राजीव गांधी राष्ट्रीय विमानन विश्वविद्यालय
RAJIV GANDHI NATIONAL AVIATION UNIVERSITY

UDAAN

नागर विमानन मंत्रालय
MINISTRY OF CIVIL AVIATION

ABHYUDAYA

Chasing the Singularity of Excellence

RULE BOOK

RC PLANE
(AEROBLAZE 2K26)

1. Event Overview

AEROBLAZE 2K26 is a competitive RC Aircraft Design & Flying Challenge, where teams design, fabricate, and pilot a radio-controlled aircraft to perform multiple flight tasks.

The event focuses on aerodynamics, stability, control, and pilot skill, testing both engineering design and real-time flight performance.

2. Problem Statement

Design and fabricate a stable, lightweight, and efficient RC aircraft capable of completing multiple flight-based challenges including take-off & landing, stability control, and aerobatic maneuvers within the given time limits.

3. Aircraft Technical Specification

- **Wingspan**:

100 cm – 130 cm

(Minimum 100 cm mandatory for qualification)

- **Weight**:

Ideal range: 900 g – 1.5 kg

Maximum permissible weight: 2 kg

- **Power Source:**

Electric propulsion system using commercial Li-Po (Lithium Polymer) batteries

Electronic Speed Controller (ESC):

30A – 40A ESC with built-in Battery Eliminator Circuit (BEC)

- **Servos:**

9g micro servos

(Minimum 2 servos required for primary control surfaces such as ailerons and elevator)

- **Construction Materials:**

Open choice of materials including Corosheet, Depron, Balsa wood, Foam, or equivalent

- **Allowed Modifications:**

Use of gearboxes and propeller extensions is permitted

- **Fabrication Rule:**

The aircraft must be entirely fabricated or significantly modified by the participating team

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4. Competition Rules & Guidelines

- The aircraft must be entirely built or significantly modified by the team
- Commercial RC planes without modification are not allowed
- Each round will have 2 attempts
- Best attempt will be considered for scoring
- 5–6 minutes pit time will be provided between attempts
- Total flight time per round: 10 minutes
- One pilot can fly only one plane
- Single rotor motor rc plane will be allowed
- Thrust to weight ratio will be checked

5. Event Rounds

Round1: Take-off & Landing

- Launch Method: Hand launch (one-arm throw)
- Objective:
- Perform a controlled take-off and a smooth landing within the designated landing zone

Round 2: Stability Check

Objective:

- Demonstrate aircraft stability and control over:
- Roll
- Pitch
- Yaw

Round 3: Aerobatics

Objective:

- Perform aerobatic maneuvers such as:
- Loops
- Rolls
- Spin handling

6. Judging Criteria

- Teams will be evaluated on:
- Design & Innovation – Aircraft structure, material selection, durability
- Flight Performance – Accuracy, efficiency, and task completion
- Control & Stability – Smooth handling, maneuver precision, crash avoidance

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7. General Instructions

- All participants must strictly follow the event rules and safety guidelines provided by the organizing committee.
- Any form of misconduct, unsafe flying, or rule violation may lead to penalties or disqualification.
- The decision of the judging panel and event coordinators will be final and binding in all matters related to the competition.

8. Person Of Contact

Event Coordinator:

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"No fears. No limits. Technological domination. Good luck!"