



# Agni-5 Ballistic Missile

## Why in News?

Recently, India successfully carried out the night trials of the Agni-5 nuclear-capable [ballistic missile](#).



## What are the Features of the Missile?

- Agni-5 is an **ingeniously built advanced surface-to-surface ballistic missile** developed under the [Integrated Guided Missile Development Programme \(IGMDP\)](#).
- It is a **fire-and-forget missile**, which cannot be stopped without an interceptor missile.
- The missile has the capability of hitting targets beyond the range of 5000 km and is crucial for India's self-defense systems.

## What are Agni Missiles?

- **About:**
  - The Agni missile class is the backbone of India's nuclear launch capability, as are [Prithvi](#) short-range ballistic missiles, submarine-launched ballistic missiles, and fighter aircraft.
  - Agni-1 to 5 missiles are designed & developed by [Defence Research and Development Organisation \(DRDO\)](#).
- **Other Ranges of Agni Missiles:**
  - Agni I: Range of 700-800 km.
  - Agni II: Range more than 2000 km.
  - Agni III: Range of more than 2,500 Km
  - Agni IV: Range is more than 3,500 km and can fire from a road mobile launcher.
  - Agni-V: The longest of the Agni series, an Inter-Continental Ballistic Missile (ICBM) with a range of over 5,000 km.

## What is the Integrated Guided Missile Development Programme?

- IGMDP was the **brainchild of renowned scientist [Dr. APJ Abdul Kalam](#)**.
- It was **intended to attain self-sufficiency** in the field of missile technology.
- After keeping in mind, the requirements of various types of missiles by the defense forces, the program recognized the need to develop five missile systems.
- The IGMDP formally got the approval of the Indian government in 1983.
- It **brought together the country's scientific community**, academic institutions, R&D laboratories, industries and the three defence services in giving shape to the strategic, indigenous missile systems.
- **The missiles developed under IGMDP are:**
  - Short-range surface-to-surface ballistic missile - Prithvi
  - Intermediate-range surface-to-surface ballistic missile - Agni
  - Short-range low-level surface-to-air missile - Trishul
  - Medium-range surface-to-air missile - Akash
  - Third generation anti-tank missile - Nag

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

**Q1. 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)**

- 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.

**Q2. 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)**

- 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.

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