



THE ROBOTICS CLUB
Integrating Knowledge...

JALADHMATRA



GREENIDHI'S ANNUAL TECHNICAL FEST

ROBOVEDA'25

EXPLORE THE UNWRITTEN LORE...



R U L E B O O K

JALADHMATRA

1. GAMES AND RULES:

Design a Wired or Wireless manually controlled Robot capable of navigating by floating on water and completing specific tasks within the provided time. The arena and all the rounds are prepared to evaluate all the attributes of the robot and to make the best robot win.

1.1. PROBLEM STATEMENT

1.1.1. Design and build an aquatic robot capable of traversing through the given water-based track avoiding static and dynamic obstacles in the least amount of time.

2. GAME FIELD AND OBJECTS:

2.1. ARENA

2.1.1. The arena is shown in the figure below. Water will be filled to a certain height.

2.1.2. The arena consists of certain obstacles and checkpoints. The robot should be able to traverse through the obstacles with utmost stability.

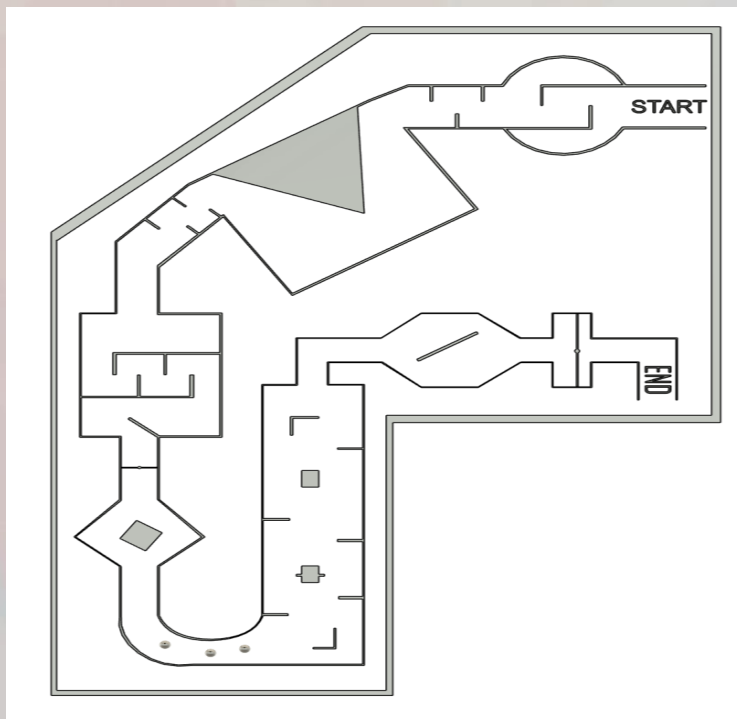
2.1.3. Arena may contain various hurdles (it can be of any kind).

2.1.4. The robot has to traverse through the starting zone which contains some obstacles.

2.1.5. And then the robot has to pass through a zone that contains some obstacles.

2.1.6. After that the robot should reach the end point by passing the end zone of the arena.





3. TEAMS:

- 3.1. There is no team limit.
- 3.2. Only 2 members of a team are allowed to stay around the arena (one for controlling and one for assisting) and a team is allowed to play with one robot only.
- 3.3. Members of different institutions can form a team.
- 3.4. Students who are pursuing any course upto post graduation can participate.

4. ROBOTS:

4.1. ROBOT SPECIFICATIONS

- 4.1.1. The robot may be wired or wireless.
- 4.1.2. In the case of wired robots, it is advisable to get wires of larger length as per your requirement and arena specifications and strictly not less than 3 meters.



4.1.3. A robot is allowed to participate only once in the event. The robot can participate once again with the same team if it satisfies the following conditions:

- The team has to register once again with a modified old robot/new robot before registrations close and a maximum of 3 registrations will be accepted.
- Propellers or motors or chassis materials should be changed to consider an old robot as a new one.

4.1.4. Robots should not damage any part of the arena. If the robot damages any part of the arena, it will be disqualified.

4.1.5. The robot should not expand or compress during the run.

4.1.6. Use of IC engines is not allowed.

4.1.7. LEGO kits are not allowed.

4.2. ROBOT DIMENSIONS

4.2.1. The maximum dimensions of the bot should be **30x30x40cm**(l*b*h).

4.2.2. The minimum dimensions of the bot should be **15x15x10cm**(l*b*h).

4.2.3. A tolerance of 5% is allowed in the dimensions.

4.3. POWER SUPPLY FOR ROBOTS

4.3.1 The potential difference between any two points should not exceed a limit of 12V and the robot should be powered only using batteries. (A tolerance of 5% is allowed).

4.3.2 If the robot suddenly stops in the arena due to any technical problem, you will be allowed to take a technical timeout. After taking one technical timeout, the timer will not be stopped if the robot suddenly stops in the arena due to any technical problem.

4.3.3 The power supply may be ON or OFF the board (i.e., one of the team members can hold the power supply). An external power supply will not be provided.

4.3.4 Changing the battery or battery polarity is not allowed during the race.

4.3.5. No external power supply will be provided at the time of the event.

4.4. WEIGHT

4.4.1. There is no weight limit for the robot.



5. SAFETY:

- 5.1. All the required accessories should be brought by the participants.
- 5.2. Team RoboVeda is not responsible for any damage to the robot.
- 5.3. Technical assistance will not be provided by coordinators or technical team.

6. THE COMPETITION AND MATCHES: There are two rounds

I. Qualifying Round

II. Final Round

6.1. QUALIFYING ROUND

- 6.1.1. Each robot has to traverse the path by floating on the water in minimal time.
- 6.1.2. The robots that traverse the path in the least time are shortlisted and forwarded to the final round.
- 6.1.3. Obstacles and their positions may vary in the arena.
- 6.1.4. There may be minimal changes in the arena
- 6.1.5. The robot will be placed at the start line.
- 6.1.6. Any team will be eligible for the next round only if the robot completes the qualification round within the given stipulated time.
- 6.1.7. The team completing in less time will have first preference.
- 6.1.8. The selected number of teams will be forwarded to the next round

6.2. FINAL ROUND

- 6.2.1. Details about the Final Round will be revealed on the same day when the round is conducted.
- 6.2.2. Specifications of the robot for the final round are the same as that of the qualifying round.



6.2.3. The robot participating in the final round should be the same one that participated in the qualifying round. Modifications will be allowed for the robot (only if previously used parts are damaged) in between the rounds only if the following conditions are satisfied :

- The participant must show both the damaged part of the robot (propellers, chassis, motors) and the replaced part of the robot (propellers, chassis, motors) on the day of the final round.
- Heads or coordinators of the event will allow the modified robot only if the damaged part and replacement part are the same/similar.

7. COMPETITION RULES:

7.1. TECHNICAL TIMEOUTS

7.1.1. The technical timeout will be given for the participant at the request of the participants for 1 minute if there is no further movement in the robot.

7.1.2. After the finishing of the technical timeout, the timer will start again and will not be stopped under any circumstances.

7.1.3. No technical assistance will be provided by the event coordinators or heads during the event.

7.2. SCORING & PENALTIES

7.2.1. Based on the violations and penalties the overall time is calculated.

7.2.2. The maximum time for each participant is 15 minutes for track completion.

7.2.3. A penalty is imposed, if the robot touches the boundary.

7.2.4. If the robot flips or gets stuck in the arena, the coordinator will arrange the bot properly at the nearest checkpoint and the penalty will be imposed.

7.2.5. A penalty will be imposed if the robot touches the obstacles.

7.2.6. If the robot moves out of the arena then the bot will be placed at the nearest checkpoint and a penalty will be imposed.

7.2.7. Scoring schema (including penalties) will be disclosed on event day by heads and coordinators.

7.2.8. A "Time waiver" of 5 seconds will be provided from total time to RF-controlled robots.



8. DISQUALIFICATION:

- 8.1. If a participant does not comply with the rules of the event, the robot will be disqualified from the event.
- 8.2. Robots should not damage any part of the arena. If the robot damages any part of the arena, it will be disqualified.
- 8.3. Misbehavior of any kind will not be tolerated and the team will be subjected to disqualification from Roboveda.
- 8.4. Human interference (e.g. touching the robot) during the game will not be allowed.
- 8.5. If the robot is unable to complete the track traversal within time (15 minutes) it will be disqualified.
- 8.6. If the robot moves out of the arena twice, then the bot will be out of the event or play.
- 8.7. A robot with the base of a toy car and its gearbox as a machine part will be disqualified. Also, Lego kits are strictly prohibited and will lead to disqualification.

9. COMPETITORS AND BEHAVIORAL RULES:

- 9.1. All participants will be given a Certificate of Participation.
- 9.2. Winners and runners will be given a Certificate of Merit.
- 9.3. All participants must bring both a college ID card and an event ID card.
- 9.4. Participants are allowed to participate once again if they satisfy rule 4.1.3.
- 9.5. Participants are not allowed to use their own Stop watches.
- 9.6. Team Roboveda is not responsible for any kind of damage to your robot.
- 9.7. We request the participants not to assume anything that is not mentioned in the document without contacting the Coordinators or Technical Team.
- 9.8. It's our sincere request to all the participants to go through this rule book thoroughly and not a single point mentioned in the rule book will be compromised under any circumstances. We also request you have a copy of this rule book handy during the event.
- 9.9. In case of any discrepancies, the decision of co-ordinators and heads shall be final and no further argument will be entertained.
- 9.10. Make sure you visit our official website on a daily basis so that you will get to know if there are any changes made in the event.
- 9.11. Any kind of misbehavior will not be tolerated and will lead to the disqualification of the team.



9.12. If you choose our hospitality, the payment must be made on the day you check-in.

9.13. In unforeseen circumstances, Team Roboveda abides by the decision of the Institution regarding the conductance of the event. Only registered participants will be informed about the change in event dates or cancellations. In that case, the registration fee will be refunded.

EVENT COORDINATORS:

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