



FOR
ROBOVANZA 7.0

MAZE SOLVER

THE MANUAL TO MASTER YOUR METAL



ROBOTICS_CBIT

1.EVENT DESCRIPTION :

If your robot excels at finding the most efficient route through a maze puzzle in the least time, this competition offers you the platform to compete against other robots and seize the opportunity to win exciting prizes.

2.PROBLEM STATEMENT :

Teams are tasked with constructing a manually controlled robot within the given specifications, which can navigate out of the maze in the shortest possible time. The robot which will start from the START point and reach the FINAL point in the shortest period will be declared as the winner.

3.TEAM SPECIFICATIONS AND ELIGIBILITY CRITERIA :

- To participate, students need to fulfill the eligibility requirement of having a valid identity card or enrollment proof from their educational institutions.
- Number of members in a team can range from 1 to 4.

4.BOT SPECIFICATIONS :

- The dimensions of the bot should be less than or equal to 30cm x 30cm x 30cm (length x breadth x height).
- The maximum allowed weight for the bot is 5kg.
- Max voltage in the circuit should not exceed 12V DC at any time.
- Tolerance of 5% on dimensions are accepted.
- The bot must be controlled manually.

5.ARENA SPECIFICATIONS :

- The dimensions of the arena are 4m x 4m (length x breadth) with track width of 35cm.
- The boundaries of the maze will comprise (but are not limited to) vinyl strips in contrast to the floor.

6.TEAM INSTRUCTIONS :

- Teams are required to have a minimum of 1 members and a maximum of 4 members.
- Members of different institutions can form a team.
- 2 members of a team are allowed to stay around the arena (one for controlling and one for assisting).

7.CONTROL MECHANISM :

- Teams can use both wired as well as wireless control mechanisms. In the case of wired bots, the length of the wire should be a minimum of 4 meters so that the wire remains slack at any instant of time.
- Bot mechanism should be such that only one person can control it.

8.COMPETITION RULES :

- Teams are not permitted to change the parts of their robots during a run or between rounds.
- Same bots can be used in different events but same bots cannot be reused by a different team in the same event.
- Teams are required to submit their robot for inspection when requested by the organizers before participating. Any instance of a robot being considered unsafe or breaching specifications will lead to disqualification.
- Participants should not dismantle their robots before the results are announced. The organizers may request to produce the robot for inspection, in case of any suspected rule violations.

9.GAMEPLAY DETAILS :

A.INITIAL

- During the event, each team will be given 5 minutes to set up and test their robot.
- There are two rounds in the competition where the two rounds will have different arena layouts.

B. ROUND-1

- The maximum time given for solving the maze is 5 mins & 10 seconds.
- Teams are required to initiate their bot from the starting point as outlined by the organizers.
- When the game starts, only two members of the team will be allowed to enter the arena.
- Time limit describes the disqualification of the bot EXCLUDING the penalties.
- Teams that are completed the round-1 in shortest time will be qualified to round-2.

C. ROUND-2

- The maximum time given for solving the maze is 4 mins & 10 seconds.
- The team can also request the bot to be reset in case of any technical issues, but only for a duration of 1 minute.
- Timer will not stop in any case except for the technical time out.
- The value of the penalty is double as that of in round one, with SAME compliance mentioned previously.

10.PENALTIES :

- Appropriate penalties, determined by the judges, will be enforced for off-tracking caused by the bot, with each touch to the maze boundary being considered as a penalty added to the total solving time.
- EACH penalty will be added (say 5 seconds) after solving, to the total time of solving (included time taken for tech support), when solved within time limit.

11.DISQUALIFICATIONS :

- If the team could not solve within the respective time limits of the rounds, and if bot goes off the track by 50% or more at any point, the team will be disqualified.
- If a team is not ready at the time of the competition, the organizer has the right to disqualify them.
- Any damages caused to the arena, will lead to disqualification.

12.OTHERS :

- All participants will be given Certificate of Participation.
- Winners and runners will be given Certificate of merit.
- Once a member has participated in a team for a specific event, they are precluded from engaging in another team for the same event.
- Decisions and judgements taken by the event organizers will be final.

PRIZE POOL: Rs. 10,000/-

Event Coordinators:

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