

SAMUDRAMANTHAN

12th
edition



CLEAN THE POOL

Practical Application
Basic Event Structure
Team and Boat Restriction
Scoring
Pool Construction

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Kharagpur



PRACTICAL APPLICATION

Ocean and river pollution has become a major problem. People are often careless and throw wastes such as plastic bottles and crisp packets directly into the water bodies. Cleaning the water bodies to prevent the accumulation of wastes and its harmful effect on marine life is the need of the hour and a challenge to the society. This event challenges participants to come up with innovative designs and waste collection mechanisms which can lift waste objects from the oceans.

BASIC EVENT STRUCTURE

The competition will consist of two main rounds. After the first round, the top 4 teams from the leaderboard will progress to the final round, where they will compete head to head in a final challenge.

In round 1, the contestants are required to lift the objects floating in the pond using their lifter present on the ship. The objective is to design the vessel with the highest stability in water along with the lifter which can collect the objects from the pool and put them according to their shapes to the tanks/boxes(specified for different objects) present in the pond. The waste objects would be of different shapes such as cuboidal, spherical, pyramidal etc. and would be lightweight.

The scoring will be done on the basis of the number of objects collected in the tank in a given period of time i.e 10 minutes. However, in case of a technical fault, a technical time out of 5 minutes will be provided to the team to rectify the error. If the team is successfully able to correct the fault, they will be allowed to continue without any penalty. However, if they exceed this timeout limit, the timer will be allowed to run, and this time will be added to their final count.

Based on the individual points, the top 75% teams from Leaderboard will proceed to the next round. In the case of equal points, the vessel with less weight will move on.

In round 2, the pool will consist of two zones i.e. black zone and white zone where two teams will face off against each other in a group. This round is divided into two halves of 5 minutes each. In the first half, one out of the two competing vessels will collect the objects from black zone and collect it in the tank present on the half line while the other vessel will collect the object from midline and put these objects in the tank present in the corners of white zone. After the first half ,they will interchange their zones and face off with each other the same as the first half.

The scoring will be done independently for both teams on the basis of their performance in both halves. Scoring pattern is given below. This will be a knockout format, where the two teams compete against each other and the team with a higher score will win.

Winner of Group A will compete with the Winner of Group B for 1st and 2nd position while the loser of group A will compete with the loser of Group B for 3rd place.

TEAM AND BOAT RESTRICTIONS

Maximum dimension of boats participating in this event must be within 50 x 30 x 30 (in cms), with an error tolerance of 5%. Any thermocol or foam components on the vessel must be covered with a protective layer so that it does not pollute the water. Any fluid containers must be checked for leaks and electric components must be sealed with insulating material to prevent untowardly incidents. The vessel can be either wired or wireless, but must not be automated. You must also carry your own source of DC power.

The maximum number of members in each team is four. A list of team members must be presented before the commencement of the event, and a representative must be present to verify the results after the event. The decision of the judges is final and binding on the team.

SCORING

The point tally for the two rounds are as follows:

Round 1

Points = $5 * (\text{Number of objects collected in different tanks})$

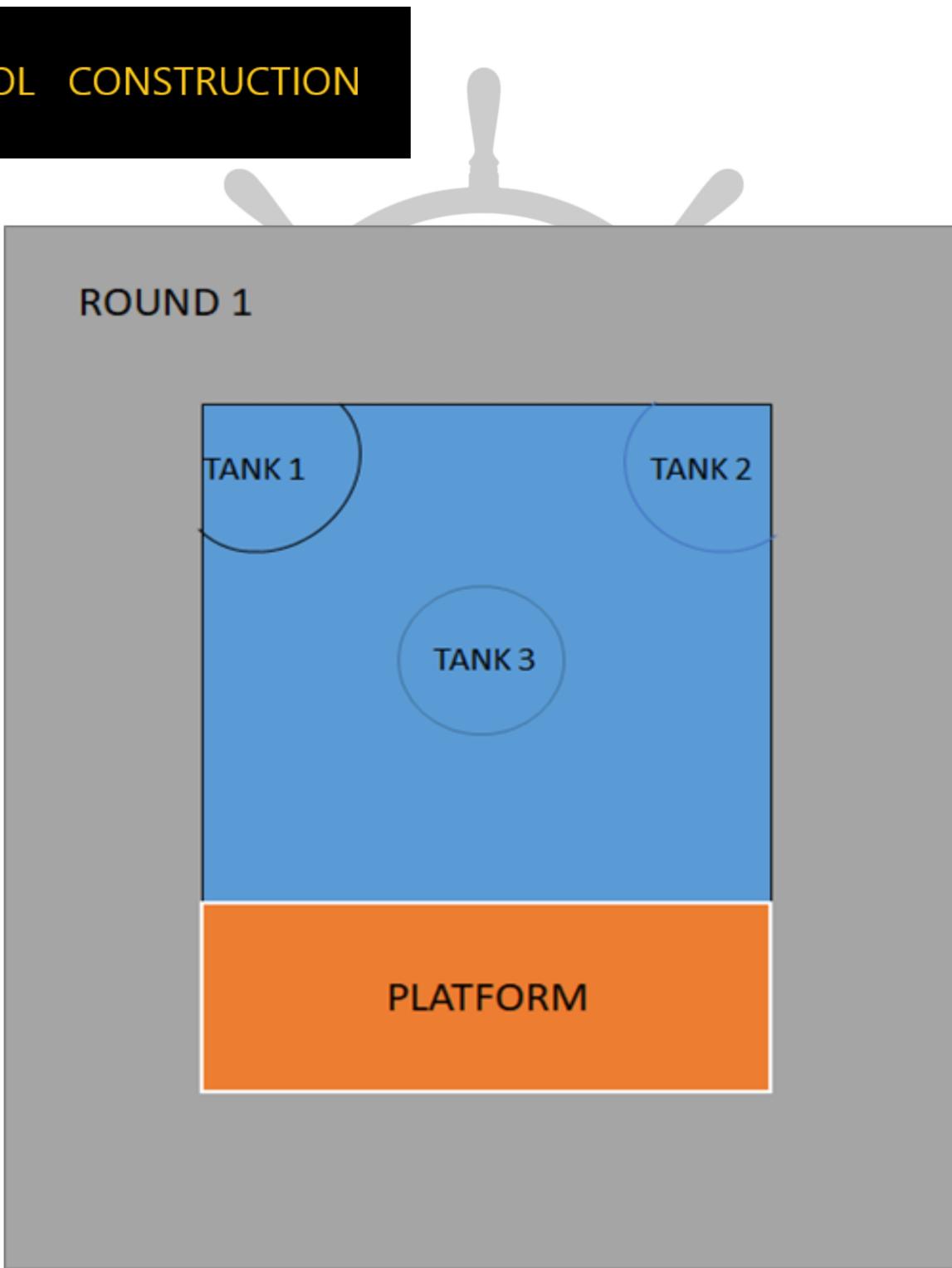
A penalty of $10 * (\text{Number of objects placed in the wrong tank})$ marks will be imposed if any team put the objects in the tank other than the specified tank for it.

For round 2,

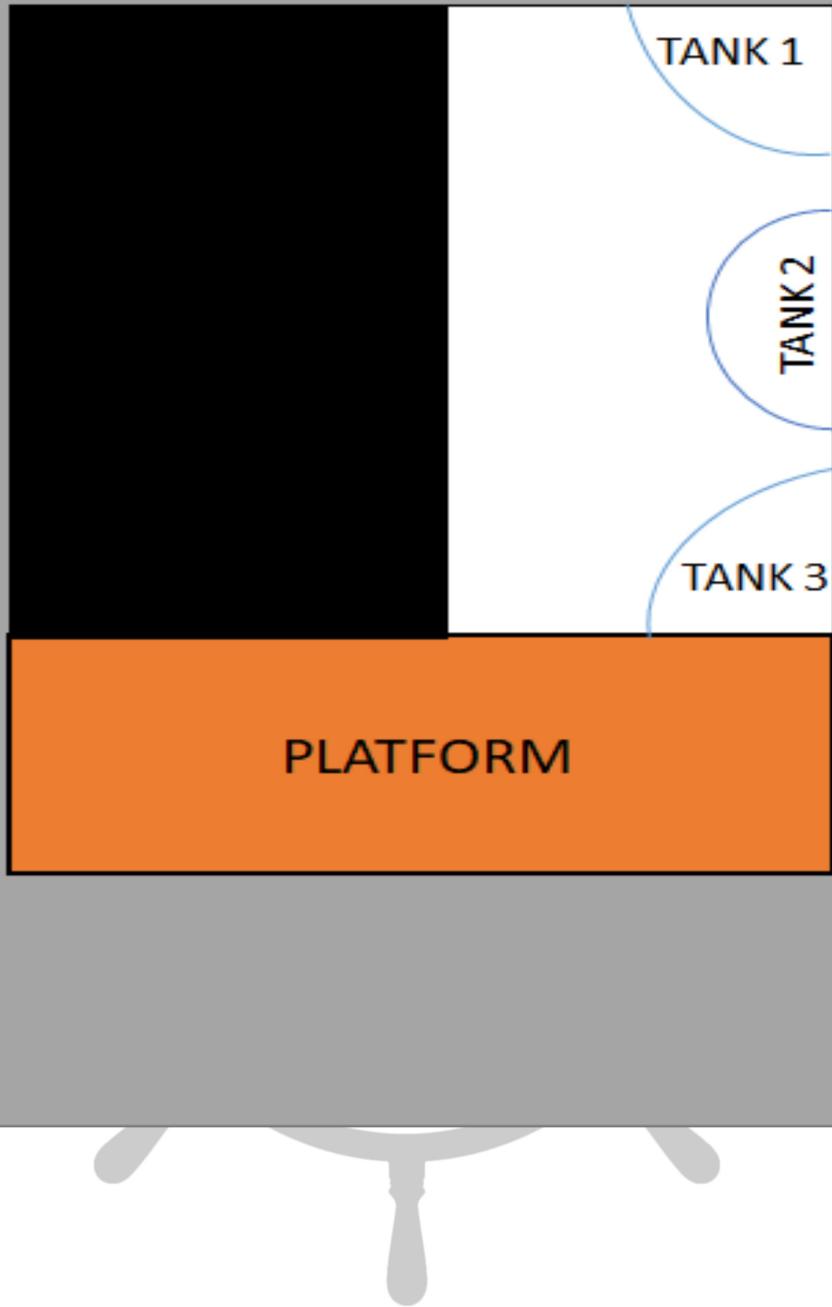
Points = $3 \times (\text{Number of objects collected when it is in Black zone}) + 2 \times (\text{Number of objects collected when it is in white zone})$

A penalty of $10 \times (\text{Number of objects placed in the wrong tank})$ marks will be imposed if any team put the objects in the tank other than the specified tank for it.

POOL CONSTRUCTION



ROUND 2



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