GRAB TO SMASH

Inhott – PRAGYAN 2016

Event Description:

Gain access to smash your opponents by grabbing your powers. Lets' see who smashes the most!!!

This event requires the participant to build two bots and then compete with that. One bot will be used to Grab his/her powers (cube) and other will be used to Smash his/her opponents (with ball).

Robot Specifications:

- Bot should be within specified size limits: **30 X 30 X 30 cm**.

- The power source for the bot must be on board.

- Voltage between any two points must not excess **12V**.

- Any bots damaging the arena will be disqualified immediately.

General Rules:

- A team can have a maximum of five members.

- The arena dimensions are subject to a tolerance of **5%**.

- A maximum of **three** teams can participate from a hostel. If **more than three** come the teams will be chosen based on **first come first serve**.

- Do not **dismantle your bot** until the results are declared.

- Organisers' decision shall be treated as final and binding on all.

- The organisers reserve the right to change any or all of the above rules as they deem fit.

Judging Criteria:

- Common timers will be running for both the teams and will be stopped when all powers (cube) have been collected by a team or at the end of 5 minutes.
- The total score at the end will decide the winner of that round.

Problem Statement:
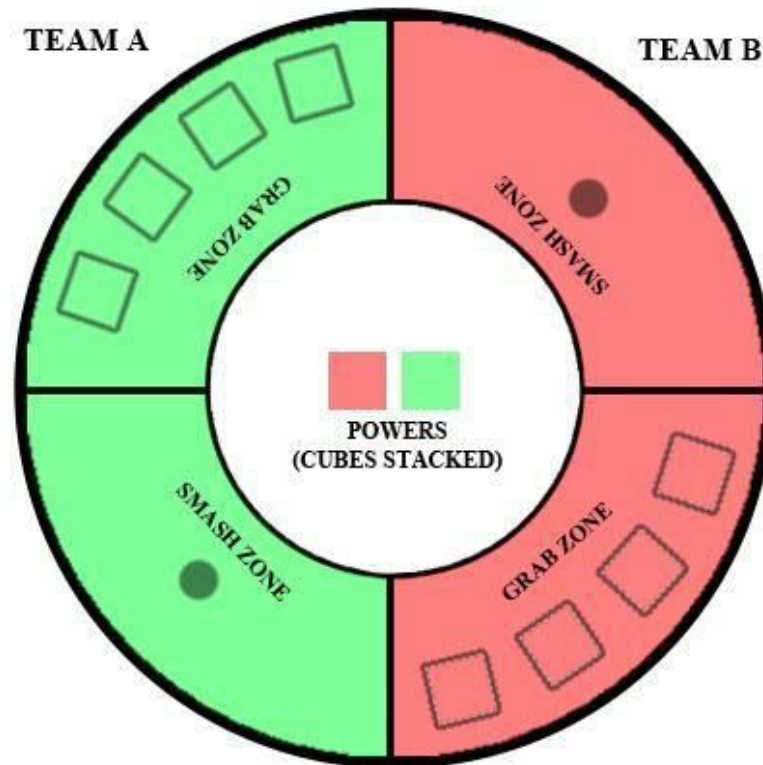
(The words "Powers (Cubes Stacked)", "Smash Zone", "Grab Zone", "Team A" and "Team B " are kept only for understanding purposes and will not be present in the actual arena)

1. Two teams from different hostel will be competing against each other.

2. **Arena:** The outer circle will be of diameter '**2m'** and inner will be of '**1m'**. Each of the Power cubes will be of '**15cm x 15xm'** and will be stacked within the inner circle. **2 stacks** with **4 cubes** in each. Order of colours will be jumbled up.

3. **Grab bot** will can move in the inner circle and his/her grab zone. The **Smash bot** can move only in the Smash zone.

4. **Role of Grab bot:** The grab bot has to **push the stack down** and move his/her coloured power cube into their zone. In case a **red coloured cube goes into green zone or vice versa**, it will be considered as a **penalty**, after which that cube will be moved to the

inner circle by the **event managers**. You will have **4 cubes** in all. Moving each cube to the Grab zone will give you access to a **ball** in the Smash zone.

5. **Role of smash bot:** This one has the **ability to push/smash the ball** towards the opponents Grab Zone. If the **ball touches** the Power Cube, that cube will be **moved back to the inner zone**.

Evaluation:

Timekeeping:

1. The timer is started for both the teams when either of the **bot starts moving** from rest.
2. The timer is stopped for both when:
   a. **All the power cubes** have been placed by one team.
   b. At the end of 5min

Scoring

Points = 50*Power Cubes Placed + 75*Ball Hit – 25*Penalties

1. What is a **Power Cubes Placed?**

   No. of cubes placed inside the Grab zone.
   Note: This can be more than 4.

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2. What is **Balls Hit**?
   How many opponents Power Cubes have been hit by your balls

1. The following two violations will be considered as "**penalties**":

   a. Moving outside the marked zone for each bot.
   b. **Red power cube falling into Green zone** due to Red Teams' error or vice versa.

2. What if scores of two teams are tied?

   One who finished first will be the winner.