Rules & Regulation

Robo-Race

PROBLEM STATEMENT:-

Design and construct a remote controlled or wire controlled robot for a racing with hurdles competition.

ENERAL CONSTRUCTION:-

1. 1. Robots can be built using wheels, tracks or any other styles or methods may be considered.
   2. Length and width of robot must not exceed 300mm X 250mm.
   3. There is no limitation of height however, during the race if any portion of the robot falls outside the border line then there will be some negative points.
   4. Length and width is measured to the extremities of the robot, i.e. includes any overhanging bodywork.

Team

1. Each team should not exceed more than 4 members
2. Multiple bots are allowed from same team but with seprate registration fees.
3. Team should consist of unique name and identity.

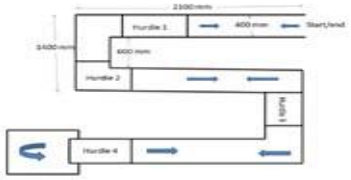
CONTROL AND POWER SUPPLY:-

1. 1. The machine can be controlled wirelessly or with wires. Both on and off board power supplies are allowed
   2. If the machine is wired then the wire should remain slack under all circumstances during the competition.

Power Supply:-

1. 1. The machine can be powered electrically with not more than 24v power supply
   2. Any form of heat energy should not be used in any way.
   3. Batteries must be totally sealed and not contain free-flowing liquid. (Whether electrolyte or otherwise.)
   4. Battery connections must be adequately insulated such as gel cells, lithium, NiCad, or dry cells.

   Weight:-

   1. Weight: 500gms to 3500gms
2. (CLICK THE PICTURE TO ENLARGE)
3. 

   Track Specifications

   Start/Finish line

   The entire robot must be placed behind this line at the start of the race. This line will be painted with white chalk.

   Main Track

   The length of Main Track will be 8800 mm width will be 400mm. The Main Track excludes the two 2" wide white Track Sides.

Turn Area

This area is situated at one end of main track having dimension 600mmX600mm. Robot must enter into this area during race.

Track Sides

The main track will be bounded on each side with a 2-inch wide strip. This strip can be either painted with some colors, or it could be composed of white chalk.

Hurdles

Overview of some decided hurdles in the track. The specification for hurdles is as follows

1 The 1st hurdle is at 1450mm from the start/end line. The length is 250mm and width is 400mm. It constitute 6 peice of wodden hemisphere separated by 3cms to each other.

2 The 2nd hurdle is at 600mm from 1st hurdle .this hurdle consists pebbles of size 4 to 15mm and length of this hurdle is 300mm and width is 400mm.

3 The 3rd hurdle is at 1600mm from 2nd hurdle. This hurdle consist sand . Length of this hurdle is 600mm, width is 400mm and depth is 3cms.

4 The 4th hurdle is at the another end of the track This consist stairs having dimension as follows

length 500mm

width 400mm

height at the center of hurdle is 6cms

height of stairs is 2cms (3 nos.)

length of stairs is 2cms (2 non.)

Practice Runs

Robots will be allowed an opportunity for a "test drive" on the track for testing and calibration prior to the contest. All test opportunities are on a first-come, first-served basis, one hour before the contest.

Race Procedure/general rules

" A robot must begin from the Start/Finish line, proceed to different hurdles and turn area, execute a 180 degree turn, and then return back to the Start/Finish line. The race ends when the robot has completely crossed the start/end line.

" The maximum duration for completing the race will be 10 minutes

" The robot must be designed in such a manner that all switches, valves etc. are accessible from outside the track. No competitor will be allowed to enter the track under any circumstances with an activated robot.

" Once and limited time will be allowed for repairs, adjustments, changing of batteries etc.

" Any team that is not ready at the time specified will be disqualified from the competition automatically.

" The machine would be checked for its safety before the race and would be discarded if found unsafe for other participants and spectators

" Contestants start their own robot.

" The time clock will begin when the front end/wheel of robot crosses the Starting Line. Any other part of the robot (which is above 2cm or more from ground) that crosses Start Line before the wheel will not start the time clock.

" Once the time clock has started; no contestant or official may touch the track, the robot, assist, or interfere with the robot in any way.

" Competitors violating any rules specified in "General Construction" will not be allowed

to participate in ROBO Hurdle Race" Judges decision shall be treated as final and binding on all.

" The time clock will stop when the rear most part/edge of the robot, that crosses the Start/Finish Line at the end of the race.

Termination

The robot's operator can terminate the race at any time. Termination includes physically touching the robot.

" If the operator terminates the robot's run prior to the starting of the time clock, then the robot will be allowed to restart the race.

" If the robot's operator terminates the robot's run after the start of the time clock, then the robot's run is terminated. The clock stops, and the distance the robot travelled at that point is recorded.

" The robot's operator is allowed to turn off the robot after it has returned back to the Start/Finish Area, or after it has gone out of bounds.

Restarts

The robot will be allowed to restart the race under the following conditions:

Interference by another competitor.

Interference by a spectator.

Interference by an official.

Robot failure due to any reason

" External forces that cause the robot to change its course

Note: -- To restart the robot, operator must say excuse and there will be only 3 excuses, but time clock will not stop.

Final Scoring/Ranking

" If a robot crosses a hurdle it will have 50 points

" If any part of robot crosses outer edge of boundary, they will have negative 5points.

CRITERIA FOR VICTORY:-

" A robot is declared victorious if his completion time of whole track is minimum with respect to others bot's completion time along with highest points.

" Competitor with minimum completion time will be given the first priority.