Prelims qualified- 0825270

NEXT IAS

MAINS TEST SERIES 2.0 - 2025 (FLT)

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

— (To be filled by candidate) —

Name of Candidate: NANCY SINGH .... Mobile No. ....

Roll No. : GSPM 23B 10138 .... Start Time .... End Time..................

Date of Examination: 02-08-2025 .... 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: ....
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FOR OFFICE USE ONLY

Student Concerns / Query	Evaluator's Feedback / Response
1	1 ....
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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

Q1.

Introduction	Body	Conclusion

Q2.

Introduction	Body	Conclusion

Q3.

Introduction	Body	Conclusion
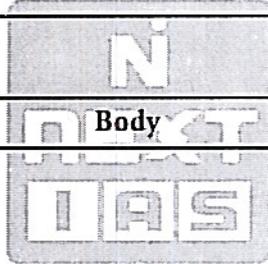
Q4.

Introduction	Body	Conclusion

Q5.

Introduction	Body	Conclusion

Q6.

Introduction	Body	Conclusion

Q7.

Introduction	Body	Conclusion

Q8.

Introduction	Body	Conclusion
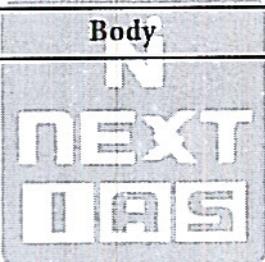
Q9.

Introduction	Body	Conclusion

Q10.

Introduction	Body	Conclusion

Q11.

Introduction	Body	Conclusion

Q12.

Introduction	Body	Conclusion

Q13.

Introduction	Body	Conclusion
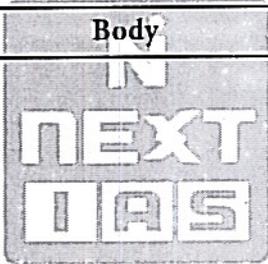
Q14.

Introduction	Body	Conclusion

Q15.

Introduction	Body	Conclusion

Q16.

Introduction	Body	Conclusion

Q17.

Introduction	Body	Conclusion

Q18.

Introduction	Body	Conclusion
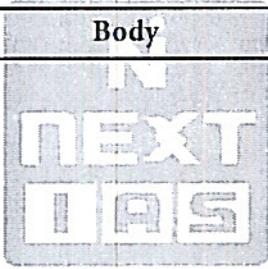
Q19.

Introduction	Body	Conclusion

Q20.

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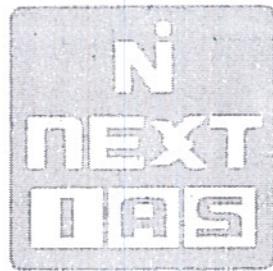
1. सरकारी बजट में जेंडर बजटिंग की ओर हाल ही में किए गये प्रयास महिला सशक्तिकरण के लिए इसके महत्व को दर्शाता है। भारत में जेंडर बजटिंग की दिशा में हालिया पहल और उनके महत्व क्या हैं? (उत्तर 150 शब्दों में दीजिए) 10 अंक

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 was introduced in 2005- 06 to promote inclusive growth and women empowerment.

Reflecting importance → Aid in uplifting 50% of population

→ Achieving SDG 5 (Gender equality)

Recent initiatives & their importance

① Increase in the budget allocation.

↳ Budget 2025- 26 has increased the allocation by 37%.

↳ This will help in efficient expenditure towards women based scheme.

Gender Budget: 3·27 lakh crore (2024-25) → 4·49 lakh crore (2025-26)
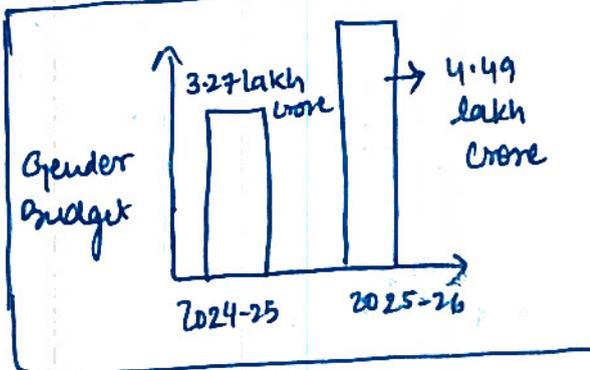
② Establishment of Gender Based Knowledge

Digital Portal : This will provide real-time analysis of the performance of schemes.

③ Inclusion of Part C in Gender budget : Part C is for the schemes that have less than 30% fund allocation for women.

Importance : Aid in holistic coverage of Schemes.

④ Gender cells within Ministries

↳ This will help in providing gender - sensitive facilities, research for women centric development.

⑤ State -based women welfare scheme

Eg : Ladki Behen Yojana → help in women participation in mainstream society.

Thus Gender budgetting is a right step in the direction of sabka Sath, sabka Vikas.

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

India has a vast coastline of 7500 km that provides opportunities for port-led growth.

Sagarmala initiative was launched to ensure port development and growth. It was launched with an outlay of ₹ 8 lakh crore.

Sagarmala promoting port-led growth

① Port led industrialisation : This ensures forward & backward linkages. eg : Provides connectivity to factories → boosting exports.

② India can become a transhipment hub. Eg : Galathea Bay being developed as transhipment terminal.

③ <u>Reducing turnaround time</u> increases the export competitiveness.

Eg : Turnaround time has reduced to <u>30.8 hours</u> (ES 2024-25).

④ Promoting <u>inland waterways</u> reduces the transportation cost.

Eg. ₹ 1.06 for transportation by water.

<u>Sagarmala helping in coastal economy</u>

① [Coastal economic Zone] can bring growth by <u>boosting</u> exports.

② Development of [fisheries] : Gives support of livelihood.

Eg : India's fisheries growing at 11% per annum.

③ Enhances <u>coastal tourism</u> & inland tourism

Eg : MV Ganga Vilas

Therefore, Sagarmala initiative can aid in reducing logistical cost and making <u>Viksit Bharat by 2047</u>.

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

India has largest population of livestock and livestock sector contributes to 30% of agriculture GDP.

Importance of livestock farming in non-farming economy

→ ① [Employment potential]: It can create jobs and make agri-preneurs.

Eg : 70% of rural households dependent on livestock.

→ ② [GDP growth]: Livestock can aid in boosting exports and GDP.

↳ Growth in [food processing sector] → Milk related products can be processed and exports

Eg : Agri-exports increased to 23-2%.

↳ Growth in [e-commerce]: Eg: Country Delight - farm to fork

Recently, there has been proposed livestock census, its importance is :

① Comprehensive data collection : This will help in having detailed analysis of varieties.

② Understanding of regional distribution and thus taking steps as per the required needs.

③ Promoting R&D in animal husbandry to understand livestock diseases

④ Boosting yield : India's cattle yield is 1777 per kg as compared to other developed countries.

⑤ Developing hybrid varieties to increase productivity.

⑥ To have an understanding of sanitary & phytosanitary barriers that hinder exports.

Livestock farming must be promoted to double farmers' income. (Ashok Dalwai Committee)

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 as suggested by M.S. Swaminathan is an intervention by the government to assure prices for crops in case of distress.

MSP helping in promoting farmers' income

① Assured remuneration and social security motivates farmers to grow specific crops.

② Crop diversification : MSP on pulses, oilseeds has increased crop diversification

③ Boost to exports : India's agri exports are 2.4% of global exports.

④ Nutritional and food security via open procurement.

Challenges faced by farmers in accessing benefits of MSP

① lack of awareness : According to economic survey 2020-21, 41% farmers were uninformed of MSP.

② Cartelisation by traders leads to not able to reap MSP benefits.

③ lack of well-established APMC mandis, e-NAM → farmers cannot realise MSP potential.

④ One size fits all approach : MSP calculation is uniform. ~~but~~ some places have more cost of production than MSP set for crops.

⑤ lack of assured MSP on high value horticulture crops like fruits & vegetables.

As suggested by Shanta Kumar Committee, we need reforms in MSP to ensure farmers' income growth.

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 network is a new form of technology that works on the modeling of human brain. Like neurons, it has the ability to train itself and take autonomous decisions.
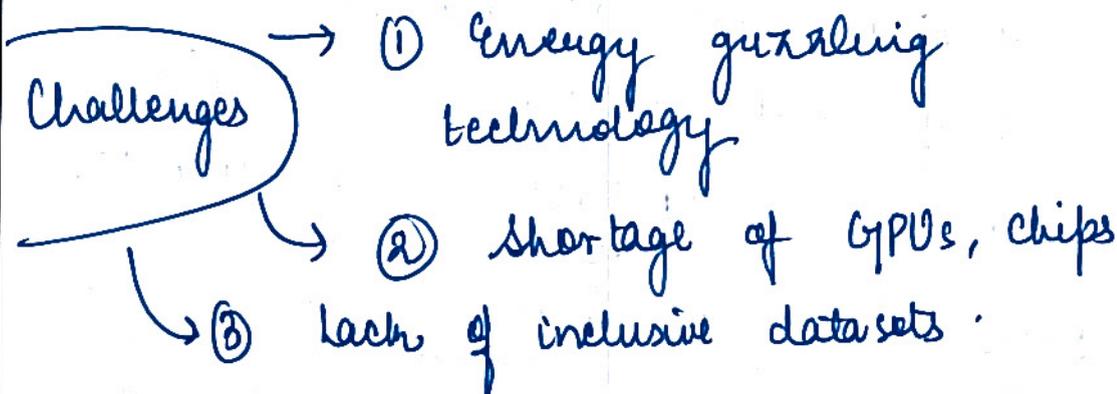
Importance of ANN in ML & AI

① Making ML more advanced

↳ It improves the models via unsupervised learning.

ANN
AI
ML
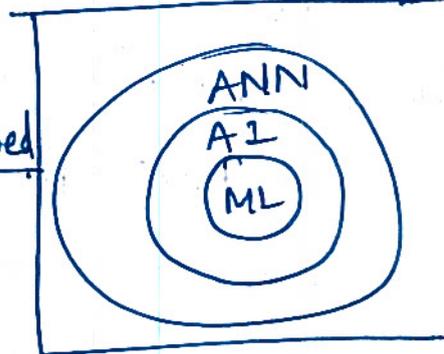
② Cancer detection, TB detection more refined by ANN.

③ It can aid in building large language models. Eg: ChatGPT, Grokk, Deepseek.

④ Aids in natural language processing and sentiment analysis.

⑤ Can create in smart analytics like market intelligence.

⑥ Building autonomous vehicles Eg: Driverless cars.

⑦ Creating advanced designs. Eg: DALLE

Challenges → ① Energy guzzling technology

→ ② Shortage of GPUs, chips

→ ③ Lack of inclusive data sets.

Bharat Gen Programme aims to builds India's Own CHATGPT to advance in ANN, AI & ML.

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

UAVs are new form of warfare that are so small as plastic bottles and can be huge too. MM Naravane mentioned that UAVs, though, cheap have great destruction abilities.

Importance of UAVs in defense sector & modern warfare

① To cause asymmetric impact on the adversaries when required.

Eg: Ukraine used drones that were cheap but Russia had to fire missiles worth $1000 million to counter.

② Intelligence surveillance & reconnaissance of adversaries before planning any attack.

Eg : India used Heron & Rustom before Operation Sindoor.

③ To <u>detect</u> and <u>decoy</u> → test the ~~satellites~~. Eg missile capabilities.

④ To protect the critical infrastructure and protect | military bases |.

⑤ To go for | high aim - targets |.

Eg : Harop was used for attacking Pakistan air base (Op. Sindoor)

⑥ To flood the <u>air defence Command</u> of adversaries. Eg: Iran-Israel war

(Challenges) → can be used for drugs delivery Eg: Punjab has contrabands of drug.

→ Can be used for surveillance by adversaries → also supply of weapons.

→ Jamming & spoofing threat.

UAV → the new state of art technology. needs to be developed and anti-drone technologies like <u>Bhargavastra</u> also need to developed to tackle adversaries UAV's.

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 refer to accidental spills of petroleum or other liquid hydrocarbon over river, ocean water etc. It may also be due to operation failures in the ships.

Environmental impacts of oil spills

① Marine ecosystem. It decreases the photosynthetic ability of phytoplanktons leading to anoxia and death of corals. eg: Coral damage in Gulf of Mannar.

② It can leads to coating of oil on water birds impacting their reproductive abilities, causing hypothermia

③ Damage to mangroves.
eg: Sundarbans affected due to oil spills -

④ Also, damage to health via [bioaccumulation] and [biomagnification] in oceanic food chain.

Various methods for cleaning oil-spills

① [Bioremediation] Breaking oil into smaller # hydrocarbons and their consequent degradation. Eg: Mixture of Oilzapper & Oilivorous.

② Using sorbents for adsorption & absorption Eg: Using [bregoli], waste from straw industry.

③ Using containers like oil barriers to reduce spread.

④ Using booms & skimmers for cleaning oil spillers.

⑤ Manual cleaning with help of local communities.

Tackling threat of oil spill is crucial to protect life below water.
                                    (SDG 14).

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

India's 58% of land is vulnerable to earthquake.

Vulnerability of northern India

① India rests on the convergence of Asian and European plate making it vulnerable to earthquake.
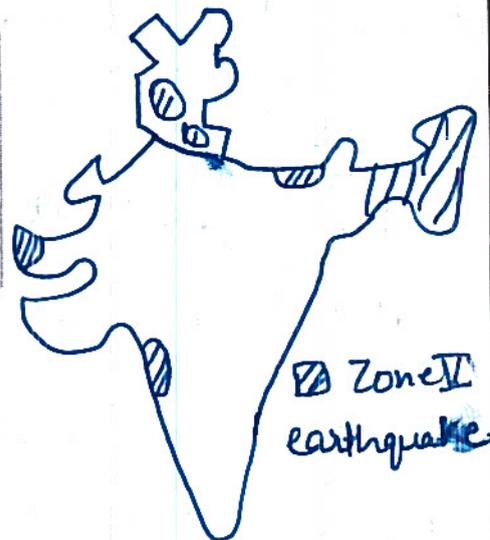
② Also presence of young-fold Himalayas in north → made of loose unconsolidated sediments

③ Overtourism is reducing the carrying capacity increasing vulnerability.

Zone V earthquake

India's preparedness

① Early warning system via SMS alerts

② Legal provision of ~~State~~ DMA, 2005
to have <u>NDRF, SDRF</u>.

③ <u>Community</u>, preparedness and mock drills
to <u>tackle earthquake</u>.

④ BIS <u>standards</u> for earthquake
resilient buildings

Ceg : Base isolation technique used
in Bhuj hospitals.

⑤ NDMA guidelines for tackling
<u>earthquake</u>.

⑥ Using traditional styles like
<u>Dhajji Diwari</u>, Koti Banhal styles

Tackling disasters via community
and government intervention needs
to be ensured to minimise the losses
and achieve <u>sendai targets</u>.

Candidates must not
write on this margin

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

Crypto currency & emerging technologies have exacerbated money laundering & terror financing.

Crypto currency contributing to menace

① Making of complex transactions that makes audit trail very difficult.

② Complex layering & integration by BCT and crypto coins.

Other technologies → Online retail e-commerce for terror financing
eg: Pahalgam attack
↳ UPI payments.
eg: Pulwama attack.

Government → Bringing Virtual
initiatives   digital assets, NFT under
                  PMLA.

                  Cross border collaboration
        Eg. Meeting of [intelligence]
            chiefs in Raisina
                         dialogue

Mutual legal assistance treaties &
extradition treaties.

Forming [Sherloc knowledge] portal
to tackle money laundering.

Money laundering & terror financing
is a menace to society.

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 blend of traditional & non-traditional warfare to create <u>asymmetric</u> challenges.

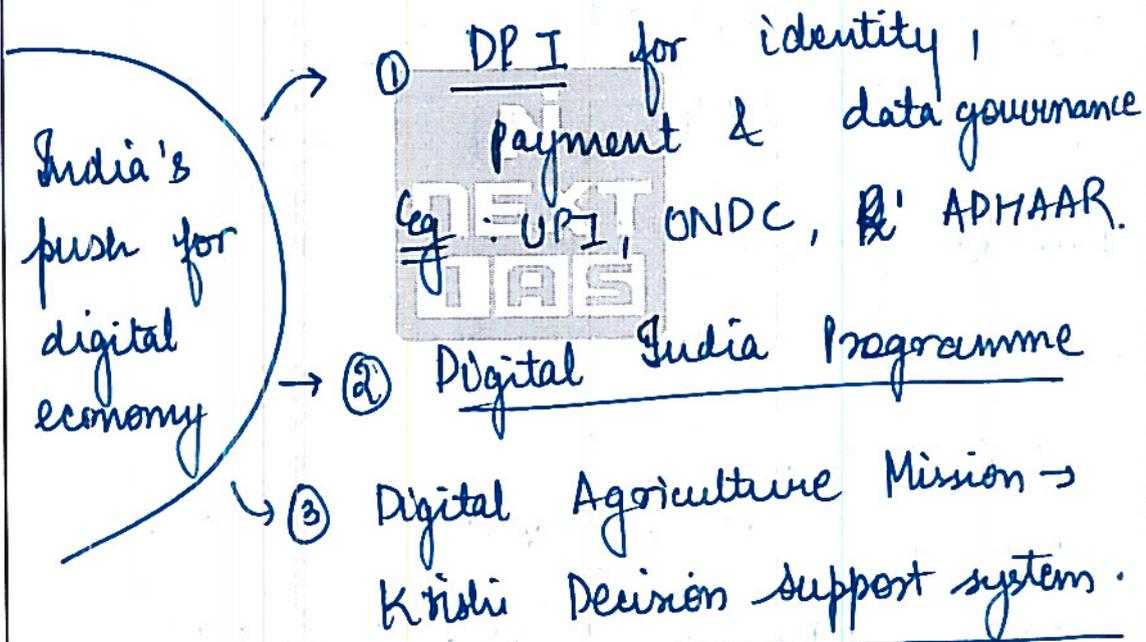| Hybrid warfare	Conventional warfare
① It is not much explicit. Eg: Internalisation by Pak. on Kashmir issue	① It is explicit like <u>war</u>.
② It aims to target civilians too.	② It mainly targets armed personnel.
③ Risk assessment is very difficult.	③ Risk assessment via losses to lives, economy.
④ Eg: Use of social media to create fake news.	④ Use of weaponry, arms & ammunitions.

Navigation by India to challenge
hybrid warfare

① We need to have national security
strategy as suggested by Chandra
Verma Committee to understand the
risk assessment, co-ordination of different
forces.

② Tackling menace of fake
news via IT, Act, PIB FCUs.

③ Building state of -the - art UAV
technologies for surveillance &
monitoring

④ Building indigenous defence capabilities via
idex, DAP 2020. eg: Akashteer
system.

⑤ Having own operating system.
eg : Maya OS

Hybrid warfare is a menace which
requires multi-pronged strategy.

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 robust digital economy, India faces challenges with regard to digital inclusion. Discuss. Suggest measures to ensure equitable access to digital resources.
(Answer in 250 words) 15 Marks

According to Digital Economy Report 2024, India is third largest digital economy with 2nd largest Internet subscribers.

India's push for digital economy

① DP I for identity, payment & data governance
eg: UPI, ONDC, & ADHAAR.

② Digital India Programme

③ Digital Agriculture Mission → Krishi Decision Support system.

Challenges with regard to digital inclusion

① Digital divide

1.1 Divides due to lack of infrastructural gaps. eg: Internet penetration

in rural is $13\frac{1}{2}\%$ as compared to 64% in urban areas.

(1.2) Divides in terms of |digital literacy|

eg : NSO ∴ Only 37% of population is digitally literate.

② |Language barriers| in digital spaces

leads to exclusion of people.

eg : Lack of regional languages integration

③ |Interoperability barriers| because

all the platforms do not operate uniformly on all devices.

④ |Cyber security issues| : Threat of digital fraud, online harassment.

⑤ |Privacy concerns| : Access to private information might be misused.

eg : Access to health data may be misused by insurance providers for denying insurance.

Measures to address access to digital resources

① Policy implementation in an effective manner. Eg: PMGDISHA.

② Roping in CSO, NGOs, SHGs for promoting digital literacy.

③ Multi-lingual platforms to ensure inclusivity Eg: N BHASHINI.

④ Developing infrastructure through Bharat Net Project, PM-WANI.

⑤ Use of web-based portals to tackle interoperability.

⑥ Use of AI for fraud detection Eg : Mule Hunter by RBI.

Therefore, digital economy which contributes ~7% to GVA needs to be strengthened to bring e-Kranti and promote inclusive development.

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

Industrial Revolution 4.0 has led to proliferation of Artificial Intelligence in various sectors which in itself is a double-edged sword.

AI into various sectors
→ ① Agriculture : Using bots for weed management.
→ ② Service : Chat GPT coding for companies
→ ③ Health : Nanobots performing surgeries
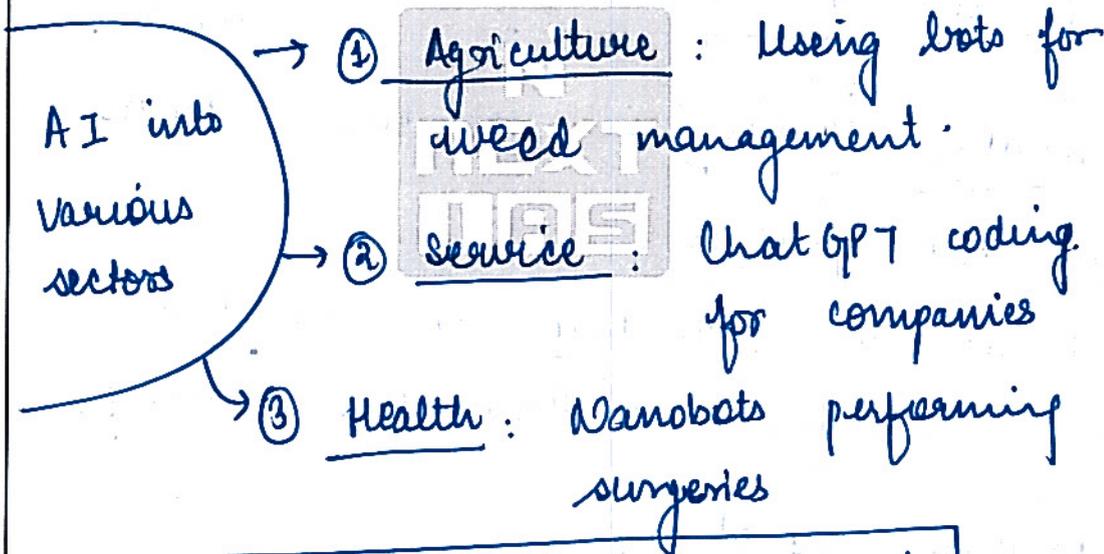
Impacts of AI on employment

Ⓐ Negative impact :

① Job-skill mismatch : India's workforce is not future ready as per the needs.

Eg : ES 2024-25 : 51% of youth unemployable.

② Loss of jobs due to automation in manufacturing and assembly line industries, BPOs etc.

Eg: ILO - 75 million jobs are at risk due to A I.

③ AI has aided in creating jobs in informal sector like gig economy → algorithmic surveillances diminishes dignity.

④ Gender biasness in recruitment by AI powered platforms.

⑤ Threat to creative economy like film industry, authors & writers etc.

Ⓑ Positive impact

① Employment created in new jobs like Data Analytics, Big Data.

② It will also boost jobs related to AI ethical management.

③ AI- powered chips will boost

semiconductor industry.

Measures to navigate these challenges

① skilling youth to match with the required skills.

Eg : Future Prime for building AI skills.

② Training of AI into inclusive datasets

③ PMKVY 4.0 for learning AI modules.

④ Democratising access to technology to ensure growth for all.

⑤ Global collaboration for safe and sustainable AI Eg. Seoul Summit.

⑥ Institutions to act as enabling and stewarding

⑦ India AI mission, AI safety institute

A proper coordination between government and private sector is required to ensure AI becomes labour augmenting and not labour replacing.

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

India's 42% workforce is dependent on agriculture and this sector contributes ~ 18% to India's GDP but issues like post-harvest losses limit the potential of this sector.

Post-harvest losses due to constraints in transport

① Lack of all-weather metalled roads leads to losses.

② Lack of development of freight trains.
eg: only 28% transport through railways.

③ ~~Absence~~ of reefer vehicles that Inadequate

can efficiently deal with perishable goods.

④ <u>Open container trains</u> increases the perishability of goods.

↳ Also high <u>operating cost of railways</u>

$\frac{Eg}{}$: 0.94-0.98 cost of railways.

⑤ <u>dack of connectivity to airways</u> - crucial for <u>horticulture products</u>.

⑥ Missing modernisation of ports and inland <u>waterways</u>.

Post - harvest losses due to marketing.

① Lack of <u>market intelligence</u> about the demand and price.

② Fragmented <u>supply chain</u> and absence of integrated <u>cold-storage facilities</u>

③ Use of traditional methods like <u>cover & plinth</u> storage.

④ Burden on <u>FCI godowns</u> lead to excess procurement & thus losses.

Eg: UN - 40% ~~food~~ harvest losses.

⑤ Inadequate <u>export potential</u> due to hygienic issues.

However, <u>other factors</u> are also responsible.

① Absence of <u>drying facilities</u> on farms

② <u>Pest infestation</u> and ineffective weed management.

③ Climate <u>vagaries</u> and erratic monsoon patterns.

④ <u>Mechanisation</u> in harvesting is very less.

Way Forward

↓

② Dedicated freight corridor

① Schemes like PM Kisan Sampada need to be promoted

③ KRISHI RAIL, <u>KRISHI UDAN</u>

Post-harvest losses need to be minimised to harness the true potential of India's agriculture sector.

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

Subsidies in Indian agriculture are approximately 2% of India's GDP and it is estimated that one fifth of farm's income come through side subsidies.

Types of subsidies

Direct subsidies
① Providing monetary support.
② Example : MSP, DBT
Aim :
③ ∧ Provides choice to farmers, remuneration

Indirect subsidies
① Providing infra-structural support.
② Example : Fertilizer subsidy, irrigation subsidy
Aim :
③ ∧ Increasing the output, minimising input cost
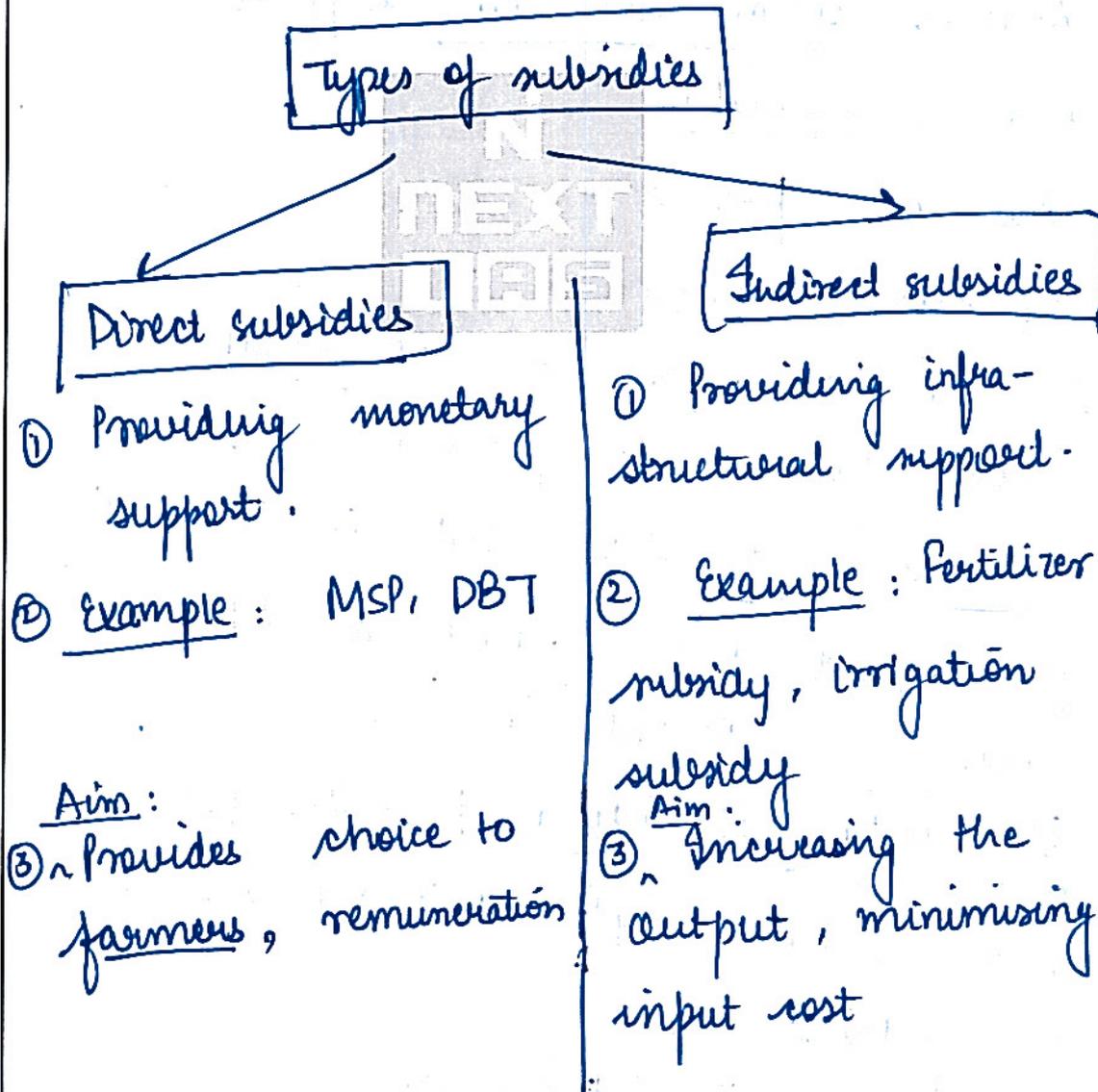
Impact of subsidies on the
cropping diversity & farm economy

(A) | Positive impact | :

① Encourages crop diversification : Eg : MSP
growth rate of 18% on millets has
increased millet production .

② Assures social security support
and remuneration .

③ Aids in | providing inputs | in wake
of climate change.
Eg : ₹ 68k crore - PM-KISAN
enables farmers to procure inputs.

④ Fertilizer subsidies aid in increasing
the yield and productivity (₹1.67
lakh crore - Budget 2025-26)

⑤ | Electricity subsidy | provides farm
mechanisation. Eg : 45% mechanisation
in Indian farms.
↳ Also help in operating tubewells .

(B) | Negative impact |

① | Skewed crop growth | : Assured MSP has led to growth of rice-wheat economy. Eg : 45% Gross cropped area is wheat & rice.

② | Environmental degradation | : Growth of water intensive crops → lowering water table, salinization,

③ | Electricity subsidy | → Electricity diverted to industries → loss to DISCOMS

④ spending of DBT on other purposes like marriage etc

⑤ Urea diverted to industries for production of other goods.

⑥ Fertilizer subsidy → excessive use leads to soil contamination → eutrophication

⑦ Burden on FCI & public ex-chequer.

On the lines of Shanta Kumar Committee, rationalisation of subsidies is the need of the hour.

15. भविष्य के अंतरिक्ष संचालन और मिशनों में पुन: प्रयोज्य प्रक्षेपण वाहनों की क्षमता पर चर्चा कीजिए। पुन: 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

Recently Pushpak, reusable launch vehicle was launched. ~~to~~ Reusable launch vehicle is India's **two stage to orbit** vehicle.

Potential of reusable launch vehicles in future space operations & missions

① **launch cost reduction** : It is estimated that RLVs can reduce launch cost by 90%.

② It will be a stepping stone to **Gaganyan** & **Bhartiya Antriksha Station** . (BAS).

③ It will support inter-planetary missions, **crewed mission**.

④ Boost India's space stature and increase <u>international collaboration</u>.

Eg : Axiom 4 — Shubhanshu Shukla visited ISS.

⑤ Boost to <u>space mining</u> and <u>space tourism</u>. Eg : Chandrayan IV planned with Japan → Sample return mission.

⑥ Being <u>cleaner than</u> other ff vehicles as it uses <u>semi- cryogenic</u>, cryogenic fuel, it will boost <u>green growth</u>.

⑦ Boost to <u>India's startups</u>

⑧ Tackle the problem of <u>space debris</u>. Kessler syndrome

Eg : More than 10 cm debris is ~60k.

⑨ It will enable <u>space docking</u> of various modules of BAS.

India's initiatives in this regard

① India's experiments like LEX - landing flight experiment, HEX - hypersonic flight experiment.

② Also REX - Reusable flight experiment to bring back the vehicle.

Eg: 2023 - Karnataka → RLV was launched.

③ Also, space capsule recovery experiment, and new atmospheric re-entry experiment for building re-entry technology.

④ $ Funding to private sector for developing RLVs.

⑤ NSIL - India's commercial private arm.

India's space economy is projected to be $ 44 billion by 2030. RLVs can have huge contribution in this,

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

Recently Bio E3 → Biotechnology in economy. environment and employment was launched. India's bioeconomy contributes 4.5% to India's GDP.

Aims and objectives of Bio E3 policy

① Establish Mulankur bioenablers → Biomanufacturing and bio foundries for promoting bioeconomy.

② Achieve the Panchamrit and NDCs by promoting bioeconomy.

③ To promote Life - Lifestyle for environment.

④ It has focussed mainly on sectors like climate resilient agriculture, carbon capture,

utilisation & storage., precision bio-
therapeutics, functional foods and
smart-protein.

⑤ To achieve the target of $300 bn.
~~a~~ bioeconomy by 2030.

⑥ Creation of additional 35 million
jobs via bioeconomy.

⑦ Establishing a <u>regulatory</u> & enabling
environment for <u>biotechnology</u>.

Policy helping in green growth

① <u>Functional foods & smart protein</u> →
provides additional nutrition benefits;
<u>lab-cultured meat</u> minimises the
wastage and resource use like
water → used in poultry.

② Climate <u>resilient crops</u> will aid
in tackling climate change.

③ <u>Biofuel</u> production → contribute

in ethanol blending → minimising
GHGs emission .

④ Biopesticides and biofertilizers
will also help in developing
organic & sustainable agriculture .

⑤ CCUS : Development of biopolymers
(activated carbon) to capture CO_2.

⑥ Bioplastics to tackle plastic
pollution eg : India is ranked
3rd in Single Use Plastic production.

⑦ It will give boost to circular
economy .

Biotechnology and bioeconomy is
a sunrise sector that can go
far ahead in achieving green
growth and attaining Panchamrit
targets and tackle SDG 13 — Climate
Action .

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 in 1997 laid the base for the development mechanism for carbon emission reduction.

Various market mechanism under Kyoto

① **Clean development mechanism**

↳ When Annex I country aids the non-annex country → achieving certified emission reduction units.

② **Joint implementation** : When Annex I helps another Annex I in reducing emission → leads to Emission reduction units.

③ International emission Trading/ carbon trading : Assigned amount of units set for developed

countries to reduce their emission →
theirs reduction can be traded
between countries.

Article 6 of Paris Climate Change
Aggreement basically deals with
market and non- market approaches to
tackle climate change.

Article 6.2 : promotes international
collaboration . The mitigation outcomes
can be traded between countries .

Article 6.4 : Aims to establish centralised
~~and~~ carbon credit trading platform
under UNFCCC.

Article 6.8 Deals with non- market
approach like capacity
building, adaptation finance .

Significance of global carbon market

① Aids the vulnerable developing

countries to tackle climate change.

② Achieving NDCs and for achieving Paris climate target of containing global temperature rise within 2⁰C limits.

③ Provides <u>technology transfer, finance</u> to the developing countries to achieve green growth and net zero targets. Eg: NCQG → COP28 → $300bn.

④ Aids in de-carbonisation of hard to abate industries like <u>steel, thermal plants</u>.

⑤ Development of green and <u>sustainable infrastructure</u>. Eg: CoP 28 - Building Breakthrough Initiative.

Tackling climate change via Carbon markets is inevitable to attain <u>SDG 13.</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 is referred to prolonged flow of dry, hot air over landmass that can have impacts on health, economy. Approximately 76% districts of India are prone to heatwaves.
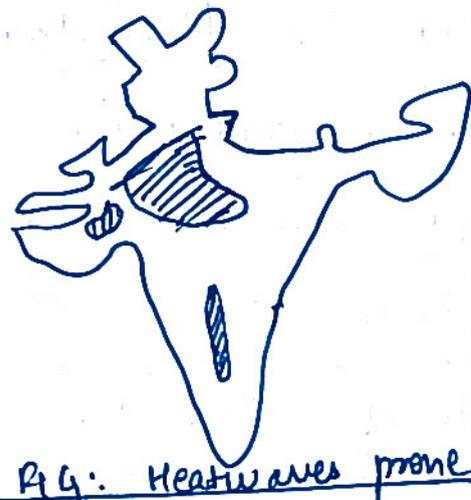
Intensification of impact & frequency

① ~~Climate~~ According to IMD, there have been 20 consecutive heatwave days in 2024 in certain areas.

FIG: Heatwaves prone areas

② NCRB: Around 730 deaths due to heatwaves in 2023.

③ There has increase of 15% vulnerability in heatwaves incident. → UNFCCC.

This increased frequency can be attributed to Global warming & climate change & unplanned urbanisation → concretization, growth of industries, Urban heat island effect.

Heat Action Plan was first developed by Odisha in 1999 and first comprehensive heat action plan was made by Ahmedabad in 2012. (HAPs are comprehensive strategies to tackle short-term & long-term targets to prepare for heatwave rise.

Role of HAPs in heatwave management

① Early Warning system via SMS alerts to keep ask people not to go outdoors.
eg: Regular IMD alerts in Delhi

② Building blue-green infrastructure

to minimise the <u>urban heat island effect</u>. Eg : Afforestation via <u>Miyawaki technique</u>.

② Using high <u>albedo paints</u> on roof to tackle the <u>heat waves</u>.

④ <u>Community preparedness</u> : Increasing awareness to keep oneself hydrated during heatwaves.

③ Building <u>cool shelters</u> for animals, street vendors etc.

⑥ <u>Smart metering</u> to regulate the consumption of electricity usage via ACs etc.

⑦ Reclamation of water bodies and tackling encroachment of wetlands.

Heat wave action plans are crucial to tackle the <u>silent disaster of heatwaves</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

Internal security refers to protection of sovereign integrity, unity of nation, building peace and advancement of vital interest of nation.

In the wake of tensions amid border countries and internal conflict, the threats by external state and non-state have increased.

Threats posed by external state actors

① China providing bases to insurgent groups like NSCN, ULFA and also providing weapon supplies.

② Proxy warfare by deep state Pakistan. Eg: recent Pahelgam terror attack.

③ Issues of <u>Rohingya</u> due to political turmoil in <u>Myanmar</u>.

④ Human trafficking, cattle smuggling, problem of FICN with <u>Nepal</u> and <u>Bangladesh</u> due to porous borders.

⑤ [Hybrid warfare]. eg: China's role in vetoing terrorist in UN sanction list; Internationalisation of Kashmir issue in UN by Pakistan.

⑥ Attack on <u>critical infrastructure</u>. eg: Attack on Mumbai electricity grid.

| Threats posed by non-state actors |

① [Narco terrorism] by supplying drugs via UAVs. eg: Punjab has huge drug supply.

Golden crescent

Golden Δ
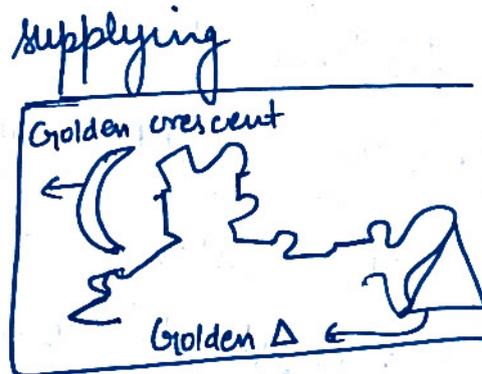
② [Ethno-national terrorism] by insurgent groups leading to ethnic conflicts.

③ Extremism in areas like Chattisgarh, Jharkhand.

④ Money laundering, terror financing, human trafficking Organised crime being done by non-state actors. ⑤ Radicalisation via online media.

Strategies to tackle these problems

① Border management via CIBMS, BOLD-QIT, drones and surveillance.

② Bridging developmental deficit by strategies like SAMADHAN, promoting skilling schemes like USTTAD, Nayi Manzil → to bridge trust deficit.

③ Using Heart and Mind Approach, Operation Sadbhavana to sensitize.

④ Modernization of police station. Eg: Fortified station. ⑤ Tackling menace of infodemic via IT. Act.

Internal security threats need to be tackled to ensure transition from childhood indoctrination to strategic deradicalisation.

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 refers to far-left radical idea. It aims to promote socio - economic needs via establishing of classless society.

Recently Naxalism Mukt Abhiyan has been set as target to end left wing extremism by 2026 (31 March).

Factors leading to LWE remaining a challenge

① Infrastructural gaps like poor internet penetration, road and bridge connectivity.

② Perception management issue : Naxals perceive governments as apathetic to their issues.

③ Rise of |Urban Naxalism| → provision of intellectual support & logistics via urban areas.

④ Ineffective implementation of land reforms.

⑤ Rehabilitation of tribals in wake of exploitation of resources has not been adequate. 40% of displaced population is tribals.

⑥ Caste continuity has ensured social oppression of lower hierarchy.

Eg : Bhima Koregaon case.

⑦ Ineffective implementation of 5th schedule provisions, PESA, FRA.

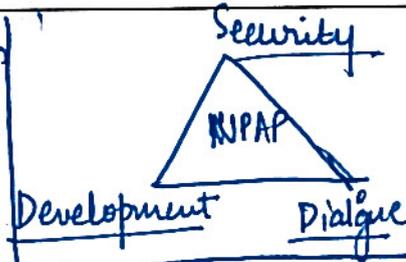Government's approach in solving

① National Policy Action Plan :
   ↳ To modernize police station.

Eg : Fortified police station

Security

△ NIPAP

Development   Dialogue

② Targeted operations

Eg : Operation Black forest recently done against LWE.

③ Perception management via development initiatives like LWE tower projects, building education city → OP Chaudhary.

④ Coordination between police forces, forming specialised forces.

Eg : Greyhounds in Andhra, COBRA

⑤ Skill development scheme like Nayi Manzil, ROSHNI.

⑥ Integrated Action Plan → CM constituting review committee.

⑦ Mine - protected vehicles to be provided.

Mungerkar committee reforms must be implemented to make Bharat Naxal free by 2026.

Space for Rough Work

NEXT IAS

Space for Rough Work

NEXT IAS

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3. Any page/pdf having shadow needs to be rescanned. Please make sure that the pdf that you upload is as clean as possible.
4. **Candidates not using the QCA booklet** must mention their details on the front page. And leave the next page blank for the macro comments. It must be understood that the answer should start from Page no. 3 in of the scanned pdf.
5. Candidates not using the QCA booklet must follow the sequence of the answer as per the question paper.
6. Please check the sequence of the answer and total number of pages in the scanned version. Make sure it is in consonance with the physical version of the same.

महत्वपूर्ण निर्देश

अभ्यर्थियों को निम्नलिखित निर्देशों को ध्यानपूर्वक पढ़ना चाहिए। किसी भी निर्देश का उल्लंघन करने पर दण्डित किया जा सकता है।

क्या न करें-	क्या करें-
1. इस प्रश्न-सह-उत्तर पुस्तिका के भीतर कहीं भी अपना नाम या पंजीकरण संख्या न लिखें।	1. कवर पृष्ठ पर दिए गए निर्देशों को ध्यान पूर्वक पढ़ें और उनका सख्ती से पालन करें।
2. अपनी QCA पुस्तिका में कहीं भी प्रश्नों के वास्तविक उत्तरों के अलावा कुछ भी न लिखें।	2. QCA पुस्तिका के कवर पृष्ठ पर दिए गए स्थान पर अपना पंजीकरण नंबर और अन्य विवरण लिखें।
3. अपनी QCA पुस्तिका से कोई भी पृष्ठ न फाड़ें, यदि आपको कोई पृष्ठ गायब लगे, तो पर्यवेक्षक/निरीक्षक को सूचित करना न भूलें।	3. स्पष्ट और पठनीय तरीके से लिखें। खराब/अपठनीय लिखावट में न लिखें।
4. अपनी QCA पुस्तिका को अपनी टेबल पर न छोड़ें, परीक्षा समाप्त होने के पश्चात इसे निरीक्षक को सौंप देना चाहिए।	4. रफ नोट्स या गणना के लिए, इस पुस्तिका के अंतिम दो खाली पृष्ठों का उपयोग किया जाना चाहिए। रफ नोट्स को बाद में क्रॉस कर देना चाहिए।
	5. यदि आप किसी कार्य को रद्द करना चाहते हैं, तो उस पर अपना पेन चलाएं या उस पर "रद्द" लिखें, अन्यथा उसका मूल्यांकन किया जा सकता है।
	6. परीक्षा हॉल छोड़ने से पहले अपनी QCA पुस्तिका व्यक्तिगत रूप से निरीक्षक को सौंप दें।

ऑनलाइन सुविधा का लाभ उठाने वाले अभ्यर्थियों के लिए विशेष अनुरोध

1. QCA पुस्तिका को ठीक से स्कैन करें। हम चाहेंगे कि आप स्कैनिंग के लिए कैमस्कैनर ऐप (CAM SCANER) का प्रयोग करें। (यह कोई प्रमोशन नहीं है)।

2. कृपया QCA पुस्तिका को पर्याप्त रोशनी में स्कैन करें। कम रोशनी में स्कैन की गई पुस्तिकाएं, उनके मूल्यांकन की गुणवत्ता को बाधित कर सकती हैं।

3. स्कैन के दौरान छाया वाले किसी भी पृष्ठ/पीडीएफ को फिर से स्कैन किया जाना चाहिए। कृपया सुनिश्चित करें कि आपके द्वारा अपलोड की गई पीडीएफ यथा संभव स्पष्ट हो ।

4. QCA पुस्तिका का उपयोग नहीं करने वाले उम्मीदवारों को अपना विवरण पहले पृष्ठ पर देना चाहिए और मैक्रो टिप्पणियों के लिए अगला पृष्ठ खाली छोड़ दें। यह समझना चाहिए कि उत्तर स्कैन की गई पीडीएफ में पृष्ठ नंबर 3 से शुरू होना चाहिए।

5. QCA पुस्तिका का उपयोग नहीं करने वाले उम्मीदवारों को प्रश्नपत्र के अनुसार उत्तर के अनुक्रम का पालन करना चाहिए।

6. कृपया स्कैन किए गए संस्करण में उत्तर के अनुक्रम और कुल पृष्ठों की संख्या की जाँच करें। सुनिश्चित करें कि यह उसी के भौतिक संस्करण के अनुरूप है।