

Q1.

Point out how the diversion of precursor chemicals poses a regulatory challenge for the pharmaceutical sector. How can institutional oversight be strengthened to prevent it?

Word limit: 150 words

10 marks

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Q1.

Question 1 - continued

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Q2.

Critically examine why traditional top-down regulatory frameworks fail in common-pool resource management, and discuss how community-led co-management models can resolve localized maritime resource conflicts.

Word limit: 250 words

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Question 2 - continued

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Question 2 - continued

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Q3.

Critically analyse how the Code on Social Security, 2020 aims to integrate gig and platform workers into India's formal social security framework. What are the challenges?

Word limit: 250 words

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Q3.

Question 3 - continued

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Question 3 - continued

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Q4.

Critically discuss how semiconductor diplomacy and strategic partnerships like the Quad can help India mitigate supply chain vulnerabilities in critical technologies.

Word limit: 250 words

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Question 4 - continued

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Question 4 - continued

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Q5.

Why has India prioritised back-end OSAT facilities over front-end fabrication units in its semiconductor mission? Point out the economic challenges of this strategy.

Word limit: 150 words

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Q5.

Question 5 - continued

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Q6.

Explain how community-led capital instruments like Revolving Funds address the credit-market failures of formal banking for rural women entrepreneurs.

Word limit: 150 words

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Q6.

Question 6 - continued

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Q7.

Underline the need for entities like the Bharatiya Beej Sahakari Samiti Limited (BBSSL). How do cooperative seed networks ensure seed sovereignty and agricultural resilience?

Word limit: 150 words

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Question 7 - continued

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Q8.

Underline the role of museum genomics in resolving taxonomic ambiguities. How can historical specimens aid modern wildlife conservation and forensic investigation?

Word limit: 150 words

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Question 8 - continued

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Q9.

Distinguish between front-end fabrication and back-end assembly in semiconductor manufacturing. Why is mastering packaging technologies crucial for India's technological self-reliance?

Word limit: 150 words

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Q9.

Question 9 - continued

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Q10. Explain how Clinical Decision Support Systems (CDSS) can democratise primary healthcare diagnostics in remote areas. What are the associated technological limitations?

Word limit: 150 words

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Q10.

Question 10 - continued

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Q11.

Explain how DNA barcoding and integrative taxonomy revolutionize marine species identification. Why is molecular taxonomy vital for cataloging India's cryptic deep-sea biodiversity?

Word limit: 150 words

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Q11.

Question 11 - continued

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Q12.

Point out why the cytochrome c oxidase subunit I (COI) gene is preferred for DNA barcoding. How does molecular taxonomy aid in identifying cryptic species?

Word limit: 150 words

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Q12.

Question 12 - continued

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Q13.

Underline the significance of IUCN Criterion B for evaluating micro-endemic species. How does a single-site distribution increase the extinction vulnerability of such species?

Word limit: 150 words

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Question 13 - continued

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Q14.

Why must disaster risk reduction strategies be fundamentally gender-responsive? Critically examine how climate change disproportionately impacts women in vulnerable ecological zones.

Word limit: 250 words

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Question 14 - continued

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Question 14 - continued

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Q15.

Critically examine how human-mediated transport pathways accelerate the global spread of invasive alien species. Why have existing biological and chemical control measures largely failed to contain them?

Word limit: 250 words

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Question 15 - continued

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Question 15 - continued

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Q16.

Critically examine why periodic natural fires are essential for maintaining savanna ecosystems. How does active fire suppression inadvertently threaten specialized fire-dependent endemic flora?

Word limit: 250 words

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Question 16 - continued

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Question 16 - continued

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Q17.

With suitable examples, discuss why compound disasters like earthquake-induced GLOFs pose severe risks. How can multi-hazard assessments be integrated into environmental clearance frameworks?

Word limit: 250 words

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Question 17 - continued

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Question 17 - continued

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Q18.

Analyse why India's Northeast remains a critical transit corridor for international wildlife trafficking. What countermeasures should the State adopt to neutralize these syndicates?

Word limit: 250 words

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Question 18 - continued

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Question 18 - continued

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Q19.

Critically examine how illicit drug trafficking funds narco-terrorism in border states. How does this nexus threaten the internal security paradigm of India?

Word limit: 250 words

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Question 19 - continued

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Question 19 - continued

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Q20. Point out the ethical dilemmas associated with "human-out-of-the-loop" AI in autonomous targeting. How can India ensure accountability under International Humanitarian Law?

Word limit: 250 words

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Question 20 - continued

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