

FULL THROTTLE

Fury road

Problem Statement:-

- **Task** :- Make a wireless remote controlled machine, only using an ic engine which can compete against other machines on a dirt track with obstacles in between.

Rule Book:-

- **Arena** :- The track will be made of mud with sharp turns, multiple bumpers, and some steep ways. Some parts of the road will be made of wood for stable control of the machine.
- 1) The width of the track will start from 5-6 feet, but further will vary accordingly.
- 2) A control stand will be provided near the track for the driver to position himself to control his vehicle during the run. The height of the stand will be around 8 feet. The controlling of machine has to be done from this stand only.
- 3) Despite organizer's efforts to keep the track's quality intact, the track is subjected to undergo wear and tear as machines run over it. The machine is expected to be able to perform on such a weakened track as well.
- 4) Multiple machines will race with each other in the final round at a time.
- 5) A lap of the track is completed when the machine comes back to the start-finish line.

Machine specification:-

- 1. Machine should fit in a box of dimensions 500mm x 300mm x 300mm at any moment of time during the race. The external device which is used to control the machine is not included in the size constraint.
- 2. The machine should be controlled by a wireless remote control mechanism throughout the race.
- 3. The machine must not be made from Lego parts, or any ready-made assembly kits other than the parts mentioned below. Readily available chassis layouts are not allowed. Any machine found having a readymade chassis will be disqualified.
- 4. The machine parts may be roughly classified into structural and functional parts: Functional parts - Gears, differential gear, engine, springs, shock absorbers, servo motors (non - propulsion purposes only), batteries, wheels and wheel hub can be directly used as available in the market. Structural parts - Chassis, steering mechanism, shock towers and suspension (excluding upper suspension arm, suspension spring and shock absorbers) have to be built by the participants themselves.
- 5. Judging for the same will be strict and the participant will be immediately disqualified if any of the above structural components are found to be ready-made.
- 6. The tires must have a maximum diameter of 4 inch. You are advised to use tires of good width for better performance on dirt tracks.
- 7. IC engine specification- up to 4.6cc.

Game Rules:-

- 1. There will be a qualifying round with each team getting 2 laps out of which the faster lap will be considered. Note that these laps will have to be taken successively.
- 2. The top teams from the qualifying rounds will make it to the second round.
- 3. In second round, each team will get 2 laps of which faster lap will be considered. The track will be set a bit tedious compared to the qualifying round.
- 4. After the second qualifying round the top teams(according to the number of participants) will compete against each other in two lap race, winner will be decided on their positions after crossing the line after the final lap.
- 5. The track will have check points at regular intervals. If a machine tumbles, halts or goes off the arena at any point on the track, one of the team members is allowed to lift it up and place it at the nearest checkpoint behind that point. The time shall still be running in the meantime.
- 6. Team members are not permitted to touch either of their machines or those of their opponents once the race begins (unless there is need to lift the machine as stated in fourth point). The penalty for doing so is disqualification
- 7. If the machine is not able to cross any particular obstacle then machine can be lifted and placed by passing through the obstacle but 30s (for each obstacle) will be increased from the total time as penalty.

Game Rules(continuation):-

- 8. If the machine is driven through a steep inclined obstacle then 5 seconds will be deduced from the total time.
- 9. In the qualification round, a maximum of two team members are allowed from a team in the racing arena while in the final round only one of the team member will be in the racing arena except the controller on the stand.
- 10. The machines are not allowed to leave any loose parts on any part of the arena. Any machine disintegrating during the race will be disqualified.
- 11. If any of the machines starts off before the flag is waved, the counter would be restarted and the machines will get a second chance. However, if any machine starts off before the waving of flag (or countdown) for a second time, it will be disqualified. No rematch will be held for the second time.
- 12. Teams are not allowed to purposefully damage the machine of the opponent's team. If found doing so on track (while racing), the concerned team will be disqualified.
- 13. Rules/point system are subjected to change on the day of the qualifications/race.
- 14. In case of any dispute, decision by the event authority will be final and not adhering to it will result in disqualification.

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Thank You