

# ROBOWARS

## Task:

Design and construct a remote controlled robot capable of fighting a one on one tournament.

## Team specification:

- ☐ A team of maximum 6 members can participate in the event.
- ☐ Team Name: Every team must have unique team name. Organizers reserves the right to reject entries from any Team whose name it deems inappropriate, offensive or conflicting. Organizers must be notified during if a Team's name has been changed.
- ☐ Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between organizer and the registered teams will be done through their Team Representative. The Team representatives must submit valid contact details (phone no., email ID etc.) at the time of registration.
- ☐ In no case the arena should be damaged by bots.
- ☐ If teams don't show up on allotted slot, they will be disqualified.
- ☐ A team can get a timeout of 2 minutes in a round to repair minor casualties for which certain points will be deducted.
- ☐ **Core committee's decision will be final and indisputable in any case.**
- ☐ An AC source of 230V/50Hz would be provided by the Core Committee.

## Dimensions and weight:

- ☐ The machine should fit in a box of dimension 750mm x 750mm x 1000 mm (l x b x h) at any given point during the match. The external device used to control the machine or any external tank is not included in the size constraint.
- ☐ The bot should not exceed 60kg weight including the pneumatic/hydraulic source and batteries.

## Mobility:

- ☐ Rolling (wheels or whole bot)
- ☐ Linear actuated legs or cam operated motion or any non-wheeled drive system.
- ☐ Jumping or flying with help of propellers or gas balloons is not allowed.

## **Battery and power.**

- ☐ Bot can be powered electrically(DC) by batteries with electrolytes such as lithium,NiCad,gel cells,fuel cells.
- ☐ The voltage between any two points on the bots should not exceed 36V.
- ☐ Change of batteries will not be allowed during the match.
- ☐ Batteries should be charged up before advancing to the match. If teams don't show up on allotted slot, they will be disqualified.

## **Pneumatics and hydraulics:**

- ☐ Use of non-inflammable gases or fluid is permitted to actuate pneumatic/hydraulic devices.
- ☐ Maximum pressure in the storage/source tank must not exceed 8 bar.
- ☐ There should be provision to check the storage tank or source tank pressure with integrated or temporarily fitted pressure gauge.
- ☐ All hydraulics liquids should be non-corrosive and leak proof.

## **Attacking/weapon system:**

- ☐ Robots can have any kind of magnetic weapons, cutters, flippers, saws, lifting devices, spinning hammers, drums etc.
- ☐ Following weapons or attacking systems are not permitted.
  - 1) Liquid projectiles and tethered or untethered projectiles.
  - 2) Inflammable liquid based weapons.
  - 3) Explosives
  - 4) Nets, ropes, or glue or any other entanglement device.
  - 5) Teasers, tesla coils or any other high voltage device.
  - 6) Radio jammers are strictly prohibited.

## **Criteria for victory:**

- ☐ The competition will be played on knockout basis.
- ☐ A bot is declared victorious if its opponent is immobilized.
- ☐ A bot is declared immobilized if it cannot move linearly for more than 20 seconds.
- ☐ In case both the robots remain mobile after the end of the round the winner will be decided subjectively.
- ☐ If the robot is thrown out of the arena, the robot still inside the arena will automatic be declared as the winner.

- ❑ Pinning occurs when one robot, through sheer force, holds an opponent stationary in order to immobilize it. Organizers will allow pinning or lifting for a maximum of 15 seconds per pin/lift then the attacker robot will be instructed to release the opponent. If team fails to stop the pinning/lifting for several times, that team can also be disqualified.
- ❑ Points will be given on the basis of aggression, damage, control and strategy.

**\*Any misbehave will lead you to disqualification from the competition.**

**\*Third prize will only be given in case of more than 20 registrations.**

### **Certification Policy:**

Certificates & Prize money will be provided to top three teams of the competition.

### **For Queries Contact:**

❖ **TECHNICAL COHEAD, SPARSH 2K18**

KUNAL JANGIR

9408695979, 9602706166

[kunaljangir.svnit@gmail.com](mailto:kunaljangir.svnit@gmail.com)

CHIRAG GHODASARA

7567776463

[ghodasarachirag6@gmail.com](mailto:ghodasarachirag6@gmail.com)

KISHAN KUMAR(HEAD)

9638283697

[kkp308@gmail.com](mailto:kkp308@gmail.com)