



AFFILIATOR

“Put the right effort and things will get rightly placed”

Event category: Manual Robotics

Problem Statement:

Build a terrestrial bot that is capable of picking blocks through different hurdles and capable of placing them.

Task:

- Traverse through the arena picking blocks from different hurdles and place them.

General Rules:

- A minimum of 3 members and a maximum of 4 members are allowed per team.
- The members must bring IDENTITY CARDS of the college.
- No person should be a member of two teams.
- No bot can be shared by two teams.
- The participants will be provided with 220 Volts, 50 Hz standard AC supply.
- Participants will have to themselves arrange for any other power supply required for their robot.
- Teams cannot tinker with their bots during the run.
- LEGO kits or its spare parts or pre-made mechanical parts are not allowed.
- Any kind of damage to the arena by the robot will lead to direct disqualification.
- Any act of misbehavior or misconduct will lead to immediate disqualification of the team
- The decision of the co-ordinators will be final and binding.

****The rules are subject to change.**

Event Rules:

- The bot has to solely traverse through the track picking and placing blocks.

- The bot will start from the point marked as “START” on the arena and will have to complete the task in maximum 5 minutes.
- There will be penalty of 300 points for restart.
- Placing each block at the correct position will fetch each team positive marks and the time remaining (in seconds) will be added as bonus to the final score.
- Each team is allowed a single restart in which negative points will be given to the team and they can begin again resetting the timer.
- In case if the teams find their robots stuck at some position they can take hand touch. In such a case the bot will be placed in a position (by the co-ordinator) where it can move freely and negative points will be given on each Hand touch.
- Each team will be provided with maximum 2 technical time-outs of 2 minutes; the first one is free while the second one will have a penalty of 100 during which they can repair their bots.

****The event rules are liable to change.**

Scoring:

FINAL SCORE: $200 * (\text{No. of blocks placed}) + 2 * (\text{time left in sec}) - 30 * (\text{no. of hand touches}) - 100 * (\text{for } 2^{\text{nd}} \text{ time-out}) - 300 (\text{for restart})$

****The scoring patterns are liable to change.**

Bot Specifications:

- Maximum allowable dimensions of the bot will be 25cm x 25cm x 25cm with a tolerance of 10%.
- The maximum weight of the bot should not exceed 2.5 kg.
- The robot can be powered on-board or off-board.
- The potential difference between any two electrical points on the bot must not exceed 20 volts throughout the run.
- Violation of any rule will lead to disqualification.

Event Co-ordinators:

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