Defence & Security · GS - III

Analyse how the increasing use of drone swarms is transforming the character of modern warfare. Examine the challenges this poses for conventional air-defence systems and national security.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 13/11/2026	GS - III	Defence & Security

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Drone swarm technology, asymmetric warfare, low-cost precision attacks, saturation of air defences, electronic warfare, critical infrastructure vulnerability, counter-drone systems, layered air defence, international humanitarian law.

Model Answer

Introduction

The proliferation of unmanned aerial vehicles (UAVs) has transformed modern warfare by making aerial surveillance and precision attacks more accessible. Coordinated drone swarms represent a significant development in this changing security environment.

Transformation of Warfare

Drone swarms can conduct simultaneous attacks, overwhelm defensive systems and target military as well as civilian infrastructure. Their relatively low cost enables non-state actors and smaller military forces to challenge technologically superior adversaries. Artificial intelligence and autonomous coordination may further increase their operational effectiveness.

Challenges for Air Defence

Conventional air-defence systems are often designed around identifiable aircraft and missiles. Large drone formations create difficulties in detection, identification and interception. Electronic warfare, communication

disruption and the risk of collateral damage complicate responses. Protecting airports, power installations and military bases becomes increasingly important.

Way Forward

India needs layered air defence, indigenous counter-drone technologies, electronic warfare capabilities and improved intelligence coordination. Clear operational safeguards must ensure compliance with international humanitarian law.

Conclusion

Drone warfare demands a shift from conventional air defence towards integrated, adaptive and cost-effective security systems.

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