Controlled Aerial Delivery System

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In news–Recently, DRDO's Aerial Delivery Research and Development Establishment (ADRDE), Agra conducted a flight demonstration of the Controlled Aerial Delivery System(CADS).

About CADS-

- CADS is **used for precise delivery of payload upto 500 kgs at predetermined location by making use of manoeuvrable capabilities of Ram Air Parachute (RAP)**.
- It **uses the Global Positioning System(GPS)** for the coordinates, altitude and heading sensors for the heading information during its flight.
- The CADS, with its onboard electronics unit, autonomously steers its flight path using waypoint navigation towards target location by operating controls.
- System performance was demonstrated at Drop Zone, Malpura from an altitude of 5000m.
- The **system was para-dropped from AN32 aircraft** and then steered to the predesignated landing point in autonomous mode.
- Eleven paratroopers of the Indian Army and Indian Air Force chased the CADS-500 in air and landed simultaneously.
- CADS delivers the attached payload within a CEP of 100 m utilizing gliding & manoeuvring capability of a high performance RAM Air Parachute.
- The system operates under complete autonomous mode with manual override capability during its entire flight regime.

Ram Air Parachute-

Ram-air parachutes are a type of parafoil parachute or canopy,

used to lower one’s descent speed so that safe arrival on the ground can be achieved, or to glide in the air, although those used for gliding purposes are typically called a ‘paraglider’.

Aerial Delivery Research and Development Establishment(ADRDE)-

- ADRDE is a pioneer R&D lab of DRDO for the Design and Development of Aerodynamic Decelerators, Aerostat Systems.
- It is located in Agra, Uttar Pradesh in India.
- Its research scope includes development of systems for dropping heavy loads, brake parachutes, towed targets, aircraft arrester barriers and aerostats.