

COMBAT-DE-ROBO

PROBLEM STATEMENT

Design and construct a wired or wireless controlled bot capable of fighting a one on one tournament to eliminate/destroy the opponent's bot in a battle.

GENERAL RULES

1. Teams can register both online or offline for this event. Team members must carry valid student ID cards of their college which they will be required to produce at the time of registration at the venue
2. Each team can have a maximum of 5 participants.
3. A team may consist of students from different colleges.
4. The organizers reserve the right to change the rules as they deem fit.
5. Judges decision will be final and binding to all.
6. When a team is called for match, they must report within five minutes otherwise, the other team would be declared as winner.
7. The match is going to be held in a specified arena in which some hurdles may be present to increase the difficulties for the teams.
8. **A team will be declared as winner if:**
 - Team 1 immobilize team 2(A bot is declared immobile if it fails to show a displacement of 10cms in 5 minute).
 - If team put other teams' bot in the specified area (pit of death), then also it will be declared as winner.
9. The bots are not allowed to intentionally cut the opponent's control wires. If any team found to do so, then it will be disqualified.
10. Mentors will be provided to each team for guidance while making bot.

GAME PLAY RULES :

ROUND 1-

This round will have matches in which 2 teams or 3 teams will fight at a time in arena where the winner will advance to next round and the defeated teams will go to their home.

Round 2

There will be one on one matches in this round from which winners of each match will advance to the next round but defeated teams will also have a chance of wild card entry to the next round.

- There will be one or two wild card entry matches depending on the judges' decision in which all defeated teams may fight against each other at a time from which the winner/winners advances to the next round and straight away joins the group of those previously selected teams.

Round 3

In this round, again there will be one on one matches from which winner advances to the next level and fights with new opponent. This round continues till only four teams will be left for semi-finals.

Semi-finals and finals:

There will be one on one fights between the four teams. Final winner will be the champion of the event.

ARENA SPECIFICATIONS:

Complete Dimension of Arena as seen from the Top view is hexagonal in shape which is encircled by a circle of 9ft diameter. There will be three entry points and a pit of death. Weapons will not be disclosed until the event starts.

Bot Specifications:

Dimensions

1. The machine should fit in a box of dimension 500 mm x 500 mm x 500 mm (lxbxh) at the start of the match. After the commencement of war dimensions can be changed. The external device used to control the machine or any external tank is not included in the size constraint.

2. The machine should not exceed 30 kg of weight (in case of wireless bot) and 25 kg of weight (in case of wired bots) including the weight of any external source/tank.. Weight of adaptors and the remote controller will not be counted.

3. Height of bot should not be less than 250 mm.

WEAPONRY:

1.Robots can have any kind attacking mechanisms which include cutters, flippers, saws, lifting devices, spinning hammers etc.

In any case should the arena be damaged by any bot.

2. Machines like grinder, drill etc. Should not be used directly as weapon. However, Secondary use of these machines is allowed.

NOTE: Wireless Bots will be given advantage.

Robot Control Requirements:

1. The machine can be controlled wirelessly or with wires. Off board power supplies are allowed. Refer below for further details on battery and power.

2. If the machine is wired then the wire should remain slack under all circumstances during the competition. All the wires coming out of the machine should be stacked as a single unit. The wires should be properly insulated. Teams are suggested to use only rated wires. Loose connections or improper wiring may lead to direct disqualification even before the event.

3. If the machine is controlled wirelessly, the machine must at least have a four frequency remote control circuit or two dual control circuits which may be interchanged before the start of the race to avoid frequency interference with other teams. The case of any interference in the wireless systems will not be considered for rematch or results.

4. Remote control systems from toys might be used. Remote control systems available in the market may also be used.

5. Teams using wireless bots have to inform the club beforehand.

BATTERY AND POWER:

1) All efforts must be made to protect battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification. Only 1 power point of 230V AC power will be provided near the arena, team has to bring their own extension ports if they want to use more than 1 power points.

Design Event:

1. There will be a Design Event in which teams will have to present a design report which will comprise of minimum 6 pages i.e.

* Introduction – 1 page

* Cost Report – 1 page

** Bot Design – 2 pages (Isometric, Front and Side view)

* Innovations – 1 page (if any)

* Weapons Used – 1 page (aim)

2. After submission of design report there will be a technical inspection which will be a day before the bot fight in which your bot will be judged for eligibility to fight and comparison will be done with the design report teams have submitted.

3. Final marks will be given after full evaluation of teams bot.

**mandatory

PRIZE:

Total prizes to be won-25k.