Defence & Security · GS - III

Evaluate the importance of institutional safety management and accident investigation in maintaining the operational readiness of India's defence aviation assets.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 25/11/2026	GS - III	Defence & Security

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Aviation safety, preventive maintenance, human factors, technical investigation, operational readiness, institutional learning

Model Answer

Military aviation operates under demanding conditions involving complex aircraft systems, high-risk training and mission requirements. Aviation accidents can result in loss of personnel, equipment and operational capability.

Why safety management matters

1. **Technical reliability:** Scheduled maintenance, component inspections and timely replacement of defective parts reduce mechanical risks.
2. **Human factors:** Crew fatigue, inadequate training and communication failures can contribute to accidents. Simulator training and standard operating procedures improve preparedness.
3. **Operational continuity:** Preventing accidents preserves expensive defence assets and ensures aircraft availability for essential missions.

Role of accident investigation

Aviation accident investigations identify technical, environmental and human factors behind failures. Their purpose should be institutional learning rather than merely assigning blame.

1. Independent technical examination improves the credibility of findings.
2. Standardised reporting helps identify recurring defects across aircraft fleets.
3. Corrective recommendations enable improvements in maintenance protocols, training and operational procedures.

Way forward for India

India needs stronger indigenous testing and maintenance capabilities, improved flight-data monitoring, regular safety audits and effective coordination between operators, manufacturers and investigative agencies.

Operational readiness and aviation safety are complementary objectives. A military aviation system that learns systematically from accidents is better equipped to preserve personnel, resources and long-term combat effectiveness.

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