



येथे बहुतांचे हित

“Techno-Social Excellence”
Marathwada Mitra Mandal's
INSTITUTE OF TECHNOLOGY (MMIT)
Lohgaon, Pune-411047
National Level Technical Event
Mechanical Engineering Department

1. ROBORACE

Robot Specifications

1. Manually controlled WIRELESS robot is compulsory.
2. Dimensions of the robot should not exceed $(30 \times 30 \times 30) \text{ cm}^3$ and should not be less than $(20 \times 20 \times 20) \text{ cm}^3$.
3. There are no material restrictions, but any kind of magnetic field generation will lead to disqualification.
4. Maximum the power supply must be up to 12 Volt. Do not carry external power supply.
5. Use of IC ENGINES or DC STEPPER MOTOR or COMPRESSOR is not allowed.
6. The weight of the robot should not exceed 2 kg, excluding remote's weight.
7. The robot should not use any sucking or sticking device on the base.
8. The robot should not have zero ground clearance i.e. no part of the robot except the wheels should be touching the ground.
9. If the source of energy is on the robot then it will be included in total weight.
10. No responsibility for the damage to the robot will be taken by the organizers.
11. Robot must be self-designed, readymade robot is not allowed.

Round 1

1. This round will be an elimination round.
2. Robots have to cover the given track in minimum possible time.
3. Half of the teams will be selected for Round 2, based on their performance and robot specifications.

Round 2

1. Arena for this round (2) is different from Round 1.
2. Winner of the Event will be decided after Round 2 as per the rule finalised by the judges panel.

Rules:

- 1) The robot will be started from the START position.
- 2) The robot, if required hand touch, will be placed on the previous checkpoint.
- 3) Maximum 3 hand touch will be allowed.
- 4) For each hand touch a penalty of 1 min will be given.
- 5) Total 2 skips are allowed in the whole track. Skips will add extra time in total time.
- 6) Voltage used should not be more than 12 volts.
- 7) During a level, teams are not allowed to change their robot.

Judging Criteria:

- i) Time lap ii) Number of check points cleared. iii) Number of skips taken.
- iv) Number of hand touches.



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$$\text{Points} = (T_{\text{threshold}} - T_{\text{taken}}) * 10 - [h * 100 + n * 120]$$

Where,

$T_{\text{threshold}}$ is a constant and will be set and revealed on the day of the event.

T_{taken} is the time taken by the robot on the track after start.

h is the number of hand touches during the race.

n is the number of skips taken.

Note

- 1) The judge's decision will be final and binding to all.
- 2) There may be changes in the rules, rounds or track, if any will be notified.

Team Specifications:

- 1) Maximum 4 & Minimum 2 participants are allowed per team.
- 2) Only the team members can control the robot.

Registration Fees: - Rs.50 /- per team member.



Top View of track



Side View of track

SAMPLE TRACK FOR COMPETETION

Contact Details:

Prof .R.G.Mahajan 9881522536
Event Co-Ordinator

Student Co-ordinator

1.Akshay Shimpi (T.E.Mech) 9156035328



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2.CADO-HOLIX

Aim

1. This competition is not only for those who just simply know how to draw in cad. It all about showing his/her skill with respect to Control over Cad Building planning Logical thinking .
2. For those who think they can do better than the early planning./
3. For those who think they are different from others
4. For those who think they are the best
5. For those who think they can draw plan economically considering all possible bye laws & by using optimum resources.

Rules

1. The organizers will reject incomplete, inconsistent or improper documents and designs. Furthermore, the organizers will not return submitted documents and designs.
2. The decision of the jury shall be final and binding.
3. All entrants are regarded as having a full understanding of the regulations for the competition and as being willing to comply with every rule.
4. The organizers reserve all rights to change any or all of the above rules as they deem fit. Change in rules, if any, will be highlighted on the website and notified to the registered participants.

Maximum Participant : 01

Registration Fees:- Rs.50 /-

Contact Details:

Prof .A.S.Bhanage 9665008381
Event Co-Ordinator

Student Co-ordinator

1.Aditya Sutar (B.E.Mech) 9307400484



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3. Lathe War

“Unleash your machining skills, and let in to the groove of screeching rhythms of turning, facing, tapering and all you can do in a lathe club”.

Want to perform operations on the lathe machine?? This is it, an event where you show begins how strong you are in workshop practices. Participants are required to perform set of operations on the job using lathe machine problem statement for which will be declared on the spot. The competition of producing a mechanical component given in drawing by using lathe machine. A work evaluation is done on the basis of surface finish, time required, and dimensional accuracy. Several operations like facing, taper turning, parting etc will be included in the drawing.

Rules

1. If any damage to tool, lathe m/c, surrounding etc, or any malpractices including negligence during machining will lead to disqualification.
2. Fine will be taken if any major damages to tool, lathe machine or surroundings occur during operation.
3. After the completion of the task all the accessories must be returned.
4. No extra work piece will be provided and carrying of any extra material is banned.
5. Judges decision will be final, binding to all and irrevocable.
6. Participant is responsible for their own safety.
7. They should compulsory have apron, tool (h.s.s) and shoes.
8. The winner will be decided on the basis of accuracy, surface finish and time duration.

Maximum 2 participants are allowed.

Registration Fees:- Rs.50 /- per participant.

Contact Details:

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Event Co-Ordinator

Student Co-ordinator

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