F-16 Fighting Falcon

Prelims - *Current events of international importance.*

Mains (GS II) – *International Relations | Bilateral agreements and their implications on regional security dynamics.*

Why in News?

The United States has approved a potential sale of 20 F-16 fighter aircraft to the Philippines, worth $5.58 billion.

- The F-16 Fighting Falcon is a *compact, multi-role fighter aircraft designed for both air-to-air combat and air-to-surface attacks.*
- **Developed by -** General Dynamics (now Lockheed Martin) for the United States Air Force (USAF) in the 1970s.
- **High Manoeuvrability -** Designed with a frameless bubble canopy for improved visibility, side-stick control for precise handling, and a fly-by-wire system for better responsiveness.
- **Speed & Performance -** Capable of speeds over Mach 2 and a combat radius of 550 km, making it ideal for quick-response missions.

  Mach 1 represents the speed of sound, approximately 761 miles per hour (or 1,225 kilometres per hour) at sea level on a standard day.

- **Weapon Systems -** Can carry missiles (AIM-9 Sidewinder, AIM-120 AMRAAM), bombs (JDAM, Paveway laser-guided bombs), and a M61 Vulcan 20mm cannon for close combat.
- **Multirole Capabilities -** Adaptable for air superiority, ground attack, reconnaissance, and electronic warfare missions.
- **Advanced Avionics -** Equipped with APG-83 AESA radar, digital flight controls, and upgraded targeting systems for precise strikes.
- **Extended Range -** Can be fitted with external fuel tanks and aerial refuelling capability to extend operational range.
- **Global Usage & India's Status**
  - **Countries Operating F-16 -** USA, Israel, Pakistan, Turkey, Egypt, UAE, South Korea, and others.
  - **India's Status -** India does not operate F-16 jets.
  - **Indian Alternative -** India operates aircraft like Tejas, Mirage 2000, Su-30MKI, Rafale, and MiG-29 for similar roles.

Reference

The Hindu | Britannica F-16

