

# **Paavai Engineering College**

## **(Autonomous)**

### **Department of Mechanical Engineering**

#### **Water Rocketry**

#### **Description:**

Water rocketry involves designing and launching rockets propelled by pressurized air and water. Teams will consider factors like weight, shape, and stability to optimize their rockets for achieving the greatest distance or altitude.

- Team Structure: Maximum of 2 members per team.

#### **Rules:**

1. Only 2-liter water bottles are allowed for use as rocket bodies.
2. Rockets must be launched with a maximum pressure of 5 bar.
3. Each team gets 2 launch attempts, and the best of the two attempts will be considered.

#### **Event coordinators:**

1. JAYACHANDHIRAN.J ( IV- MECH)
2. POOVARASAN.S ( III- MECH)

## **Event :- Technical quiz Description:**

The technical quiz will test participants' knowledge in mechanical engineering concepts. There will be two rounds: a prelim round and a mains round.

### **Round 1: Prelims (30 minutes)**

- A written round with 30 questions on basic mechanical terms and mechanics. Teams will have 30 minutes to complete this round. The top 6 teams will move to the next round.

### **Round 2: Mains**

- This round consists of 20 questions. Teams will take turns answering questions, and if a team is unable to answer, the question will be passed to the next team.

## **Rules:**

1. Be punctual to the event venue.
2. Phones are prohibited during the quiz.
3. Any form of cheating will result in disqualification.
4. Time limits for each question must be followed.

## **Event coordinators:**

1. S.SUGANDHAN (IV-MECH)

## **Machining**

### **Description:**

Machining is a manufacturing process that removes material from a workpiece to achieve a desired shape or finish. This event includes two rounds: a prelim round with MCQs and a practical lathe operation task.

#### Round 1: Prelims (30 minutes)

- 30 MCQ-based questions on basic machining concepts. Six teams will be shortlisted for the next round.

#### Round 2: Lathe Operation (1 hour)

- Participants will machine a workpiece according to a provided design pattern. Judging will be based on the accuracy of dimensions and surface finish.
- Team Structure: Maximum of 2 members per team.

### **Rules:**

1. Teams will be evaluated on completion time, dimensional accuracy, and surface finish.
2. No extra time will be allotted beyond the stipulated hour.
3. No replacement of tools or raw materials will be permitted after the competition begins.

### **Event coordinators:**

1. AMARNATH ( IV- MECH)
2. ELAVARASAN ( III- MECH)