

# COGNIZANCE 2K24

**Faculty of Technology & Engineering**

**Chandubhai S Patel Institute of Technology**

**Department – Mechanical Engineering**

**Title of Technical Event: Roller Coaster**

## **Event Coordinators:**

### **Faculty Coordinators**

1. Dr. Dattatraya Subhedar (Contact no: 9712624320)
2. Dr. Kamlesh Chauhan (Contact no: 9879023373)

### **Student Coordinators**

1. Krishna Patel ( Student ID: 22ME014, Contact no: 7096523504)
2. Subhankar Sahi ( Student ID: 20ME050, Contact no: 9898557452)
3. Daivik Soni ( Student ID: 22ME023, Contact no: 9104439955)
4. Bhavendra Pathak ( Student ID: 21ME037, Contact no: 8154911434)

## **Event Description:**

Lose yourself in the maze of roller coaster. This three round event will assure the thrill and calibrate your technical fundamentals with creatively designed map where slow and steady wins the race.



**(Source: Pinterest)**

### **Team Specification:**

No. of Participants per entry/ Team: 3

### **Task:**

Task 1 : Time travelled by a plastic ball from top to toe will be measured along the maze created.

Task 2 : Plastic ball filled with sand will be tested on the same maze and maximum time will be measured.

Task 3 : Plastic ball half filled with liquid will be tested on the maze and time taken to travel the maze will be measured.

### **General Rules and Regulations:**

1. Fair Play: Teams must adhere to the principles of fair play and sportsmanship. Any form of cheating, use of external assistance, or disruptive behaviour may result in disqualification.
2. Time Management: Teams must be mindful of the time constraints for each round. It is essential to manage time effectively to complete the challenges within the designated time limits.
3. Safety: Participants must prioritize their safety and the safety of others during the challenge. Any reckless or dangerous behaviour will not be tolerated.
4. Organizer's Decisions: The decisions of the event organizers and coordinators are final and binding. Any disputes or concerns should be addressed to the designated event officials.
5. Team : Only whole team as to reach to location then only game will be started.
6. Code of Conduct: Participants must adhere to a respectful and professional code of conduct throughout the event. Any behaviour that violates the code of conduct may lead to immediate disqualification.
7. Disqualification: The event organizers reserve the right to disqualify any team or participant who violates the rules or engages in misconduct.

### **Rounds:**

#### **➤ Round 1:**

In the first round, teams will be given a plastic ball of the size 40 mm (Standard table tennis ball). Ball will be freely suspended from the top of 2x2x2 ft map and time taken to travel from the top of the maze to bottom will be measured.

Maximum time taken by the ball to reach from top to toe will be measured and out of 30 teams only 15 teams will proceed to the next round.

Three chances will be given for Round 1 where 3 times ball will be travelled along the maze and maximum time out of 3 chances will be counted.

➤ **Round 2:**

The second round will test density difference of different materials where a heavy ball of same size filled with sand will be given to travel the maze and the time will be calculated.

This round will also have 3 chances where the maximum time will be considered.

No modifications allowed during all the rounds of the competition.

Maximum 5 teams will be allowed for the round 3.

➤ **Round 3:**

Final round will be a bit complex where a ball half filled with high density liquid will be given and passed along the maze.

This round will also have 3 chances where the maximum time will be considered.

No modifications allowed during all the rounds of the competition.

**Event Rules:**

1. Teams have to create a maze of 2 feet length, 2 feet width and 2 feet height.
2. Following materials can be used to construct the maze: Plastic, Wood, Metal, Glass and Card board (Paper). No other materials are allowed.
3. Starting point of the maze should be on the top corner of the cube only.
4. Maze can have creative designs to keep the ball running for a longer period.
5. If the ball is stuck in between, then as per the rules 3 chances are given. If the ball is stuck 3 times, then the team will be disqualified.