



# ABHYUDAYA

Chasing the Singularity of Excellence

रुद्र  
बॉक्स

# Glidator

## Description :

The objective of this competition is to design, fabricate, and fly an unpowered glider that demonstrates sound aerodynamic design and structural efficiency. Teams must balance lift, weight, and stability to achieve reliable glide performance..

## Eligibility & Team Structure :

- Team Size: Minimum 2 members, Maximum 4 members.
- Each team must appoint one Team Captain as the official point of contact.
- Open to all students with a valid college ID.



## **Technical Specifications (The Build) :**

All gliders must strictly comply with the following technical specifications.

- Wingspan: Must be between 75 cm and 80 cm (tip-to-tip).
- Primary Material: Balsa wood must be the primary structural material.
- Maximum Balsa Thickness: 5 mm for any main structural element.
- Wing Spars: Spars are permitted for structural reinforcement.
- Spar Material: Balsa or equivalent lightweight wood only.
- Spar Size Limit: Maximum cross-section of 5 mm × 5 mm.
- Declaration Rule: All spar details (number, size, and placement) must be specified in the Round 1 PPT.
- Electronics: Servos, receivers, and batteries allowed strictly for control.
- Propulsion: Any thrust-generating system is strictly prohibited.

## **Competition Structure :**

- The competition consists of two rounds.
- Only teams qualifying Round 1 may participate in Round 2.

### **Round 1: Virtual Qualification**

Round 1 verifies minimum flight capability and compliance.

- Qualification Requirement: Minimum unpowered glide distance of 8-10 meters.
- Flight Video: Continuous footage clearly showing the achieved distance.
- Presentation (PPT) must include material list, spar details (if used), component photos, and glide ratio calculation.
- Failure to meet the minimum glide distance will result in non-qualification



## **Round 2: Field Finale**

- Manual hand-launch from a fixed elevated platform.
- Three attempts per team; best attempt is scored.
- Sub-Round A: Unpowered Glide.
- Sub-Round B: Controlled Flight.

### **Scoring Criteria :**

- Glide Ratio: 35%.
- Time of Glide: 25%.
- Control Authority: 30%.
- Design and Aesthetics: 10%.

### **Safety & Environmental Clause:**

- Unsafe designs may be grounded by organizers.
- Organizers may change location or schedule if weather or external conditions are hazardous.
- Organizers' decisions are final.

### **Disqualification Conditions :**

- Wingspan outside 75–80 cm range.
- Failure to qualify Round 1.
- Use of undeclared materials or spars.
- Use of propulsion systems.

### **Conclusion :**

**This event aims to provide hands-on exposure to aerodynamics, structures, and basic avionics.**



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“Glide With Wings”

