

# GUJARAT TECHNOLOGICAL UNIVERSITY

(<http://www.gtu.ac.in/>)

**A call to colleges / Institutes to bid for hosting Zonal TechFests.  
Please register the bid online on or before Saturday, 15<sup>th</sup> February 2014.**

Based upon the survey conducted by GTU for hosting university level tech fest, GTU had invited a round table discussion involving all interested affiliated colleges on 26<sup>th</sup> January, 2014 (<http://www.gtu.ac.in/circulars/14Jan/24012014.pdf>).

As per the outcome of the above meeting chaired by Hon'ble Vice Chancellor, the university has decided to host university level TechFest from this academic year. GTU will provide resources and mentoring and closely work with the hosting institution and other nearby colleges to make it happen.

The activity will be held at central and in zonal level. We are inviting bids from competent institutes who wish to host the zonal level efforts.

**REGISTRATION OF BIDS:** The interested institutions may register their bids/ nominations in the given online link. (<https://docs.google.com/forms/d/1w-lHmCtnAP9-YApxEB23iW4Can3rXT7qkyf9YMfg-Dk/viewform>) **on or before Saturday, 15<sup>th</sup> February 2014.**

A jury will go through the nominations and select the hosting institutes based upon a few parameters like,

Infrastructure, hospitality / accommodation, experience, accessibility of the venue, finance, courses offered.

Note: The coordination team has invited student TechFest conveners of various colleges. (<http://www.gtu.ac.in/circulars/14Feb/10022014.pdf>) to come on board and help co-creating the above activity in zonal and central level.

## **FRAMEWORK OF EXPECTED ACTIVITIES IN EACH OF THE ZONAL TECHFESTS:**

The reference framework of the activities, suggested in the first meeting, is given in the next few pages.

### **Several One day events have been suggested -**

- Stock market
- Football
- Gully Cricket
- Lan Gaming
- Minute to WinIt
- Slow Biking
- Sudoku
- Treasure Hunt

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These events are independently conducted on both the days of the fest and can allow participation on both the days.

## **Suggested Events on Robotics**

### **Event 1 – Based on the concept of Line follower Robot.**

Participants are supposed to make an automatic robot following black line on a pre-designed track.

The field would be of white colour on which black line having width 30 mm would be drawn according to pre-design track.

### **Event 2 – Based on Robo-War**

Participants should make robot such that it can attack over opponents robot.

### **Event 3 – Based on Robo-puzzle solving capability.**

The participants are required to run their bot through the blocks and solve the given puzzle.

### **Event 4 – Event based on Robo-Race.**

The participants' Robot has to travel successfully through a track which is proliferated by obstacles.

## **OTHER EVENTS:**

1. The suggested Events relating to various branches of Engineering are given from page 3 to 6
2. The Suggested Events relating to Management are given on page 7.

*Note: Events relating the stream of pharmacy will be added soon. Suggestions for these events are welcome.*

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## **Chemical – Environmental Engineering**

### **Event 1 – Based on the basic concepts of chemistry with little tweaks.**

An event which will evaluate your technical knowledge of Chemical Engineering

### **Event 2 – Missile making using chemicals.**

In this event participants are supposed to bring missile made by themselves using chemicals.

### **Event 3 – An Event based that tests practical skills in chemical engineering**

In this event participants are supposed to prepare solutions of some specific pH as per the direction of the event manager. And then they need to alter the pH as per the direction of event manager. Lastly participants will have to face a quiz round based on fundamental of solution preparation & pH concept.

### **Event 4 – Event based on practical problems related to waste-water treatment.**

In this event, participants have to provide a feasible process which can be used to decolour the coloured solution of dyes and intermediates and bring the colour limit down to acceptable norms. Further details will be provided.

## **Civil Engineering**

### **Event 1 – This event is basically designed to check the imaginary power of participant in planning.**

In this event the team has to design a job layout. And also they have to plan for batching plant, labour colony, warehouses for different construction material which need during the construction

### **Event 2 – Based on the concept of Mix Design.**

This is an event to make the concrete cube to gain maximum strength with max economy. You will be provided cement, aggregates and water.

You have make the mix design as per IS codes.

The marks will be measured by following formula prepared by juries.

Marks = (strength + slump)/cement conjunction.

### **Event 3 – Event based on Earthquake-resistance testing capability.**

Participants will have to design and construct a G+2 building from wood. Guidelines for the same will be provided. Your building will have to stand strong against the soft storey effect and many others

### **Event 4 – Event based on presentation on Civil construction.**

This is power point presentation event. Participants have to make the presentation on the civil construction base topic and present in the limited time you will be given only 5 minute to present and also judge and audience will ask question related to it Topic should be among the new advanced construction technology, new methods, new major problems and with their

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innovative solution and case study of any specific famous structure. Participants have to submit report in details in hardcopy related to the topic.

## **Event 5 – Event based on Bridge building and related problem.**

What does a bridge CLICK in your mind? An obvious answer is a passage connecting two roads or water bodies. The construction aspects of a normal bridge can be thought about without much brain-racking but have you ever dwelled upon the painstaking idea of designing a swinging bridge impervious to natural disasters which stands tall and strong even under the most adverse conditions? Furthermore, what if the bridge is not centrally supported?

So, related to this problem we have three option to overcome this problem.

1. Truss bridge
2. Suspension bridge
3. Cable stayed bridge

In this event you have to make only span of truss bridge no abutments by your different ideas like simple truss and arch truss.

Rules:

The marks will be measure by the total load survive by span /self weight.

Length of bridge, Width of bridge, Clearance of the bridge should be given at the time of event so you have to be specific about dimension.

We will provide Popsicle sticks and fevicol. You are not allowed to use any type of external adhesive material or paint .

Failure will be considered as the span failure or the failure of single joints.

## **Computer Engineering – Information Technology**

Event 1 – Based on bug hunting capability (Familiarity to a programming language)

Participants will be required to solve certain chunk of error-prone code in the second round.

The code will contain tricky logical, runtime, latent errors. Programming language flexibility will be provided to the participants

Event 2 – Based on logic and programming skills

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Participants will solve certain problem statements in the second round. The problem statement will be subtle in logic but simple to implement. The code should be efficient as well as effective.

Event 3 – To check familiarity with Windows operating system

It is the contest of operating windows (XP and 7). It will be a 2 day event where the participants will try to do given task in specific operating systems. It will require deep knowledge of features and working of the operating System.

Event 4 – Based on Web technologies and their practical use

This event will be based on basic HTML, JavaScript and CSS. It will be a two day event. Problem scripts will be given and the participants are required to get the correct output on the browser screen using HTML, CSS and JavaScript. Related software will be provided.

Event 5 – Online coding challenge (Only for Central Event)

This event will be conducted online. Participants will be few problem statements based on reality and their programming capabilities and logic will be checked.

***The winner will get a direct admission to the central level event along with the winner of other events.***

## **Electrical Engineering – E.C.**

**Event 1 – This event is related with the subject Digital Logic Design**

In this event participants have to solve problems related with design of logical circuits

**Event 2 – Based on knowledge about resistors and their implementation in circuit design.**

In this event, participant will have to

- > Decode resistance values from the colour codes.
- > Design most economical circuit using resistance for given value of equivalent resistance
- > Solve the given circuits
- > Design your circuit on bread-board and give its equivalent

**Event 3 – This event is related to designing and debugging of electronic components which gives an opportunity to check the depth of talent in the field.**

It requires theoretical and practical knowledge of basic electronics and its components

**Mechanical Engineering – Automobile Engineering**

**Event 1 – Based on “Junkyard wars – famous TV show on Discovery Channel”.**

The problem statement will be unveiled at the time of the event itself. The participating teams will get a limited amount of material with which they have to make something in accordance to the given problem statement.

**Event 2 – Based on a making practical model to commensurate a problem statement.**

A problem statement will be given.

The participant teams will have to make the most efficient working model as the solution of the statement and will have to display their models in working condition at the college.

**Event 3 – Event based on CAD.**

The participants will be given different views of some object that they have to draft in Creo 1.0 Parametric in minimum time.

**Event 4 – Event based on Automobile Design problem.**

A spontaneous design problem related to Automobiles would be given and the participants need to improve the current design of given object or component by sketching it.

**Management and Innovation Skills**

**Event 1 – Based on the concept of Youth parliament.**

The participants will take part in a debate similar as in the parliament.

The topic of debate will be same for all the zones.

**Event 2 – Based on demonstration of entrepreneurial skills.**

The main idea of this Business plan is to bring out innovative & viable new products which are different and unique from the existing products.

**Event 3 – An Event based on paper presentation on a social topic (for eg. Indian Economy).**

The participants are required to present a paper on some social topic.

**Event 4 – Event that entertain ideas on solving social Issues.**

The participants are required to think unconventionally and give solution to the problem statement provided.

**Event 5 – Event that encompasses Group Discussion and Personal Interviews.**

**Event 6 – Quiz Competition.**

**Event 7 – Photograph Competition.**

The participant will be required to capture photographs on the day of the event itself, and the best photographs will be awarded.