Science & Technology · GS - III

Examine the growing role of private satellite communication networks in modern warfare. What challenges do they pose for national security and strategic autonomy?

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 23/10/2026	GS - III	Science & Technology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Satellite Communication, Low Earth Orbit, Commercial Space Technology, Modern Warfare, Digital Connectivity, Strategic Dependence, Cybersecurity, Electronic Warfare, Space Militarisation, National Security.

Model Answer

Introduction:

The restoration of Starshield satellite services in Ukraine highlights the growing importance of commercial space technology in contemporary military operations.

Role in Modern Warfare

1. Battlefield connectivity: Satellites support communication between military units in areas where terrestrial networks are damaged.
2. Operational coordination: They facilitate information sharing, surveillance and command-and-control functions.
3. Resilience: Distributed satellite networks can provide alternative communication channels during infrastructure disruptions.

Key Challenges

Strategic dependence: Military operations may rely on decisions made by private companies.

1. Cybersecurity threats: Satellite networks can be targeted through hacking, jamming and electronic warfare.
2. Geopolitical influence: Corporate decisions may affect the operational capabilities of states involved in conflicts.
3. Regulatory concerns: Questions arise regarding accountability, service continuity and international law.
4. Way Forward: Governments should develop clear public–private defence frameworks, strengthen cybersecurity, diversify communication infrastructure and invest in indigenous satellite capabilities.

Conclusion:

Commercial satellite networks offer significant military advantages, but countries must balance technological benefits with operational security and strategic autonomy.

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