



KAMARAJ IAS ACADEMY
Only IAS Academy by Grandson of "Perunthalaivar Kamarajar"

What is Blue Sparrow?

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Why in News?

Israel reportedly used the Blue Sparrow missile in a strike on Tehran on 28 February 2026.

The strike allegedly killed Ayatollah Ali Khamenei, Iran's Supreme Leader who had ruled the country since 1989.

The missile was developed by Rafael Advanced Defense Systems of Israel.

Blue Sparrow Missile

Blue Sparrow is an air-launched ballistic target missile.

It belongs to the Sparrow missile family, which includes:

Black Sparrow

Silver Sparrow

These missiles were designed mainly as practice targets for Israel's Arrow missile defense system.

Purpose of Sparrow Missile Family

The Sparrow missiles simulate enemy ballistic missile threats.

They help test and improve the Arrow missile defence system, which intercepts ballistic missiles before they reach the ground.

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Key Technical Specifications

Length: 6.51 metres

Weight: 1,900 kg

Propulsion: Single-stage solid rocket propellant

Guidance system: Dual GPS + INS (Inertial Navigation System)

INS allows the missile to track its movement without external signals.

How the Blue Sparrow Works

The missile is released from a fighter jet at high altitude.

It accelerates steeply upward, reaching near the edge of the atmosphere.

A front section called the re-entry vehicle then separates.

The re-entry vehicle falls almost vertically toward the target at extremely high speed.

Built-in thrusters help it maintain course during descent.

Why It Is Difficult to Intercept

Most air-defence systems monitor threats coming horizontally from the horizon.

Blue Sparrow drops almost vertically from above.

It travels at several times the speed of sound, giving defenders very little reaction time.

Role in the Israel–Iran Conflict

Israeli strikes hit Tehran on 28 February 2026.

Israel described the operation as Operation Roaring Lion.

The United States referred to the coordinated effort as Operation Epic Fury.

Evolution into Combat Missile

Technology from Blue Sparrow led to the development of the ROCKS missile.

ROCKS is a combat-ready precision missile capable of:

Long-range stand-off attacks

Striking underground targets

Operating even when GPS signals are jammed.

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Warhead capacity: Up to 500 kg

Accuracy: Within about 3 metres of the target.

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