

Engineering

Classes: 6-8
No of students per team: 2
No of teams allowed per school: 1
Mode: Offline (Thursday, 9 May 2024)

- The first 16 teams to register will be allowed to participate.
- To design and build a manually controlled boat that has to sail through the obstacles in the arena and complete the race task before the other boat. The boat should compulsorily be wireless and powered by batteries. Wired boats are NOT allowed.
- Teams will have to compete in the given arena, starting from two opposite ends. The boat which reaches the other end first will win.

Bot specifications:

- The robot must totally fit into a 300mm(length) x 200mm(width) x 200mm(height) i.e the robot should strictly be smaller than a cuboid of the given dimensions.
- No external power supply will be allowed. Participants will be allowed to use only an on-board power supply. Teams shall bring their own power supply.
- Using Lego kits or any other ready-made mechanism for the construction of the robot is strictly not allowed.
- Violation of the stated rule will imply disqualification of the particular team. The robot must not harm other robots or the arena. Any team found to violate this may be disqualified from the competition.
- The robots should not contain any corrosive, harmful or combustible substances due to safety concerns.
- There should be an emergency stop button on the robot that pauses it when it is pressed in unpleasant circumstances.

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- The design presented by the teams should be original (not protected by means of patent/copyright/technical publication by anyone).

Arena

- The arena will consist of certain obstacles and checkpoints carrying predefined points. The robot should be able to navigate through the obstacles with utmost stability while maintaining an appropriate pace.
- The arena will be a tank having water, in which two boats will race to reach the finish line first. A robot will have completed the task after having reached the finish line, to the other end of the arena.

The obstacles will be of the following type:

- Fixed bar floaters placed at constant gaps through which the robot has to maneuver.
- Fixed cylinders through which the robot has to navigate.
- There might be a surprise obstacle carrying certain bonus points.