

ROBOT CHALLENGE

Egypt 2022

PUCK COLLECT

Competition



Robot Challenge

Puck Collect Rules

This Category divides into three sections all of them open robots (using any type of robot) :

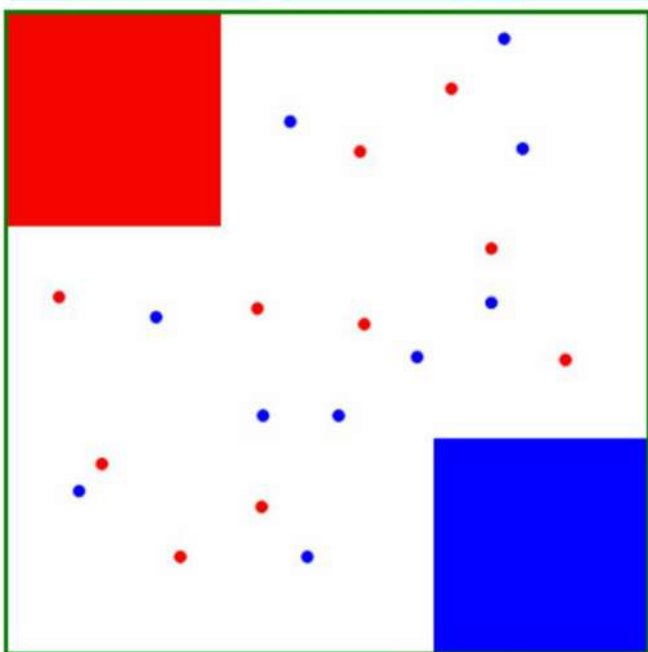
- 1- Junior (Ages from 9 to 14 years old)
- 2- Senior (Ages from 14 to 18 years old)
- 3- Adults (Ages from 18 years old)

Short Description:

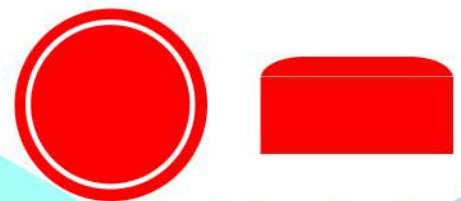
Two robots compete. Small coloured pucks are distributed on the field. The aim is to collect all pucks of the assigned colour and carry them to the own home base

Puck Collect - Field Dimensions:

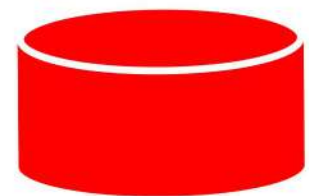
- A- The Field:** in this competition has a size of 250 x 250 cm. It is framed with a board of at least 8 cm height of any color.
- B- Home Bases:** Two (70 cm x 70 cm) home bases (red and blue) are positioned in opposing corners of the field. The remaining part of the field is white.
- C- Pucks:** Ten pucks of each colour are spread randomly in the neutral zone. The pucks are disks made of plastic in the size of (4 cm diameter, 2 cm height) with slightly polished edges.



Top view of Field



Projected views of puck



Isometric View of Puck



Game Specifications:

- 1- The total time for each round is 3 minutes.
- 2- The total number of rounds and qualification system announced before the competition
- 3- The robot must be autonomous.

Robot Dimensions:

The dimension of the robot are (50 cm Length x 50 cm width) maximum , with no restriction for the height, A robot may expand in size after a match begins, but must not physically separate into pieces, and must remain as a single centralized robot. Any robot violating these restrictions shall lose the match. Screws, nuts, and other robot parts with a total mass of less than 5 g falling off from a robot's body shall not cause the loss of match.

Start of the Game:

“ Robots must pass inspection prior to compete “

- A-** There will be calibration once at the beginning of the competition.
- B-** Each of the two robots is assigned a colour (red or blue) and is placed on the corresponding home base. The robots are not allowed to leave the home base until the judge announces the start of the match.
- C-** The aim of this competition is to collect all pucks of the assigned colour and plac them into the assigned home base.
- D-** one player only can run the robot during round.

End of the Game:

- E-** The match ends when all pucks have been collected. or when the judge decides. The robot with the higher score is declared the winner.
- F-** Participating teams are always responsible for the safety of their robots and are liable for any accidents caused by their team members or their robots.



Scoring:

A puck is counted as collected, if all the following conditions are met:

- Its entire body is located unmoved within any of the home bases for more than 1 second.
- It is touching the floor.
- It is outside the convex shape of the robot and not covered by any part of a robot.

The judge immediately removes a collected puck. It counts for the robot, which is assigned to the colour of the particular home base as follows:

- If the colour of the puck is equal to the colour of the home base, the score will be increased by 1.
- If the colour of the puck is not equal to the colour of the home base, the score will be decreased by 1.

The total score of a robot at the end of a match must not be negative.

Therefore, if there are more wrong coloured pucks than right coloured pucks the score will be corrected to 0.

For Further Questions:

Technical Support : 01022758877

Good Luck.

