

Roborace

No. of Team Member: 3 –5

Description: The machine (bot) should navigate the track in minimum possible time by clearing all obstacles and checkpoints.

Rules:

- Arena: The arena is shown in figure 1.
- The surface of the arena will be flat at most of the surfaces.
- The obstacles that will be a part of the arena are:
 - Between 0 to 180 degree turns
 - Ramp with an angle of inclination of maximum 50 degree
 - Curved path
 - Hanging bridge
 - Sprint track
 - Sea-saw
 - Banked road Note: The track shown in the figure is the proposed design.
- The actual track is subject to changes.

Bot Specifications:

- Power supply will be provided to the team at the time of event for its machines.
- The potential difference between any two points of the machines must not exceed 24 VDC and 4A of current.
- The machine can be either wired or wireless.
- The bot dimensions must not exceed 25cm*25cm*25cm.
- In case the machine is using a non-electric power supply, kindly get it approved from the organizers beforehand via email.
- Organizers are not responsible for inconvenience if approval is not sought

Game Procedure:

There will be 2 rounds. An elimination round followed by a final round.

- The teams are required to complete the track in minimum possible time.
- The team will be given two runs in the elimination round.
- The best score of the two runs will be considered.

- Top 10 teams selected from the elimination round will qualify for the final round.
- At the start of the run, the machines will be placed behind the starting line.
- The time will start as soon as the front edge of the machine crosses the line.
- The maximum time given to complete the task is 3 minutes in qualifying round and 5 minutes in the final round.
- There will be four checkpoints in the track.
- The team has to clear all the checkpoints before reaching the finish line.
- A total of 3 restarts will be given to the team during the run.
- If a team opts for a restart, then the machine will be restarted by placing it at the previous checkpoint. No penalty will be awarded for a restart.
- During a restart, the teams can make any hardware changes (if required). However, the time won't be stopped during the restart.
- In the final round, if all the teams are unable to complete the task in the stipulated time, then the team that reaches the farthest wins.

Miscellaneous:

- Any team that is not ready at the time specified will be removed from the competition automatically.
- The machines would be checked for their safety before the run and would be discarded if found unsafe for other participants and spectators.
- Organizers' decision shall be treated as final and binding on all.
- The organizers reserve the right to change any or all of the above rules as they deem fit.
- Change in rules, if any, will be highlighted on the website and notified to the registered participants.
- In case of ties during elimination round, a rerun will be given to the teams.