

# Alpine Swift

Team Event (Y19 only)

Points: 30

## Problem statement

Design a rubber powered Ornithopter that will use its potential energy for flapping the wings that will ultimately provide the lift to the bird. Designing is a very crucial part of this event to ensure a good time of flight.

## Rules and Regulations

- Each team will get 2 attempts to fly their ornithopter.
- Best out of the 2 flight time will be used for scoring.
- Each team will be given one trial run before the event.
- Models should be handmade, readymade models will not be accepted.
- The aircraft should not be powered by an electric/engine source, it should only be rubber powered.
- There is no limitation on the size of the bird.

## Team structure

There is no limitation on the number of teams from each pool. The teams can have a maximum of four members.

## Task

- The participants will have to construct an ornithopter having good flapping frequency, low drag and it should be rubber propelled.
  - Your model can be of any size or shape and can be made of any material. But, it is recommended to use lightweight material like balsa, bamboo, plastic etc.
- Teams need to hand launch their model. Any other mechanism like the use of springs/rubber band, high start etc. is not allowed.
- Once launched, your model should be capable of achieving a good time of flight.

## Scoring

Entirely based on time of flight (T). Time is calculated in seconds(s). The ranking will be based on 'T'.

## Tie Condition

In case there is any tie, teams will have to repeat the problem statement until we get a winner.

**Note:** \*\*Team must report on scheduled time. If any team will fail this condition then points will be deducted as the following scheme from their total score

- For the first 10 minutes 1-second penalty per minute
- For 10 to 15 minutes 2 seconds penalty per minutes
- After 15 minutes team will be disqualified.

In case of any disputes, the decision of the Coordinators would be final and binding to all. In case of any problem, feel free to contact.

Coordinators:

Aayush Saini (9198975323)

Amrendra Pratap Singh (9140695135)

Kevlin (9559024940)

Nitesh (9079924892)