



GENERO'17

TEAM TECH-ME

RULEBOOK



LATHE WAR: -

Description:

Want to perform operations on the lathe machine?? This is it, an event where you show how strong your workshop skills are. Lathe War is a manufacturing event about command and accuracy to prove your proficiency on a Lathe machine.

Problem Statement:

- The participants will be given a 2-D drawing which they have to manufacture with minimum tolerances in the given time.
- Participants will be tested in 2 rounds. Information regarding the rounds will be disclosed at the time of event.

Team Specification and Eligibility:

- A team can consist maximum of 3 members.
- Students from same as well as different educational institutes can form a team.
- Participants must carry with them a valid ID card (college or voter ID)

Rules:

- Job completion time will be told at the time of event.
- Raw material will be provided for the competition. Carrying any extra material is not allowed.
- Extra material will not be provided in any case of problem.
- If any team member found consulting/trying to consult/helping any other person or team member, both will be disqualified on the spot.
- JUDGES DECISION WILL BE FINAL, BINDING TO ALL AND IRREVOCABLE.

- Work evaluation is done on the basis of surface finish, time taken, and dimensional accuracy.
- Tolerance time will not be given.
- Any damage to the machine will result in fine/disqualification.
- The organisers reserve the right to change any or all of the above-mentioned rules as they see fit.
- Changes in rules, if any, will be highlighted on the website and notified to the registered participants.

PIRATES BATTLE: -

Description:

The team has to build a boat which can transverse a maze that will contain hurdles within a given time period.

Boat Specification:

- The minimum dimension of the boat can be 30 cm x 30 cm x 30 cm (l x b x h).
- The boat may be wired or wireless.
- Use of any mechanism for propulsion is allowed.
- The length of the wire (for wired bots) should be long enough to cover the whole track and wire should remain slack during the complete run. (minimum 1.5 m length)
- All the wires should be perfectly taped, any loose wire leads to the rejection of the team.
- Each team must prepare its own power sources. Only 220V volt AC sources will be provided at the arena, but can only be used in the form of maximum 24-volt DC voltage.
- Readymade toy boats are not allowed.

Team specification and eligibility:

- A team may consist of a maximum of 4 members. Students from different educational institutes can form a team.
- Participants should carry with them valid identity cards (college or voter ID).

Rules and regulations:

- Any team that is not ready at the time specified will be disqualified.

- The machines would be checked for their safety before the run and would be discarded if found unsafe for other participants and spectators.
- 'Organizing teams' decision shall be final and binding to all.
- Any boat not conforming to the specifications provided will be instantly disqualified.
- Any boat which damages the arena will be disqualified.
- Flying (using air foil, helium balloons etc.) is not allowed.
- There will be two timing based rounds, the top 5 teams having the best timing shall proceed in the second round.
- The level of difficulty will have increased in the second round, e.g. – waves, extra barriers etc.
- The organizers reserve the right to change any or all of the above rules as they see fit.
- Change in rules, if any, will be highlighted on the website and notified to the registered participants.
- Any changes in the rule can be made according to the situations before the event.

3-D MODELING

Problem Statement:

- Participants are expected to convert the given 2-D Model into a 3-D model with help of three standard views (front, top and side views Participants are allowed to use either an AutoCAD or Solid works)

Description:

- Desktop computers with the required software will be provided by the organizers. It is to be noted that the three views will be provided in printed format.

Marking and winning criteria:

- Winner will be decided based on time taken and number of steps taken to complete the design.

Rules and regulations:

- Participants are not allowed to bring mobile phones at the time of event.
- No participant will be allowed to open any other tab on the given window, if found he/she will get disqualified from the event immediately.
- There is no team performance only entry of single person is allowed.

- Participant must reach on allotted time of the event (will be informed further before the event).
- Rules can be changed at the time of the event participants will be informed accordingly.

Robot competition: Road Rash

Objective:

Two manual or automatic robots will be racing against each other in an arena which shown in fig1 having some minor obstacles. The winner will be decided upon the ability of the robot to outrun the opponent without falling off the edge of the arena.

Description:

The robots will start from the starting positions (arrow marked in fig 1) and both of them will move in the same sense (shown by arrows). The robots are expected to chase and approach the other robot from behind. Any dimension of the robot should not be less than 200 mm during all time of the game.

Arena Description:

The arena will be a 300-mm wide racing track made up of ordinary plywood. Arena will be parallel to the ground but fixed at a height of 300 mm from it. It will be made up of ordinary plywood. There will be two obstacles located diametrically opposite to each other. The obstacles will be stainless steel rod (10 mm diameter) fixed at a height of 20 mm from the surface of the racing track (it will be anywhere in arena).

Team Specification and Eligibility:

- A team may consist of a maximum of 4 members. Students from different educational institutes can form a team.
- Participants should carry with them valid identity cards (college or voter ID).

Marking and Winning Criteria:

There will be two rounds of 3 minutes each. Each round will end with the fulfillment of any one of the following conditions:

- A robot successfully chases its opponent and touches it from behind. The chaser will be declared winner of the round and the round will end.
- If none of team chase its opponent on the completing of the 3 minutes the winner will be decided who gain maximum points.

- 10 points for crossing of the obstacle and 10 points for crossing the circular track.
- If a robot falls of the racing track. It awarded by -5 points at in a round maximum 3 retry allowed.
- In a game 2 rounds will be there and the best one will be taken
- If the points tie of the both team after the completing the game. A round more played.

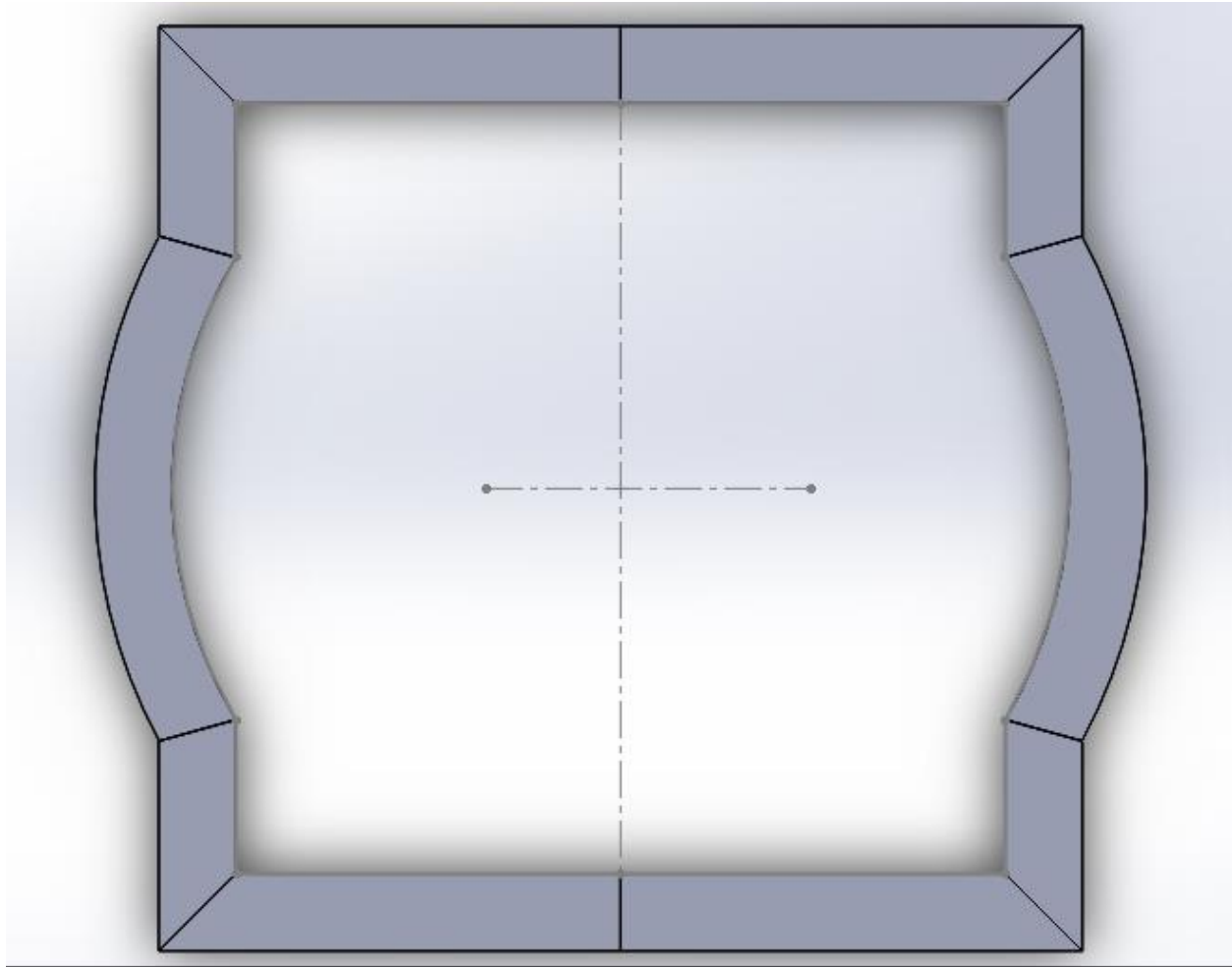


Figure:1

Water Rocket

Description:

The water rocketry challenge is a competition to build a rocket powered by pressurized water. The competition focuses on designing aerodynamically better rockets that would be capable of targeted flights when launched at a particular angle from the horizontal. The participants need to study the basics of rocketry and come up with their own designs.

Problem Statement:

Design and Build a water rocket which can be launched at any angle with respect to the horizontal. The teams will be participating in two rounds and the winners will be decided on the basis of rules given below.

General Instructions-

- The participant need to register as a team and team should have a Team name and Team captain.
- Maximum number of members in a team should not be more than 4.
- The participants are expected to play fair, in any case if they found guilty, the entire team will be disqualified
- Team GENERO have the authority to take the final decisions. No argues will be entertained.
- Participation certificate will be provided to all (except the disqualified team).

Rules and regulations:

- The rocket shall be made of low density material like plastic. Metals and other high-density materials are strictly prohibited.
- The water rocket must be single stage.
- It cannot carry any sharp edges if we found any sharp edges this may led to the rejection of team.
- The water as a fuel is provide by the organizer you need not to carry it.
- The rocket must be able to sustain air pressure of 90 psi.
- If teams construct their own launcher, then they will be awarded with some bonus marks. Although a launcher will be provided by the organising team if any team has not constructed the launcher or its launcher is not working, but it will not get the bonus marks then.
- The launcher or releasing mechanism must be of sufficiently sturdy construction to ensure a repeatable and predictable launch direction.
- Launcher should be adjustable at any angle in between 30-90 degrees.
- Although there is no limit to the size of rocket but the teams will get some bonus marks if they construct their rockets according to the following dimensions:
 - a. **Maximum length = 80cm**
 - b. **Maximum diameter (including fins) = 40cm**

Event:

- Round 1:

- a. Technical inspection: includes measurement of rocket dimensions and inspection of launcher.
- b. Distance round: teams will get the marks on the basis of distance they cover within a sector of 20° .
 - **Round 2 (The ring of fire)**:
Teams are required to hit a circular ring (of diameter 75 cm) in this round. If their rocket passes through the ring then they will get some bonus marks.

Note: GENERO'17 organizing team holds the authority to change or modify the rules or events owing to the availability of ground or any other circumstances.

Automobile Quiz

Problem Statement:

The event is about a quiz which will be based on basic automobile engineering objective type questions. The questions will not be asked directly in the quiz. Each question would have some oblige so first you have to decode the question for getting the meaning of question and then you have to be accountable. For decoding the question, the hint will be provided within the question. Using that hint you can easily decode the question.

General Instruction:

- Use of cell phone is prohibited during the quiz.
- Quiz will be of 1 hour.

