TESSERACT 2K20

ROBOSOCCER

Get ready for goal kicks, penalties and more! As the name itself suggests, the event basically deals with manual robotics in which you to have to design a manually controlled bot which is capable of playing football.

PROBLEM STATEMENT

Build a manually controlled robot designed to avoid obstacles and score goals. Be prepared to take on other robots to score the maximum number of goals in a proper soccer match.

GENERAL RULES

- This is a team event.
- The minimum number of participants in a team are must be 2 & the maximum number of participants allowed per team is 5.
- A team may comprise members from different colleges. No person shall be a member of two teams.
- Damage to arena, may lead to disqualification of the bot.
- No bot is allowed to pick the ball up or grip it or incorporate the ball within its body, so that it is not playable for the opponent.
- Machine cannot be constructed using readymade Lego kits or any readymade mechanism.
- The decision of the coordinators will be deemed final.
- Any or all of the rules are subject to change at any point of time.
- A team can be disqualified on disciplinary ground.

EVENT RULES

There will be 2 rounds:

a) Preliminary Round

b) Final Round

PRELIMINARY ROUND

- There approximately 8 – 10 balls will be placed at different places of the arena. One bot of a particular team is allowed inside the arena.

- The arena will have many obstacles placed at different positions. The robots have to avoid obstacles while moving.

- The bot is required to put all the balls into goal post, avoiding the obstacles, in maximum 5 mints(approx.) of time.

- The robot will get a penalty of 10 points if it touches or hits an obstacle.
- The team may take a maximum one RESET. The team will get a penalty of 50 point for each

RESET.
• The timer won't stop during a RESET. RESET means that the balls will be placed at the first position in the arena and the team can position their bot as per their choice.

• In case of a tie the team with lesser number of penalties qualifies for the next round.
• 16/32 teams with the best score will qualify for the next round.

FINAL ROUND

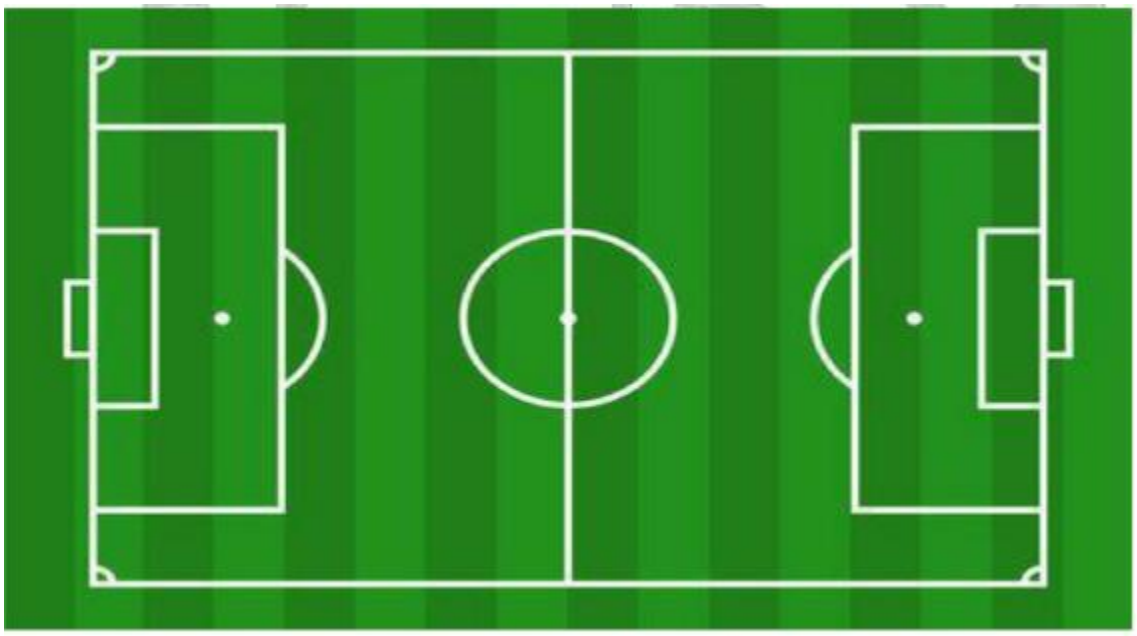
• The teams must use the same bot which was used in the previous round.
• The participants will have to play against each other.
• One bot is allowed inside the arena.
• The ball will be placed in the center with robots on both sides of the arena. A 5-minute time will be given to score goals in the opponent's goal post. The total 5-minute time is divided into two 2.5-minute halves.
• Each will be a 1 vs. 1 match and the winner progresses to the next round.
• In case of a tie, "PENALTY SHOOTOUT" will take place where each team will be given 3 chances.
• In the event of any mechanical or electrical failure of a robot, a timeout of maximum 2 minutes can be taken. The timer will be paused during time-out.
• If a foul takes place, the bot causing the foul will be taken off the field for 20 seconds.
• The winner will be decided by the number of goals scored.

BOT SPECIFICATION

• The size of the bot must not exceed 25*25*25cm. Individual parameters to be measured with a tolerance of 10%.
• The machine must be manually controlled.
• Maximum weight of each bot should be 2.2kg.
• Touching the robot during the competition is strictly prohibited.
• No Lego kits or IC engines are allowed.
• Robots must not damage the tournament area.
• The robot may use an external or on-board power supply. The potential difference between any two points on the robot must not exceed 12 V.

ARENA SPECIFICATIONS

• The arena will be in the form of rectangle having dimension 2.3m (length) and 1.2m(width).[It should be vary]
• The goal post will be of length 54-60cm each.
• Standard golf ball or TT ball will be used.



SCORING:

- **For PRELIMINARY ROUND –** SCORE= 50*(Number of balls placed) – 50*(RESETS taken) – 10*(Number of times the obstacles are hit)+Additional (if the bot will be able to complete placing all the balls within the given time without any penalty then then additional 50 marks will be added).

- **For FINAL ROUND-** It will be a 1 vs 1 match and the one who scores the maximum number of goals will win the match. If the bot touches the red zone then 1 goal will be deducted from their points. If the bot is in safe zone then the opposite side will not be able to defend him, if seen so then points will be deducted from their side.

P.S- ALL RULES CAN BE CHANGED WITH PRIOR INFORMATION

TERMS AND CONDITION

Participants from GNIT should get their college ID cards.
Participants from other schools/colleges are requested to get a valid ID proof.

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