# ROBO-EXPLOREDOR

## TASK

Design and construct a remote controlled robot capable of travelling through a challenging arena comprising of all possible terrains like sand, pebbles, obstacles, bumpers, bridges, marbles, inclines, sea-saw, dips, cliffs, ramps, banks, etc. in a minimum possible time.

## SPECIFICATIONS

1. The machine should fit in a box of dimension 25cm × 25cm × 25cm (l × b × h) at any given point during the match. The remote controller is not included in the size constraint. An error of ±5% is allowable.
2. The machine should not exceed 4kg (8.81 pounds). Weight of remote controller will not be counted.
3. In case of wired bot the length of wire from remote controller to robot should be minimum 2 meters so that the wire remains slack at any instant of time.
4. Robot can't have any kind of hydraulic device(s) or pneumatic device(s).
5. Robot can't have the internal or external circuitry to amplify the power supply.
6. Readymade toy cars are not allowed.

## MOBILITY

All robots must have easily visible and controlled mobility in order to compete. Methods of mobility include:
1. Rolling (wheels or tracks).
2. Jumping, hopping and Flying (using air foil, helium balloons, ornithopters, etc.) are not allowed.

## POWER SUPPLY

1. Power rating should be 18V and 30A (±10%).
2. 220 volts, 50 Hz standard AC supply will be provided for the participants.

## For more details visit www.snklp.in

# DISCIPLINARY RULES

1. Any bot found damaging the arena will be immediately disqualified. The final decision is at the discretion of the organizers.
2. During competition no team member is allowed to touch the bot, arena or the power supply i.e. no regulation in power supply will be allowed in the time of competition.
3. Any action violating fair play will lead to immediate disqualification.

# ARENA

1. Track width is 40 cm normally and it may change at some places.
2. The track surface and course line may have unevenness.
3. There will be an inclination, but this will not exceed 45 degrees.
4. The arena will consist of various obstacles along with sand, bumps, water and other multi-terrain features
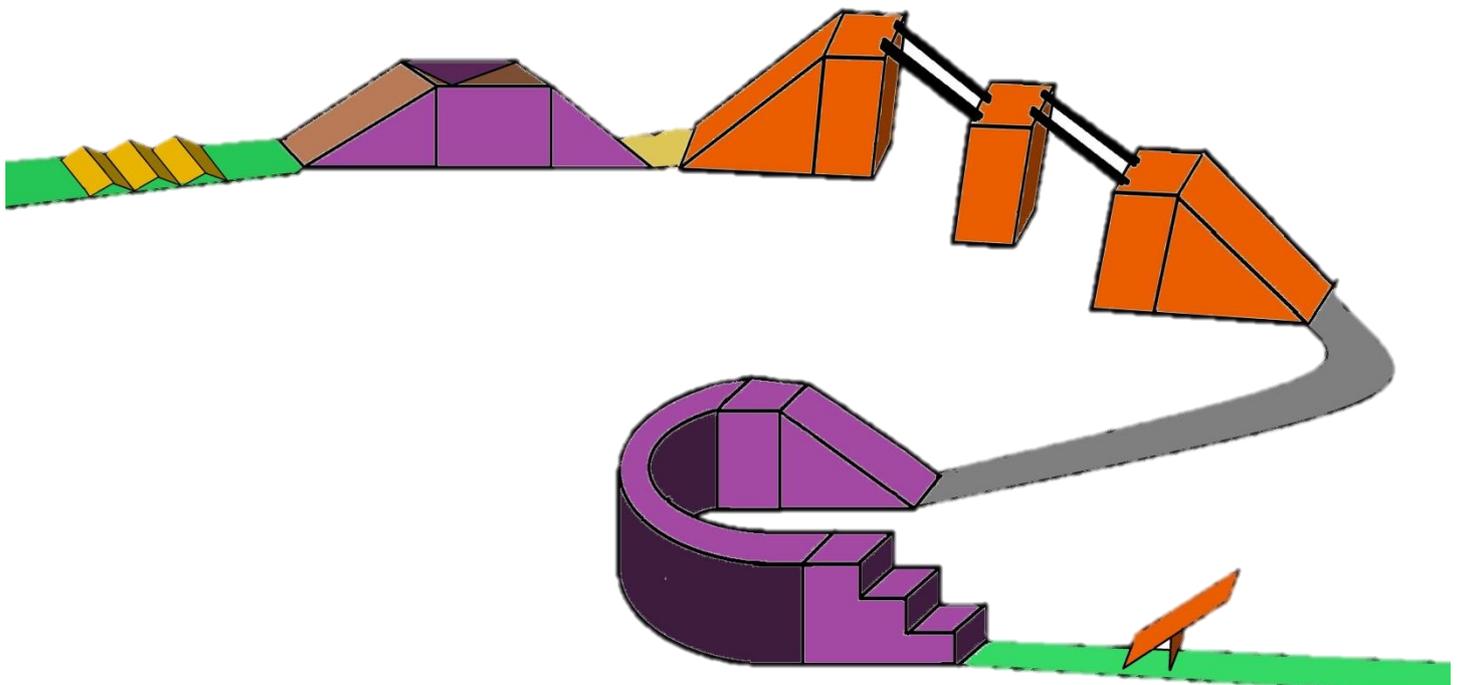
**(Note:** This is a sample arena. Final arena may be different from that.**)**

# GAME RULES

1. The teams will have to submit their bot before the start of the competition. Only those teams which submit their bots will be allowed to participate. The bot will be handed back to the team during the time of their competition. No test drive on arena is allowed.
2. Only one bot per team is allowed.
3. Competition will start only when organizers give the signal.
4. The starting procedure of the bot should be simple and should not involve giving bot any manual force or impulse in any direction.

# GENERAL RULES

1. Participants are not allowed to keep anything inside the arena other than the bot.
2. Laptops/personal computers are not allowed near the arena. Other Wi-Fi, Bluetooth, etc. devices must be switched off. The organizers hold the right to check for these devices and their usage and disqualify the team.
3. The time measured by the organizers will be final and will be used for scoring the teams.
4. Time measured by any contestant by any other means is not acceptable for scoring.
5. In case of any disputes / discrepancies, the organizers' decision will be final and binding.
6. The organizers reserve the rights to change any or all of the above rules as they deem fit. Change in rules, if any will be notified to the registered teams.
7. In case of disqualification registration fees will not be refunded.

# CONTROLS

The bot must be completely remote controlled.

# TEAM SPECIFICATION

1. A team may consist of a maximum of 3 participants. Students from different educational institutes can form a team.

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2. Team Name: Every team must have a name which must be unique. Organizers reserve the right to reject entries from any team whose name it deems inappropriate, offensive or conflicting.
3. A participant cannot be a member of 2 different teams in this event.

# ELIGIBILITY

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

# CERTIFICATE POLICY

The certificate of excellence will be awarded to top 2 teams.

# CONTACT PERSONS

1. Amit Kumar: +91  9113465250
2. Rittika Sharma: +91  7602265929
3. Puja Mondal: +91  9851680537