in 2008-09 to 31% in 2023-24 [Economic survey 2023-24].

Domestic Capital Formation

Fixed Capital Formation

Change in stocks

Domestic savings are calculated as credit.



Causes of decline in domestic savings

① Inflation in economy \Rightarrow more spending needed.

② Rise in Household debt driving conspicuous consumption

(eg) Household debt is 43% now.

③ Investment into real estate to buy houses, and other capital assets such as cars.

(Don't write anything in this part)

VAJIRAM & RAVI

(Don't write anything in this part)

④ Uncertainty in economy due to covid-19 and other factors ↓
safer options gold, bonds, mutual funds

Strengthen savings behaviour:

- ① Fiscal prudence in spending by government
- (e.g.) no populist policies.
- ② Investment in health & education ⇒ surplus income to savings.
- ③ Measures to increase savings such as
 - a) Mahila Samman certificates
 - b) Post-office savings rate to be increased.
- ④ Tax incentives → Rationalisation of GST, Income tax debates
(e.g.) 2015-16 budget reforms.

Savings rate is essential for healthy credit cycle & business cycle and hence household saving cycle is a necessity.

Introduction	
Body	
Conclusion	
Presentation	
Marks:	

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 in India consists of unsecured debt financing instruments for business purposes of corporates.

under-developed

→ low number of investors in corporate bonds

→ Ratings of corporate bonds in India is relatively low.

Structural and regulatory challenges

- ① Government as a major borrower ⇒ crowding out effect & high domestic Rate of Interest.
- ② Cheaper loans available at foreign markets.
- ③ Investor confidence in G-bonds is much higher compared to corporate bonds.

④ Instances of default, diversion of funds further lowered investor confidence (e.g. Wendol case 2025)

⑤ <2% of Indian population invests in capital market.

⑥ multiplicity of regulators & regulatory "Cholesterol" [Economic Survey 2017]
- SEBI, PFRDA, IRDAI

⑦ Investment into alternate safe options due to risk aversion nature (e.g. Gold, T-bills).

GIFT city in Gujarat is a step in right direction to enhance Indian corporate Bond market.

Introduction	
Body	
Conclusion	
Presentation	
Marks:	

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)

India's commitment to 50% non-fossil fuel has been realised now with cumulative 110 bn\$ investment. Further VGF can help in tapping unexplored sectors of renewable energy.

Viability Gap Funding entails a dynamic mechanism :-

- a) Private finance shortfalls are supported by government.
- b) Prevent cost-oversuns of projects as timely completion of projects is done.
- c) helps in attracting foreign investment due to government support.
- d) Viability of PPP projects increase.
- e) Banks and lenders confidently lend to Renewable energy due to VGF support.

Thus VAF can be now used for:

① large scale solar power plants ~~micro~~
latest technologies

(e.g.) Bi-facial solar energy plants

② offshore wind energy projects and
wind-farms on land.

③ VAF can be used for Agri-voltaics
and Green-Hydrogen production

④ VAF can also be used for energy
storage systems [Nith ayog - 83 GW requirement]

→ Compressed Air Energy Storage

(e.g.) Kuanool Andhra Pradesh.

→ Battery as storage system (Lit).

Thus, VAF forms a robust mechanism
for viability of Renewable energy installation
to achieve Panchamrit goals of ~~net zero~~
net zero - 2070.

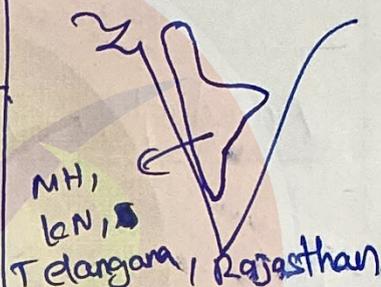
Introduction	
Body	
Conclusion	
Presentation	
Marks:	

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)

Ministry of ~~Finance~~ ^{Agriculture} & Farmers welfare data shows that 11% of 33 bn\$ imports is pulses [4.7 lac tonnes].

Need for self-sufficiency in Pulses

major pulses growing



① Food and nutrition

Security ↓

- good source of proteins

- helps in fighting malnutrition.

[35% - stunting NFHS-5].

② Foreign savings, due to import of pulses

③ Agro-climate based cultivation of pulses

leads to a) water and energy savings

b) environmental sustainability.

④ Post self-sufficiency, scope for exports and food processing industry exists.

Policy and Technological Interventions needed.

I. Policy intervention:

a) Risk assurance mechanism for harvest.
(e.g.) PM-AASHA.

b) Yield enhancement initiatives
(e.g.) Seeds and fertilizers at subsidy.

Accordingly, a) Mission for Atmanirbharata in Pulses (Budget 2025-26)

b) National food security mission
130 seed hubs to be initiated.
have been initiated.

Technological Interventions

a) Kaishi & Site specific farming information
(e.g.) Agastya, Bhar Agari apps.

b) Cost of production to reduce ⇒
access to mechanisation (e.g.) FARMS app

Digital Agri Mission and Atmanirbharata in pulses is essential for SDG 1 & SDG 2.

Introduction	
Body	
Conclusion	
Presentation	
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)

Geospatial Mission in Budget 2025-26 with 200 crore outlay can revolutionise rural development in years to come

Space-based solution → developmental challenge in rural India.

① PM-SVAMITVA scheme — drone based survey of rural habitation areas

↓
a) clear land titling

b) access to formal credit

② Geospatial satellite data can be used for

a) Community disaster plan formulation

ex) shelter homes during landslides

b) Forest Right verification in Tribal hamlets & title rights given to Tribals

c) verification of Tax claims & exemption

based on agricultural income ex) done in Telangana.

③ Satellite data is used for urban-rural linkages and Rurban development
 (ej:) National Rurban mission advocates

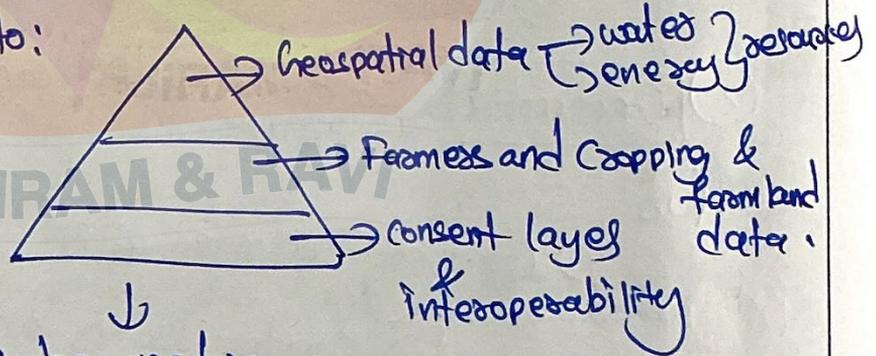
④ Satellite data & communication for Tele medicine services in remote areas

↳ for digital (DTH) based education services

(ej:) TSAT in Telangana.

Steps for further enhancement

① satellite data & Geospatial data data of rural areas into:



↓
 can be used in

a) agri stack for farming solutions

b) Forward and backward linkages, e-commerce development in rural areas

c) Tier 2 & Tier-3 connectivity can be

achieved & in future Satellite Internet.

Introduction	
Body	
Conclusion	
Presentation	
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)

Urbanisation in India is expected to reach 35% by 2030 and 41% by 2049 which will have tremendous impact on PM-2.5 levels in Tier 2 & Tier 3 cities.

Linkages between PM 2.5 levels in Tier 2 & Tier 3 cities

- ① Urban sprawl around major cities not very well regulated.
- ② Construction activities increase without adhering to Green Building codes.
- ③ lack of EV, CNG based automobility & community transport such as metro rises PM2.5 levels.
- ④ Close to farm-fields & concentration of particulate matter due to burning of crop residue.

⑤ Presence of micro-small & medium enterprises with low technology adoption

⑥ Thermal powerplants are generally closer to such cities lead to increase in PM_{2.5} levels

Various mitigation measures

→ enforcement of green Building codes

→ Using farming solutions such as PUSA decomposes instead of burning.

→ Enforcing CNG/EV based public mobility solutions.

(e.g.) EV buses in Telangana.

Government initiatives

① National Clean Air Plan to reduce PM_{2.5} levels in 140 cities

② SAFAR and NAOJ data & warnings.

Tackling air pollution in Tier 2 & Tier 3 cities is a matter of justice & equity

[Ranjit Sinker (2024)]

Introduction

Body

Conclusion

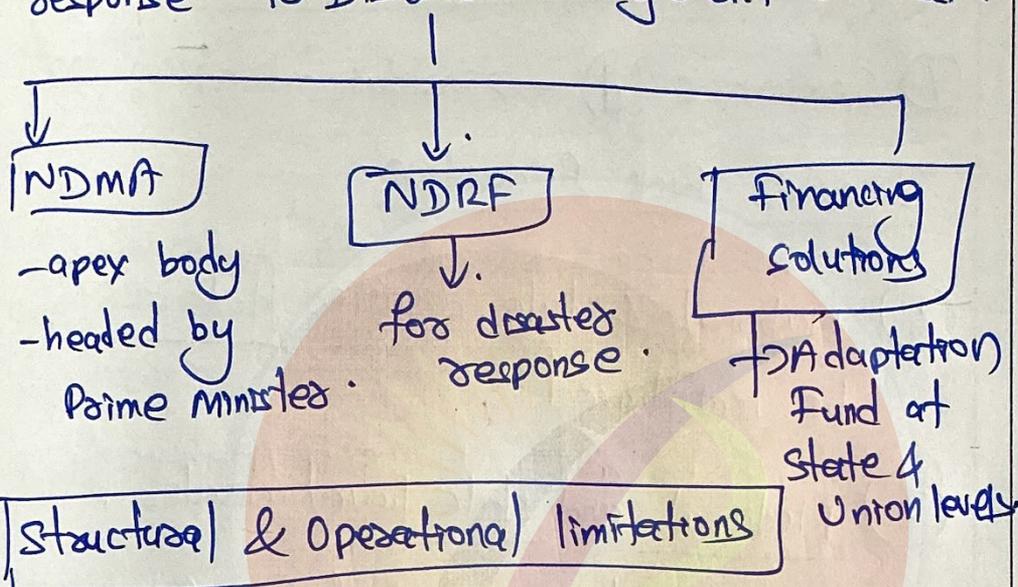
Presentation

Marks:

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)

NDMA Act 2005 enforced for institutionalised response to Disaster management created.



- ① Centralisation of formulation of disaster plans but climate change leading to localised disasters
- ② limited NDRF forces - 12 battalions.
- ③ Rise in Urban disasters
- ④ Need for data-driven, real-time quick response along with long-term localised planning for adaptation & mitigation.

⑤ Lacked institutionalisation of Disaster Risk Reduction.

2025 Amendment & Importance -

- ① Section 2 (d) → institutionalisation of Disaster Risk Reduction.
- ② National & state disasters database to be maintained
- ③ National and state level disaster plans to be prepared by NDMA & SDMA respectively
- ④ Use of AI/ML in realtime monitoring & prediction of disasters
- ⑤ Project Mausam (2025).

⑤ Section of Urban Disaster ~~Response~~ Management Author & State disaster Response Force

Thus, the amendment recognises Sendai Framework of Disaster Risk Reduction into development Planning

Introduction	
Body	
Conclusion	
Presentation	
Marks:	

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

Artificial Neural Networks are human-like neural networks created to train AI models just like how human brain functions.

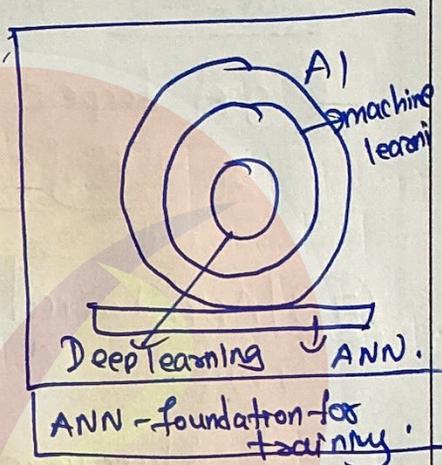
ANN → Applications

① Training AI models to respond like human
(e.g.) chat GPT.

② ANN enhances our understanding of how brain processes informations & receives neural signals (non-invasive learning).

③ Can be used in treatment of neurological disorders treatment,
(e.g.) Huntington, Alzheimer's.

④ Can be used in understanding mental illness and mental support system creation.



⑤ Used in developing Brain-Computer Interface technology

(e.g.) Tesla and Elon-muscle BCI technology

⑥ ANN models can be used to understand historically extinct languages & get deeper insight into history

(e.g.) IVC script.

⑦ ANN Trained AI models find applications in:

→ language translation - Bhashini.

→ creation of LLM for Bhasha then project.

→ Used in Education & Agri cultural domains.

Thus, ANN represents a revolutionary algorithmic technology that can drive us for developing ~~artificial~~ Artificial General Intelligence.

10. "Internal security challenges in India are increasingly shaped by external and transnational dynamics." Examine the statement with relevant examples.

(10 marks, 150 words)

Indian Internal Security amid precarious
border, ~~and~~ geographical and cultural
diversity is also being shaped by
external and transnational dynamics.

Internal Security → external & transnational
dynamics

① left wing extremism → arms & finances
through transnational channels.

② Organised Crime:

① Drug peddling → ^{Iran -} India - Pak - Nepal
border

② Human trafficking → India - Bangladesh
border.

③ Terrorism:

① Social media based recruitment.

eg. Instagram o/hw in Kerala
- NIA.

② Crypto-based funding to terrorists.

④ Cyber warfare.

a) Transactional cyberattacks on India - China - on Bombay powergrid.

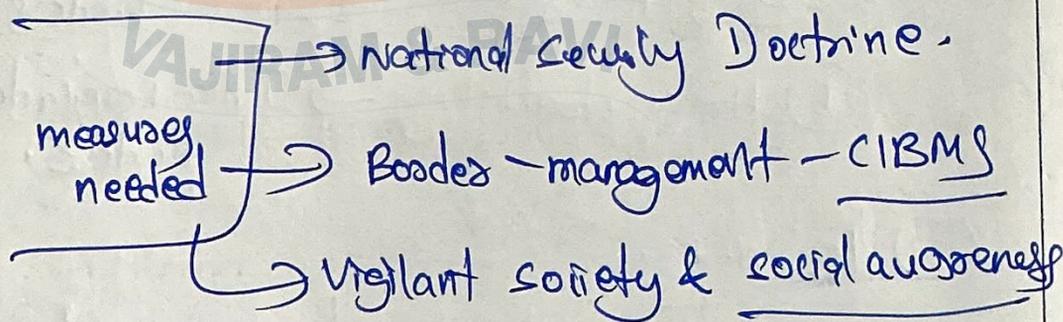
b) espionage activities by Pakistan.

⑤ Radicalisation in Indian Society

a) North Eastern - NSCN-IM - operating with Chinese support.

⑥ NCO's and CO's in Internal security issues

(e!) allegations of NCO's in conversions and illegal migration in North-east.



Internal Security is now changing into 5th dimension warfare with civil society as told by Ajit Dora (NSA).

Introduction	
Body	
Conclusion	
Presentation	
Marks:	

VAJIRAM & RAVI

(Don't write anything in this part)

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)

In the wake of India's attempt to join Global supply chains through FTAs, tariff rationalisation becomes an important reform.

Potential trade-offs to certain sectors due to Tariff rationalisation

① Agricultural and allied sectors - Tariff rationalisation may lead to dumping of agri products affecting Indian farmers.
- 86% are small and marginal farmers.

② Dairy and Animal Husbandary sectors - Australian dairy & western dairy receive huge subsidies \Rightarrow affects rural women livelihoods - $\approx 63\%$ of women in rural areas

③ Textile and Apparel sectors - employs about 4-5 crore people \rightarrow cheap goods may flood Indian market.

(Don't write anything in this part)

VAJIRAM & RAVI

(Don't write anything in this part)

④ Reduces revenue to Union government affecting their welfare capacity

⑤ weaponisation of supply chains and food security issues. may pop up.

(es:) Pulses and edible oil imports.

⑥ May lead to more subsidy spending on vulnerable sectors like

a) MSME's

b) Agriculture & Fisheries, due to under competition

Potential benefits from Rationalisation.

① Attracts investments from other nations

(es:) Food Processing Industry into India.

② leads to FTA's and CEPA's and integration into supply chains.

③ Becomes easier to join multilateral trade blocks like RECP.

④ Easier to navigate China + 1, friendshoring policies.

5) Bargaining leverage against transactions diplomacy of nations for USA.

What needs to be done

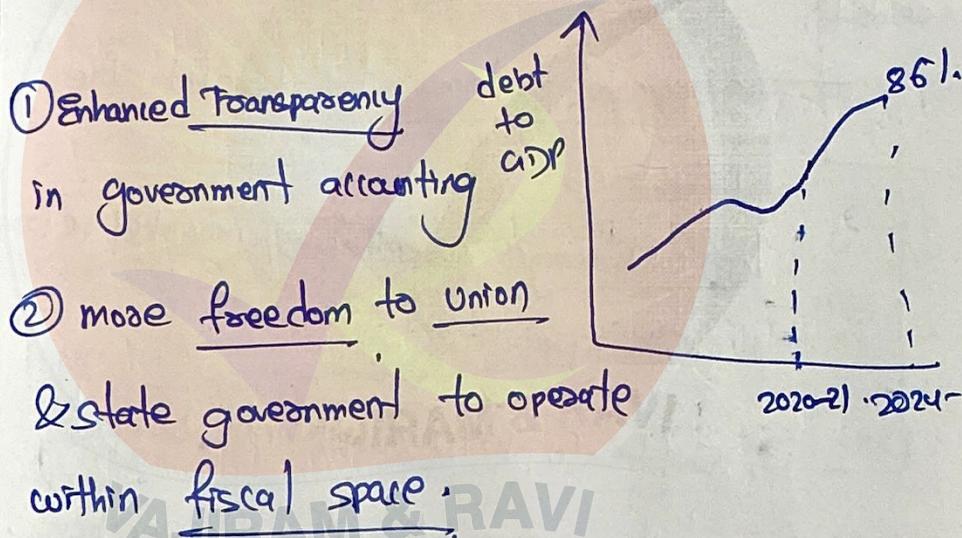
- measures needed
- Stakeholder engagement before large scale tariff rationalisation
Ex: CCT and forum bodies
 - Domestic reforms to benefit the industries
Ex: cold storage, warehousing, market reforms in agriculture.
 - Shift to WTO compliant Direct transfers and incentives to vulnerable sectors.

De-globalisation and necessity of India's integration into global value chains should push for tariff rationalisation and safeguarding domestic economy at the same time.

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)

15th Finance Commission recommended the shift from fiscal deficit to "debt-to-GDP ratio" as fiscal anchor.

advantages due to shift from fiscal deficit to debt-to-GDP ratio.



③ off-budget borrowings can no more be hidden and will be accounted.

④ long-term planning and cascading plans to reduce debt (e.g.) 2025-32 - debt to be reduced to ₹1-497

⑤ Inter-generational equity as debt burden on future is accounted into developmental plans.

⑥ fiscal prudence by state governments enhances national financial stability.

⑦ May attract more foreign investment due to transparency in debt levels.

⑧ Credit ratings of bonds improves due to institutional framework strengthening.

(e.g.) Recent S&P improvement in India's ratings.

Dis-advantages of such a shift.

① FRBM target annual fiscal deficit but the space provided in debt as anchor can be used for fiscal profligacy.

② May lead to more populist schemes from state governments.

(ex:) Ladki Behen Yojana in Maharashtra.

③ May lead to more borrowing from international market and increases external debt.

While the shift has been recommended by N-lc-Singh Committee also, debt-to-GDP ratio as anchor has the potential to achieve long-term fiscal stability balancing with developmental needs of both union & state governments.

VAJIRAM & RAVI

Introduction	
Body	
Conclusion	
Presentation	
Marks:	

VAJIRAM & RAVI

(Don't write anything in this part)

The food processing sector is moving towards greater formalisation and growth. Critically assess how initiatives like the FDI scheme and Pradhan Mantri Formalisation of Micro Food Enterprises (PM-FME) contribute to this transformation.
(5 marks, 250 words)

Food processing sector in India contributed to 90 lac formal employment (67%), 127. to over exports (10 bn\$) - [Economic Survey 2024-25].

FDI scheme	PM-FME scheme
Incentives [4-67%] for <u>incremental sales</u> and <u>investment</u> into industry	<u>Capital & Credit</u> support along with <u>marketing & branding</u> support ② One-district one product

Contributes formalisation through these schemes

- ① Financial Inclusion of these industrial units - due to 4-67% incentive units
- ② Formal credit instead of informal credit.
- ③ mobilisation of women in SHGs and PM-FME ⇒ more women into banking &

④ Udyam portal for registration of MSMEs (PM-FME Units).

⑤ formation of forward & backward linkages due to digital inclusion in these units

i.e.: Samanati Agri services — loans to farmers [backward linkages].

ninja Cast → farmer and e-commerce [forward linkages].

⑥ "ODOP" scheme → marketing, branding, export potential → formalisation.

⑦ EPFO registration and PM-Shiksha Yojana support.

Issues with respect to FPI despite PLI & PM-FME.

① "Dwarfism" — remain of small units leading to low employment potential.

VAJIRAM & RAVI

② lack of diversity in products \Rightarrow
closure of units due to economic
unviability

③ standards and quality requirement
awareness are not clear \rightarrow export
rejection & loss of competitiveness

④ low technology adoption and value
addition \Rightarrow low revenue to units.

⑤ Rising input cost due to:

a) backward linkages to farms are not
formalised.

b) forward linkages to retail stores remain
informal - rec: lack of retailer vars
with APS

Thus, liberalisation of agricultural sector &
promoting contract farming & e-commerce,
can help in further organisation of FPI,

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 price support mechanism announced by union government that gives market an indication of prices and procurement certainty to farmers for 23 crops.

legal guarantee to MSP — unsustainable and inefficient agricultural system.

① Fiscal capacity of the government
is low (cost needed to procure).

② Market distortion by such procurement

a) Prices are disconnected from demand & supply

(ex) Cereal Inflation in India.

b) Food wastage due to insufficient capacity to store.

(ex) Shanta Kumar committee

- (Don't write anything in this part)
- ③ leads to low private investment in
 - a) e-commerce in agriculture,
 - b) food processing sector underdeveloped.
 - ④ further skewed cropping pattern due to only high MSP crops will be grown.
 - ⑤ Environmental damage due to monocropping patterns. \Rightarrow unsustainable food systems.
 - ⑥ long-term unviable option as states lose capacity to produce.
 - ⑦ indebtedness of small farmers, market reforms cannot be possible.

Advantages of MSP as legal guarantee.

- ① May lead to assured income \Rightarrow investment into agriculture increases due to better price realisation.

(Don't write anything in this part)

VAJIRAM & RAVI

② helps in Coop-diversification due to assured procurement

③ Helps in Technology integration & formation of FPO's as assured procurement is there.

④ stops rural distress, indebtedness & farmer suicides.

→ Shift to Direct Benefit Transfers
eg. PM-KISAN.

→ Use of private agencies in procurement, handling of coops

eg. Shanta Kumar Committee recommendation.

→ Investment into storage, warehousing, cold storage facilities

→ Technology integration to formalise supply chain

eg. nirma least startup.

Digital Agri-mission using Agri-stack can be a

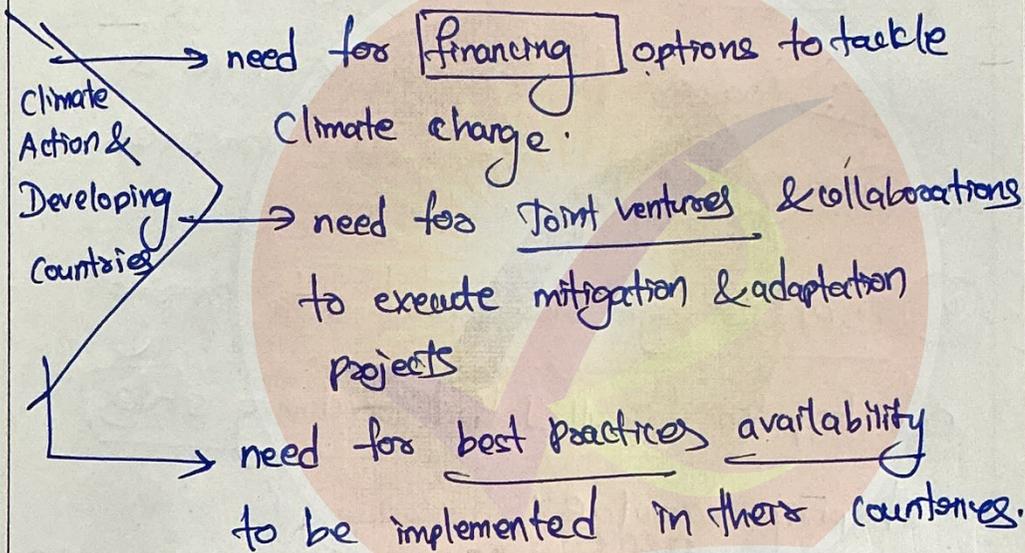
gamechanger for remunerative pricing of agricultural products

Introduction	
Body	
Conclusion	
Presentation	
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 Public Infrastructure refers to open-source data availability, best practices & interoperability to increase its reach and user base.



DPI → developing countries to lead climate action narrative.

① Enhanced Transparency and methods and achievements of climate goals ⇒ more partners are available.

(ex) UNFCCC - Cop 29 - Enhanced Transparency framework for NDC reporting.

② DPI can attract more finances into developing countries & reach commitments as the economy is more formalised.

③ DPI can help in institutional approach to Disaster resilience building

(ex:) Coalition for Disaster Resilience & Sharing of best infrastructure practices.

④ DPI through Geo-spatial data sharing can help in Small Island Developing States shaping narrative.

(ex:) Tuvalu ministers in knee deep water asking for Justice.

⑤ DPI through MARS satellite, NISAR satellite can shape the climate action narrative for CBDR (common but differentiated responsibilities) in action — Methane emission observation.

(ex:) Advocating more NDC commitment from developed world.

⑥ DPI in International arena can help in Renewable Energy transition & shaping climate action narrative -

Ex: Paris deal (COP-21) - India-France ISA
India-UK - "Osowon" - COP-26 (Glasgow)

Challenges in DPI shaping climate narrative.

→ Fiscal capacity of developing countries to adopt DPI

→ Resistance from developed world to act on climate justice.

→ data transparency & reliability issues.

Despite these challenges DPI has the potential to change the narrative in favour of developing world to achieve 1.5°C target of COP-21.

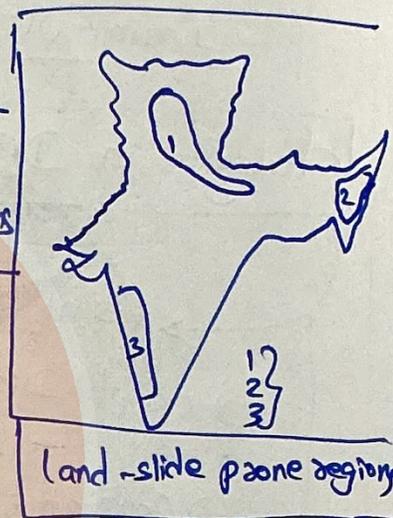
Introduction	
Body	
Conclusion	
Representation	
Remarks:	

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)

ISRO landslide Atlas report state that 12-8% of Indian landmass is prone to landslides.

Reasons behind increasing vulnerability of Himalayan regions



I. natural Reasons

a) Tectonic activity leads to slope instability.

b) minor earthquakes along the region cause landslides.

c) natural slope weakening & changes to vegetation can trigger landslides.

II. Anthropogenic reasons

① Unsustainable Infrastructure development.

Ex. NDMA said → Delhi plan adopted for shimla

- ② Encroachment into flood plains causing landslides
- ③ Vegetation removal leading to slope instability - Deforestation.
- ④ Un^{us}ustainable Urbanisation leading to beyond Carrying capacity of the system
(e.g.) Rudrapurayag landslide
- ⑤ Tourism led solid waste mismanagement
→ soilification
- ⑦ Climate change related events
 - cloud burst
 - hlof triggered landslides.

Steps to be taken for management:

- ① Comprehensive site specific planning for infrastructure development:

(Don't write anything in this part)

VAJIRAM & RAVI

② Slope stabilisation measures

- Afforestation
- NDMA suggestion — Soil hardening techniques such as electro treatment.

③ Sustainable Urbanization practices

- (c) Use of Renewable energy.
- limiting number of tourists

- steps taken
- National landslide Risk management scheme by union government
 - microscale Hazard Zonation and vulnerability mapping
 - Use of satellite technology for real-time slope analysis.

Best Practices from Maharashtra's Madhyamdes land-slide management can be adopted.

Introduction	
Body	
Conclusion	
Presentation	
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)

Forest Survey of India report (2023) states that 33% of Indian forest area is prone to forest fires in India.

Reasons for forest fires

I. Climate change

Global warming ⇒ High temperatures

Sustained by high pressure conditions

Forest fires due to friction between vegetation

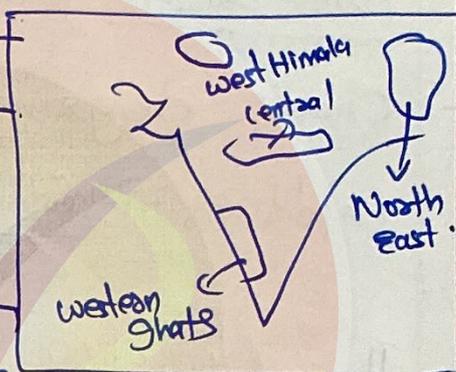
II. Anthropogenic reasons (others)

① Jhum cultivation and spreads of fire.

② Human negligence such as

a) Cigarette buds.

b) Forest dwellers misadventures.



III. Thunderstorms and lightning related forest fires.

Two examples of forest fires

I. Californian forest fires (2023)

(wet season) followed by (dry season) & climate change factors led to devastating wild fires in California USA.

II. Australian wildfires (2024)

→ El-Nino conditions coupled with high pressure for a long time led to forest fires in Australia.

Forest-fire handling in India.

① Forest-fire management framework exists

in India accordingly

- training of forest officials and forest guards are undertaken.

VAJIRAM & RAVI

(2) Hazard Zonation and vulnerability mapping is done and real-time monitoring using satellite is underway
(eg:) NISAR satellite.

(3) Joint Forest management and Community engagement to detect and respond to Forest fires.

What further can be done

- steps needed
- National forest fire management Institute can be setup.
 - Dedicated personnel training with air support needed to tackle.
 - Increased spending on fire management
- currently about 35-50 crore only

Climate change driving forest fire affects our carbon sequestration targets & tribal livelihood. Therefore, institutional approach is necessary to handle it.

Introduction

Body

Conclusion

Presentation

Marks:

(Don't write anything in this part)

VAJIRAM & RAVI

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)



(Don't write anything in this part)

VAJIRAM & RAVI

(Don't write anything in this part)



(Don't write anything in this part)

VAJIRAM & RAVI

(Do any this



Introduction	
Body	
Conclusion	
Presentation	
Marks:	

VAJIRAM & RAVI

(Don't write anything in this part)

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)

New Criminal laws Bharatiya Nyaya Samhita and Bharatiya Sakshyam Adhiniyam aim to address the newage threats in a more systematic and institutional approach.

New Criminal laws to address cybercrime & Organised Crime.

- ① New BNS law incorporated ^{cybercrime,} Organised Crime, Terrorism into the framework.
- ② Digital Technology based investigative procedures are embedded into it.
- ③ Provision for 90 days police custody provides space for investigation.
- ④ Stringent Bail conditions, digital FIR and Zero FIR also enhances operational framework.

⑤ Provisions for response and surveillance in case of cybercrimes and organised crime help in tackling entrenched networks

Challenges perceived in its effective implementation

- ① Involvement of non-state actors across the states and achieving coordination between states is a challenge. (e.g.) Human Trafficking networks.
- ② transnational nature of organised crime and cyber-crime (e.g.) Drug peddling from Iran.
- ③ Use of darknet and social media for carrying out operation
- ④ Plausibility of denial, anonymity, is very high in cybercrime carry

(Don't write anything in this part)

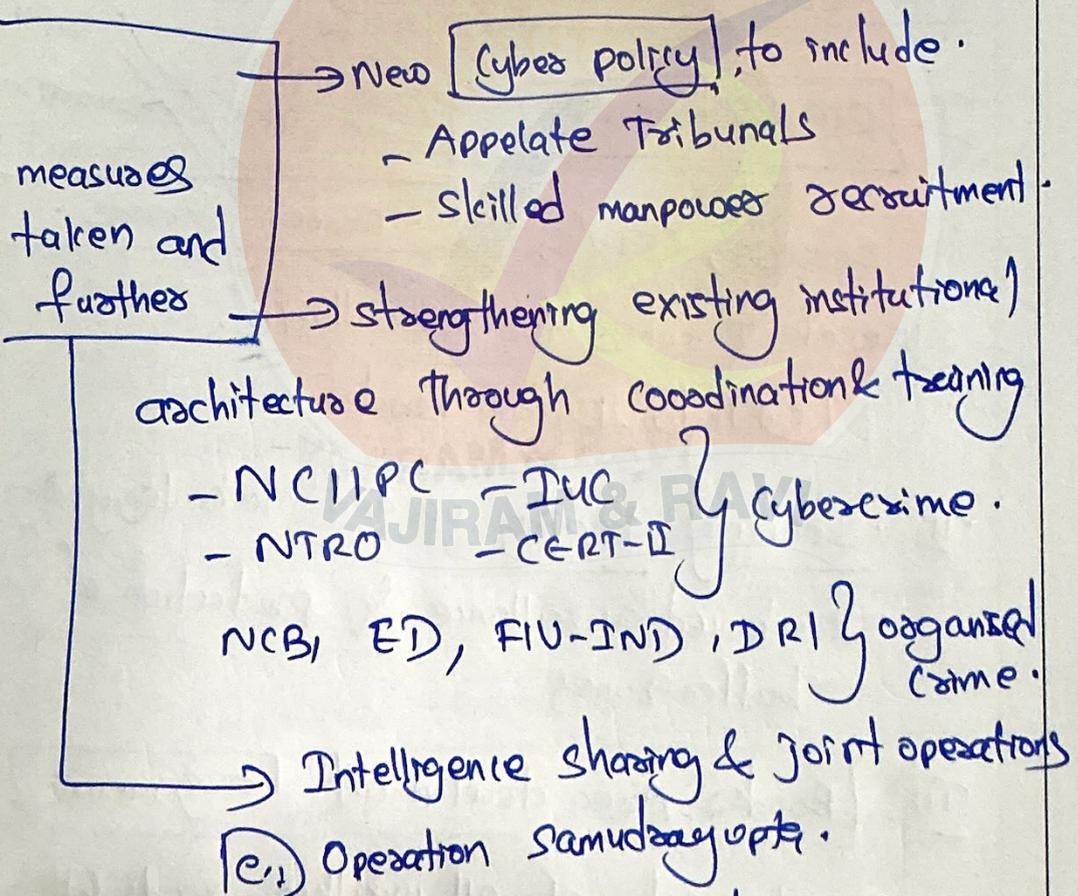
VAJIRAM & RAVI

(Don't write anything in this part)

⑤ Institutional issues such as:

- a) Judicial pendency in handling cases
- b) skilled manpower in police forces.

⑥ Porous borders and loop holes in cyber architecture - enhance vulnerabilities



New laws give a fillip to handle cyber-crime & organised crimes. "Zero Day" vulnerability preparations must be underway.

Introduction
Body
Conclusion
Presentation
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)

Madhukar Gupta Committee suggested for Comprehensive border management along with Socio-economic development of border communities.

Integrated Border Infrastructure and management Practices

I. CIBMS measures

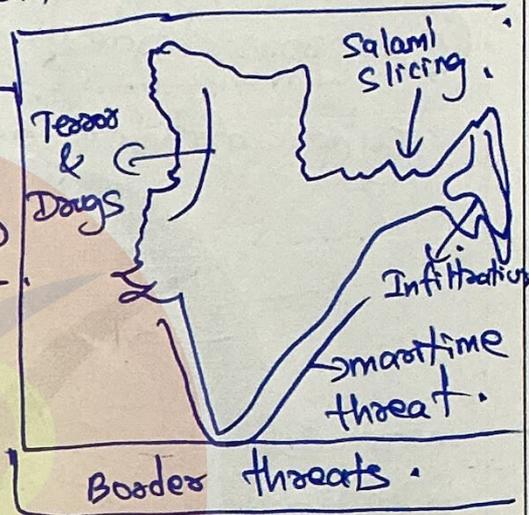
↓
Sensors, CCTVs,
Use of Drones for surveillance.

(i) Indo-Bangla border.

II. Security beefing up and technology integration
⇒ enhanced surveillance & protection of buffer zones

III. Border Area development Programme

- Development of all weather roads & Highway
- Development of air-fields.



VAJIRAM & RAVI

(Don't write anything in this part)

IV Border Infrastructure modernisation scheme.

- a) Upgradation of military outposts.
- b) CCTV surveillance.

V Vibrant village programme.

- Socio-economic development of border villages such as education, health, skilling, Internet, water, electricity supply.

↓
These initiatives balance security imperatives with socio-economic development in following manner:

I. Vibrant village programme.

- maintains stable population
- ground level feedback & intelligence.
- improves terrain awareness and situational response.
- checks incursion & salami slicing
- prevents radicalisation among youth

II. Border management schemes would help in

① Security enhancement towards Border & Locals.

② help in foiling infiltration attempts

(ex: Bangladesh-border)

③ Initiatives like GEMINI in maritime domain can be used for Drug ^{smuggling} surveillance.

④ Builds trust and Human Rights Protections.

Thus, Shelkar Committee recommendations and actions like Operation Sadbhavana,

Operation Himayat can enhance border security as well as socio-economic development.

Introduction	
Body	
Conclusion	
Presentation	
Marks:	

Space for Rough Work

