



ANNA UNIVERSITY
MADRAS INSTITUTE OF TECHNOLOGY



THE ASSOCIATION OF MECHANICAL ENGINEERS

PRESENTS



PISTOBOLTZ '23

RULE BOOK

TECHNICAL EVENTS:

1. PAPER PRESENTATION

EVENT DESCRIPTION:

Present your paper/research for the topic given

RULES:

- Maximum number of participants in a Team is 3-4.
- The topics for the paper
 - i. Sustainable manufacturing
 - ii. What can happen in Industrial 5.0
 - iii. Alternatives for lithium ion batteries in electric vehicles.
 - iv. Digital Twin.
- Report should be well comprehended, albeit advanced which could appeal to an undergraduate. Kindly contact the coordinator for any clarifications.
- Abstract should not exceed more than 250 words and Paper should not exceed 15 pages.
- Bring your college I-Card & receipt on event day.
- Kindly bring your PowerPoint presentation on a CD or on a pen-drive.
- Soft-copies of the submitted paper and PowerPoint presentations must be in the .ppt format.
- Kindly Mail your abstract, paper and ppt to harrisantony011@gmail.com. Difficulties will be addressed through the same email-id.
- The teams will get 10 minutes for presentation and followed by question-and-answer session.
- Persons from different institutions can be a part of the same team. However, one person may not be a part of multiple teams for the same event.
- The mail with submissions should contain: Title- theme of the paper. Names of the authors. Phone no of the authors. E-mail ID's.

- Paper should be in IEEE Format. Paper must contain index, list of figures, list of tables, abstract, introduction, point wise description of subject and conclusion, Result and references.
- Paper must be preceded by a cover page specifying the title of the paper, names of authors and their college names as also their contact numbers and email ids.
- Last day to submit soft copy of your report (via e-mail) will be two days prior to the day of presentation.
- After you have submitted the soft copy, a panel of judges will go through your material and if you are shortlisted to give the presentation, you will be notified.
- The abstract mail should contain abstract, references, your e-mail id and mobile number.
- The decision of judges will be final and no arguments or appeal will be entertained.

VENUE:

DURATION: 15mins

2. DESIGN MASTER:

EVENT DESCRIPTION:

An event where the participants need to model the given assembly drawing in SolidWorks within the specified time limit. Participant completing the given drawing in minimum time and commands is declared the winner.

RULES:

- Individual Event
- Systems will be provided
- Software – SolidWorks

VENUE: CAD Lab, PT Building

DURATION: 2 Hours

3. MECH CONNECTIONS:

EVENT DESCRIPTION:

Connect the given images to form a meaningful mechanical terminology within the specified time.

RULES:

- Team of 2/3 members.
- High scoring teams of the first-round advances to the second round.
- Unfair means to find answers is considered malpractice, and the team is directly disqualified.
- **ROUND 1:** Identify the mechanical terms from the given set of pictures.
- **ROUND 2:** Identify the mechanical statements from the pictures.
- The organizing team reserves the right to change or modify the rules.

VENUE: RLHC

DURATION: 1 Hour

4. KNOW YOUR APPARATUS:

EVENT DESCRIPTION:

The team is provided with an apparatus, whose goal is to identify the apparatus and explain its function within the specified time. The team with the maximum number of correct answers will be declared the winner.

RULES:

- Team of 1/2 members.
- Use of any electronic gadgets or any other means to find answers is considered malpractice, and the team is directly disqualified.
- The organizing team reserves the right to change or modify the rules.

VENUE: Metrology Lab, PT Building

DURATION: 1 Hour

NON - TECHNICAL EVENTS:

1. DARE TO FIT:

EVENT DESCRIPTION:

Showcase your inner Arnold in this exclusive series of high-adrenaline workouts.

RULES:

- The event will be conducted in 3 consecutive rounds. All rounds will be head-to-head elimination rounds.
- **ROUND 1:** Limited Rep Round, the participant who finishes the workout in the correct form with given reps advances to round 2.
- **ROUND 2:** Limited Rep Round, with increased weights and rep count, participant has to complete the workout to advance to the 3rd round.
- **ROUND 3:** Maximum Rep Round, participant with the maximum rep count with the correct form will be declared the winner.
- Number of Reps will be given on spot.
- Rep is not counted, if the form is improper.
- Decision of the judges will be final and binding.

VENUE: Old PT Building, MIT Road

DURATION: Rolling Event

2. MYSTERY IN MACHINES:

EVENT DESCRIPTION:

Fan of Prison Break ??? come solve through this series of problems and escape.

RULES:

- Team of 3/4 members.
- Team which reaches the highest level, or completes the event in the minimum time, will be declared the winner.
- You will be left in the central workshop with clue which lead to another clue.
- Unfair means to find answers is considered malpractice, and the team is directly disqualified.

- The organizing team reserves the right to change or modify the rules.

VENUE: PT Building

DURATION: Rolling Event

3. F1 SIMULATOR:

EVENT DESCRIPTION:

Think you are Lightning McQueen, come prove your worth in this virtual racing circuits to become the next on road champion.

VENUE: RLHC

DURATION: Rolling Event

4. F1 QUIZ:

EVENT DESCRIPTION:

Prove your knowledge of F1 in this pen-paper quiz.

RULES:

- Individual event.
- 30 minutes
- Any unfair means will be considered malpractice and will lead to direct disqualification.

JUDGING CRITERIA:

- Points would be awarded for every right answer.
- There is no negative marking for wrong answers or leaving an answer blank.
- Marking need not be uniform across all questions.
- The highest scoring teams will advance to the next round and highest scoring team shall be adjudged the winners of the event.
- Decision of the judges will be final and binding.
- The organizing team reserves the right to change or modify the rules

VENUE: RLHC

DURATION: Rolling Event

ROBOTIC EVENTS:

1. RC RACING:

EVENT DESCRIPTION:

Race against time in this high-octane racing event.

RULES:

- Participants should have their own RC car model.
- Penalties will be given accordingly.
- Decision of the judges will be final and binding.

VENUE: Central Workshop, MIT Road

DURATION: Rolling Event

2. ROBO WAR:

EVENT DESCRIPTION:

Fight Club your way through series of challenges and claim the victor.

SPECIFICATION:

Design a robot that meets the following dimensional specifications and functions properly during the event through clashes.

DIMENSIONS & FABRICATIONS:

Robot should fit in a box of 60x60x40 cm dimensions, before the commencement of the event. The controller is not included in the spatial constraint. The height of the robot will be measured perpendicular to the line of motion. Weight of the robot should not exceed 8 kg. Tolerance of 2% will be provided only in case weight.

RULES:

- The event will be conducted in 3 consecutive levels, Preliminary, Semi-Final, and Final.
- Matches will take place in a circle of 10 ft diameter.
- Each match will consist of three rounds of five minutes each.
- After each round, 2 minute break will be provided.
- For every minute, more than the 2-minute mark, 2 points will be deducted.
- Team will be disqualified for crossing five minutes of break.
- For a match, 2 bots will clash against each other.
- If a bot pushes the opponent completely out of the circle, 2 points will be awarded.
- If half the body goes out, 1 point will be awarded.
- In case of standoff with a bot who is half outside, within 10 seconds, the other bot can try to claim 2 points, beyond which bots shall be reset in the center.
- If a bot has been toppled, 3 points will be awarded.
- Participants are not allowed to step inside the ring, 2 points will be deducted if done so. Hence, make sure you have sufficient wire length.
- In case of odd number participants, the unpaired participant will be paired with the fourth place after preliminaries.
- Winner of the match will advance to the next level.
- Battery: 12 V only
- Decision of the organizers will be final and binding.

VENUE: Old PT Building, MIT Road

DURATION: Rolling Event

3. ALL TERRAIN VEHICLE:

EVENT DESCRIPTION:

Race against time and the challenging environments ahead.

SPECIFICATION:

Design a wireless or wired manual All Terrain Vehicle robot that meets the following dimensional specifications and can

complete a rough terrain track successfully. Robots will be judged on the track time, and excellent maneuverability. Build your robots for all kinds of challenging environments.

DIMENSIONS & FABRICATIONS:

- Maximum Voltage: 24V
- Dimensions – 60x60x40 cm
- Maximum Weight – 10 Kg
- On-board power supply
- Maximum Locomotive Limbs – 6

RULES:

- One member of the team should run the robot through the entire circuit.
- Any teams found having EM Interference Shooters, RF Jammers will be disqualified on spot.
- The robot should be electrically powered.
- Use of hydraulics and pneumatics should be avoided.
- Proper insulation of wires must be maintained at all times.
- Decision of the organizers will be final and binding.

VENUE: Old PT Building, MIT Road

DURATION: Rolling Event

