STRUCTURE FOR FUTURE

INTRODUCTION

This event focuses on how participants make structures engineered to withstand weight, are durable, and in some cases, are aesthetically pleasing.

PRIZE MONEY

1st prize: 3500
2nd prize: 2500
3rd prize: 1500

PROBLEM STATEMENT

Participants need to design and build their structures using popsicle sticks and glue. Participants can use the fewest number of popsicle sticks while still achieving their goals.

Round 1

- Participants need to submit a CAD model of the tower.
- The CAD file must be in .sldasm/ .dwg/ .step format.
- Teams have to manufacture the same CAD model in the next round, so design it accordingly.
- The structure should support at least 1 kg of weight applied normally downwards to the top surface.
- The top and bottom surfaces of the tower should be made flat.

Round 2

- This would be an offline round.
- Teams have to manufacture the CAD model on the spot.
- The time duration given would be 4 hours.
- The materials required for building the tower will be provided to the teams.
- The completed structure would be first measured by the coordinators.
- If the dimensions are found to exceed the allowed dimensions by a considerate margin, the team will be disqualified.
- The structure would then be weighed on a weighing scale.
- Weights ranging from 1kg to 10kg would be placed on the top surface of the structure.

- The procedure of placing weights would be the same for every team.
- The maximum weight the tower can hold without collapsing would be noted.

MATERIAL TO BE USED

- The organizers will provide popsicle sticks. Sticks can have the following maximum dimensions: Length = 112 mm, Breadth = 95 mm, Width = 02 mm
- Sticks can be altered physically by cutting or notching at any angle.
- Only Fevicol can be used as an adhesive; using other adhesives may lead to disqualification. The use of threads is not allowed.
- Participants must bring basic stationary items, such as pens, scissors, cutters, etc.
- Clips for support and fevicol would be provided to the participants.
- The maximum number of sticks that can be overlapped together is 2.

STRUCTURE DIMENSIONS

Length - 25 cm (maximum);
Width - 25 cm (maximum);
Height - 25 cm (minimum),
(No limit for maximum height)

A sample of the tower is given below:

TEAM SPECIFICATIONS

- The team should have a minimum of 2 members and up to 5 members.
- Members of a team may be from the same college or different.
- Any number of teams can participate from one college.
- Professionals are not allowed. Only students can participate.
- Once registered, the same team cannot register with another name or for another model other than the previously registered one.
- Every team must have a unique name that should not be offensive, conflicting, or inappropriate.
- Organizers must be notified if a team's name has been changed.
- Team Representative: Each team must specify their Team Representative (Leader) at the time of registration on the website. All important communications between the organizer and the registered teams will be done through their Team Representatives. The Team representatives must submit valid contact details (phone no., email id, etc.) at the time of registration.

GENERAL RULES

- Bring your college/student I-Card at the time of the competition.
- Decisions taken by Judges will be final and binding for all.
- Any misbehavior will lead you to disqualification from the competition.
- Organizers have the right to reject entries for any inappropriate team name.
- Teams who don't show up on allotted slots will be disqualified.
- If less then 12 teams have registered for the event only two prizes will be given and if less then 10 teams have registered for the event only one prize will be given.

JUDGING CRITERIA

ROUND 1

The CAD model would be judged on the following criteria:

- Originality
- Aesthetics

ROUND 2

- The weight of the structure would be noted.
- The maximum weight the structure can hold just before collapsing would also be noted.
- The structure made with minimum material and holding the maximum weight would be considered the winner.

- The ratio of the maximum weight withstand to the weight of the structure itself would be the efficiency of the tower
- The aesthetics of the bridge will also be evaluated.
- The judges will evaluate the model based on its appearance, the originality of its design, and the connection of members.
- The weightage of each criterion is given as follows: Efficiency = 70 points Aesthetics = 30 points
- The total score will be given out of 100 points.

EVENT TIMELINE

ROUND 1

Abstract Submission: Before 15th March 2023
Declaration of shortlisted candidates: 18th March 2023

ROUND 2

Final submission: 31st March 2023

REGISTRATION DETAILS

Fees: Rs. 80
Register at: **https://mindbendsvnit.in**