



## RAPID WHEELS

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### **TASK:**

Design a robot (wireless ) within the specified dimensions that can operated manually and can travel through all turns of the track. The robot that will complete the specified task in least time will be the winner. Think your robot can overcome any obstacle-big or small in the least of time.

### **ROBOT**

#### **SPECIFICATIONS:**

- 1) The maximum dimension of the robot can be 25 cm x 20cm x15 cm (l x b x h).
- 2) The robot must be wireless
- 3) The Motor must be DC.
- 4) Maximum weight must not exceed 3 kg.
- 5)Participants will have to themselves arrange for batteries.
- 6) The machine must not be made from Lego parts, or any ready-made kit, if we find such machine it will be disqualified.

### **BATTERIES & POWER:**

1. The machine must be powered electrically only. Use of IC engine is not allowed.



2. Batteries must be sealed, immobilized electrolyte type (gel cell, lithium, NiCad, or dry cells).

3. The electric voltage anywhere in the machine should not be more than 24V DC at any point of time.

### **GENERAL RULES:**

1) This is racing event so fastest and most balanced robot will win.

2) Robot should be as per the given specifications.

3) Each team can have maximum Five members. Students from different institutes can form a team.

4) Each member of the team must contain the identity card of his/her respected institute.

5) The robot should not damage the arena.

6) No test practice will be allowed on the arena.

7) The robot must not leave behind any of its parts during the run; else it will result in disqualification



8) Unethical behavior could lead to disqualification. Faculty co-ordinators have all the rights to take final decision for any matter during the event.

9) Judge's decision will be considered final.

10) Certificates of Participation will be given to all the teams that will participate in the event, but not to the teams which get disqualified due to disobeying any of the competition rules. \*Co-ordination committee reserves the right to add or update any rule.

### **TRACK SPECIFICATION:**

1) The track surface and course line may have unevenness. .

2) There will be certain obstacles in the race track which will try to slow down the robo.

3) The design and size of the track is undefined.

4) Arena will consist of Switch Bridge, speed breakers, marble pit, slippery path, seesaw , inclined surface etc.



## GAME

### RULE:

- 1) The competition is based on time trail system. There will a qualifying round for each team.
- 2) The top team from qualifying round makes it to the final round on basis of time trials.
- 3) The event is of 3 rounds (1st one is the qualifying round)
- 4) If any of the robots starts off before start up call, the counter would be restarted and the machines will get a second chance. If repeated again then team will be disqualified.
- 5) Your robot must be ready when call is made for your team.
- 6) Team members will be allowed only one times to touch or reset their robots position during the run. However, this will lead to a time penalty and timer will not stop during this course of action.
- 7) The robot will be judged on basis of (in priority):- a. Time to complete the track. b. Number of checkpoints cleared.
- 8) Machine must not contain any ready made kits, pneumatic &hydraulic systems, IC engines.
- 9) Decision about your robot will be taken by the organizers.



10) No team will get a second chance after completing the track with poor score.

### **POINTS CALCULATION:**

- 1) Total point:-400 points
- 2) Each zone contains:-50 points(arena contain 6 zone.)
- 3) Additional points(like controlling mechanism,rate of accident,etc.): -100
- 4) Falling down from the arena:- -100 points

#### **Note:-**

**The one who will reach finishing line first will be announced as WINNER and get the trophy of victory.**

# THANK YOU