



# **BOTWHEEL BONANZA**



#### **PROBLEM STATEMENT**

The teams have to construct robots capable of picking up objects and placing them at designated spots in the least possible time.

#### **BOT SPECIFICATION**

- The bot must weigh less than 3kgs.
- Terminal potential must not exceed 24 volts.
- Lead Acid battery is not allowed.
- The dimensions of the bot must be less than 30 cm x 30cm x 30cm, excluding dimensions of the picking and placing mechanism.
- The teams are free to use any picking mechanism as long as it is self-designed.





### **GUIDELINES**

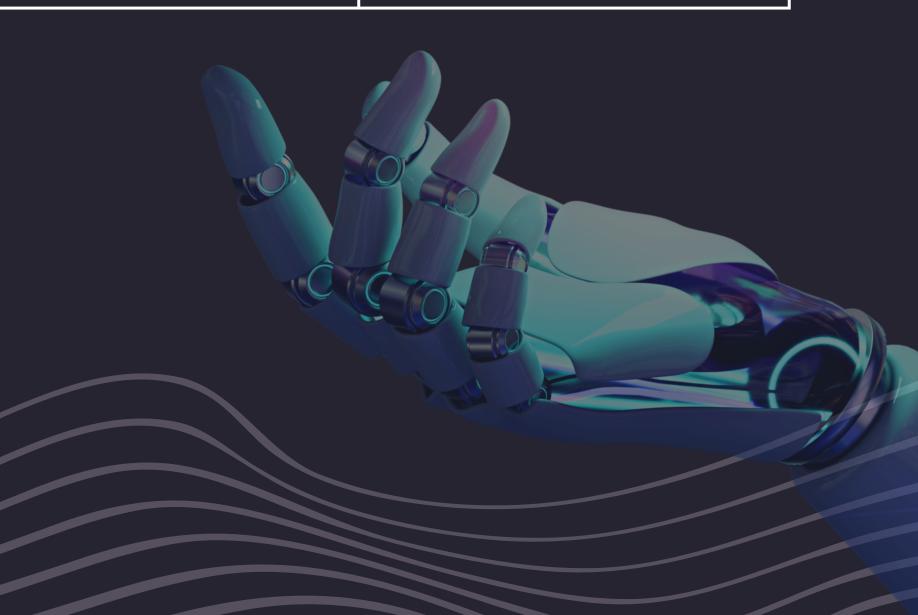
- Each team should comprise of minimum 1 and maximum 3 participants.
- If the box is placed perfectly by the robot, 5 points will be allotted to the team.
- If the box is placed with some portion being outside, 3
  points will be allotted.
- If only some portion is inside the designated spot, only 1 point will be allotted.
- Teams will be negatively marked if the bot touches the border more than 3 times.
- The arenas are not to scale and are provided to just give a rough idea about the race track to the participants.





The points for timing are given below:

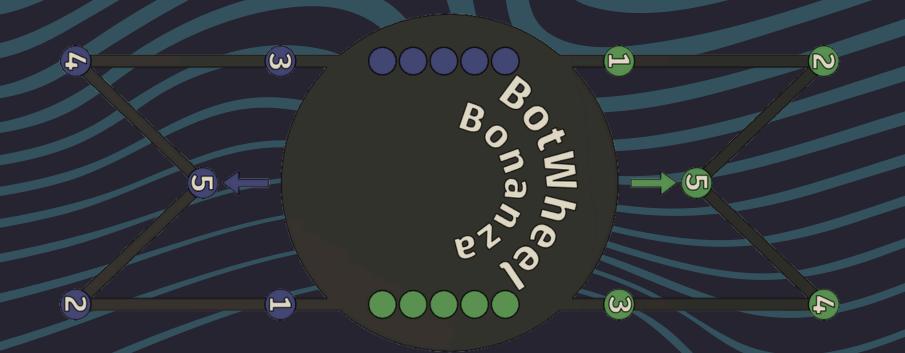
Under 1 minute	50 points
Under 2 minutes	40 points
Under 3 minutes	30 points
Under 4 minutes	20 points
Under 5 minutes	10 points
Above 5 minutes	0 points







### **ARENA: DAY 1**

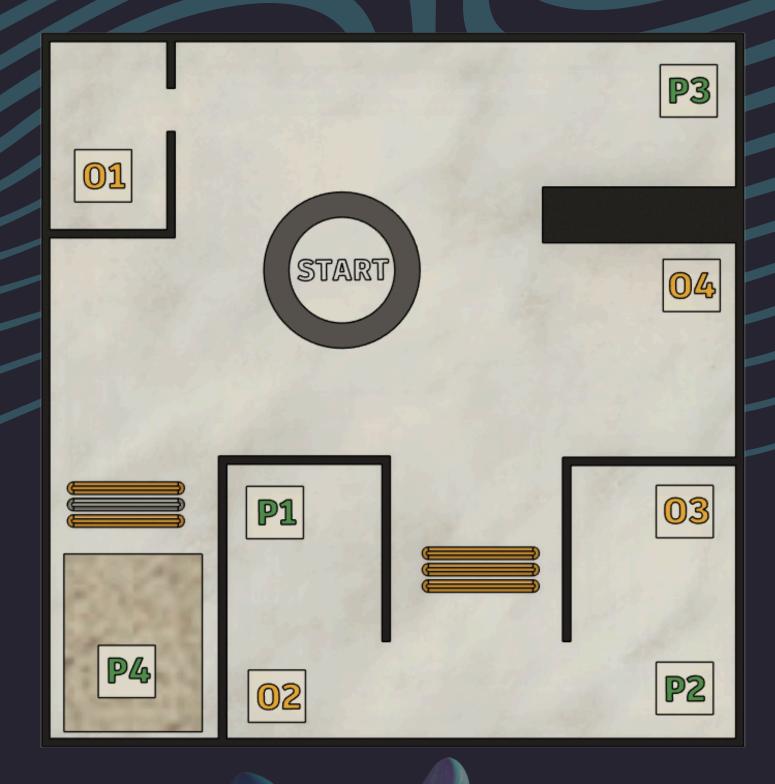


- The circle in the middle will be the commencement and finish points for both the teams.
- The teams have to pick the objects up from the center one by one, and place them at their respective spots in chronological order.
- The object would be a cube of 3 inches with a weight of less than 100 grams.
- If the object falls astray, it will be placed back at the center and the bot will have to pick it up again.
- The teams with the most points on Day 1 will qualify for Day 2.





# **ARENA: DAY 2**



- The track for Day 2 contains several hurdles including a sand pit, several CVC bumps and walls.
- The circle in the middle will be the commencement and finish points for the teams.
- The teams have to pick the objects up one by one from their respective pick up points labelled O1,O2,O3 and O4.
- They will place them at their respective spots in chronological order at P1,P2,P3 and P4





- The teams will get 3 warnings for touching the wall, after which, for every strike, 2 points will be deducted from the total points scored by the team.
- The object will be a cube of 3 inches with a weight of less than 100 grams.
- If the object falls astray, it will be placed back at the center and the bot will have to pick it up again.
- The top 3 teams with the most points on Day 1 will be given the asset of the pole position on Day 2.

