



Aqua Drive

Team Event, Open-To-All

Points: 15

Problem Statement:

Design and fabricate water rockets for the 2 rounds-

Round 1- maximum range,

Round 2- maximum time of flight.

You are allowed to make and use more than 1 model for different rounds.

Rules and Regulations:

- Plastic bottles of 1.5ltr – 2.5ltr can be used for the main body.
- Metal sheets in any form cannot be used.
- Models should be handmade, readymade rockets will not be accepted.
- Your model can be of any size or shape and can be made of any material. But, it should not damage the arena or hurt any person. If your model is found dangerous, you will not be allowed to participate in the event.
- The water rocket may contain any of the following mechanisms suitable for different rounds:

Gliding (wings type) mechanism

** Booster mechanism: in this case, participants should ensure that they have proper launchers supporting the launching mechanism

** Any other innovative mechanism will be encouraged provided that the material and mechanism used is not harmful or dangerous to any person in the field.

In this case the decision of the panel of coordinators will be final and no queries will be entertained in this regard.

Team Specifications:

A team can consist of a maximum of **3 members**. Maximum **5 teams** are allowed from each pool. Top 10 teams of the 1st round will qualify for the 2nd round i.e time of flight



Arena:

The Launch Zone for both rounds will be a circle of 1 m diameter.

Event Structure:

Round 1 - Range

The water rocket has to be launched from launch pad and will be tested for maximum horizontal range. Top 10 teams will qualify for the 2nd round.

Round 2- Maximize time of flight

You can use parachutes of any other innovative ideas to maximize the time of flight. The use of any electronic components in this event is strictly prohibited.

Scoring Criteria:

Point Distribution for Round 1:

Each team will be given a maximum of two trials. Best of the two trials will be considered as follows. The distance covered in meters will be directly equal to the points you score in this round. This score will be called "A". **Round one is only the qualification round.**

Point Distribution for Round 2:

Time of flight is calculated in seconds, depending on the round 2 scores teams will be considered as 1st, 2nd, 3rd and 4th..

TIE- Condition-

In case of tie the teams will have to repeat the problem statement until we get a winner. This rule will be followed in both the rounds.

Useful Links: <http://www.aircommandrockets.com/construction.htm>

<http://www.youtube.com/watch?v=x8jrqa08Xa8&feature=related>

<http://www.youtube.com/watch?v=6db9kZh3EdU>

<http://www.youtube.com/watch?v=m2ui8ITPIU8&feature=related>

<http://students.iitk.ac.in/aeromodelling>.

Note: In case of any disputes, the decision of the Coordinators would be final and binding to all.

Contacts:

Ayush Jain 9005532203

Tanmay Jaipurkar 8960402557

Anurag Kumar 9532983320