RACE PULSE

"A SMOOTH RACE NEVER MADE A SKILLFUL RACER"

Problem Statement:

Design a manually controlled robot that can travel through a given path through different terrains including various obstacles like sand, grease, pebbles, bridges, inclines and much more than your expectations.

Robot Specifications:

1] The manually controlled robot should fit inside a box of 30cm x 30cm x 30cm.

2] The robots can increase into dimensions during its run.

3] The weight of the robot should not exceed 3kg.

4] The robot should NOT destroy the arena at any time during the play. If the robot is suspected to destroy the arena that team may get disqualified from the event.

5] The control for the robots can be of wire or wireless.

6] LEGO KITS ARE NOT ALLOWED.

7] The participants will be provided with 220V, 50Hz standard AC supply. Participants will have to arrange for any other power supply required for their robot themselves. But it should not exceed 24V.

8] Both wired & wireless robots are allowed.

General Rules:

1] Maximum number of participants allowed per team: 4 people.
2] A participant cannot be a part of more than one team.
3] A Team can comprise of different colleges.
4] A maximum of two team members can control the robot simultaneously.
5] Any team which is not ready at the specified time will be disqualified.
6] Any misbehavior by any member of the team will be lead to their disqualification.
7] Team must adhere to the spirit of healthy competition.
8] The Coordinator's decision will be final.
9] Event managers can revise the rule at any point of time if it is necessary.
10] IC engines and Lego kits are not allowed.
11] There should be a minimum of three different teams for declaring an event as a competition.
12] The scoring patterns may change if the arena will be modified in the further levels of the event. Disputes if any will be resolved by the Organizers.
13] Focus is on developing robots and innovation. Teams may be inquired about the developmental process of their robot and general awareness of robotics.

Technical Rules & Regulations:

1] The bot needs to traverse the arena within a time span of maximum 8 minutes. The path to be traversed is not easy as it contains Royal bumpers, tumbling rollers, Mega-bridge, water ditch, sea-saw, nail-net bridge, pit of balls and inclined plane on a rough terrain.

2] Participants need to properly insulate their motors. The bot will initially start from the starting line and in its way it will cross various stages as it reaches the finish line.

3] If the bot gets stuck at any point and needs manual intervention then it will make the bot to restart from the last hurdle crossed. Hand touches & Skips are allowed in those situations but for that time penalty will be counted.

4] If any kind of technical problem occurs on the bot during the run, technical timeouts will be given for maximum of 5mins. But at that time bot modification with new equipment is not allowed.

5] A valid crossing will be the case when the end wheels are completely out of the particular obstacle. A valid finish will be the case when the rear wheels have crossed or touched the end line.

6] Top 10 teams will qualify for the final round. Number of teams for the final round may be changed according to the number of participations. In the Final round the arena will be modified a little bit.

7] The time will not be stopped under any circumstances unless & until it is the fault of our parts.

Scoring:

Scoring is based on the time taken by the bot to travel through the path of the arena.

The bots taking least time to travel through the path and reach the finish line will qualify for the next round. Same rule will be maintained for deciding the winners.

Total time= Time taken to finish the race + (30seconds*No. of hand touches) + (60seconds*No. of skips) + (10 seconds* No. of obstacles touched)

Arena Specification:

To be disclosed on the day of the event.

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