ROBO-RACE

PROBLEM STATEMENT:

Design a wired/wireless manually controlled robot which should be able to travel on all the hurdles and complete the track in minimum amount of time.

TECHNICAL SPECIFICATION:

- Robots must pass a technical inspection by the Referee and/or assigned Staff prior to being permitted to compete. The Referee would check whether the size of the robot is matching the criteria, any loosen component etc.
- Robots that fail technical inspection may not compete until the Team rectifies identified problems and passes a re-inspection. There are no limits on the number of re-inspections; however, as soon as a team fails, **inspecting Staff members will move to the next robot to be inspected. This rule does not extend any time limits during the Competition**

BOT SPECIFICATIONS:

- ❖ The maximum dimension of the robot can be 25 cm × 20cm × 15 cm (L× B× H)
- ❖ The robot may be wired or wireless.
- ❖ The length of the wire (for wired bots) should be long enough to cover the whole track and wire should remain slack during the complete run.
- **Maximum weight must not exceed 3 kg excluding batteries**.
- **Motor Specifications:** DC motor with maximum 500 RPM
- Use of readymade chassis/ RC Car is not allowed.
- The robot must be powered electrically only. **Use of an IC engine in any form is not allowed**.
- All the robots must depend only on motors for their propulsion and control.
- The participants will be provided with 220 Volts, 50Hz standard AC supply. Participants will have to themselves arrange for adaptor or batteries.

- The power supply for the vehicle should not exceed **12V DC** between any two points in the circuit at any given time.

ARENA SPECIFICATIONS

The size of arena will be approximately 250cm ×210 cm. The arena may be covered with the following irregularities-

- SAND AND STONE
- RUMBLE STRIPS
- ELEVATION
- DAMP AREA/ WATER SPRINKER
- SMALL HOLES

RULES AND REGULATIONS

- Participants should posses a valid identity card from their respective Institution
- Each team can have maximum four members and minimum of one member.
- Robot should be as per the given specifications
- The robot should not damage the arena.
- No test practice will be allowed on the arena.
- The robot must not leave behind any of its parts during the run; else it will result in disqualification
- **One hour** before the event bot must go through specification check. Any team that is not ready at the time specified will be disqualified from the com
- Bot should always remain inside the track. If the bot leaves the track at any point of the time during the race or bot becomes immobile, it will be considered as a "PIT FALL" which is an opportunity to repair or relocate the bot. (However timer will not stop while relocating)
- Each pit fall spans for 1 minute.
- Participants are not allowed to touch the bot unless instructed to do so by organizers.
- Only two person from a team is allowed to manipulate the bot during a pit fall
- The teams cannot change batteries once the match has begun.

- Unethical behavior could lead to disqualification. Organizers have all the rights to take final decision for any matter during the event.
- 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.
- Participants should not step onto arena at any point of time while controlling their bot or in any other way. If so then it immediately leads to disqualification.
- **Referee's** decision will be considered final.

NOTE: Rules are subject to change if organizers deem it fit. All the participants are advised to check this page to keep them updated about the event.

JUDGING CRITERIA

- This is racing event so fastest and most balanced robot will win.
- There will a qualifying round for each team on time trail basis. The top team from qualifying round makes it to the final round on basis of time trials.
- Wires should remain slack during the course of the run. Pulling the wire to aid the robot in traversing may lead to disqualification.
- 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.
- Team members will be allowed only three 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.
- In case of a tie then other factors such as- number of pitfall, Number of checkpoints cleared will be considered.
- No team will get a second chance after completing the track with poor score.
- **Referee's decision will be final.**

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