



Very Short-Range Air Defence System (VSHORADS)

Why in News?

Recently, [Defence Research and Development Organisation \(DRDO\)](#) conducted **two successful test flight of Very Short Range Air Defence System (VSHORADS) missile** from a ground based portable launcher at the **Integrated Test Range, Chandipur, off the coast of Odisha.**

- Both the flight tests have **completely met the mission objectives.**

What is VSHORADS?

- **About:**
 - Very Short-Range Air Defence System (VSHORADS) is a [Man Portable Air Defence System \(MANPAD\)](#) **designed and developed indigenously by DRDO's** Research Centre Imarat (RCI), Hyderabad in collaboration with other DRDO laboratories and Indian Industry Partners.
- **Design:**
 - VSHORADS missile incorporates many novel technologies including **miniaturized Reaction Control System (RCS)** and **integrated avionics**, which have been successfully proven during the tests.
 - The missile, meant for **neutralizing low-altitude aerial threats at short ranges**, is propelled by a **dual thrust solid motor.**
 - The design of the missile including launcher has been **highly optimized to ensure easy portability.**
- **Significance:**
 - This new missile equipped with modern technologies will give **further technological boost to the [Armed Forces.](#)**

What is a Reaction Control System?

- A Reaction Control System (RCS) is responsible for **attitude control** and steering by the **use of thrusters.**
- The RCS system is capable of **providing small amounts of thrust in any desired direction** or combination of directions.
- An RCS is also capable of **providing torque to allow control of rotation (pitch, yaw, and roll).**

What are MANPADS?

- MANPADS are **short-range, lightweight and portable surface-to-air missiles** that can be fired by individuals or small groups to destroy aircraft or helicopters.
- They help **shield troops from aerial attacks** and are most effective in targeting low-flying aircraft.
- MANPATs or Man-Portable Anti-Tank Systems work in a similar manner but are used to destroy or incapacitate military tanks.
- MANPADS have a maximum range of 8 kilometers and can engage targets at altitudes of 4.5 km.
- The first MANPADS were introduced by the United States and Soviet Union in the 1960s.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. What is “Terminal High Altitude Area Defense (THAAD)”, sometimes seen in the news? (2018)

- (a) An Israeli radar system
- (b) India’s indigenous anti-missile programme
- (c) An American anti-missile system
- (d) A defence collaboration between Japan and South Korea

Ans: (c)

Exp:

- Terminal High Altitude Area Defence (THAAD) is an American anti-missile system designed to intercept and destroy short and medium-range ballistic missiles during their “terminal” phase of flight when they are falling towards the target.
- They have the ability to intercept missiles inside and outside the atmosphere.
- It is interoperable with other ballistic missile defence systems and is highly mobile and deployable worldwide.
- **Therefore, option C is the correct answer.**

[Source: PIB](#)

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