

## **STRUCTURA**

**“Strongest pillars in the world”**

### **INTRODUCTION:**

Exhaust your brain to build the most stable structure which can pass the most excruciating test of stability. Also the time is not your friend in this game so gather your wits determine yourself and make on.

### **PROBLEM STATEMENT:**

Dextra brings you a chance to design a tall and stable tower using drawing sheet and some adhesives. Use your own techniques and challenge the world to prove your mettle as a successful engineer.



## **RULES AND REGULATIONS:**

- Participants need to design a tower with the material provided to them.
- Participants will be given 2 hours to complete their tower.
- The tower can be of any shape.
- The tower should not be stuck to the surface.
- The tower should be able to stand on the ground without any support.
- The points will be awarded based on height and stability of the tower.
- Team will have to complete their tower within 2 hours.

## **MATERIALS PROVIDED:**

- A chart paper (A1 size) / newspaper.
- Scissors
- Cello tape
- Fevicol
- Caps and sticks

Note- Participants cannot use any material other than that provided to them by the organisers.  
(Miscellaneous basic stationery like pencils, erasers, etc. should be carried by the participants.)

## **TOWER CONSTRAINTS:**

- Tower should have a horizontal platform ( $\geq 5 \times 5$  sq.cm) on its “peak”.
- A block of  $5 \times 5$  cm<sup>2</sup> (base surface) weighing around 40-50 gm will be placed on that platform and tower should bear the weight without bending and collapsing.
- These two constraints must be fulfilled, otherwise team will be disqualified.

## **JUDGING CRITERIA:**

### Stability Testing

- The stability of tower will be tested by giving a push on upper part of tower by a pendulum of certain weight.
- For height the points will be given by  $PH = 0.75 \times \text{Height (in cm)}$
- For stability test tower will be hit three times by pendulum such that the weight of bob will increase every time. If the tower stumbles against any bob, it will not be tested for higher weights. The weights of the various pendulum bobs would be disclosed at the time of event only. Points awarded for 1st , 2nd and 3rd ball will be 15, 25 and 35 respectively.
- The team with the highest score will be declared as winner. In case of a tie, the tower with greater height will be the winner.

## **TEAM SIZE:**

A team can consist of maximum 3 members. Students from different educational institutes can form a team.

## **ELIGIBILITY CRITERIA:**

- All students with a valid Registration Card of DEXTRA 2014 along with their respective educational institutes' ID Card are eligible to participate.
- Non-JUET participants must possess an Accommodation Confirmation Letter (ACL) issued by the organizing body at the time of registration

## **EVENT MANAGERS:**

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