MECHANICAL DEPARTMENT EVENTS

RUSH

-:It's not the speed about the speed you achieved; it's about the energy you wasted:-

ABOUT

Participants are required to construct a 4-wheel mechanically driven cart of any material(wood, plastic, metal, bakelite or any of their choice) based on the principle of conversion of potential energy into kinetic energy of the cart.

PROBLEM STATEMENT

Design a prototype of a kart which can convert potential energy into kinetic energy.

ROUNDS AND DETAILS

There will be two rounds – one VIRTUAL and the other DYNAMIC

VIRTUAL ROUND

In the virtual round, each team has to describe the idea/mechanism to the judges. A team copying the mechanism from the internet or failing to describe or justify its mechanism would stand disqualified. The cost of Manufacturing will also be evaluated. The cheaper, the better.

DYNAMIC ROUND

In the dynamic round, teams will compete amongst each other on the following basis: Acceleration Distance covered Deviation from straight line path Recoil.

JUDGING CRITERIA

They will be awarded points for each of the 4 parameters and based on the total point's winners will be decided. Theses paramaters include –

Acceleration Distance covered Deviation from straight line path Recoil.

RULES AND REGULATION

1. A team should consist of a maximum of four members.
2. The dimensions of the cart are: The length should be in the range of 15-35 cm. The breadth should be in the range of 10-15 cm. The height of the cart (its topmost part) should be below 15 cm.
3. Participants will be given 2 chances for qualifying through each phase. Also individual phase top scorers will also be awarded.

FREQUENTLY ASKED QUESTIONS

Q1. Does the kart need to be fabricated before hand or on the spot ?

Ans. Yes. You need to come with your kart prepared which will be evaluated virtually and dynamically.

Q2. What type of questions will be put forth for the virtual round ?

Ans. Simple questions regarding your kart's mechanism and vehicle dynamics.

Q3. Is there any boundation for material to be used for the kart ?

Ans. The kart needs to be fabricated at minimum possible cost. Avoid spending too much money for fabrication and prefer waste material available.

Q4. Are there any constrsaints regarding the mechanism of the kart ?

Ans. The kart must possess capability to convert potential energy to kinetic. The use of battery driven motors is prohibited.

CONTACT DETAILS

AMIT KUMAR- 8923053910
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PRIZE

Worth Rs. 3,700/-

OBJECTIFIED

-:Good DESIGN is a lot like clear thinking made visual:-

ABOUT

An event for the designing enthusiasts (especially from Mechanical and Civil Engineering). Participants would be required to solve their way out of a problem statement set forth to them in order to emerge victorious in the event. Mechanical Engineering students would be required to design a kart or some other machine component in the slot of time provided to them and the ones with the most efficient design will finish at the top of the podium. Civil Engineering students would be required be the architect of a house or a market of given square footage wherein they'll not only be required to allocate spaces to various requirements but also have definite positions for beams and pillars.

PROBLEM STATEMENT

Make the most efficient design form given size requirements and other specifications.

ROUNDS AND DETAILS

The event will be held in a single round. The designs fulfilling the requirements and having most feasible manufacturability will be awarded.

JUDGING CRITERIA

The designs created would be evaluated on the following parameters

- Realisticness
- Cost of Manufacturing the Design
- Amount of material required for the design
- Justification
- Feasibility
- Strength
- Reliability of the Design

RULES AND REGULATION

1. The designing can be done on any designing software platform (including SolidWorks, CATIA, and AutoCAD). The designs assisted by analysis performed on various analysis software's would be given a priority. For those designers who are interested to participate and still unaware of the usage of any designing software can proceed with a pencil and paper. Such students should be equipped with whatever stationery that they would require.
2. The participants would be required to justify their design and be ready to answer the questions put forth by the judges and the evaluators which would be related to their design only.
3. The contestants will be given a valid time slot during which they will be required to complete the task failing to do which, participants will lose points.
4. Use of mobile phones or internet will be strictly prohibited and only calculators will be allowed.
5. It's an individual event.

FREQUENTLY ASKED QUESTIONS

Q1. Will stationary and other required material be provided?

Ans. For the students using designing platform need to bring their laptops with pre installed softwares. For the students who wish to work on paper, chart papers or A4 sheets will be provided as per requirements. However they need to come prepared with rulers, pencils and erasers.

Q2. Will any questions be put up by the judges regarding the proposed design?

Ans. Yes. The designer needs to justify each and every step taken by him/her.

Q3. Is any pre registrtation required?

Ans. Students are advised to register themselves before hand. However on spot entries are also welcome.

Q4. When will the design criteria or problem statement be provided?

Ans. The problem statement will be provided on the spot at the time of the event.

CONTACT DETAILS

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PRIZE

Worth Rs. 2400/-

TECHLOCKED

-:Clues are only hints, success is one step ahead:-

ABOUT

Here comes the technical twist to the conventional fun activity which usually happens to be the heart of the fest. The teams participating in the event would be required to solve clues and find answers from a place which is definitely the most exciting place to be in the 1st year and also the best place for mechanizes throughout the period of their engineering i.e. the Workshop. The students will have access to the workshop area where they will be required to search for the clues which will be in the form of tools, machines or other objects in the workshop area.

PROBLEM STATEMENT

Solve through a set of clues whick direct you to objects from the workshop. Be the winner by finding your path through workshop tools and machines.

ROUNDS AND DETAILS

1. The event will take place in two rounds.
2. The first round will be simple yet interesting. Simple and logical clues will provided to the participants who would be required to click pictures of tools or machines or other stuff which they feel would be suitable answer to the clue provided to them. Clearing the first clue, the participants would be provided with another clue with a slightly higher difficult level. Thus they will be required to pass through a chain of clues before they move on to the second round of the event.

3. The second round would be a tricky one wherein they will be provided with some extremely simple jobs (or tasks). The participating teams will be required to strategise the steps that they would need to follow in order to achieve the requisite goal. In addition to this, they will also need gather

photographs of tools or machines that would be required during the manufacturing process.

JUDGING CRITERIA

Both the round will be bounded by certain time intervals. The teams failing to complete the task in required time will be directly disqualified.

RULES AND REGULATION

1. The teams can use mobile phones only for the purpose clicking pictures. Any team member caught using the internet or taking any sort of help using phone calls or text book pdfs would be disqualified.
2. Since, the event would take place majorly in the workshop area, the participants would be required to be wearing shoes which is the general rule of workshop which has to followed under all circumstances

FREQUENTLY ASKED QUESTIONS

Q1. Where do we need to look in order to find the answer to the clues?
Ans. All the solutions to the clues will be available in the workshop of the institution.

Q2. Will the clues point directly to the machines present in the workshop area?

Ans. No. the clues may address the machines or tools or any other objects present in the workshop.

Q3. Will only conventional solutions be accepted for the second round?

Ans. No. the team needs to complete the task following suitable and feasible methodology.

Q4. Will there be any restriction for timing?

Ans. Yes the teams need to find the correct solution in minimum possible times. In case of tie breaker situation the team that took lower time will be declared winner.

CONTACT DETAILS

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PRIZE :-Worth Rs. 2700/-