Science & Technology · GS - III

The Russia–Ukraine conflict has highlighted the growing importance of private space companies in modern warfare. Discuss the opportunities and challenges associated with the dependence of national militaries on privately operated satellite communication networks.

EXAM YEAR	PAPER	SUBJECT
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MARKS	WORD LIMIT
10	~150 words

Answer Hint

Starlink, Starshield, Russia–Ukraine War, Satellite Communication, Drone Warfare, Private Space Companies, National Security, Strategic Autonomy, Technological Dependence, Public–Private Partnerships, Defence Preparedness.

Model Answer

Introduction

Modern warfare increasingly depends on satellite communication, real-time intelligence and unmanned systems. The reported restrictions on SpaceX's satellite services used by Ukraine have highlighted the strategic importance of private space infrastructure.

Main Body

Privately operated satellite networks provide rapid, wide-area connectivity and support military communications, logistics, reconnaissance and drone operations. They can supplement conventional defence infrastructure and improve operational coordination.

However, dependence on a private provider creates significant challenges. Service restrictions, technical failures, commercial priorities or geopolitical disagreements can disrupt critical military operations. This raises questions about accountability, national sovereignty and the influence of private companies on conflict outcomes.

Countries should diversify communication systems, develop indigenous satellite capabilities, maintain alternative communication channels and establish clear agreements with private providers. International cooperation and investment in resilient space infrastructure are also essential.

Conclusion

Private space technology offers substantial defence benefits, but excessive dependence can undermine strategic autonomy. A resilient approach combining commercial innovation with secure national capabilities is vital for long-term defence preparedness.

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