



Mech Tech Meet

Season-8

March 3rd-4th, 2017



ROBO-RACE **(*RUN ALONE IN THE RUSH*)**

INTRODUCTION

Calling all the speed racing fanatics out there. Put your robots to the ultimate speed and control test. This event gives you the opportunity to test your machine and to vanquish all other opponents. And in the end only fastest and snakiest machines will survive.

PROBLEM STATEMENT

Design and built a manually controlled wired or wireless robot which is capable of completing race successfully in minimum time.

RULES

SPECIFICATIONS

1. The dimension of robot should not exceed $25 \times 25 \times 20 \text{ cm}^3$ (L*B*H), however a tolerance of 5% can be considered in dimension.
2. The potential difference between any two points on robot must not exceed 24 Volts (no current limit).
3. Both wired & wireless robots are allowed.
4. The bots can have either onboard or off board batteries or AC adaptors.

Eligibility

1. Students from different institutes can make a team.
2. All regular students with a valid identity card of their respective educational institutes are eligible to participate in the event.

General rules

1. The team should not consist of more than 4 members.
2. Only AC power source will be provided during the race.



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3. The given specification of the robot must be strictly followed or the team will be disqualified.
4. Use of LEGO kits is strictly prohibited and using this will lead to disqualification.
5. Terminals for charging the battery will not be provided in the college.
6. No practice run will be provided on the main arena.
7. Participants with wired robots are strictly advised to get wire of length 5 m or more and the wire should remain slack under all circumstances during the competition.
8. Decision of the event coordinator will be treated as final.
9. The structure of the robot should not be changed during the competition.
10. If your bot gets dismantled during race then you will be disqualified.
11. Arena may subject to change before the commencement of any round.
12. Damaging the arena will lead to disqualification.

GAMEPLAY

1. There would be two choices of start point (one start point would be awarded with time bonus of 45sec) which would be declared 1 hour before the event.
2. If your bot goes off track by any reason, it has to restart from previous hurdle.
3. Only **5 restart** will be given to each robot.
4. Restart from any hurdle will cause 30 sec penalty.
5. Omitting any hurdle will cause 2 min penalty (**only 3 omits will be allowed**).
6. Completing the task no.1 in the 'E' will reduce 30sec (from total time) and on completing task no.2- 45sec will be reduced from your **total race time** (75sec can be reduced as per your efforts).
7. Penalty of 5sec would be awarded on displacement of plastic boxes in zig-zag path.
8. On striking with pendulum **once** penalty of 5sec would be awarded.



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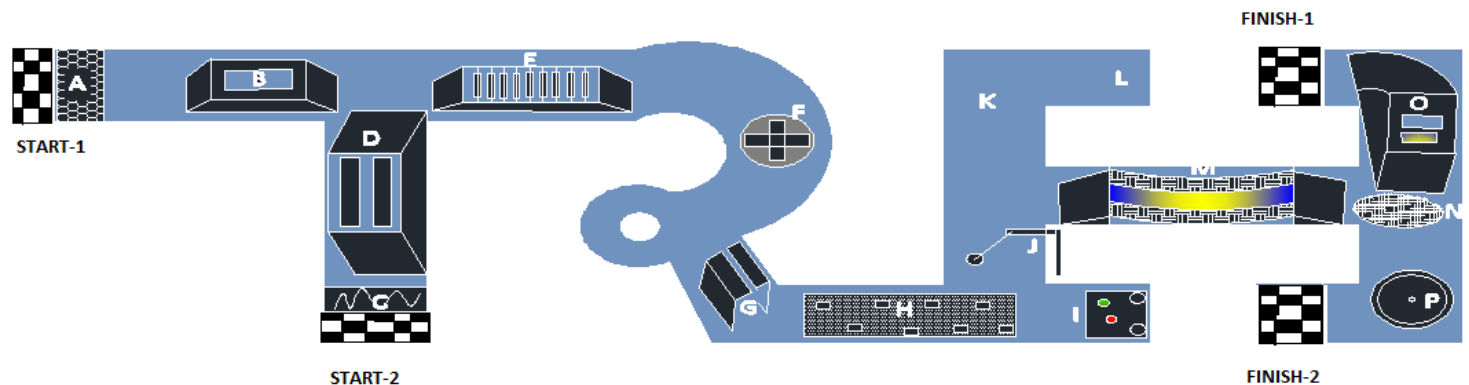
9. You will be given only 3 chances to attempt any obstacle.
10. You are free to end the race with any of the finish point but 45sec reduction from total time will be awarded for those who completes with 2nd finish point.
11. Max 8 minutes will be given to each bot to complete the track.

Winning Criteria

Team which will take the least time to complete the track will be the winning team.

ARENA

Basic Track DETAILS



A- Pebbles B- single gap in bridge C- Speed brakers D- Double gap in bridge E- Rollers F- Revolving door G- Tunnel H- Zig-zag path
I- 1st task completion j- swinging heavy pendulum k- some barriers L- 2nd task completion M- hanging bridge over water
N- sand O- bridge maker P- rotating disc