



## Robotics Ground 0

### TASK

- Teams have to build a manually controlled bot that can do simple tasks to follow the path given and put the blocks in target zones so that it can complete the route by overcoming the hurdles in its path.

### TEAM SPECIFICATIONS

**No. of Participants: 2-4**

**Grade: III-V**

### ELIGIBILITY CRITERIA

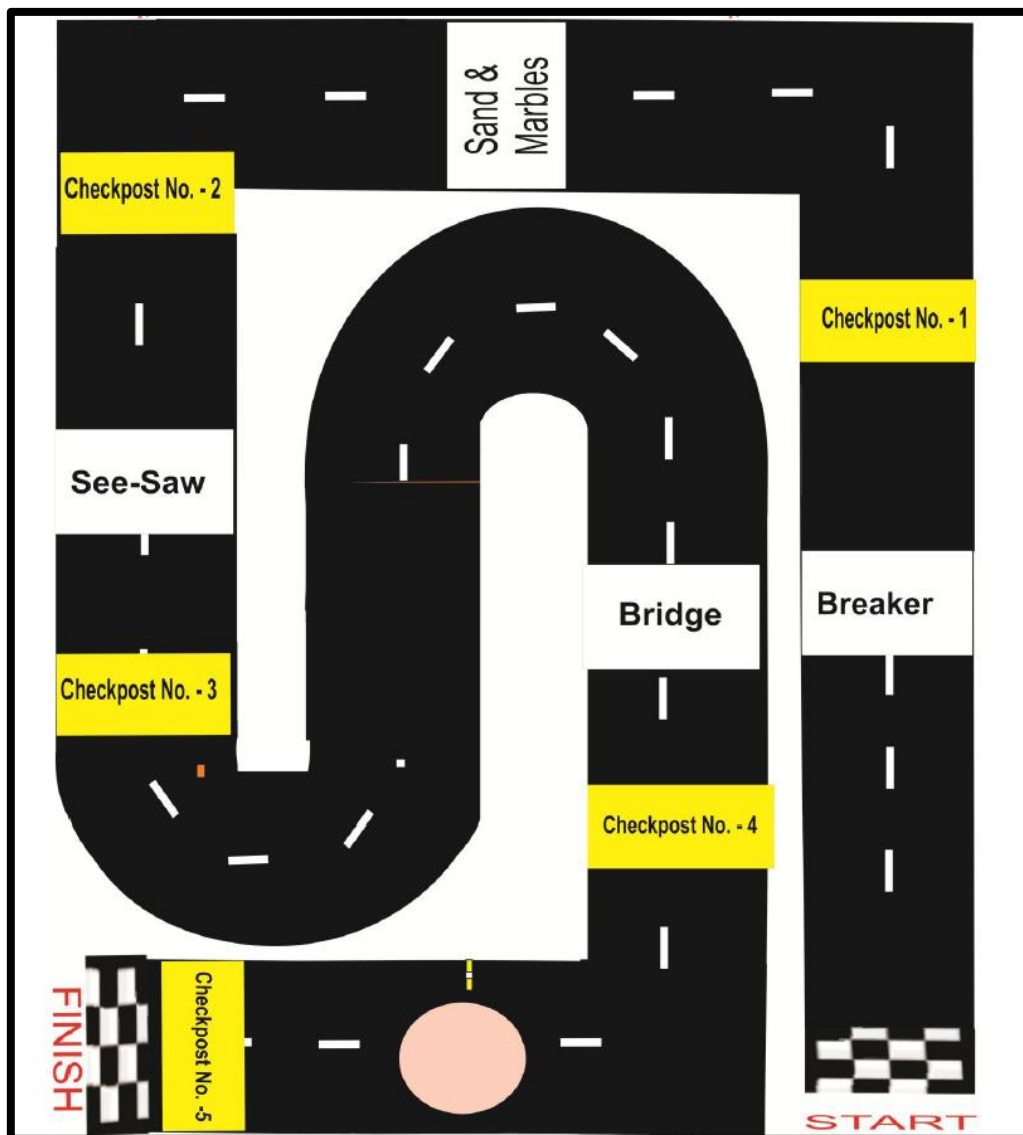
- All students with a **valid identity card** from their respective educational institutes are eligible to participate.

### BOT SPECIFICATIONS

- The dimensions of the bot should be less than or equal to 300 mm X 300mm X 300mm (lxbxh) failing which the team will be disqualified from the competition.
- The bot must be controlled manually.
- 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 **2 meters** so that the wire remains slack at any instant of time.
- The dimensions of the remote are not included in the size constraint of the bot.
- The Bot must have an onboard power supply in any case.
- Participants are not supposed to use any readymade Lego components or readymade gripping mechanism. However, the participants are allowed to use ready-made gear assemblies.
- The mechanism used should be such that only one person will control the bot.
- Failing to meet any of the above specifications will lead to immediate disqualification.

## POWER SUPPLY

- The participants should use an onboard electric or non-electric power supply i.e. the powersource should be on the bot itself. The power source must be non-polluting and must satisfy the safety constraints determined by the organizers. In the case of the non-electric power supply, the participants must get it approved by the organizers beforehand via email. Organizers are not responsible for the inconvenience if approval is not sought.
- In the case of an electric power supply, the voltage between any two points should be less than or equal to 12V DC at all times during the run.
- AC power supply will not be provided and cannot be used in the competition.



**\*This is practice arena for the bots, actual arena may be changed slightly at the time of competition.**

## GAMEPLAY

- The bot must start from the '**START**' mark.
- The bot has to cross four checkpoints by crossing the huddles i.e see-saw, bridge, marble path, and breaker.
- In case the bot falls/crosses the referred path (more than 25 % of robot out from the path defined) then 10 points penalty will be deducted and the bot will be placed at the previous Checkpoint.
- During the penalties timer won't be stopped during this process.
- Only two penalties will be allowed in the competition. At the moment bot will have third penalty, bot will be disqualified immediately.
- After that, bot need to drag a block of 200\*200mm to the checkpoint 5.
- Remember timing is the key during the competition.
- Then it has to cross the gate to arrive at the final **FINISH** mark to finish the run.

## GAME RULES

- The bot would be checked for safety before starting and will be disqualified if found unsafe for other participants.
- Only one team member is allowed to handle the bot. No other team member is allowed to enter the arena.
- The bot will be liable for disqualification if it causes any kind of damage to the arena.
- The bot is required to slide the blocks to the Deposit Zone.
- Any damage done to the blocks will lead to immediate disqualification.
- The arena has 5 checkpoints.
- The timer won't be stopped during this process.
- In case of any disputes/discrepancies, the organizer's decision will be final and binding.
- The organizers reserve the right to change any or all of the above rules as they deem fit.

## JUDGING

- 10 points will be awarded after crossing checkpoint 1.
- 20 points will be awarded after crossing checkpoint 2.
- 30 points will be awarded after crossing checkpoint 3.
- 40 points will be awarded after crossing checkpoint 4.
- 50 points will be awarded after crossing checkpoint 5.
- In case the bot falls/crosses the referred path (more than 25 % of robot out from the path defined) then 10 points penalty will be deducted and the bot will be placed at the previous Checkpoint.
- 50 point will be defined for the time, the quickly you will pass the Finish line more points you will get.