

# ROCKETRY

## Short summary :

Flying model rockets is a relatively safe and inexpensive way for students to learn the basics of forces and the response of a vehicle to external forces. A model rocket is subjected to four forces in flight; weight, thrust, and the aerodynamic forces, lift and drag.

There are many different types of model rockets an Individual can make out of scratch on their own. So AMTICS inviting you to grab the opportunity to compete against your fellow students from the university and stand the chance to win exciting prizes and certificates!

## Detailed summary :

- Construction rules:

- o Build a water rocket as defined. The rocket must not be made from any ready-made kit, if found so, the team will be disqualified.

- o All the required materials for the for rocket build must be arranged by the participants, Materials used in the rocket build must be of low density.

- o Participants must have to build a built in parachutes in their rocket to clear the max air time criteria which is going to measured using the Stopwatch at the time of leaving the launch pad.

- o The team with maximum air time, from the time of launching the rocket throughout from the launcher to its landing via Parachute will be nominated as the winner.

- o Participants get maximum 10mins to launch their rocket model from rest, exceeding the time limit may result in disqualification of the team/individual.

- o Building material can be used, as long as the rocket fits given specification and if the design and construction are primarily the original work of them.

- o The rocket will be launched at an angle of 90degrees (approx.)

- o A proper stand must be prepared which is capable of launching the rocket at 90 degree exact by participants if they want (Better if you bring yours) otherwise a default launching pad will be provided.

- o Pressure on the pump will be set by judges as of your choice make sure not exceeding the limit of 85psi .

- o The pressure vessel must be:
  - Plastic/ Poly/ Carbon Fibre / PET bottles/ SODA (Sparkling water) bottle with zero cracks, dents, scratches and any sort of minute defects.
  - Maximum capacity 3-litre size bottle.
- The rocket must only have water propulsion no Other propellant can be used.
- Rocket must be clear of any sort of coverings till 7.6 cm approx. from the throat of the rocket.
- The mouth of the pressurised bottle must fit over a half-inch schedule 40 PVC pipe.
- Notes:
  - o Entry is open for all age groups below 24.
  - o An individual may participate as a SOLO YOLO or construct a team of a maximum of 3 members. Any institution (School/College/University/Vocational Institution) or group of any certified Students Club (within defined age group).
  - o Register team for the specified competition online through the only provided link from the Pravaah.
  - o For registration participants have to pay 50₹ per team.
- Registration can also be done on the spot of the event day on 15th September. For that you have to come with model that follows all the above mentioned criteria and rules.
  - o The team with maximum Air time measured using the Stopwatch will be nominated as the winner of the competition as mentioned above in rules in detail .
  - o Pressure pump will be provided to participants.
  - o All participants will get a certification of Participation from UKA Tarsadia University.
  - o Exciting prizes and Certificates will be awarded to winning teams.

Time : 1hr (approx)

Venue : AMTICS ENGINEERING BUILDING

Coordinators :

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