



EFFULGENCE '17

10TH 13TH OCT
BEATING THE INVINCIBLES

A techno-management fest



ROBOWARS

TASK

Design a wired/wireless, manually controlled robot capable of overpowering its opponent in a dual combat.

TEAM SPECIFICATION AND ELIGIBILITY

Team Specification : Any team can participate in Robowars, Effulgence. A team may consist of a maximum of 5 participants. These participants can be from same or different institutes.

Eligibility : Students of any recognized engineering college are eligible to participate.

Team Representative : Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between us 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.

ROBOT DESIGN AND DEVELOPMENT

Specifications :

1. The robot should fit inside a box of 750mm x 750mm x 1000mm (LxBxH) before the start of every match. During a match, the robot can expand, stretch or extend within a circle of 1,500 mm in diameter considering the top view.
2. The total weight of the robot including all the accessories and equipment excluding the power source should be no more than 53 Kg. The weight of external compressor and/or cylinder in case of pneumatics or hydraulics will NOT be included. In case of wireless robots, the weight must not exceed 55 kg.

EXCEEDING THE WEIGHT LIMIT MAY LEAD TO DISQUALIFICATION OF THE TEAM.

POWER SOURCES

1. The machine can be powered electrically only. Use of an IC engine in any form is not allowed.
2. Each team must prepare its own power sources. The teams have to bring their own battery eliminators.
3. The voltage difference between any two points in the machine should not be more than 36V DC at any point of time.
4. All connections should be made safe to prevent short circuits and battery fires. Any unsafe circuitry may be asked to be replaced; failure to do so will result in disqualification.
5. Change of battery will not be allowed during the match unless timeout is taken by either of the team.
6. No provision will be provided for charging of batteries.



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MOBILITY

1. All robots must have easily visible and controlled mobility.
2. Methods of mobility may include:
 - a). Rolling (wheels, tracks or the whole robot)
 - b). Walking (linear actuated legs with no rolling or cam operated motion)
 - c). Shuffling (rotational cam operated legs)
3. Jumping, hopping, flying or any other method of mobility which leads the robot to lose contact with the ground is not allowed.

ROBOT CONTROL

1. All wires coming out of the robot should be properly protected, insulated and bundled as a single unit.
2. The wire should be sufficiently long so as to remain slack at all time during the competition.

WEAPON SYSTEMS

1. Robots can have any kind of cutters, flippers, saws, lifting devices, spinning hammers etc. as weapons with following exceptions and limitations:
 - a.) Any kind of inflammable liquid / liquid projectiles.
 - b.) Smoke, dust or Flame-based weapons.
 - c.) Any kind of explosive or potentially ignitable solid.
 - d.) High power magnets or electromagnets
 - e.) Radio Jamming, Tasers, Tesla coils, or any other highvoltage device.
2. Spinning weapons which do not come in contact with the arena at any point of time are allowed.
3. No Pneumatics and Hydraulics based systems are allowed.

GENERAL RULES

1. There will be two rounds, five minutes each.
2. Any team that is not ready at the time specified will be disqualified.
3. In no case should the arena be damaged by any robot.
4. The competition will be played on a Knock-out basis.
5. A ROBOT will be declared 'KNOCKED-OUT' if it is unable to travel a distance of 7 inches in 40 seconds.



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6. If no robot is immobilized within the time limit then winner will be judged on the basis of the points scored.
7. The organizers reserve the rights to change any or all of the above rules as they deem fit.
8. Violation of any of the above rules or any misconduct will lead to disqualification.
9. Decision of organizers will be final and binding on all.
10. Change in rules, if any will be highlighted on the website and notified to the registered teams.

Safety Rules

1. Weapons attached to the robot, if found unfit for the competition would be straightway disqualified. Safe and innovative kind of mechanism is always invited and appreciated.
2. All the teams have to install the 'Kill Switch' (the switch that would disconnect the power source from motors instantly) in their robot so that in case of abrupt behavior or any kind of emergency, the robot may be completely powered down within 15 seconds.
3. All weapons, especially sharp edges should be properly covered so that they do not harm anyone while carrying or testing it.
4. No part of the robot should be detached from the robot at any instant during the course of the game. Contestants are instructed to not to test their robots outside the playing arena.
5. Activation of weapons outside the arena without the permission of the event organizers will lead to immediate disqualification and stringent actions may be taken against the offenders, including expulsion and debarment from the technical festival.

QUERRY/HELP

For any queries regarding the Problem Statement, you can contact the coordinators:

Event Co-ordinators:-

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