

EVENT – RANA VEERA ROBOVEDA'18

The Kshatriyas once ruled out everyone by winning many wars with their nobility. The valor of these noble kings in wars was found in their strength and strategy. But now things have changed. We only have history syllabus to know such things. We, at SNIST, are here to bring back the magnificent times. With wars between bots, and an exhibition of might, skill and strength, the **RANA VEERA** throne is all set to be grabbed by the most deserving robot.

PROBLEM STATEMENT:

The objective is to build a robot following the specified limitations which can bring its opponent to halt position under a specified time limit.

SPECIFICATIONS OF THE ROBOT:

1. The maximum dimensions of the robot should not exceed **750mm x 750mm x 600mm (l*b*h) (5% tolerance)** including its expanding arms etc.
2. The robot can be wired or wireless.
3. For wired robots, all the controlling wires should be bound into a single strip and properly insulated for at least **4m** length from the robot base. It shouldn't entangle with opponent's wires.
4. For wireless robots, use four frequency remote control circuit or two dual control circuits to avoid frequency interface.
5. If battery is **ON** board (wireless robot),
Maximum weight of the robot = 61 kgs.
For **OFF**-board batteries (wired robot),
Maximum weight of the robot = 52 kgs.
6. The robot can use wheels, chains-drive mechanism, cams for locomotion.
7. Jumping, Hopping, and Flying are **not** allowed.
8. Use of Pneumatics and Hydraulics is strictly prohibited.

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9. All the wires coming from robot should be stacked properly and should come through a pipe whose length should be greater than or equal to **10cm**.

BATTERY AND POWER:

1. The robot should be self-powered with battery not exceeding **48V** (**5%** tolerance) and there is no limit for current .
2. Robot powered by ON board batteries must be sealed, immobilized within a thick shell of at least **5mm**.
3. Battery should be properly protected from external damages.
4. Use of non-leak proof batteries may lead to disqualification.

PRE-CHECKING:

1. All robots must undergo a pre-check process before competing for the event.
2. After the pre-check process robot design shouldn't alter.
3. Pre-check process is done one day before the commencement of the event and will not be done after the commencement of the event.

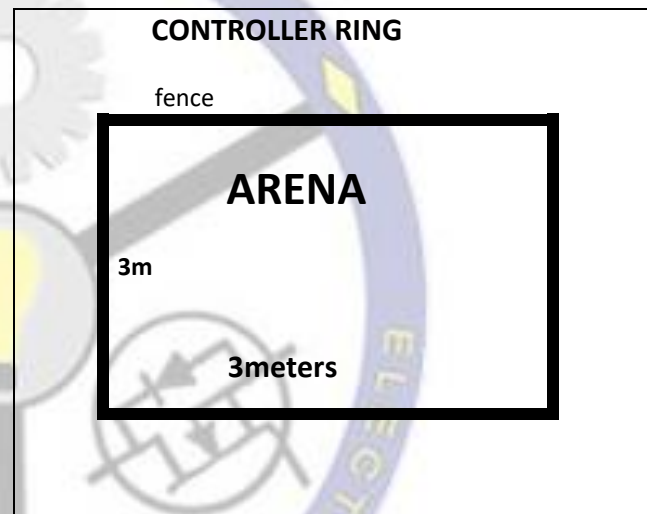
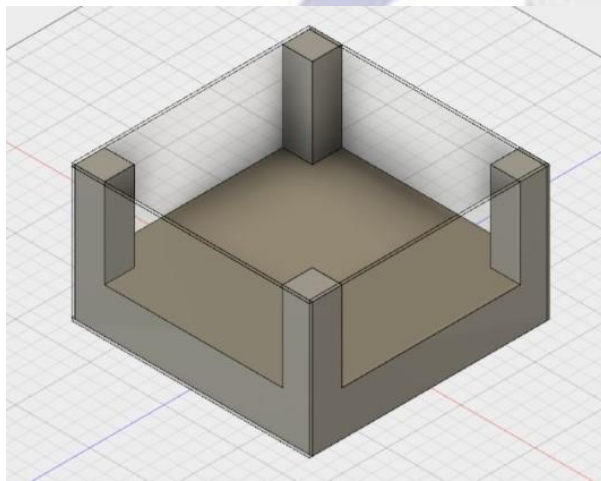
QUALIFYING ROUND:

1. The Qualifying round will be a one on one round in which two robots will be picked at random.
2. The time limit is **4:30 minutes (3 Rounds, 90 Sec each)** for each fight.
3. Only **1 minute** gap will be given between two successive rounds of a particular match.

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4. The teams can take a timeout of 30secs and a maximum of **only one timeout** will be given to **each team in every round**.
5. The arena is a square with protection fence of **4 - 4.5 feet** height around its perimeter.
6. The participant and the controller should stay behind the fence in the controller ring.

ARENA DESIGN:



Note: The dimensions of arena may not be exactly as shown in the figure. It just resembles the figure shown. The figure shown above is not up to scale.

JUDGING CRITERIA:

1. Bringing an opponent to halt within the time limit will get you to next round.
Halt: If the robot does not move for 15sec without opponent touching it, then the robot is said to be at halt position.
2. If both the robots are able to move after the time limit then the judges will decide the winner of the round.

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3. The decision of the judges will be based on the following parameters,
- The points are purely based on aggression and defence criteria.
 - Extent of damage done to the opponent robot.
 - Extent of damage perceived.
 - Robot operating skills.
 - Arena damage

FURTHER ROUNDS:

1. The rules and regulations of other rounds will be revealed on the day of event.
2. Arena will be disclosed on the day of the round.

WEAPONS:

1. Magnetic weapons, hammers, cutters, flippers, saws, lifting devices, spinners (horizontal and vertical), are allowed.
2. Projectiles are not allowed.
3. Use of fire or substances which can cause fire is strictly prohibited.
4. Liquids like water or acids cannot be used.
5. Robot should not use electricity as means of attacking.
6. Nets, tapes, glue, high power magnets or electromagnets, thermal coils, radio signal jammers, entanglement devices cannot be used.

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RULES AND REGULATIONS:

1. Only under Graduates are allowed to Participate in the event.
2. A team can consist of a maximum of **4 members**.
3. Members of different institutions can form a team.
4. Only **2 members** of a team are allowed to stay around the arena (for controlling and assisting) and a team is allowed to play with one robot only.
5. Any kind of damage to the arena will not be entertained, and if done, the robot will be immediately disqualified.
6. All the required accessories have to be brought by the participants.
7. No technical assistance will be provided by the coordinators during the time of the event.
8. No practice runs will be provided.
9. Use of an **IC engine** in any form is not allowed.
10. Human interference (e.g. touching the robot) during the game is not allowed.
11. Unfair play may lead to disqualification of the team which will be decided by the coordinator of the event.
12. Misbehavior of any kind will not be tolerated and the team will be subjected to disqualification from Roboveda.
13. The robot should not harm the opponent or the field. Constantly harming the arena may lead to disqualification.
14. No external power supply will be provided at the time of event.
15. A robot with the base of a toy car and its gear box as a machine part will be disqualified. Also, **LEGO KITS** are strictly prohibited and will lead to disqualification.
16. Participants with wired robots are strictly advised to get wires of length 4m or more.
17. Readymade RF modules, PCBs, Arduino are allowed.
18. Using the same robot for different events will not be entertained irrespective of a change in components or team members.

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NOTE:

1. All participants will be given Certificate of Participation.
 2. Winners and runners will be given Certificate of Merit.
 3. Member participated from a team cannot participate in another team for the same event.
- In case of any discrepancies, the decision of the coordinator and the event head shall be the final and no further arguments shall be entertained.
 - A robot is allowed to participate only once in that particular event.
 - We request the participants not to assume anything without contacting us.
 - Team Roboveda is not responsible for any kind of damage to your robot.
 - All participants must bring their college ID card.

In case of any discrepancies, the decision of the coordinator and the event head shall be the final and no further arguments shall be entertained.

****THANK YOU****

EVENT COORDINATORS:

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