

LCA Tejas fighter jet

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In news: The maiden flight trial of the Light Combat Aircraft(LCA) Tejas MK-1A was started recently.

About Tejas aircraft-

- Tejas is **a single-engine multi-role fighter aircraft**, which is capable of operating in high-risk air environments.
- **HAL developed its first supersonic fighter – HAL HF-24 Marut – in the 1960s and phased them out in 1990.**
- After that, it developed **its supersonic fighter – Tejas** which is **by far the smallest and lightest** in its class of contemporary supersonic combat aircraft.
- The light combat aircraft **made its maiden flight in January 2001** and was inducted into the squadron of the Indian Air Force in 2016.
- **Tejas – meaning ‘radiant’ – has many USPs.**
- For starters, **it has active electronically-scanned radar for critical operation capability.**
- It **can refuel in the air and be ready for war again.**
- It **can target enemy aircraft from a distance**, and also has the ability to dodge the enemy’s radar.
- Tejas **marked its international debut at the Langkawi International Maritime and Aerospace Exhibition (LIMA) in March 2019.**
- Compared to Sukhoi, Tejas is much lighter. It is **fully capable of carrying a load of eight to nine tonnes.**
- It can fly with as many weapons and missiles as Sukhoi, which weighs more.
- **Despite being light, its speed is unmatched. These aircraft can fly as fast as the speed of sound, i.e., Mach 1.6 to 1.8, up at an altitude of 52,000 feet..**
- The Tejas Mark-1A is also costlier than the Sukhoi-30MKI fighter aircraft because many latest types of equipment have been added to it.

- For example, **it has radar developed in Israel**. Apart from this, the aircraft **also has an indigenously developed radar**.

Demand by foreign countries-

- According to the government's recent statement in the Lok Sabha, **six countries – the USA, Australia, Argentina, Egypt, Indonesia and the Philippines have expressed interest in procuring light combat aircraft (LCA)**.
- Malaysia has already placed an order for procuring 18 India's indigenously-made fighter jets.
- The Royal Malaysian Air Force (RMAF) intends to procure Tejas to supplement its MiG-29 fleet.
- According to reports, just last year, the Indian government awarded a contract worth Rs 48,000 crore to Hindustan Aeronautics Limited for manufacturing 83 Tejas jets to be delivered by 2023.

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- LCA Mk-1A is an indigenously-designed aircraft with more than 70 per cent indigenous content.
- **The aircraft is equipped with Active Electronically Scanned Array (AESA) Radar, Advanced Short Range Air-Air Missile (ASRAAM)** which is a combat missile, Electronic Warfare (EW) Suite and Air to Air Refuelling (AAR) to meet the operational requirements of the IAF.
- LCA Mk-1A is an **upgraded version of the LCA Mk-1**. LCA Mk-1 reached Full Operational Capability (FOC) in 2020.
- **AESA is capable of tracking multiple enemy targets with high accuracy** suitable for firing missiles in all terrain operations.
- The major function of the EW suite is to identify and locate threat signals, attack or jam adversary's signal operations and give a leverage to the pilots.
- In December 2021, HAL signed a contract with Bharat

Electronics Limited (BEL) for development and supply of critical avionics like Flight Control System Line Replaceable Units (a modular component like radio which can be replaced during field operation) for the LCA Mk1A programme.