

# Wings 2023

## Competition Title : Aqua-Rocketry

### Rulebook

#### OVERVIEW

*Design and build a water rocket within the specified dimensions robust enough to withstand the pressure and when launched from the launch pad achieves the maximum range within a fixed distance from the launcher point. The team with maximum range will be nominated as winner.*

1. This is a team event which is open to college students as well as school students.
2. Each team can have a maximum of 4 participants.  
The members of the team can be from different colleges .
3. This is an event comprising of 2 Groups. The 1<sup>st</sup> and 2<sup>nd</sup> rank holder from both the groups will be selected for Semi-Final and Finale .The event will take place at GECA on 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> February 2023.
4. Participants are allowed to use a multistage water rocket. In the case of multistage water rockets, a maximum of 2 liters of water is allowed inside the rocket.
5. Build a water rocket as defined specifications in Rulebook. The rocket must not be made from any ready-made kit, if found so, the team will be disqualified.

#### ROCKET SPECIFICATIONS

- Only plastic soft drink bottles are to be used for the rocket body.

- The nose cone and fins should not be made of metal or any sharp surface. If a team fails to meet this requirement it will be disqualified from the event.
- The water rocket must use compressed ambient atmospheric air only as its source of energy. Only tap water shall be used in the rocket, and the water shall be provided by the organizers. Water brought by the team shall not be allowed in the rockets.
- The amount of water to be filled in the rocket body is left to the choice of the team.
- **Launchers will NOT be provided by the organizers.**
- Rocket must be launched from a stationary position on a fixed launcher. (Slingshots, trebuchets, catapults, cannons, and all other forms of launcher boost assists are forbidden). In other words, the internal pressure of the rocket must be the only source of energy for the rocket.
- The rocket may or may not split into two or more parts only during the flight , in such cases the range of the farthest part will be considered.
- The teams may bring as many rockets as they wish but it should comply with the rules given above.

## Tasks

- The participants have to launch the rocket from the launching point and the rocket should land in the launch arena.
- The launch arena will be a sector of circle with sector angle  $45^\circ$  and the launch will take place from the centre of the circle.
- The range of flight is the distance between the point of launch and the point of first impact with the ground after launch.
- In case of multi-stage water rockets, range of flight will be calculated as the distance between the point of launch and impact of the 2nd rocket with the ground.

## Judging Parameters

- Participants are scored primarily on the basis of their range of flight .Greater the range greater will be the points earned.

- **Rockets going out of the sector of an angle 45 degrees will not be awarded any points.**

**6. The top 3 teams will be awarded with cash prizes. For Winner of Aqua-rocketry 6000Rs ,for runner-up prize of 4000Rs and for 3<sup>rd</sup> rank holder 2000Rs and the Certificates of Excellence will be awarded.**

### **Participation Fees:**

**1. For College/University Students**

- **Participation Fees For Individual or a team of 4 – 400/-**
- **For GECA students participation fees for team of 4 - will be 200/-**
- **Each Member must carry his college ID Card.**

**2. For School Students**

- **Participation Fees For Individual or a team of 4 - 200/-**
- **Each Member must carry his School ID Card.**

### **Accommodation:**

**Accommodation will be provided in campus for free of cost.**

**No Food will be provided Free of Cost. Participant must take care of eating expenses.**

**Registration Link:** (Registration will be accepted till 31<sup>st</sup> of January 2k23.)

<https://forms.gle/awkVUdZWzHmWu9U57>

**Venue:** Government College of Engineering , Aurangabad

**Visit:** <http://www.gecawings.com/>

## **Contact:**

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