

# ONLY FOR 1<sup>ST</sup> YEAR

## PROBLEM STATEMENT

IN THIS EVENT PARTICIPANTS HAVE TO BUILD A TERRESTIAL BOT THAT IS CAPABLE OF PICKING UP & PLACING THE BLOCK AT RIGHT PLACE BY USING THEIR MACHANICAL ARM AND MUST BE ABLE TO PASS THROUGH DIFFERENT HURDLES

## DESCRIPTION OF EVENT

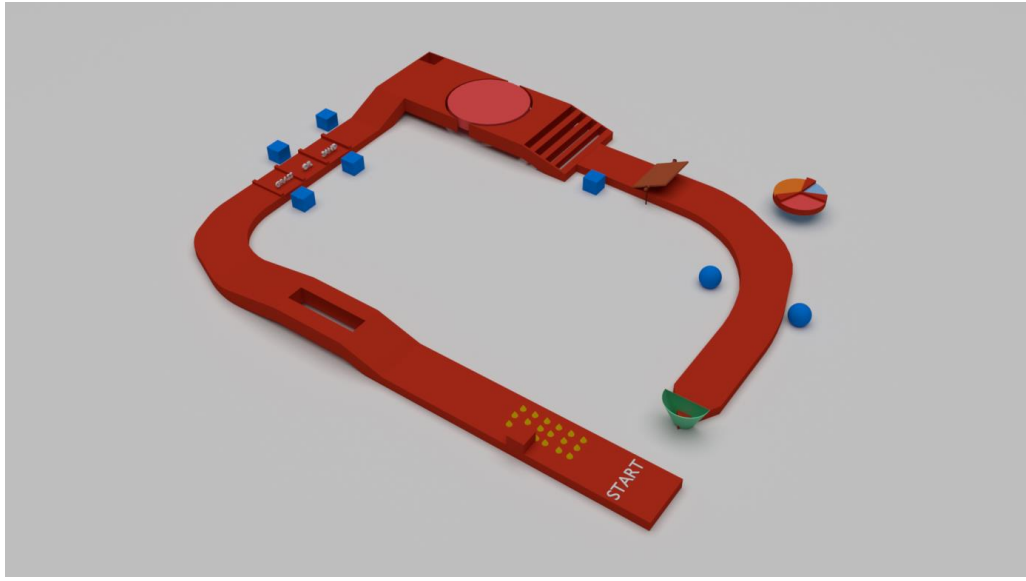
THIS EVENT CONSISTS OF TWO ROUNDS :

1. PRE-ROUND
2. FINAL ROUND

## RULES FOR PRE ROUND AND FINAL ROUND

- A MINIMUM OF TWO MEMBER AND MAXIMUM OF FOUR MEMBER ARE PER TEAM.
- NO PERSON SHOULD BE A MEMBER OF TWO OR MORE TEAMS.
- EACH PARTICIPANT GROUP MUST HAVE THEIR OWN BOT.
- ARTIFICIAL OR LOBO BOTS & COMPONENT ARE NOT ALLOWED.
- ANY KIND OF DAMAGE TO THE ARENA BY THE BOT WILL LEAD TO IMMEDIATE DISQUALIFICATION OF THE TEAM.

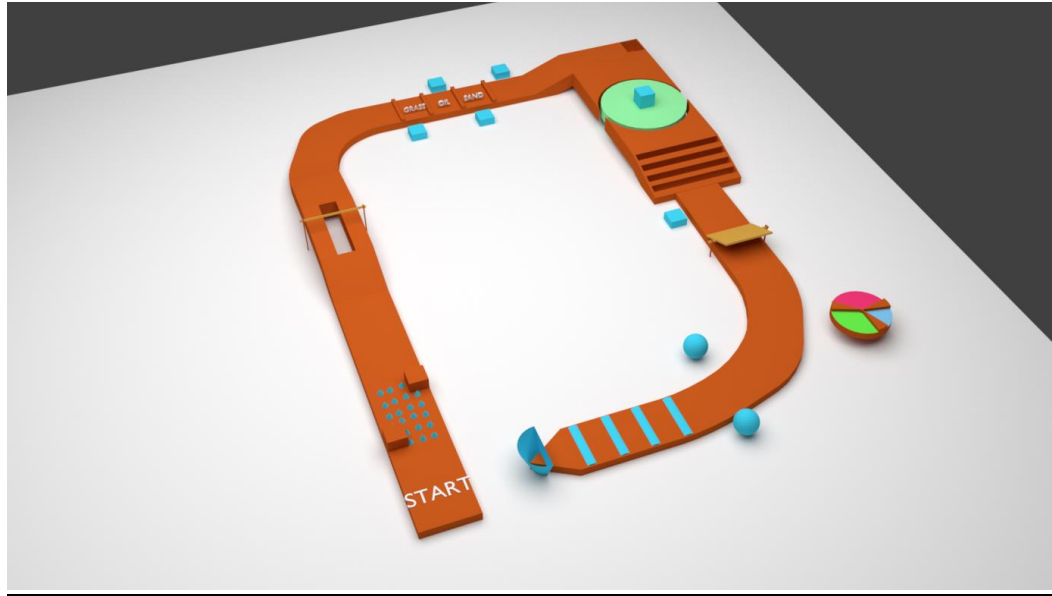
## PRE ROUND –



- THE BOT WILL START FROM THE POINT MARKED AS A START ON THE ARENA.
- THERE WILL BE PENALTY OF 100 POINTS FOR RESTART.
- BEFORE STARTING THE TASK, ONE PERSON HAVE TO SOLVE A BODMAS BASED PROBLEM WHOSE SOLUTION WILL LEAD THEM TO PICK UP THE OBJECT BASED ON THEIR SOLUTION.
- CONTROLLERS HAVE TO MOVE THE BOT IN THE INDICATED DIRECTION AND THEY HAVE TO CROSS THE HURDLES WHICH WILL BE KEPT EITHER LEFT OF RIGHT SIDE OF THE PATH.
- THE BOT HAS TO THEN CLIMB UP THE INCLINED SURFACE WITH THE OBJECT.
- A BRIDGE IS PROVIDED ON THE TOP OF THE INCLINED SURFACE THROUGH WHICH THE CONTROLLERS HAVE TO MOVE THE BOT.
- NOW THE BOT HAS TO MOVE DOWN AND HAS TO CROSS THE GRASS, OIL AND SAND PATH.

- AFTER MOVING FORWARD, THE CONTROLLERS WILL HAVE TO PICK UP THE OBJECT AS PER THE SOLUTION OBTAINED BY THEMSELVES.
- THEN AGAIN, THE BOT HAS TO CLIMB THE INCLINED SURFACE AND PLACE THE OBJECT ON THE HORIZONTAL PLATE.
- MOVING FORWARD THE BOT HAS TO CROSS THE HURDLE WHICH IS A ROTATING DISK.
- THE BOT HAS TO MOVE DOWN AND PICK THE OBJECT AND HAS TO CROSS THE SEE-SAW.
  
- THE BOT HAS TO MOVE FORWARD TO PLACE THE OBJECT ON A ROTATING DISK.
  
- THERE WILL BE NUMBERS WRITTEN ON THE ROTATING DISK. THE BOT NEEDS TO PLACE THE GIVEN BOX ON THE DISK AND THE NUMBER ON THE WHICH THE BOX IS PLACED ON THE ROTATING DISK WILL BE THE NUMBER OF TIMES THE CONTROLLER HAS TO MOVE THE BALL THROUGH THE BUCKET THAT THE CONTROLLER WILL SEE MOVING FORWARD ON THE ARENA.

# FINAL ROUND



STEP 1 TO 3 WILL BE SAME FOR THE FINAL ROUND.  
BOT HAS TO CLIMB UP THE INCLINED SURFACE.

A GATE WITH VERTICAL PLATE IS PROVIDED ON THE TOP OF THE INCLINED SURFACE WHICH IS TO BE OPEN BY USING MECHANICAL ARM OF BOT.

A OBJECT IS PLACED ON ROTATING DISC, SO BOT HAS TO PICK THE OBJECT AND HAS TO MOVE FORWARD.

## BOT SPECIFICATIONS

MAXIMUM ALLOWED DIMENSION OF THE BOT WILL BE (35 cm x 35cm x 35cm).

THE MAXIMUM WEIGHT OF THE BOT SHOULD NOT EXCEED 2KG.

## ARENA DESCRIPTION

WIDTH OF TRACK IS 40cm, length of hurdles is 50cm(approx).

### INCLINED DESCRIPTION –

Length= 110 cm(approx),inclination angle = 30<sup>0</sup>, height = 25cm.

**BOX OBJECT DIMENSION – 5cm X 5cmX 5cm.**

**SPEED OF ROTATING DISC = 3.5RPM TO 10RPM.**

## SCORING RULES FOR PRE ROUND

STARTING POINT = +50 POINTS.

RESTART POINT = -100 POINTS.

DISTURBING ARENA = -10 POINTS.

PICKING BOX = +50 POINT/BOX.

DROPPING BOX AT RIGHT PLACE = +50 POINT.

CLIMBING ON THE INCLINED, CROSSING THE BRIDGE = +100POINT.

MOVING DOWN FROM THE INCLINED = +40 POINT.

CROSSING SAND PART AND HURDLE = +100 POINTS.

PASSING THE ROTATING DISK = +100POINTS.

BONUS POINT = +100 POINTS.

POINTS FOR DROPPING BALL INSIDE THE BUCKET = +20  
FOR HAND TOUCHES = -30 POINTS.

CONTACTS :

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**IN CASE OF ANY DISCREPANCY THE DECISION OF JUDGMENT PANEL  
WILL BE FINAL AND BINDING.**