

TERRANOVA

PROBLEM STATEMENT:

The team (3-5 members) will be provided with a challenge to build a manually controlled robot capable of traversing through a multitude of terrains.

The Robot:

The team is expected to construct a manually controlled robot of the following specifications:

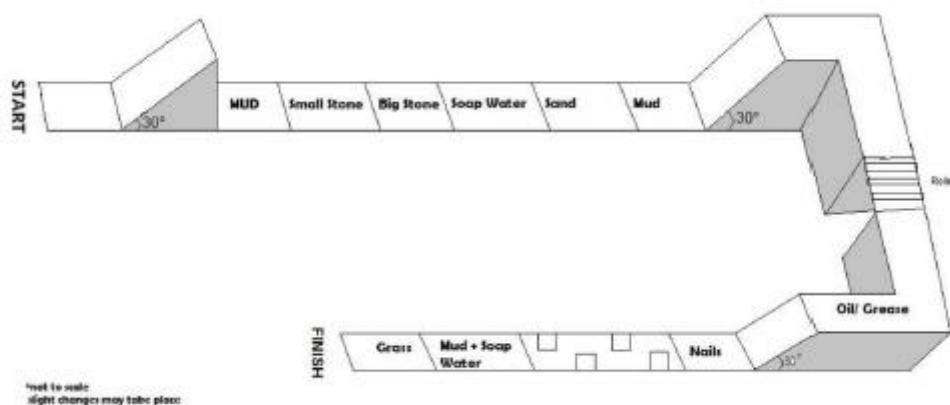
1. The size of the robot should not exceed 25cm x 25cm x 25cm (LxBxH) (10% tolerance)
2. No restrictions on wheel sizes, types, or numbers.
3. The maximum allowable operating voltage should not exceed 12 volts, DC (Voltage regulation not allowed).
4. You may use any motor and there lies no restrictions on torque and rpm.
5. The weight of the robot should not exceed 2kgs (10% tolerance)
6. If your controller and power supply is connected to the robot via electrical wires, please ensure that the length of wires is a minimum of 12 feet.
7. Wireless RF controllers are allowed. Wi-Fi and Bluetooth based controlling is not allowed.
8. Readymade toys car or Lego or IC engines or hydraulic systems are not allowed.

The Arena:

Our arena structure will consist of Terrain Blocks i.e. blocks that will model a certain terrain.

1. There will be minimum 4 Terrain Blocks in the Prelims.

A diagrammatic representation of the Arena has been provided below.



PLEASE NOTE- *This is a sample arena only; original arena may differ from the above*

So, as you can observe, the blocks will be tilted.

The spaces in between the blocks at the tilts will be filled with a proper material so that the robot can easily traverse through it.

Also note that during the Final round, there will be an addition of an extra terrain block, which we prefer to call the “Mystery Block”, in between any two blocks of our choice.

We do have a hint for you: The “Mystery Block” will have a dynamic terrain that will consist of two of the four elements, namely: Earth, Air, Fire and Water.

The Team Rules:

1. A team of a minimum of 3 members and a maximum of 5 members will be allowed to participate.
2. All team members must possess a proper identification that states their college's name.
3. Team members must adhere to all rules and regulations as stated in these information sheets.

Competition Rules:

1. Prelims:
50% of the teams will be eliminated in this round.
For example, if there are 20 teams, only 50% of the total teams (i.e 10 teams) that complete their course through the arena in minimum time will be allowed into the final round. If there are an odd number of teams, we shall be rounding off to the closest non-decimal value for 50%.
2. Finals:
All selected teams will be allowed 20 minutes of time before the round starts, in order to modify their robots if required, to cope with the newly introduced terrain block.
The two teams, that are able to cover the arena in the least amount of time, will be victorious.
In case of a tie, the contest will be re-enacted with some slight modifications.
3. Maximum 5 minutes is allotted to each team to traverse the arena.
4. One may skip any huddle if he is not able to cross it (Max skip allowed 1 free), Skip will incur a penalty of 30 seconds.
5. 3 hand touches are allowed with penalty of 20 seconds for each.
6. Only one restart will be allowed with a penalty of 2 minute.
7. A team can take maximum 1 Technical Time-Out for not more than 2 minutes with valid reasons after that additional 1 minute will be added as penalty.

Terms and Conditions:

1. Unethical behavior could lead to disqualification.
2. Coordinators have all the rights to take final decision for any matter during the event.
3. Damaging the arena may lead to direct disqualification.
4. Angle of the slope may differ.
5. 10% tolerance is given on dimensions and weight.
6. Participants will be provided with a standard 220 volts - 50 Hz AC power supply outlet.
Participants will have to arrange for other requirements themselves (like extension cords).

7. The robot may be disqualified if found violating the technical and safety rules of the event.
8. If any single member is seen there for two different team then both the teams will be disqualified and if one bot is seen there for two different team then also both the teams will be disqualified immediately.

TERMS AND CONDITION

Participants from GNIT should get their college ID cards.

Participants from other schools/colleges are requested to get a valid ID proof.

For any queries contact:

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