Science & Technology · GS - III

Satellite communication has become a critical component of modern warfare. Discuss the strategic risks of dependence on private satellite networks and suggest measures to strengthen national communication resilience.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 24/10/2026	GS - III	Science & Technology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Space security, private-sector dependence, military communications, strategic autonomy, LEO satellites, redundancy, indigenous technology.

Model Answer

Introduction:

Satellite communication supports battlefield coordination, drone operations, intelligence sharing and real-time decision-making. Commercial networks have expanded these capabilities but also created new strategic dependencies.

Strategic risks:

1. External dependence: Service providers may restrict access due to contractual, political or regulatory decisions.
2. Operational vulnerability: Outages, jamming and cyberattacks can disrupt military communications.
3. Geopolitical uncertainty: Dependence on foreign-controlled infrastructure may constrain strategic autonomy.
4. Intelligence risks: Poorly secured networks can expose sensitive operational information.

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Way Forward:

1. Develop sovereign satellite communication capabilities.
2. Maintain multiple communication channels, including radio, terrestrial networks and satellite systems.
3. Strengthen anti-jamming, encryption and cyber defence.
4. Promote partnerships between governments and domestic technology companies.
5. Conduct regular exercises to test communication systems under disrupted conditions.

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Conclusion:

Ukraine's experience highlights that military communication resilience depends not on one technology, but on diversified, secure and independently controllable networks.

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