



ROBOT FOR CLEAN INDIA CAMPAIGN

EVENT FORMAT:

The event consists of three rounds:

Round 1: Garbage Transportation

- ❑ In this round, each team will transfer the garbage which will be in the dustbin located at 4 fixed places on the arena to the given specific location . The round lasts for 4 minutes.
- ❑ The dustbin should be kept at its current position after collecting the garbage , then only the team can go to the second dustbin.
- ❑ The objective of the round is to transfer the maximum amount of the garbage without spreading it on the arena and to keep the dustbin at its current position in minimum time.
- ❑ The teams will be ranked according to the gross points and the best will move on to next round.
- ❑ The negative points will be given for spreading the garbage and damaging the arena.

Round 2: Garbage Collection and Transportation

- ❑ In this, round the garbage will be spread across the arena.
- ❑ There are chances that the garbage will be kept at maximum 15 cm height at one specific area on the arena.



- ② Here, the team has to clean the city i.e. collect the garbage spread across the city (arena); and put the collected garbage at the allocated location given in the city.
- ② This round lasts for 5 min. The team which clean the city in the minimum time will be awarded with maximum points.

Round 3: Garbage Selection, Collection, and Transportation

- ② This round lasts for 5 minutes.
- ② The arena will be divided into two regions namely City A and City B and each team will be allocated a separate region. The allocated region team has to clean the city and arrange the objects according to requirement given by the coordinator, which will be told to you before the round start.
- ② The team who has fulfilled the given requirements with cleaner city in the minimum time will be given more points.

JUDGING CRITERIA :

FIRST ROUND:



- ❓ 100 points will be given for the each correct transportation of the garbage. Each second saved from the limit of 4 minutes will give 2 points each. The gross point is calculated.
- ❓ Negative point will be given if the garbage is falling down on the surface of the arena. The Rule is this: Suppose if 10% of the total amount of the garbage has fallen than 10% points will be deducted.
- ❓ In the case of tie in ranking, the team with more accuracy (less amount of the garbage has fallen on the surface of the arena) will be given priority.
- ❓ **In each round wireless robot will be given extra 25 points.**
- ❓ **In each round autonomous robot will be given extra 50 points.**

SECOND ROUND:

- ❓ If the city is totally cleaned then , you will be awarded with 100 pts.
- ❓ In the case of a tie in score, one minute will be given to the each team separately, in which they have to transfer the garbage to its specific position. The team which will transfer more amount of garbage will go in third round.
- ❓ Each second saved from the limit of 5 minutes will give 2 points each. The gross point is calculated.



THIRD ROUND:

- ❑ 10 points will be given for arrangement of each object at the given area as per the requirement and a total of 100 pts will be given if the city is totally cleaned.
- ❑ Each second saved from the limit of 5 minutes will be given 2 points each. The gross point is calculated.

IMPOTRANT NOTE :-

- The concept of vacuum cleaner and Robotic gripper or any other is advisable for cleaning and collecting purposes in the above rounds , any new innovative ideas are also welcome. (In the case of vacuum cleaner, if you are using it then try to make it by your own using its principle i.e. it should not cross the given dimension of the robot).

SPECIFICATIONS:

Team specifications:

- ❑ Each team can consist of maximum five members.
- ❑ Each team member should be a student of an Authorized college. Students from different colleges can also form a team.
- ❑ No participant can take part in more than one team.



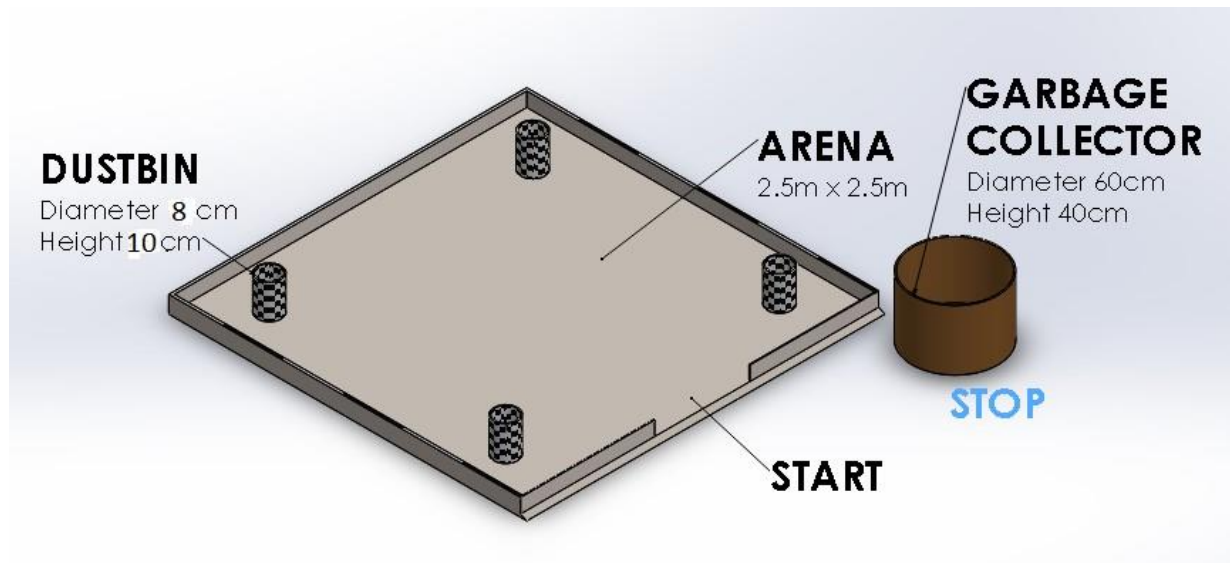
- ❑ Each participant should bring their respective college ID proof. It is not obligatory that the participants forming a team should be from the same college.

- ❑ Any number of teams can come from same college, there's no restriction for it.

Robot specifications:

- ❑ Dimension of Robot should be within the limit: 40cm x 40cm x 40cm.
- ❑ The robot can be manually controlled and can be wired or wireless or autonomous. In the case of wireless bots, their operating frequency should be adjustable, so that no two robots, in any case have same operating frequency. This matter should be checked and dealt with, prior to the match.
- ❑ Potential between any two points on the robot should not exceed 12V.
- ❑ The concept of image processing, jumping, hoping and robotic hand mechanism etc. can be used.

Arena specifications:



❓ Dimension of arena: 250cm x 250cm.

- ❓ Dustbin- Diameter- 8cm (Max) Height 10 (Max)

Note – It is not necessary that dustbin will be cylindrical. It can be square or rectangular too , but it will not exceed the above dimensions.

❓ Dimension of Garbage Collector: Diameter-60cm, Height-40cm.

❓ Garbage used will be of paper, plastic, boxes etc.

RULES AND REGULATIONS:

❓ Any failure in meeting the specifications can lead to disqualification of the team.

❓ Any violation of rules and regulations found at any point of time will lead to immediate disqualification.

❓ Each participant should bring college ID proof.

❓ Any of the Robots should not be modified in between the rounds whatsoever.



- ❑ Robots should be checked well before the match. If a robot is damaged during the match it will be considered team's liability. However, an extra time of 2 minutes **may** only be given in Case of accidental damage of solder joints, leading to circuit failure.
- ❑ The organizers reserve the right to change any or all the rules as they deem fit.
- ❑ Decision of organizers shall be treated as final and binding on all.

AT ANY TIME, IF IT IS NECESSARY THE ABOVE RULES CAN BE CHANGE BY THE COORDINATOR ON THE SPOT.

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