# MAYVI 2019

# COMPETETION RULES BOOK

## ABOUT THE COMPETITION

MAYVI 2019 - **Ma**ke Your **Vi**mana, Asia's first on-of-a-kind Aeromodelling competition which promotes enthusiasm and knowledge of building an RC plane. The concept of this competition is to create awareness about Aeromodelling and give a chance of experience of BUILDING an aircraft. It is a 24-hour competition organized by Team AERO2ASTRO. Winning teams will be awarded prizes worth INR 60,000/- .

## PROBLEM STATEMENTS

### RULES ON TEAM STRUCTURE:

1. Maximum of 5 members in a team.
2. Individual participants are allowed.
3. Members of a team may be from same college or different colleges.
4. Any number of teams can participate from one college.
5. Participants are requested to carry their school/college ID cards to the event.

### DESIGN CONSTRAINTS:

1. RC Plane shouldn't measure more than 1 Meter, along any direction.
2. The use of IC engines is prohibited. Only electrical motors are allowed.
3. If available, one of the team members may fly the aircraft. If not, a pilot will be provided.
4. Use of gyroscopes and flight controllers are prohibited.
5. Battery should not weigh more than 180 grams.
6. Only single motor models are permitted.
7. Propeller diameter should not be greater than 10 inches.
8. Metal propellers, Wood propellers are not allowed.

### ABSTRACT SUBMISSION:

1. All the teams must submit an abstract on their aircraft, which must not exceed 5 pages with standard formatting. The abstract must be a document of the basic design of the aircraft (which includes dimensions, wing span, etc.) and also should explain how their design is suitable for given tasks.
2. Along with the abstract, participants must attach pictures of their design.

3. The abstract should be submitted as per the standard format (you may refer the standard report format).
4. The abstract must be submitted on or before 02.10.2019 (Wed).

# FORMAT OF THE COMPETETION:

1. The competition requires the participants to build a RC Plane that can fly.
2. Ready-made Planes are strictly prohibited.
3. The competition will be of 4 stages;
   A) Presentation Round.
   B) Building Round.
   C) Technical Inspection.
   D) Flying Round.

## A) Presenting your design:

In this round, all teams must present a PPT stating the key features of the RC model.

Note: Presentation must consist aircraft design specifications and electronics used in it.

## B) Building Round:

In this round, the participants must build their own RC Plane. Participants may bring all the components & materials required to build their aircraft or you may order it during the registration. Participants are requested to get their own blueprint for building the aircraft.

Note: Teams ordering components at Aero2Astro must inform the Organizers 7-days prior to the event.

## C) Technical Inspection:

After building, the model will be evaluated based on how accurately the structure of the plane is built. Suggestions will be given by the support team and jury, if needed.

## D) Flying Round:

The intention of the event is to evaluate aircraft but not the pilot. So the flying round is decided by the following scoring criteria.

- **Takeoff and landing round:**

In this round, pilot needs to take off and land the aircraft at the given position. Pilot's position will be stationery.

- **Gliding round:**

In this round, after climbing for 20 seconds the throttle has to be cut down to zero and has to perform gliding and land safely.

- **Payload capacity:**

The team may decide the amount of payload that will be carried by the aircraft. Once the payload is added it won't be reduced. Payload will be added at the centre of gravity and the aircraft must fly for at-least 20 seconds and land safely.

Note: The participants may chose the "No payload" option, if they wish not to add any payload.

# SCORING CRITERIA:

| | |
|---|---|
| **Building time** | |
| Built before 420 minutes<br>For every 60 minutes delay | +20 points<br>-5 points |
| **Design round** | |
| Best Design & Best Team Presentation | +20 points |
| **Technical inspection** | |
| Accuracy of the structure & Design Specifications | +20 points |
| **Take off and landing** | |
| Smooth take off and landing | +20 points |
| **Glide round** | |
| Stable takeoff<br>Glide time<br>Land at mentioned location | +10 points<br>+20 points<br>+15 points |
| **Payload capacity** | |
| 1. 0 to 50 grams<br>2. 50 to 100 grams<br>3. 100 to 50 grams<br>4. 150 to 200 grams | +10 points<br>+20 points<br>+30 points<br>+40 points |
| **Maneuverability** | |
| Depending on the number of rolls, loops performed within 20 | +25 points |

| | |
|---|---|
| seconds after climbing for 10 seconds. | |
| **TOTAL POINTS :**<br>The maximum achievable points in the event. | 250 points |

## GENERAL GUIDELINES OF THE COMPETITION:

- Pilot can position himself at any point in the arena, to fly the aircraft, during the rounds. The pilots position is stationary during flying.
- Changes in teams cannot be done post registration.
- The models can have powered take off with a landing gear or can be launched manually by a person standing at ground.
- Any of the above mentioned rules, if found to be violated, teams will be disqualified.

## CONTACT DETAILS:


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For more details regarding the Event:www.aero2astro.cm/mayvi

# GROUND BLUEPRINT: