NEXT IAS

MAINS TEST SERIES 2.0 - 2025 (FLT)

— **(To be filled by candidate)** —

TEST CODE : FLT2503　　　　　　　　　　**Test No. : 03**

Name of Candidate: ......**Aniket Ranjan**...... Mobile No. ......

Roll No. : ...**MT25FLTRA061**... Start Time ...**10:12AM**... End Time...**13:27**...

Date of Examination: ...**15/07/2025**... Medium : English ☑　　Hindi ☐

Q. No.	Maximum Marks	Marks Obtained	Q. No.	Maximum Marks	Marks Obtained
1.	10		11.	15	
2.	10		12.	15	
3.	10		13.	15	
4.	10		14.	15	
5.	10		15.	15	
6.	10		16.	15	
7.	10		17.	15	
8.	10		18.	15	
9.	10		19.	15	
10.	10		20.	15	
TOTAL MARKS - 100			**TOTAL MARKS - 150**		

GRAND TOTAL - ..../ 250　　　　EVAL CODE: .... EVAL DATE: ....

GENERAL INSTRUCTIONS

1. Immediately on receipt of the QCA booklet, please check that this QCA booklet does not have any misprint or torn or missing pages or items, etc. If so, get it replaced by a fresh QCA booklet.
2. Candidates must mention all relevant details like Name, Email, Roll No, Mobile, etc. in the space allocated.
3. Candidate is expected to attempt all 20 questions within the given timeline.
4. Answers must be written in the medium authorized at the time of admission.
5. Candidates must write answers for the specific question under the respective question itself. Any answer written outside the space allotted may not be given credit.
6. Please write neatly. Avoid illegible writing.
7. Do not write/mark irrelevant matters in the QCAB.

सामान्य निर्देश

1. QCA पुस्तिका प्राप्त होने पर कृपया तुरंत जांच लें कि इस QCA पुस्तिका में कोई पृष्ठ या सामग्री आदि गलत छपी हुई या फटी हुई या गायब तो नहीं है। यदि ऐसा है, तो इसे एक नई QCA पुस्तिका से बदल लें।
2. अभ्यर्थियों को सभी प्रासंगिक विवरण जैसे नाम, ईमेल, रोल नंबर, मोबाइल नंबर आदि का आवंटित स्थान पर उल्लेख करना होगा।
3. अभ्यर्थियों से अपेक्षा की जाती है कि वह आवंटित समय-सीमा के भीतर ही सभी 20 प्रश्नों के उत्तर-लेखन का प्रयास करें।
4. प्रत्येक उत्तर, प्रवेश के समय चुनी गयी भाषा के माध्यम में ही लिखे जाने चाहिए।
5. अभ्यर्थियों को विशिष्ट प्रश्न के उत्तर संबंधित प्रश्न के नीचे ही लिखने होंगे। आवंटित स्थान के बाहर लिखे गए किसी भी उत्तर को क्रेडिट नहीं दिया जाएगा।
6. कृपया साफ-सुथरा लिखें। अपठनीय लेखन से बचें।
7. QCAB में अप्रासंगिक तथ्यों को न लिखें / न ही चिह्नित करें।

REMARKS: ....
....

FOR OFFICE USE ONLY

Student Concerns / Query	Evaluator's Feedback / Response
1	1 ....
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2	2 ....
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3	3 ....
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MARKING SCHEME *

Marks Per Ques	Below Average	Average	Above Average
10 Marks	Below 3.00	3.00 - 3.75	4.00 and above
15 Marks	Below 4.50	4.50 - 5.75	6.00 and above

* Subject to change without prior notice.

IMPORTANT QR CODES

Topper's Copy

Common mistake and Correct Filled QCAB

Copy Scanner App

Next IAS Test Centre Location

MACRO COMMENTS

The Purpose of MTS 2.0 Score Improvement Program (SIP) is to provide constructive suggestions on 'How to improve Answer Writing and thereby score better marks.

Q1.

Introduction	Body	Conclusion

Q2.

Introduction	Body	Conclusion

Q3.

Introduction	Body	Conclusion

Q4.

Introduction	Body	Conclusion

Q5.

Introduction	Body	Conclusion

Q6.

Introduction	Body	Conclusion

Q7.

Introduction	Body	Conclusion

Q8.

Introduction	Body	Conclusion
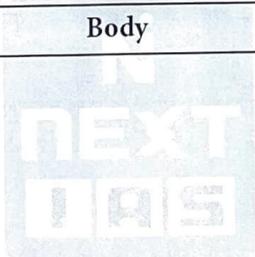
Q9.

Introduction	Body	Conclusion

Q10.

Introduction	Body	Conclusion

Q11.

Introduction	Body	Conclusion

Q12.

Introduction	Body	Conclusion

Q13.

Introduction	Body	Conclusion

Q14.

Introduction	Body	Conclusion

Q15.

Introduction	Body	Conclusion

Q16.

Introduction	Body	Conclusion

Q17.

Introduction	Body	Conclusion

Q18.

Introduction	Body	Conclusion

Q19.

Introduction	Body	Conclusion

Q20.

Introduction	Body	Conclusion

1. सरकारी बजट में जेंडर बजटिंग की ओर हाल ही में किए गये प्रयास महिला सशक्तिकरण के लिए इसके महत्व को दर्शाता है। भारत में जेंडर बजटिंग की दिशा में हालिया पहल और उनके महत्व क्या हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

The recent push towards gender budgeting in the Government Budget reflects its importance for women empowerment. What are the recent initiatives towards gender budgeting in India and their importance?   (Answer in 150 words) 10 Marks

Gender Budgeting means the fiscal policy in which government budget is towards women centric, gender justice and women empowerment.

Importance of the Women Empowerment

① Increases the productivity, savings and GDP growth.

② helps in ushering the women employment.

③ Breaks the patriarchy and glass-Ceiling for women

④ Half of population = Inclusivity, Growth and Improvement of demographic dividend.

Recent initiative of gender budgeting

① Focus on <u>women startups</u> → Economic empowerment, helps in <u>women innovation</u> & <u>growth.</u>

② Public <u>outreach</u> for women health, through <u>UJJWALA</u>, <u>menstrual hygiene</u> → <u>Longevity increased</u> → better demography.

③ Focussing on women Education <u>(NEP2020)</u>
   ↳ Budget is allocated for women.

④ More budgetory allocation to Ministry of <u>women</u> for <u>ICDS</u>, <u>POSHAN 2.0</u>

⑤ Training in ASHA, ANM & more nursing colleges for women.

⑥ SHG - women based :- Government <u>interest subvention</u> to help women.

Thus, the numerous '<u>gender budget</u>' based features helps in the path of making <u>Vikshit Bharat at 2047.</u>

2. बंदरगाह आधारित विकास को भारत में आर्थिक विकास और क्षेत्रीय एकीकरण के प्रमुख चालक के रूप में देखा जाता है। चर्चा कीजिए कि सागरमाला पहल किस प्रकार बंदरगाह आधारित विकास और तटीय अर्थव्यवस्था को बढ़ावा दे सकती है। (उत्तर 150 शब्दों में दीजिए) 10 अंक

Port-led development is seen as a key driver of economic growth and regional integration in India. Discuss how the Sagarmala initiative can promote port-led growth and the coastal economy. (Answer in 150 words) 10 Marks

Ministry of Ports had included 13th port as the Major port and numerous Minor ports in enhancing the logistic sector of the economic growth.

Port is the key driver of Economic growth

① It helps in the forward and backward linkages. eg→ JNPT port from farms to export.

② It reduces the logistics Cost by 20-30%.

③ Promotes pollution free shipment → Green products

④ Generates employment for the laboures in the port area.

Port is the key driver of Regional Integration

① Brings the products from all across the region.

② Focus on farmer producer linkages.

③ Infrastructure growth and Institutional development. eg's SEZ, EEZ in GJ near Kandla port.

④ Converting rural into urban areas near ports.

Sagarmala initiative - port led growth and Coastal economy:-

① It focus on providing better turaround time to ships.

② Ease of doing business - single window clearance.

③ Safety & security through Marine, Naval Officers.

④ PPP mode for better expertise.

Thus, the port led development will bring substantial amount of growth to the Coastal economy.

3. गैर-कृषि अर्थव्यवस्था में पशुपालन के महत्व पर चर्चा कीजिए। पशुपालन को बढ़ावा देने के लिए हाल ही में प्रस्तावित पशुध न जनगणना की क्या आवश्यकता है?

(उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the importance of livestock farming in a non-farm economy. What is the need for the recently proposed livestock census in promoting animal husbandry?

(Answer in 150 words) 10 Marks

Livestock farming is the animal rearing activity in poultry, sheep, goat, etc to earn the income in effective manner. (Livestock farmer is contributing more to economy than farming)

Importance of livestock farming

① Increases the Economic growth in the primary sector.

② Alternate source of Income, ef in case of Crop failure, Seasonal disaparity.

③ It is the perennial source of Income, doesn't depend on the Monsoon, market-related vagaries, etc.

Need for the livestock related Census

① To know the _extant_ of the people engaged in _livestock_

② The kind of _disease_ and _vetenary doctors_ available.

③ Focussing on how to process the product of Animals through Marketing. (eg: licious, Blinkit, etc.

④ To provide _Institutional_ support by Ministry of _Animal Husbandry._

⑤ _Awareness_ & _Outreach_ on how to better Case for the Animals.

Thus, the _livestock rearing sector_ present a greater scope for the economic growth & _Census_ was the step in doing so.

4. न्यूनतम समर्थन मूल्य किसानों की आय को बढ़ाने में कैसे मदद कर सकते हैं? न्यूनतम समर्थन मूल्य का लाभ प्राप्त करने में किसानों को किन चुनौतियों का सामना करना पड़ता है? (उत्तर 150 शब्दों में दीजिए) 10 अंक

How can minimum support prices help in promoting farmers' income? What are the challenges faced by farmers in accessing the benefits of minimum support prices?

(Answer in 150 words) 10 Marks

Minimum Support Price (MSP) is the minimum price paid by the government before the sowing period on 22 crops

MSP is generally paid on 2 crops in Majority — Rice & Wheat

MSP — helping the Farmer's Income

① Provide a fix price assurance to the farmer.

② Farmer can bargain in the market above the MSP.

③ Protect against the Income loss due to certain external vagaries.

④ Protect against the monopolies of the Corporates, APMC intermediaries.

challenges faced by farmers :-

① Exclusion & Inclusion errors.

② Transport issues by taking it to APMC, e-NAM warehouses, etc.

③ Digital divide as MSP is Adhar based.

④ Nexus of officials and APMC (Sahukars)
↳ impacts small & Marginal farmers.

⑤ Corporate who take farm product on contract → fails to procure even in MSP.

⑥ Lack of proper Awareness among farmers.

Thus, the need is for proper public outreach and implementation of Dalwai Mehta & Shanta kr. Committee in the progess of doubling the far.mer income in the coming time.

5. कृत्रिम तंत्रिका नेटवर्क क्या हैं? मशीन लर्निंग और कृत्रिम बुद्धिमत्ता में उनके महत्व पर चर्चा कीजिए।

(उत्तर 150 शब्दों में दीजिए) 10 अंक

What are artificial neural networks? Discuss their importance in machine learning and artificial intelligence.   (Answer in 150 words) 10 Marks

Artificial neural networks are the networks of connection between the nodes of the Artificial Intelligent software system. It is based on the process of Deep learning, a part of Machine learning

eg:- seen in ChatGpt 4.0, Gemini, Brain Computer Interface, Codes.

Artificial Neural Network

Importance of Artificial Neural Networks in Machine learning are:-

① Error free learning of the data sets.

② It focuses on better synchronisation of the available data to feed in the process of deep learning.

③ help us to understand the brain neural system

④ It will further help in better output & results.

Importance of Artificial neural network in Artificial Intelligence

① More nuanced result just like the human brain.

② deals with complex task in the time bound manner.

③ better judgement capacity in solving complex issues.

④ helps in precision work (eg) → Robotics, engineering, Modelling.

⑤ helps in simulating the different experience.

Artificial neural network is the advanced way of training the Machines to perform like human beings.

6. रक्षा क्षेत्र और आधुनिक युद्ध में मानव रहित हवाई वाहनों (यूएवी) के महत्व पर चर्चा कीजिए।

(उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the importance of Unmanned Aerial Vehicles (UAVs) in the defense sector and modern warfare. (Answer in 150 words) 10 Marks

The drone attacks in the Palagam terror response during Operation Sindoor is the testimony that Unmanned Aerial vehicles (UAV) are gaining importance.

Importance of UAV in defense sector and Modern Warfare :—

① Kinetic warefare, requires pin-point precision attack — UAV does that.

② It drops the bombs, explosives on the targetted location.

③ It helps in surveillance in the Mountaneous area of Himalayas and over oceans as well.

④ It help in detecting & Countering drone attacks as well.

⑤ AI based drone helps in remote sensing.

⑥ Deeper Manueverebility → as said by Raj Shukla (Lt. General)

⑦ helps in Monitoring the area through night vision Cameras.

(eg) → In URI Attack

⑧ Provide food, Arms, & Other Support and transport to soldiers who are at higher, difficult location.

⑨ It is needed in the hour of the hostile neighbour for flexibility in the attack.

Drones are the new weapon of the defense capabilities. Indias Research and development team is focussing on Indigeneous drone development.

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7. समुद्री और तटीय पारिस्थितिकी तंत्र पर तेल रिसाव के पर्यावरणीय प्रभावों की जांच कीजिए। तेल रिसाव की सफाई के लिए इस्तेमाल की जाने वाली विभिन्न विधियाँ क्या हैं?   (उत्तर 150 शब्दों में दीजिए) 10 अंक

Examine the environmental impacts of oil spills on marine and coastal ecosystems. What are the various methods used for cleaning-up of oil spills?

(Answer in 150 words) 10 Marks

Oil spills are the marine pollution that are caused during crude oil exploration and transportation from offshore areas to oneshore.

Environmental Impacts of oil spills on Marine and Coastal ecosystems are:-

① Affects the aquatic ecosystem.

② Affects the global heat circulation as it impact evaporation and precipitation.

③ Impact the Coastal fishing economy and has adverse impact on livelihoods of fisherman

④ promotes ocean deoxygenation
and issue of eutrophication.

⑤ It can also lead to ocean
fires and pollutants penetrating
aquatic animals → Bio magnification
and Bioaccumulation

Methods used for cleaning oil- spills

① Fractional distillation on board
to collect & refine the oil.

② Oil Collection machines needs to
be installed on oceans to filter
it out.

③ Genetic engineering of Bacteria,
fungi for oil Remediation.

④ Research and development in cleaning
the oil through scientist collaboration.

Oil spills had the adverse impact on
the marine system, that needs to be
                        handled effectively.

8. भूकंप संबंधी आपदाओं के प्रति उत्तरी भारत की संवेदनशीलता पर चर्चा कीजिए। उनके प्रभावों को कम करने में भारत की तैयारियों पर प्रकाश डालें।   (उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss the vulnerability of northern India to earthquake-related disasters. Highlight India's preparedness in mitigating their impacts.   (Answer in 150 words) 10 Marks

60% of the Indian landmass is vulnerable to the earthquake-related disasters in India.

$$\text{Disaster of Earthquake} = \frac{\text{Risk} \times \text{Vulnerability}}{\text{Capacity to Cope}}$$
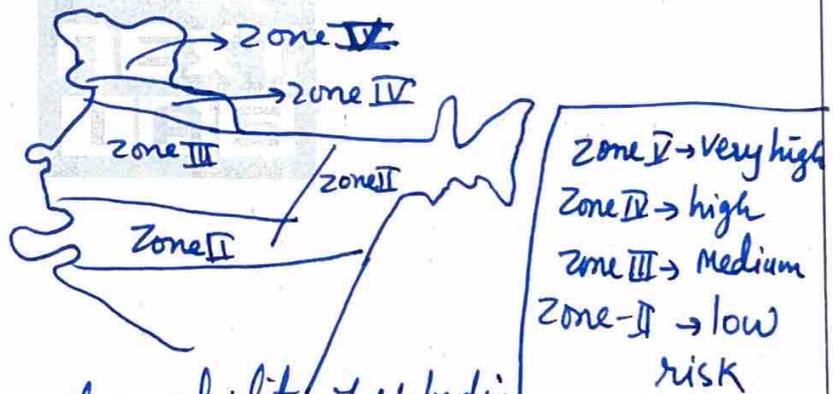
fig: Earthquake vulnerability of N.India

Zone V → Very high
Zone IV → high
Zone III → Medium
Zone-II → low risk

Vulnerability of North India due to Earthquakes :-

① Unstable himalayan rocks → due to tectonic plates.

② Construction of dams on rivers eg → Tapovan dam.

③ Flash floods → Creates shaking of the earth.

④ High population density → pressure on the earth. → eg. Delhi.

⑤ Avalanches, Liquefactions all creates pressure on the North India.

India's preparedness in Mitigating the impacts :-

① Earth Quake resilient buildings to cope up with seismic waves.

② Early detection & warning of seismic waves.

③ NDMA guidelines in public awareness.

④ Need of Environmental & Earthquake Impact assessment of areas.

⑤ Coordination & Collaboration of IMD, NDRF and SDRF teams.

Earthquake is the Calamity that can be controlled only through proactive & vigilant methods.

9. चर्चा करें कि क्रिप्टोकरेंसी और अन्य उभरती प्रौद्योगिकियां मनी लॉन्ड्रिंग और आतंकवाद के वित्तपोषण के खतरे में कैसे योगदान करती हैं। इस समस्या से निपटने के लिए भारत सरकार द्वारा क्या कदम उठाए गए हैं?

(उत्तर 150 शब्दों में दीजिए) 10 अंक

Discuss how cryptocurrency and other emerging technologies contribute to the menace of money laundering and terror financing. What steps have been undertaken by the Government of India to tackle this issue? (Answer in 150 words) 10 Marks

Cyptocurrency, AI (deepfakes), Hawala are the emerging technology that helps in Money laundering and terror financing.

FATF told that Country lose substantial amount of GDP due to Money laundering

Crypocurrency Contributing to Money laundering & terror financing by:-

① Data encryption → send to terrorist and money is laundered and financed the terrorist.

② Youtube, facebook → helps in Indoctrination, Arms, smuggling → financing terror.

③ Opium trade through digital channel
→ Money laundered & terror financed.

④ Funding of <u>NGOs</u> and then providing money to terrorist groups.

Steps undertaken to control the issue

① <u>NIA, ED</u> and <u>PMLA</u> laws in action.

② <u>Interpol</u> and <u>foreign government</u> support.

③ <u>FCRA</u> amendments for <u>NGOs</u>.

④ Breaking the <u>insiders</u> and <u>terrorists</u> <u>nexus</u>.

⑤ Counter digital propaganda.

⑥ National <u>CyberCrime</u> portal, I4C, etc

Government is taking adequate measures to control the impact of <u>digital</u> technologies in Curbing ML & terror financing.

10. हाइब्रिड युद्ध क्या है? यह पारंपरिक युद्ध से किस प्रकार भिन्न है? भारत हाइब्रिड युद्ध की चुनौतियों का सामना किस प्रकार कर सकता है?

(उत्तर 150 शब्दों में दीजिए) 10 अंक

What is hybrid warfare? How is it different from conventional warfare? How can India navigate the challenge of hybrid warfare? (Answer in 150 words) 10 Marks

Hybrid warfare is the amalgamation of the Conventional warfare (Arms, Missiles,) and Information warfare (Misinformation, fake news) to navigate the war.

Hybrid warfare	Conventional Warfare
① Information + Traditional warfare	① Use of arms, ammunition to stop the war.
② Greater Casualities due to information asymmetries.	② Impact is less due to weak information system.
③ Attacks the Civilians as well.	③ limited to army & military personnels.

India — Navigating the challenge

① Focus on the <u>Civil- Military</u> fusion for information sharing

② Use of <u>Drone</u>, Satellite Imagery for better Coordination.

⑤ Need for Media <u>Censorship</u> on the Defense movement.

④ Public control over <u>fake news</u> through I4C, National portal of Cyber crime.

③ Technology transfer from the <u>friendly</u> nations like <u>Russia</u>, Japan, etc.

Hybrid nature of war demand a proactive <u>approach</u> in dealing this crisis situation.

11. भारत द्वारा मजबूत डिजिटल अर्थव्यवस्था के लिए प्रयास करने के बावजूद, भारत को डिजिटल समावेशन के संबंध में चुनौतियों का सामना करना पड़ रहा है। चर्चा कीजिए। डिजिटल संसाधनों तक समान पहुँच सुनिश्चित करने के उपाय सुझाएँ।

(उत्तर 250 शब्दों में दीजिए) 15 अंक

Despite India's push for a <u>robust digital economy</u>, India faces challenges with regard to <u>digital inclusion</u>. Discuss. Suggest measures to ensure equitable access to digital resources.

(Answer in 250 words) 15 Marks

<u>Digital India</u> was proposed by the Government to boost the <u>financial inclusion</u>, <u>regional development</u>, but there are issues of <u>digital divide</u> that are bottleneck for India in achieving <u>$5 trillion economy</u>.

| Robust Digital Indian Economy |

1) For Governence System :→ Schemes like <u>Digilocker</u>, <u>GST filing</u>, iGOT (Mission Karmyogi)

2) Fo <u>better service delivery</u> :- AePs of MGNREGA, GIS tagging of Panchayat Assets, etc.

3) For <u>Accountability</u> :→ RTI, e-Citizen charter, IRCTC App,

4) For Grievance redressal: CPGRAMS, My Gov. in.

5) <u>Health</u> - Ayushman Bharat digital ID, TKDL, e-NAM, <u>BHIM UPI</u>, etc.

However, the challenges with regards to digital inclusion are:-

① <u>Digital Divide</u> : Among <u>Rural-Urban</u> <u>Rich-poor</u>, <u>Upper-class - lower class.</u> As per (NITI Aayog) → women are <u>40%</u> less digitally active than Man (<u>gender</u> <u>digital divide</u>)

② <u>Digital illiteracy</u> :→ People are unaware of <u>operation of Mobile, digital</u> <u>divides.</u>

③ Frauds, <u>scams</u> like Digital Arrest, fake OTP. (eg)→ A farmer from Bihar - [Katihar] lost <u>5 lakhs</u> due to digital arrest.

Candidates must not write on this margin.

(4) <u>lack of public outreach of Internet.</u>

↳ Only few <u>gram panchayats</u> are Internet ready.

[Measures for Equitable access are ;—]

① Focus on <u>Community Service Centre upgradation</u> and <u>Maintenance.</u>

② Proactiveness in [Bharatnet] penetration to Gram Panchayats.

③ <u>Gender sensitive</u> training through [Internet Mitra], NGOs, Civil societies, etc.

④ Take the [CSR] help to fill the governance vacuum.

⑤ In Tribal areas, [EMRS], <u>Vigyan kendra</u>, Anthropologist would helps.

⑥ Maintain & fix <u>accountability</u> of officers through <u>audit.</u>

Thus, the dream of <u>Bharat</u> in becoming <u>Ek Bharat shreshtha Bharat</u> is in the filling loopholes in <u>digital inclusion.</u>

12. जैसे-जैसे कृत्रिम बुद्धिमत्ता अर्थव्यवस्था के विभिन्न क्षेत्रों में प्रवेश कर रही है, वैसे-वैसे नौकरियों का खत्म होना एक वास्तविकता बनती जा रही है। रोजगार पर एआई के प्रभावों का विश्लेषण करते हुए, इस चुनौती से निपटने और रोजगार वृद्धि को बढ़ावा देने के उपाय सुझाएं।   (उत्तर 250 शब्दों में दीजिए) 15 अंक

As artificial intelligence penetrates into various sectors of the economy, job losses are becoming a reality. Analysing the impacts of AI on employment, suggest measures to navigate this challenge and promote job growth.   (Answer in 250 words) 15 Marks

Economic Survey (2024-25) has told about the loses of low-skilled jobs due to advent of new IT revolution, Artificial Intelligence (AI).

AI has potential of taking Jobs of millions of people — IMF, WB

AI takes over BPO, — AI in Car, Automobile Manufacturing.
Call centres   → SC uses AI Saransh,
                                             SUPACE → for
                                             effectiveness.

Soil, land ←   Penetration
analysis   of AI
(GIS Mapping)
                                        → INS Nilgiri → AI
                                          enabled fighter
                      ↓   Naval ship.
          Predictive Analysis
          of Cyclone, Tsunami,
          Weather (Mausam Project)
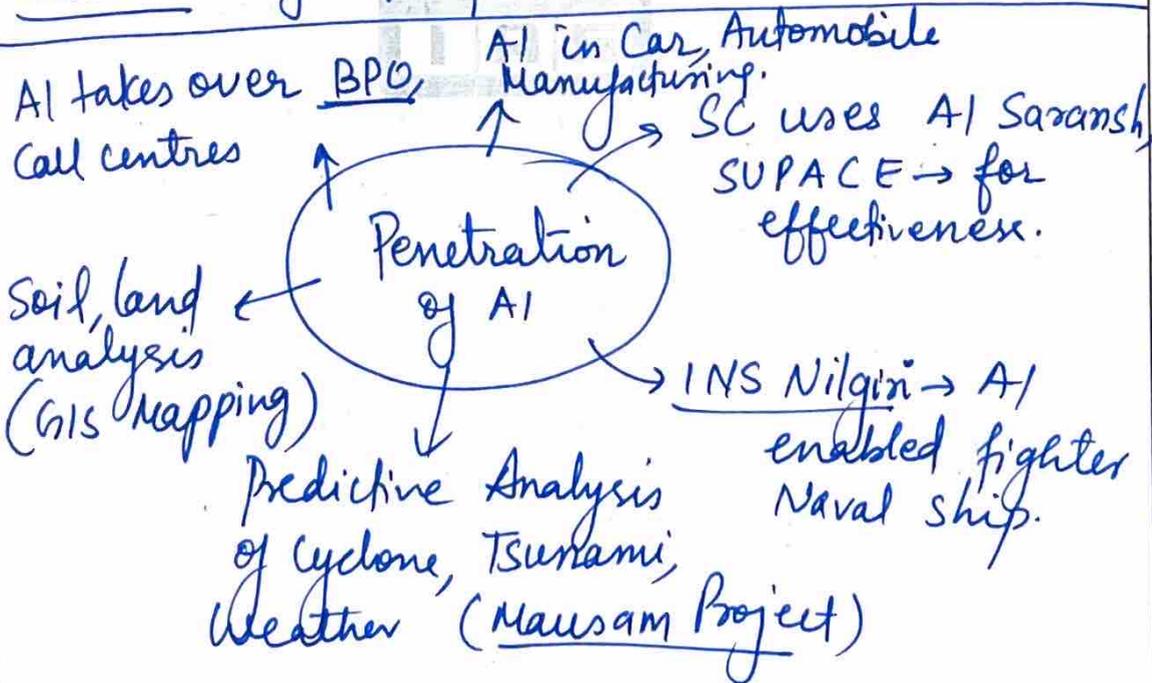
AI is mostly taking place in the service sector and to some extent in the Manufacturing sector.

Impact of AI on employment.

① low skilled jobs like <u>BPO</u>, <u>Call centres</u>, IVR are taken by AI.

② Increase the issues of <u>disguised</u>, <u>under employment</u>.

③ <u>Demography</u> of India will be a burden on [Democracy] of India (Median age of India is 27%.)

④ It will create the burden on government for <u>subsidy</u>, <u>poverty</u> and <u>health related</u> issues.

⑤ It will further deepen the issue of <u>Urban-rural Migration</u> for Jobs

⑥ Gender divide may penetrate more:→ [Women] will be <u>lay off</u> due to her <u>physical inefficiency</u> that will be taken over by AI.

Measures to navigate and promote job growth

① Focus on high skilling of the citizen through Skill India, Rozgar Mela (ES- 2024-25)

② Need of structural transformation → labour is still needed in Manufacturing Jobs

③ Link [Industry- Academics] to enhance working of AI; AI replacing Human would be converting into enhancing humans.

④ Menial Jobs like Gutter cleaning, sweeping are essential, still require Manpower → focus on (AI) doing that.

⑤ Allow PPP mode in enhancing Job penetration by having different Job segments.

Thus, the focus of AI is not in replacing Human, rather than improving the life of human through better coordination among stakeholders.

13. भारत में फसल-उपरांत होने वाला नुकसान प्रतिवर्ष लगभग ₹1,52,790 करोड़ है। भारत में फसल-उपरांत होने वाली हानियों के लिए किस हद तक कृषि उत्पादों के परिवहन और विपणन में आने वाली बाधाओं को जिम्मेदार ठहराया जा सकता है?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

India's post-harvest losses amount to approximately ₹1,52,790 crore annually. To what extent can post-harvest losses in India be attributed to the constraints in the transport and marketing of agricultural products?   (Answer in 250 words) 15 Marks

Post harvest loses are the loses incurred by the farmers due to wastage of food grains, either due to inefficient storage, market linkage, food processing units or lack of transportation facilities.

It hinders the farmer's aim of doubling their Income (Dinesh Goswami Dalwai Mehta Committee)

Extent to which post-harvest loses is attributed to :-

Constraints in the Transport :-

① lack of pucca roads (eg) In Bihar, UP → still roads are kutchha.

② Storage & Keeping facilities are dilapidated. (eg) → Cold storage is very less per villages.

③ lack of vehicles, transport facilities available to small & medium land holding farmer (89%) → as they have less income.

④. Even in the process of taking the products to APMC, MSP procurement Centres — farmers had to pay the charges.

| Constraints related to Marketing: |

① lack of forward linkages to the food- processing Industries.

② Shelf-life of crops like Sugarcane, potatoes are less → due to inefficient selling, farmer incurs losses.

③ APMC mandis collusion and Corruptions → Farmers did not get their efficient remuneration due to lack of effective bargaining power.

④ <u>Digital Divide</u>: <u>e-NAM, TRIFED</u> are not able to penetrate to the farmers much.

⑤ lack of Export facilities, due to <u>post, rail</u> Connectivity issues
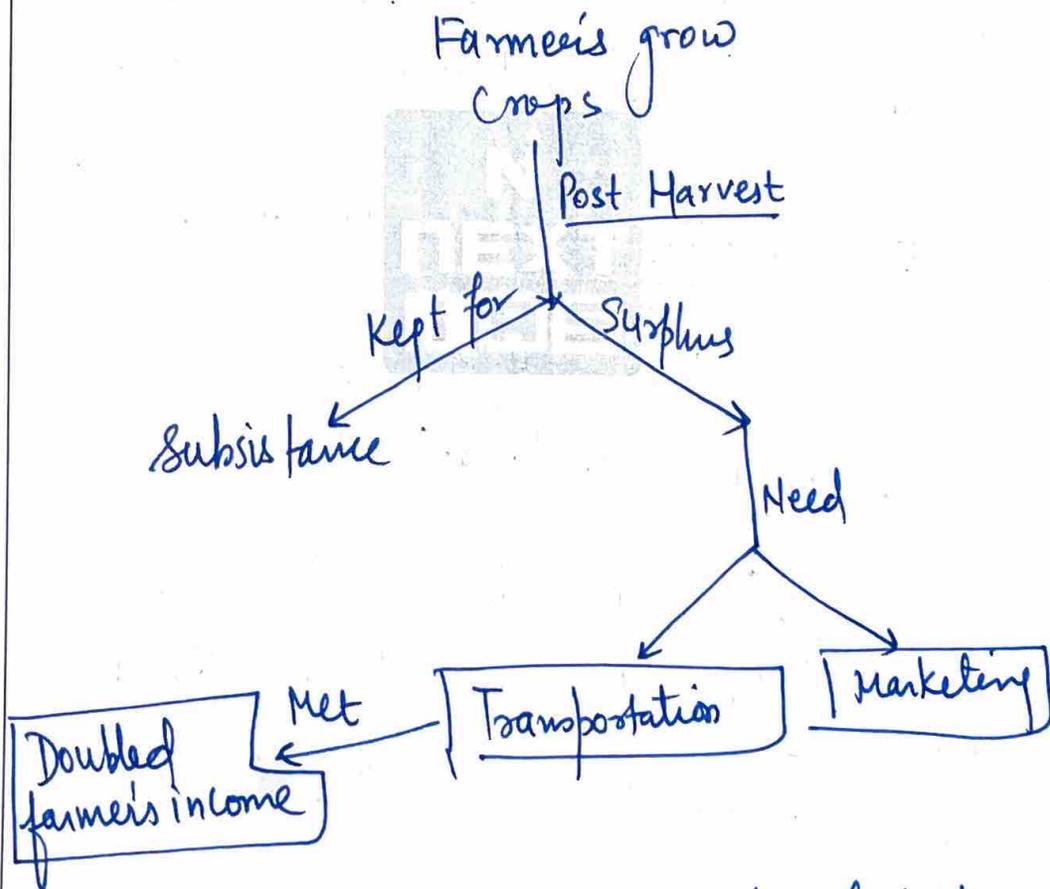
Thus, the need of hour is to fill the bottleneck by implementing Shanta kro recommendation, by focusing on PM-Gati-shakti, <u>Dedicated freight Corridor</u>, robustness of <u>e-Procurement</u> through stakeholders Coordination.

14. भारतीय कृषि में प्रत्यक्ष और अप्रत्यक्ष सब्सिडी क्या हैं? इन सब्सिडी ने देश की फसल विविधता और कृषि अर्थव्यवस्था को किस प्रकार प्रभावित किया है? (उत्तर 250 शब्दों में दीजिए) 15 अंक

What are the direct and indirect subsidies in Indian agriculture? How have these subsidies impacted the cropping diversity and farm economy of the country?

(Answer in 250 words) 15 Marks

Direct subsidies are the **benefits** in terms of **Monetary Relaxation** given directly to the beneficiary by the Government.

(eg)→ Fertilizer Subsidy, Scholarship, Ayush Man Bharat Benefits, PM KUSUM, MSP.

Indirect subsidies are the subsidies given by the government via a channel to the beneficiaries. (eg)→ DBT of LPG (UJJWALA), Electricity subsidy to farmer by paying to DISCOMs.

Subsidies impacting Cropping Diversity

① Mono cropping of only Rice & Wheat system (Punjab and Haryana only grows → Rice & wheat)

② Nutritional deficit due to skewed Crops and protein crops like Pulses, Millets, Maize are sidelined.

③ Fertilizer subsidy → N:P:K (1:4:6) ratio is more towards Urea.

④ Impacts the water table → Sugarcane, Rice are water insensitive crops.

⑤ Electricity subsidy → DISCOMs are affected (need of UDAY scheme)

[Subsidies impacting the farm economy]

① Farmers income are not realised.

② They don't have better bargaining power infront of food Retailer giants

③ Issues of [NPAs] → farmers are unable to pay loans → Banks hesitate to offer loan → impacting farmers income

④ Farmers are not even able to diversify the crops due to lack of [backward-forward] linkages in other Crops → impacting Income.

⑤ Often subsidies are _delays_, exclusion and inclusion error → affecting farmers income.

⑥ Informal lending → debt burden → no doubling of farmer's income → unable to _marry off_ daughter → _suicide_. (vidarbha region)

⑦ Confiscation of land → in case of crop failure.

[Way forward]
→ Diversify MSP to other Crops (shanta kr. Committee)
→ Focus on [FPO] for better bargaining.

Digital tech. for subsidy.

Farmer _Cooperative_ in loans to farmer.

Only when _backbone_ of Indian primary sector ie Agriculture (contributing 27% of GDP) surpasses the thresold of _50%_, then doubling of farmer income will be realised.

Candidates must
write on this mar

15. भविष्य के अंतरिक्ष संचालन और मिशनों में पुनः प्रयोज्य प्रक्षेपण वाहनों की क्षमता पर चर्चा कीजिए। पुनः प्रयोज्य प्रक्षेपण वाहनों के विकास की दिशा में भारत की क्या पहल है?   (उत्तर 250 शब्दों में दीजिए) 15 अंक

Discuss the potential of reusable launch vehicles in future space operations and missions. What are India's initiatives towards the development of reusable launch vehicles? (Answer in 250 words) 15 Marks

Astronaut shubhanshu Shukla is one of the crew of Axiom 4 of Nasa who went to ISS, recognised the need of Reusable launch vehicle (RLV) for future space operations and Missions.

Potential of Reusable launch vehicle in future Space Operations

① It will help in the repairing of Low Earth Orbit (0-400 km) satellite through humans.

② It will help in better docking of the part over the space.

③ It reduces the chances of error in the operation of satellites and space based machines.

④ It will further help in Cost-rationalisation and Cost-cutting in wastage of [flight] modules.

┌─────────────────────────────┐
│ Potential usage in Missions │
└─────────────────────────────┘

① Next Generation launch Vehicle (NGLV) is ISRO (RLV) → help in the Gaganyan Mission.

② It will help astronauts to go again to Moon (Apollo) and even Mars.

③ Help us to navigate the threat of Asteroids, Comets, hitting the earth.

④ Further, exploration through Space Tourism can be seen in near future.

⑤ It generates healthy Competition 'am nation to go for better Missions.

Initiatives by Indian for Reusable launch Vehicle :—

① Budget is provided by the Government for <u>RLV</u> to ISRO.

② <u>ANTRIX</u> and <u>New Space India Limited</u> focuses on <u>Private sector</u> Contribution → <u>Skyroot</u>, etc.

③ Collaborating with <u>NASA</u>, <u>ROSCOSMOS</u> and <u>ISRO</u>

④ Testing <u>Space Docking System</u>, <u>PUSHPAK</u>, etc to demonstrate RLV.

⑤ Training of the <u>Astronauts</u> for better simulation of the space.

The Mission of <u>Vikshit Bharat</u> at <u>2047</u> lies in the effective and sustainable development of <u>RLV</u> and maintaining <u>space debris</u> as well

16. हाल ही में शुरू की गई BioE3 नीति के लक्ष्यों और उद्देश्यों की व्याख्या कीजिए। यह नीति अर्थव्यवस्था के "हरित विकास" को सुनिश्चित करने में किस प्रकार सहायक हो सकती है?   (उत्तर 250 शब्दों में दीजिए) 15 अंक

Explain the aims and objectives of the recently launched BioE3 policy. How can the policy help in ensuring "green growth" of the economy?   (Answer in 250 words) 15 Marks

Bio E3 is the step of Government in bringing sustainability, ecocentrism in the vehicle fuel sector in realising the need to control the global temperature under 2.5°C rise from pre-Industrial level (IPCC Sixth Assessment Report)

Aims and objectives of BioE3 policy

① Focus on the production of Biofuel through food waste, rotten products like Cassava, rotten beetroots etc.

② It aims to reduce the global Warming and control the pollution.

③ It will protect the Biodiversity and the climate health.

Candidates mu~
write on this ma~

④ Provide the alternate solution to the <u>fossil fuel</u>.

⑤ It will help in generating <u>Inter-generational</u> equity.

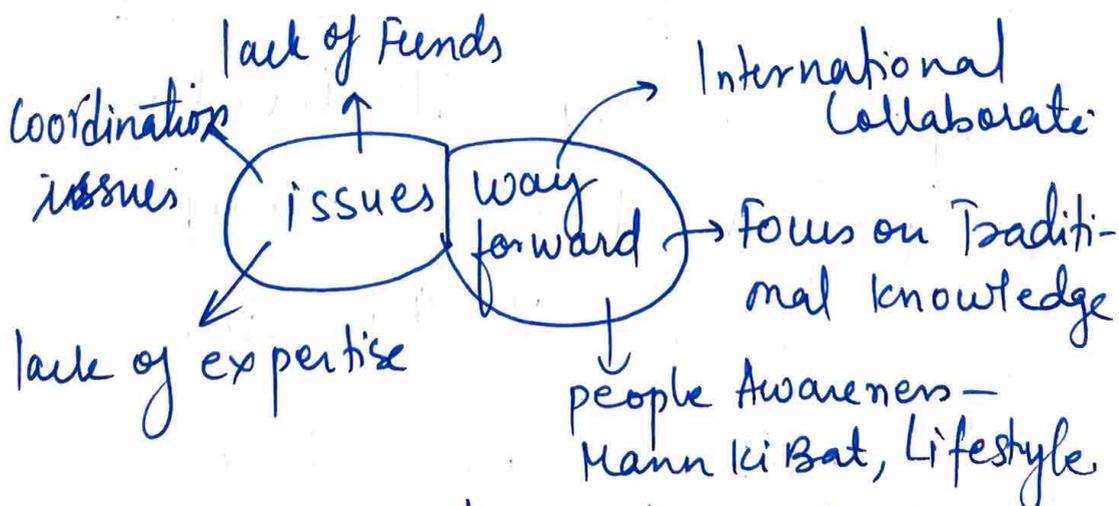⑥ Focusing on <u>Compassionate Capitalism</u>.

Policy helping in '<u>Green Growth</u>' of the 'Economy : —

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① It eliminates the negative impact of <u>fossil fuels</u>.

② The growth will be from the <u>Renewable sources</u> of energy.

③ It further add in the <u>Corporate social responsibility</u> in the '<u>green investment</u>' of the Companies.

④ Generates Jobs in the environment friendly <u>sector</u>.

⑤ It also helps in target of <u>Nationally determined contributions</u> of India (achieving 9 targets before 2030)

⑥ It will add in the <u>more production</u> of organic <u>crops</u> and <u>products</u> necessary for transition <u>towards</u> Sustainable development goals.

lack of Funds

Coordination issues

issues → International Collaborate

way forward → Focus on Traditional knowledge

lack of expertise

people Awareness — Mann ki Bat, Lifestyle.

The need of the <u>hour</u> demands that we need to shift to BioE3 policy to meet the SDG targets by 2030.

17. क्योटो प्रोटोकॉल के अंतर्गत विभिन्न बाजार तंत्र क्या थे? पेरिस जलवायु परिवर्तन समझौते का अनुच्छेद 6 क्या है? नेट-शून्य लक्ष्यों को प्राप्त करने में वैश्विक कार्बन बाजार के महत्व की व्याख्या कीजिए।(उत्तर 250 शब्दों में दीजिए) 15 अंक
What were the various market mechanisms under the Kyoto Protocol? What is Article 6 of the Paris Climate Change Agreement? Explain the significance of the global carbon market in achieving net-zero targets.
(Answer in 250 words) 15 Marks

Kyoto Protocol ~~are~~ is the predecessor to the Paris climate deal to Control the growth of Global temperature above 2.5°C from pre-industrial level (1850 - 1900)

Various Market Mechanisms under Kyoto Protocol are:-

① Clean development Mechanism

Developing Country will invest in green project of other developing Country and it will get the Carbon credit which will be a token for affirmative action by Country in controlling global warming.

② Emmission Reduction Certification ↳ when one developing country help in <u>emission reduction</u> of other developing country.

③ In this case, Country doesn't ask for any <u>Credits</u>, they just Voluntarily help the other Country.

[Article 6] of the Paris climate change talks about the <u>IPCC impact Assessment</u> reports, <u>NDC targets of Country →</u> they need to do it voluntarily and the <u>Global stocktake</u> by the <u>Conferance of parties</u> of the UNFCCC to look into the matter of the global <u>Carbon emission</u> improvements.

Significance of global Carbon Market in achieving Net Zero (2050)

① It will help in keeping the overall <u>carbon emission</u> of the world under Control.

② It is the Care & way out to punish |polluter's pay| Mechanism.

③ help the <u>developing</u> Country in transitioning towards net-zero — India by <u>2070</u>.

④ provide <u>technology transfer</u>

⑤ Implements Common but differentiated responsibility — Respected Capabilities.

Global Carbon market is the effective way in reaching <u>Net Zero</u> and fulfilling <u>SDG targets.</u>

18. जलवायु परिवर्तन और तेजी से हो रहे शहरीकरण ने भारत में गर्मी की लहरों के प्रभाव और आवृत्ति को तीव्र कर दिया है। चर्चा कीजिए। हीट एक्शन प्लान (एचएपी) भारत में हीटवेव प्रबंधन को कैसे बेहतर बना सकते हैं?

(उत्तर 250 शब्दों में दीजिए) 15 अंक

Climate change and rapid urbanization have intensified the impact and frequency of heat waves in India. Discuss. How can Heat Action Plans (HAPs) improve heatwave management in India? (Answer in 250 words) 15 Marks

Heat waves are the Conditions when the temperature over the plain is $\geq 40°C$ and over the mountains is $\geq 30°C$ in the Summer humid season.

Climate change and Rapid Urbanisation impacting and increasing heat waves in India by :—

① High pressure system creates Heat dome due to weaking on Jet streams, traps the heat.

② Presence of high clouds → send back the heat → global warming.

③ Presence of Concrete slabs Creates the issue of heat waves

④ More people- more Carbon dioxide → less afforestation → deepening the Heat wave.

⑤ Coastal areas experiencing the impact of the humid and more intense heat

⑥ More pollution, Population, Urbanisation generates more pressure on the Mountaineous ecosystem → excacerbate the Heat wave.

Heat Action Plans → Managing the heat waves:—

① Focus on Green buildings, GRIHA, LEED certified buildings.

② Miyawaki System of forestry in the Urban areas.

③ <u>Nagar Van</u> scheme for Controlling the heat of the city.

④ Use of <u>Organic materials, geotextile</u> on the roads, <u>slabs</u> for <u>eco-friendly</u> system.

⑤ Recirculatory Aquaculture system helps in reducing the <u>heat waves</u>.

⑥ Control over the <u>urban expansion</u>; green <u>cooling system</u> and focus on renewables.

Heat waves are the threat to the <u>humans</u> and the <u>animals</u>, it is therefore, need for (HAP) to cater to the <u>SDG</u>.

19. बाह्य सरकारी एवं गैर-सरकारी तत्वों द्वारा भारत की आंतरिक सुरक्षा के लिए उत्पन्न खतरे क्या हैं? इन खतरों से निपटने के लिए आवश्यक रणनीतियों पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

What are the threats posed to India's internal security by external State and non-state actors? Discuss the strategies necessary to tackle these threats. (Answer in 250 words) 15 Marks

State Actors are the legitimate actors, like [Pakistan, china] who help the extremist in Conducting terrorist attack, insurgency in the India.

Non-state actors are the volunteer actors, who Cause security threat by their Cadre. eg→ ISIS, LeT, JeM, NSCN, ULFA, etc.

[Threat posed by state actors;→]

① Terrorist attacks : Pakistan lobbied terrorist groups attacks on India eg→ 26/11 Mumbai Attack, URI Attack.

② Cyber crime : china accused of Collapsing Power Grid, Nuclear establishment.

③ They help in funding the Insurgent groups. (eg) Myanmar support to insurgent groups.

④ Human trafficking, Fake Currency notes, drug trafficking from Golden Crescent and golden triangle ⊕ Nepal, Bhutan, Bangladesh — porous border.

Afgh-
Pak   china
            Myanmar
           Bangladesh

fig: State Actors

Threat by non-state Actors: —

① 'Lone wolf Attacks' : → Pahalgam Terror Attack (2025), Jammu Region is now targeted by TLF, LeT, etc.

② Radicalisation and Indoctrination through [Cyber] Youtube, Facebook of Youth.

③ Funding of [NGOS] to stop the growth. (eg)→ Kudankulam Nuclear power plant.

④ Increase in the illegal refugees and migrants. (eg)→ From Myanmar, Bangladesh (changes the demography)

Strategies by Government to tackle

state Actors	Non-state Actor
① Dialogues & Negotiation (eg)→ SCO RATS, BRICS, UNSC, etc.	① Zero tolerance → shoot at sight.
② Cancell trade and other links. (eg)→ As India did in Pahalgam Attack	② Increase defense budget.
③ Need of Robust intelligence & vigilance.	③ Counter propaganda and public outreach.

Thus, the state & non-state actors are the greater security threat on India, which can be tackled through a effective calibrated approach.

20. वामपंथी उग्रवाद (एलडब्ल्यूई) भारत की आंतरिक सुरक्षा के लिए चुनौती बना हुआ है। देश में वामपंथी उग्रवाद के मुद्दे को हल करने के लिए भारत सरकार के दृष्टिकोण पर चर्चा कीजिए। (उत्तर 250 शब्दों में दीजिए) 15 अंक

Left-wing extremism (LWE) continues to remain a challenge to India's internal security. Discuss the Government of India's approach towards solving the issue of LWE in the country. (Answer in 250 words) 15 Marks

Left wing extremism/Naxalism is the socio-economic, governmental deficit issue, which the government under Naxalism Mukt Bharat had taken aim to eradicate by 31 March, 2026 (MHA)

Challenges of LWE in Indias Internal security are:-

① separatist and secersonist Movement. eg → ULFA, UNLF, NCSN of Assam, Mizoram, Nagaland etc.

② Youth radicalisation and Indoctrination.

③ Ethnic conflicts due to inter group clashesh. (eg)→ kuki-Meitis, issues.

④ Loss of life of Jawans, security personnels and life of locals, tribals, women.

⑤ Stops the growth of development in tribal area especially due to Revolt against outsider.

⑥ Issue of Urban naxalism → drugs, smuggling, trafficking etc

⑦ Educated and literate Cadre passing threat to the security of India.

⑧ Cyber crimes and menance of state & non-state actors (eg)→ China, Myanmar, etc.

Government of India approach towards the LWE in the Country:-

① 'SAMADHAN' approach in the LWE affected area.

② 'Zero tolerance' policy by personnel.
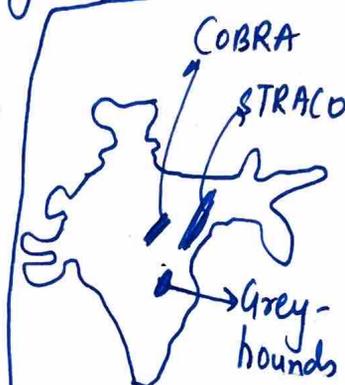
③ COBRA, STRACO, Greyhound battalions to tackle the issue

④ Tribal Youth exchange, Bastar engagement, Community policing Amchu Bastar, Amcho police.

⑤ Public Outreach (Civic Action Plan), Counter Propaganda (ROSHNI, GOAL)

⑥ Organising trade, festivals and strengthening Gram panchayats.

The aim of 'Zero tolerance' is to change Red Corridors to growth Corridors.

fig: Security Personnel