JIS GROUP

TESSERACT 2K20

GNIT

MICRO MOUSE

PROBLEM STATEMENT:

The team (3-5 members) will be provided with a challenge to build a manually controlled robot capable of collecting flag while traversing the maze.

The Robot:

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

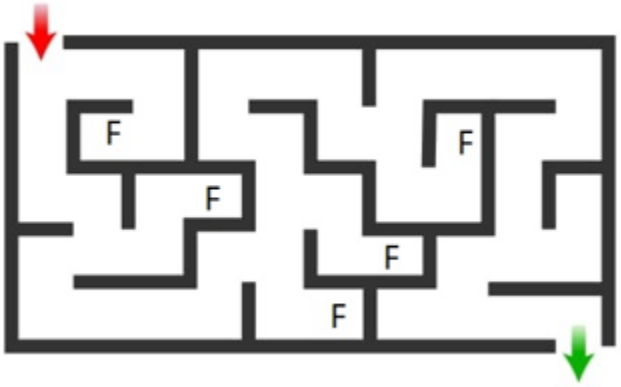
1. The size of the robot should not exceed 25cm x 25cm x 25cm (LxBxH) (10% tolerance)
2. No restrictions on wheel sizes, types, or numbers.
3. The maximum allowable operating voltage should not exceed 12 volts, DC.
4. You may use any motor and there lies no restrictions on torque and rpm.
5. The robot should be capable of collecting the flags using the arm built in it.
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.

Rules:

1. The robot should traverse through the shortest path.
2. The robot should pick the flag that they come across and accumulate them at a particular spot.
3. Each robot should have an arm, using which it should collect the flags that they come across in the track.
4. A time slot of 6 minutes(approximately) will be allotted and the activity should be completed within that.
5. Each flag, that the robot collects will add 10 points.
6. If the robot touches the obstacle provided in the maze, a penalty of 5 points will be deducted.
7. If the robot misplaces the obstacle or creates any changes to the track, a penalty of 15 points will be deducted.
8. If the robot completes collecting all the flags within the allotted time and that too without any penalty, a bonus of 20 points will be awarded.

SAMPLE

A sample maze is provided below.



F=>Flag

****Note:** This is not the actual maze. The actual maze will be different and complex.

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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