



TECH FIESTA 2019



BOMB DISPOSAL

- **EVENT THEME:** Warzone is covered by deadly invisible mines. Instead of risking human lives, bots are assigned to find and dispose those. Design a manually controlled robot capable of detecting mines and built with wire cutting mechanism to dispose those.

- **EVENT SYNOPSIS:**
 - **General rules:**
 - ◆ This is a team event.
 - ◆ The teams should take complete responsibility for their bots. College shall not take any responsibility if the bots are misplaced, damaged, stolen or destroyed.
 - ◆ The members must bring their identity cards of college.
 - ◆ No person should be a member of 2 teams.
 - ◆ No bot can be shared by two teams.
 - ◆ The number of participants allowed per team minimum is 3 and maximum 5.
 - ◆ Damage to arena, may lead to disqualification of the bot.
 - ◆ Bot cannot be constructed using readymade Lego kits or any readymade machine.
 - ◆ The decision of the coordinator will be deemed final.
 - ◆ A team can be disqualified on disciplinary grounds.
 - ◆ Team can either use a Hydraulic Mechanism or Gear Mechanism to cut the wire.

 - **EVENT RULES:**
 - **Preliminary Round:**

Single bot with Cutting and Magnet Detecting Mechanism and conveyer belt(optional) is required. The road's width will be according to the bot's specification. There will be sand on arena in which mines will be hidden. There will be colored wires to disable the mine to clear its path. Bot will have to detect it, and cut proper wire to dispose that mine. There will be LED indication for each successful disposal. Bot have to dispose such mines to clear a path for itself to reach a certain destination.



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➤ **Final round:**

Top 10 to 16 teams will be selected for the final round.

The arena for the second round will be decided on the spot.

▪ **Scoring Rules:**

- ❖ Mine Detection: 100 points, Wire cut: 150 points.
- ❖ Negative Points:
Obstacle touch: -20 points, Hand Touch: -50 points,
- ❖ Each team will be provided with maximum 1 technical time-out of 2 minutes, after which there will be a penalty of 100 points during which they can repair their bots.
- ❖ Preliminary round will be limited to 4 minutes for each team.
- ❖ Rules for final round will be declared later.

▪ **Bot specification:**

- ❖ Each bot should fit inside a box of (30*35*30) cm (with 10% tolerance allowed). Including your cutting mechanism.
- ❖ The Bot should have an arm and a cutter to cut objects.
- ❖ The maximum weight of bot should not exceed 3 kg.
- ❖ The potential difference between any two electrical points on the bot must not exceed 18 volts throughout the run.
- ❖ Bot must be manually controlled.
- ❖ Ready made kits are not allowed.
- ❖ Bot can be wired or wireless.
- ❖ IC engines are not allowed.

- **EVENT HEAD:** NILAY SEN (8272915279)
BIKASH MAHATO (7003351769)

PS: All rules are subject to change without prior information.