



## Anti-Tank Guided Missiles (ATGM)

### Why in News?

Recently, [Defence Research and Development Organisation \(DRDO\)](#) has successfully test fired indigenously developed **Laser-Guided Anti-Tank Guided Missiles (ATGM)**.

### What do we need to know about the ATGM?



#### ▪ Anti-Tank Guided Missiles:

- ATGMs are primarily **designed to hit and destroy heavily armored military vehicles**.
  - The missiles can be transported by a **single soldier, to larger tripod-mounted weapons**, which require a squad or team to transport and fire, to vehicle and aircraft mounted missile systems.
- This type of guided missiles rely on an **electro-optical imager (IIR)** seeker, a laser or a **W-band radar seeker** in the nose of the missile.
  - These are **'fire-and-forget'** missiles where the **operator can retreat** right after firing as **there is no more guidance required**.

#### ▪ Laser-Guided ATGM:

- The all-indigenous Laser Guided ATGM employs a **tandem High Explosive Anti-Tank (HEAT)** warhead to defeat **Explosive Reactive Armour (ERA)** protected armoured vehicles.
- The ATGM has been developed with multi-platform launch capability and is **currently undergoing technical evaluation trials** from the 120 mm rifled gun of MBT Arjun.

### What are some other Anti-tank Missiles?

#### ▪ [Helina:](#)

- It has a **maximum range of seven kilometers** and has been designed and developed for integration on the weaponized version of the **ALH (Advanced Light Helicopter)**.

- The missile system has **all-weather, day, and night capability** and can defeat **battle tanks with conventional armour as well as explosive reactive armour.**



- **The Nag:**

- It is a **third-generation fire-and-forget** missile developed for mechanized formations to engage **heavily fortified enemy tanks.**



- **MPATGM:**

- It stands for **Man-Portable Anti-Tank Guided Missile** which has a range of 2.5 kilometers, with **fire-and-forget and top attack capabilities** for infantry use.



▪ **SANT:**

- It is a **Smart Stand-off Anti-Tank Missile** being developed for launch from the **Mi-35 Helicopter** for the Air Force's anti-tank operations.



▪ **ATGM for MBT Arjun:**

- **ATGM for MBT Arjun** is a laser-guided, precision-guided munition that is launched from the 120mm rifled gun of the Arjun tank to engage and defeat **Explosive Reactive Armour-protected armoured targets**.



## UPSC Civil Services Examination, Previous Year Questions (PYQs)

**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)**

**Explanation:**

- 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 missile 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.

**Q. With reference to Agni-IV Missile, which of the following statements is/are correct? (2014)**

1. It is a surface-to-surface missile.
2. It is fuelled by liquid propellant only.
3. It can deliver one-tonne nuclear warheads about 7500 km away.

**Select the correct answer using the code given below:**

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Ans: (a)**

**Explanation:**

- Agni-IV is a nuclear-capable long-range ballistic missile of India, with a strike range of 4,000 km.
- The indigenously developed Agni-IV is a two-stage surface-to-surface missile. It is 20 metres long with a weight of 17 tonnes. Hence, statement 1 is correct.
- It is a two stage solid fuelled system that can carry a one-tonne nuclear warhead over a distance of 4,000 kilometres. Hence, statements 2 and 3 are not correct.
- Therefore, option (a) is the correct answer.

**Source: PIB**

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