

Synergy Competition: Drone

Last Date of Registration: 09 November 2022

Registration
Fee: INR 100/-
for each
competition

(Entry fees are per team, payable on the spot, and exempted for “school students”)

Contemporary times have seen drones being employed in journalism, videography, delivery of commodities, disaster management, search and rescue, healthcare, mapping, military operations, and many more. The drone competitions will give an opportunity to students to showcase coding and problem-solving skills in a simulated environment. Entries are invited in the following areas in the drone competition:

- Drone-Eye in sky
- Drone Race
- Drone Hurdle Race
- Drone Payload Race
- Drone Innovation

1. Event: Drone-Eye in sky

Drone-eye in the sky is a drone photography/Videography contest in two areas ^{**1}.

- a. Static photography (*stationary objects*)
- b. Dynamic photography (*objects in motion*)

Evaluation will be based on view/perspective, stability of video, and innovation considering the quality and originality of photos and videos checked by experts.

The decision of the Judges and Event Organizers shall be treated as final and binding on all. The decisions cannot be contested by any of the participant teams.

^{**1} *Only public areas will be considered for this event.*

2. Event: Drone Race

Drones will compete in a race on a pre-defined flight track (without hurdles) while their operators stay at a static and defined position.

Evaluation will consider the flight time taken to complete the full lap. The decision of the Judges and Event Organizers shall be treated as final and binding on all. The decisions cannot be contested by any of the participant teams.

3. Event: Drone Hurdle race

In this category, the drones will traverse a pre-defined flight track riddled with hurdles of specific dimensions.

Evaluation will consider the flight time taken to complete the full lap successfully, and manoeuvre through hurdles. Collision with hurdles will have negative markings.

The decision of the Judges and Event Organizers shall be treated as final and binding on all. The decisions cannot be contested by any of the participant teams.

4. Event: Drone Payload

Drones will go through multiple rounds with incremental payloads. The participant will manoeuvre the drones to retrieve and deliver the payload at specified positions without touchdowns. Touchdowns will have negative markings. The flight time with payload will be considered to decide the final result

The decision of the Judges and Event Organizers shall be treated as final and binding on all. The decisions cannot be contested by any of the participant teams.

5. Event: Drone Innovation

Drone innovation is a unique competition designed to encourage innovation at the grass-roots level to solve real-life problems. Evaluations will be based on:

- Presentation
- Uniqueness
- Extent of social impact

The decision of the Judges and Event Organizers shall be treated as final and binding on all. The decisions cannot be contested by any of the participant teams.

General Rules for all the drone competition categories

1. The drone should adhere to IDRL and IRDA rules.
2. All frames must pass a safety and airworthiness inspection. Once the airframe has been checked and approved by the Committee, it must not be modified or changed.
3. A charging station would be provided with power points.

Name	Measurement (Max)
Drone dimensions – hub-to-hub (diagonal)	360 mm
Drone height – from the base to the top of a GPS antenna	222 mm
Propeller – length	150 mm
Maximum Weight of drone as per DGCA	2 kg
Control distance (maximum) – with supplied remote control	300 m
Altitude of operation	30 m