DRDO & Research & Development:

Indigenous Technology Development

DRDO-IAF Jammer: DRDO is collaborating with the Indian Air Force (IAF) to develop a new ground-based jammer. This S-band electronic warfare system, inspired by Russia's Krasukha, is designed to neutralize Airborne Early Warning and Control (AWACS) aircraft and disrupt Global Navigation Satellite System (GNSS) signals.

AMCA Engine: The Gas Turbine Research Establishment (GTRE) is developing a high-bypass turbofan engine for the Advanced Medium Combat Aircraft (AMCA) program. This technology could also be used to power commercial aircraft, showcasing a dual-use spin-off from the defense sector.

Tejas MK-1A: The final weapons firing trials for the indigenous Tejas MK-1A fighter jet are scheduled for September 2025, marking a critical step before its full induction into the IAF.

Defense Industry & Procurement

Manufacturing Orders: Paras Defence and Space Technologies Ltd. has secured an order worth ₹45.32 crore from Bharat Electronics Ltd (BEL) for signal and data processing systems. Similarly, Apollo Micro Systems has been declared the lowest bidder for orders worth ₹25.12 crore from DRDO and other Defense Public Sector Undertakings (PSUs).

Tactical Mobility: A new joint venture between JSW Sarbloh Motors and Tomcar USA will focus on building tactical All-Terrain Vehicles (ATVs) in India to enhance the mobility of the armed forces.

Airbus C-295M: The IAF plans to acquire an additional 50 Airbus C-295M transport aircraft, which will increase its total fleet to 106 and help phase out the aging Antonov An-32 aircraft.

Other Developments

Agni-5 Missile Test: India successfully test-fired the Agni-5 ballistic missile, a nuclear-capable Intermediate Range Ballistic Missile (IRBM) developed by DRDO. The missile is equipped with Multiple Independently Targetable Reentry Vehicle (MIRV) technology, allowing it to deliver multiple warheads to different targets.

Operation Sindoor: PM Modi recently highlighted "Operation Sindoor" as a new approach to counter-terrorism. The operation involved the use of drones and precision munitions to strike nine terrorist camps in Pakistan and Pakistan-occupied Jammu and Kashmir.

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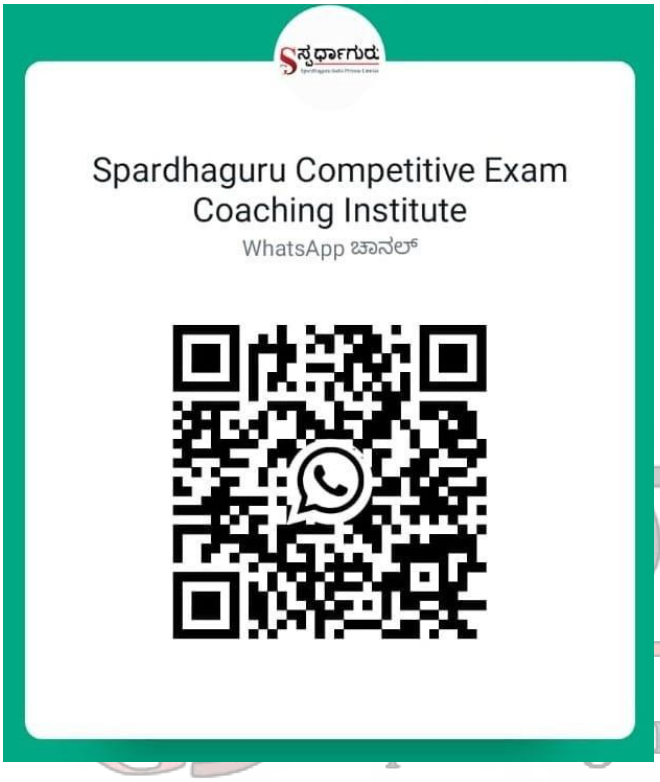

MCQS

1.What is the primary function of the new ground-based jammer being developed by DRDO and the IAF?
a) To provide a secure communication network for the armed forces.
b) To detect incoming enemy aircraft and missiles.
c) To neutralize AWACS aircraft and disrupt GNSS signals.
d) To intercept and analyze enemy radar signals.

Answer: c) To neutralize AWACS aircraft and disrupt GNSS signals.
The provided text explicitly states that the jammer is "designed to neutralize Airborne Early Warning and Control (AWACS) aircraft and disrupt Global Navigation Satellite System (GNSS) signals."

2.Which organization is responsible for developing the high-bypass turbofan engine for the AMCA program?
a) Hindustan Aeronautics Limited (HAL)
b) Bharat Electronics Ltd (BEL)
c) Gas Turbine Research Establishment (GTRE)
d) Defence Research and Development Organisation (DRDO)

Answer: c) Gas Turbine Research Establishment (GTRE)
The prompt mentions that "The Gas Turbine Research Establishment (GTRE) is developing a high-bypass turbofan engine for the Advanced Medium Combat Aircraft (AMCA) program."

3.What is the significance of the upcoming final weapons firing trials for the Tejas MK-1A fighter jet?
a) It will lead to the export of the jet to other countries.
b) It is a crucial step before its full induction into the IAF.
c) It is a prerequisite for a new joint venture with a foreign company.
d) It will determine the final cost of the aircraft.

Answer: b) It is a crucial step before its full induction into the IAF.
The text states that the trials are "a critical step before its full induction into the IAF."

4.The Agni-5 ballistic missile's ability to deliver multiple warheads to different targets is a result of which technology?

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a) Cruise Missile Technology (CMT)
b) Interceptor Missile System (IMS)
c) Multiple Independently Targetable Reentry Vehicle (MIRV) technology
d) Anti-Ballistic Missile (ABM) technology

Answer: c) Multiple Independently Targetable Reentry Vehicle (MIRV) technology
The prompt clarifies that the missile is "equipped with Multiple Independently Targetable Reentry Vehicle (MIRV) technology, allowing it to deliver multiple warheads to different targets."

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