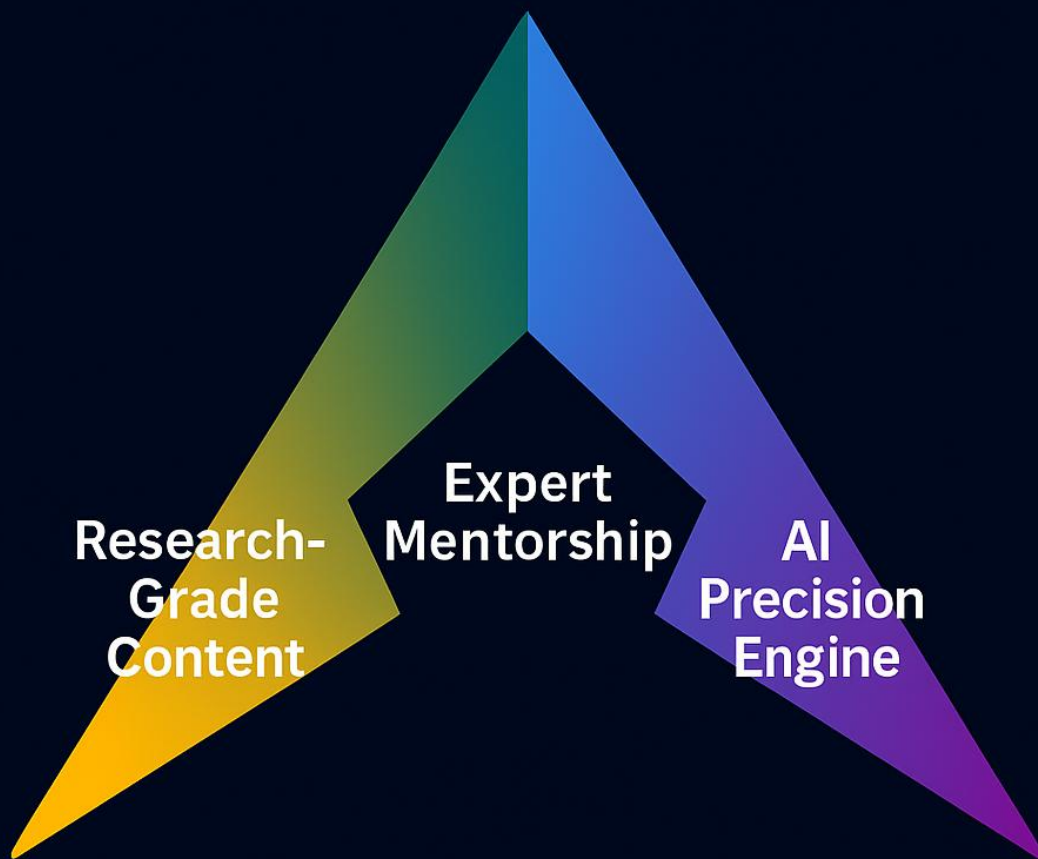


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DAILY CURRENT AFFAIRS DATED 05.07.2026

GS Paper III: Security

1. Future of Tanks in Modern Warfare: Lessons for India

a. Introduction

The character of warfare is undergoing a profound transformation due to the rapid emergence of drones, precision-guided munitions, electronic warfare, cyber operations and network-centric combat systems. The extensive use of these technologies in recent conflicts, particularly the Russia-Ukraine war, has revived the debate over whether traditional armoured platforms remain relevant on the modern battlefield.

India, however, continues to view armoured capabilities as an essential component of its conventional military power. The induction of the indigenous Zorawar Light Tank for deployment along the Line of Actual Control (LAC) reflects India's effort to modernise its armoured forces while adapting them to the unique operational requirements of high-altitude warfare. Rather than replacing tanks, technological advances are redefining how they are employed within integrated battlefield systems.



b. Background Context

Modern conflicts demonstrate that warfare is increasingly shaped by the convergence of conventional military platforms with emerging technologies. Drones, precision strikes, satellite intelligence, artificial intelligence, cyber operations and electronic warfare are changing the methods by which military objectives are achieved.

Nevertheless, experience from recent wars indicates that technological innovation has not eliminated the need for tanks. Instead, it has transformed armoured warfare from platform-centric operations to combined-arms and network-centric operations, where tanks operate alongside infantry, artillery, drones, air defence and electronic warfare assets.

This evolution explains why tanks continue to remain relevant despite increasing battlefield vulnerabilities.

c. Why Tanks Continue to Matter

Essential for Territorial Control

- Air power and long-range precision strikes can destroy targets but cannot occupy territory.
- Ground forces remain indispensable for capturing, holding and defending land.
- Tanks provide the protected mobility and firepower necessary for sustained ground operations.

Core Component of Combined-Arms Warfare

Modern armoured warfare relies upon close integration between:

- Tanks.
- Infantry.
- Artillery.
- Air defence systems.
- Drones.
- Electronic warfare units.
- Intelligence, Surveillance and Reconnaissance (ISR) assets.

The effectiveness of tanks increasingly depends upon operating within this integrated combat network rather than functioning independently.

Protected Mobility and Firepower

- Tanks combine mobility, armour protection and direct fire capability.
- They support infantry assaults, breach defensive positions and sustain offensive operations under hostile conditions.

Psychological and Deterrent Value

- Armoured formations continue to exert significant psychological influence during conventional warfare.
- Their presence enhances deterrence and strengthens battlefield dominance.

While tanks remain strategically important, India's operational requirements differ from those of many other countries because of the unique terrain along the Line of Actual Control.

d. Why India Needs the Zorawar Light Tank

Designed for High-Altitude Warfare

- Specifically developed for operations along the Line of Actual Control (LAC).
- Optimised for mountainous terrain where conventional main battle tanks face mobility constraints.

Enhanced Strategic Mobility

- Lower weight enables rapid air transportation.
- Improves operational flexibility in difficult terrain.
- Facilitates quicker deployment during contingencies.

Strengthening Border Deterrence

- Provides highly mobile armoured support to infantry formations.
- Enhances both offensive and defensive capabilities in high-altitude regions.

Maintaining Operational Balance

- Responds to China's deployment of Type-15 Light Tanks on the Tibetan Plateau.
- Helps maintain military balance along the LAC.

The induction of light tanks also reflects the broader evolution of armoured warfare in response to emerging technologies.

e. Changing Nature of Armoured Warfare

Growing Threat from Drones

- Armed drones and loitering munitions have increased the vulnerability of armoured vehicles.
- Tanks require stronger protection and improved battlefield integration.

Precision-Guided Weapons

- Anti-tank guided missiles (ATGMs) and precision munitions have reduced the survivability of isolated armoured formations.
- Mobility, concealment and combined-arms tactics have become increasingly important.

Electronic Warfare

- Modern battlefields are characterised by contested electromagnetic environments.
- Communication, navigation and targeting systems may face jamming or electronic interference.

Active Protection Systems (APS)

- APS detect and intercept incoming missiles and anti-tank weapons before impact.
- Newer systems are increasingly designed to counter certain categories of drones.

Network-Centric Warfare

- Tanks now function as nodes within an integrated battlefield network.
- Real-time intelligence, surveillance, reconnaissance, precision firepower and secure communications enhance operational effectiveness.

Despite these evolving threats, tanks continue to perform roles that cannot be substituted by stand-alone technological systems.

f. Why Tanks Remain Relevant

Seizing and Holding Territory

- Only protected ground forces can establish lasting territorial control.
- Tanks remain indispensable during conventional land operations.

Direct Fire Support

- Provide heavy firepower in support of infantry.
- Enable manoeuvre under hostile conditions.

High-Intensity Conventional Warfare

- Continue to play an important role during:
 - Border contingencies.
 - Conventional conflicts.
 - Offensive and defensive operations.
- Enhance operational flexibility across diverse terrain.

However, maintaining effective armoured forces now requires continuous technological adaptation.

g. Key Challenges

Drone Proliferation

- Low-cost drones and loitering munitions significantly increase battlefield vulnerability.
- Counter-drone capabilities have become operational necessities.

High Modernisation Costs

Tanks require substantial expenditure on:

- Acquisition.

- Maintenance.
- Upgrades.
- Life-cycle support.

Rapid Technological Obsolescence

- Continuous upgrades are necessary in:
 - Sensors.
 - Communications.
 - Electronic warfare.
 - Protection systems.
- Failure to modernise quickly reduces battlefield effectiveness.

These challenges underscore the need for an integrated modernisation strategy rather than isolated platform upgrades.

h. Way Forward

Accelerate Indigenous Armoured Modernisation

- Expedite induction of the Zorawar Light Tank.
- Strengthen Atmanirbhar Bharat in defence manufacturing.

Integrate Emerging Technologies

- Combine armoured formations with:
 - Drones.
 - AI-enabled surveillance.
 - Electronic warfare.
 - Network-centric command-and-control systems.
- Improve battlefield awareness and operational effectiveness.

Enhance Survivability

- Deploy Active Protection Systems (APS).
- Strengthen counter-drone capabilities.
- Upgrade electronic warfare equipment.

Strengthen Joint Operations

- Improve coordination among the Army, Air Force and Navy.
- Integrate armoured operations with air, cyber and electronic warfare capabilities.

Maintain Balanced Force Development

- Continue investing in both conventional platforms and emerging technologies.
- Recognise that future conflicts will require hybrid military capabilities rather than exclusive reliance on any single technology.

Conclusion

The future of armoured warfare lies not in abandoning tanks but in reimagining their role within a multi-domain battlefield. For India, the induction of the Zorawar Light Tank reflects a pragmatic recognition that high-altitude operations demand specialised armoured capabilities alongside emerging technologies. By integrating indigenous armoured platforms with drones, artificial intelligence, electronic warfare and network-centric operations, India can build a modern, resilient and future-ready land warfare capability while advancing the objectives of Atmanirbhar Bharat in defence.

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While every effort has been made to balance depth with brevity, please keep the following in mind:

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This compilation is curated primarily from the UPSC Mains perspective — with emphasis on conceptual clarity, analytical depth, and interlinkages across GS papers.

However, the PrepAlpine team is simultaneously developing a dedicated Prelims-focused Current Affairs Series, designed for:

- factual coverage
- data recall
- Prelims-style MCQs
- objective pattern analysis

This Prelims Edition will be released separately as a standalone publication.

2. Content Length

Some sections may feel shorter or longer depending on topic relevance and news density. To fit your personal preference, you may freely resize or summarize sections using any LLM tool (ChatGPT, Gemini, Claude, etc.) at your convenience.

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