

# **Anti-Tank Guided Missiles (ATGM)**

# Why in News?

Recently, <u>Defence Research and Development Organisation (DRDO)</u> 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.



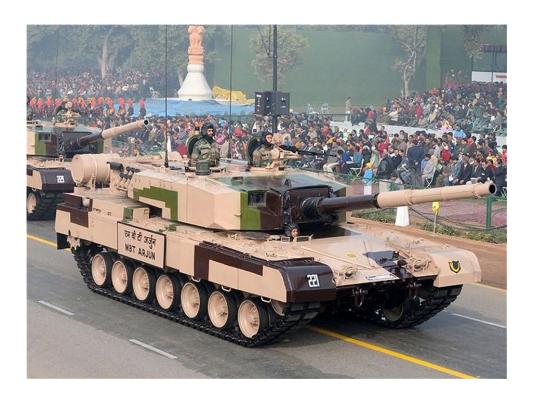
#### SANT:

• 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 Armourprotected 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** 

PDF Refernece URL: https://www.drishtiias.com/printpdf/anti-tank-guided-missiles-atgm