



# EFFULGENCE '17

10<sup>TH</sup> 13<sup>TH</sup> OCT  
BEATING THE INVINCIBLES

A techno-management fest



## WALL-E

***“Wall- E a manual bot”***

### INTRODUCTION

Wall -E de novo becomes a great rescuer. He had preserved the Eva from all bother predicament. There was a herd of stymied but Wall-E's scintillating heroism and meticulously exhumed the Eva. He had gone against the danger, encountered hazardous militants and crinkled mystify in his path. Wall-E some time siege with profligate and created a plight ballgame.

### TASK

Construct a bot (wired/wireless) which can traverse through the arena full of sharp turns, rough paths, undulations and zig-zag paths and wedges and can travel through the complexity on earth as well as space.

### TEAM SPECIFICATIONS

- A team can consist of a maximum of five members.
- Students from different educational institutions can form a team.
- Participants must have a valid identity card of their respective educational institution.

### BOT SPECIFICATIONS

- Maximum allowable dimensions of the bot will be 30cm x 30cm x 30cm (l x w x h)
- The bot can be wired or wireless
- The weight of the bot should not exceed five kg. It includes the weight of all external control devices.
- The speed of the motors used must not exceed 500 RPM.
- Teams can also use three cell lithium polymer or lithium ion batteries for power supply.

### ARENA SPECIFICATIONS

The arena is divided into three parts according to the rounds of game play. The width of the whole track is 40cm for each bot.

#### ROUND1

The track will have the following obstacles as given in the following order from the starting point:

- **Plank:** needed to be pushed to complete the path.
- **See Saw**
- **A Semi circular path having sand on it**
- **Small blocks 1,** The bot can climb on these blocks.
- **Another semi circular path having greece**
- **Breakers**
- **Stairs**
- **Bridge having two strips of width 6cm and space between them 18cm**
- **Pendulum**



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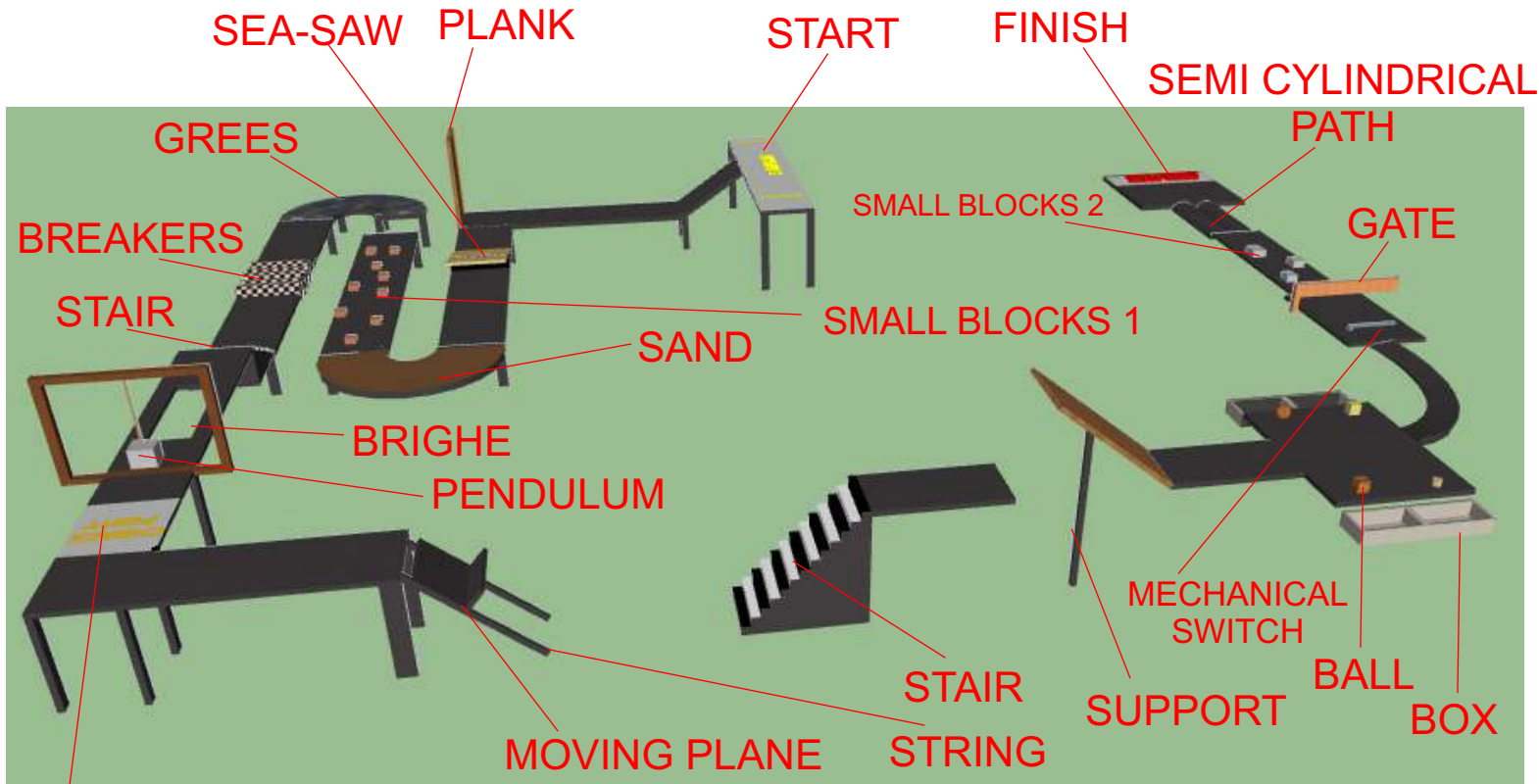
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For more details about arena watch the video.

### FINISH POINT ROUND1

#### ROUND2-

- Firstly, the bot will traverse through all the hurdles of Round 1. Now, Round 2 will have following hurdles given in the order:
- **Movable support hinged on string(declined around  $56.31^\circ$ )**, The bot will have to go down through this support
- **A plank supported by a wooden stick**, The bot has to go through the side path to push the support so that plank falls down and completed path
- **Now, The bot has to go up through the stairs**
- **4 blocks of different shapes to pull them into four boxes according to given preference.**
- **Mechanical switch**, The bot has to rotate this mechanical switch to open the crossing gate ahead.
- **Gate**,
- **Small box 2**, The bot has to pass the path with avoiding these blocks.
- **Semi cylindrical path**,

#### ROUND3-

- Round 3 will consist of tracks of first two rounds leading the surprise hurdles.
- The round 3 will be totally surprise hurdle





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### GAMEPLAY:

#### ROUND1:

In the first round, the bot has to traverse round 1 solely.

1. Maximum 4 Restarts can be taken if there is any mishap/toppling
2. Bots will be placed again at the point of discontinuity
3. Only one hurdle can be skipped
4. There will be a penalty of 5 sec. for each restart while eight sec. for each skip.
5. Bot taking time more than 5 minutes on track will be eliminated instantly.
6. Selection of teams for next round will be on the basis of time taken by them for traversing the arena.

#### ROUND2:

1. In case, bot loses its balls/blocks it can grasp the ball/block again (only once) while suffering a penalty of 3 sec
2. Maximum five restarts can be taken if there is any mishap/toppling. Bots will be placed again at the point of discontinuity.
3. Two hurdles can be skipped.
4. Only teams qualifying this round will be considered for the next rounds. However, this doesn't ensure their selection.
5. The teams will be ranked on the basis of results of both Round 1 and Round 2.
6. Top teams (rank wise) will be selected for next round.
7. There will be a penalty of 5 sec. for each restart while ten sec. for the skip.

#### ROUND3:

1. Maximum four restarts can be taken if there is any mishap/toppling. Bots will be placed again at the point of discontinuity.
2. Only one hurdle can be skipped.
3. There will be a penalty of 6 sec. for each restart while ten sec. for the skip.

### GENERAL RULES:

1. A team will be disqualified if it is not present with its bot on the allotted time.
2. The team will be disqualified if its bot fails to fulfill the given bot specifications.
3. The team will be disqualified if its bot is found to be damaging the opponent team's bot or the arena
4. Certificates of Excellence will be awarded to the top three teams.
5. The bot will be checked for the safety of the opponent's team and the arena, and would be disqualified if found unsafe.
6. Flying of bot using air foil, helium balloons, etc. is not allowed.
7. The organizers reserve the right to change any or all of the above rules as they deem fit.
8. The decision of organizers will be final and binding on all.
9. Teams misbehaving with any of organizers will be disqualified and in the case of any dispute decision of Event Head will be final.



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