



St. Vincent Pallotti College of Engineering & Technology
Gavasi Manapur, Wardha Road, Nagpur-441108
NAAC accredited with grade A

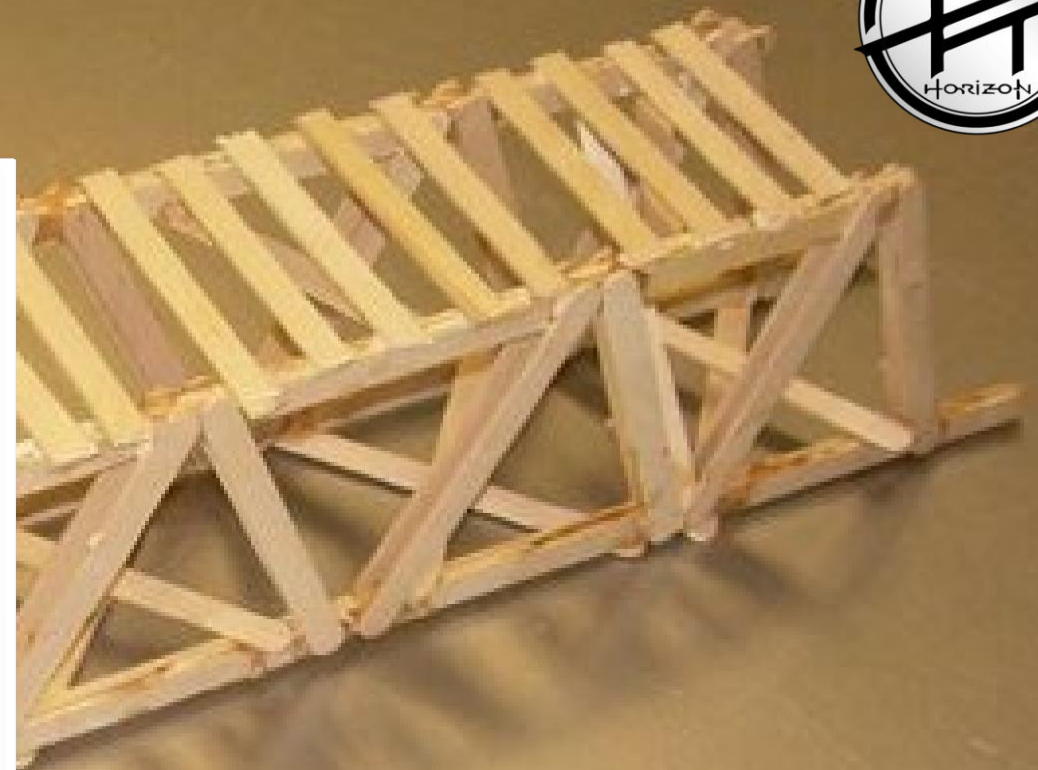
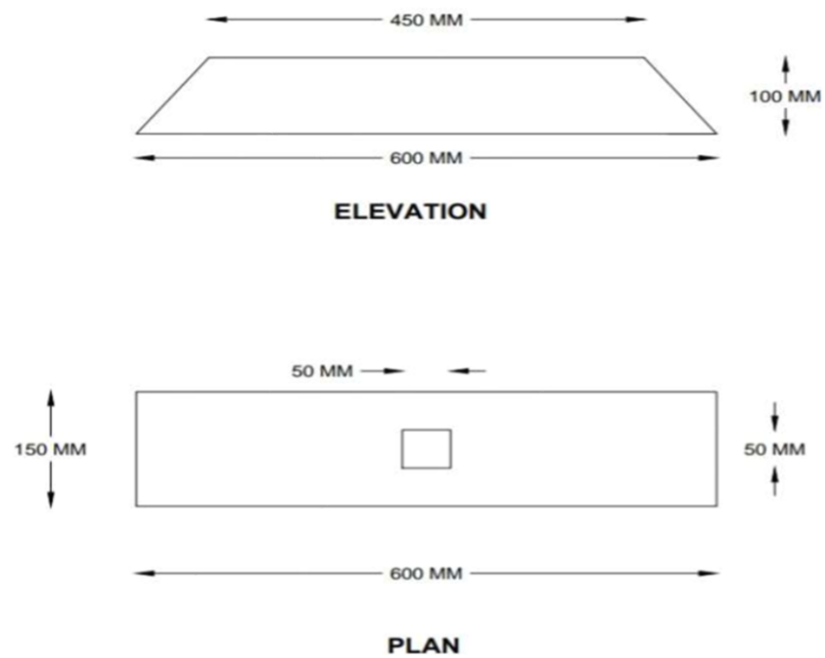


TECHNEX-23

PRESENTS

HORIZON





PLAN & ELEVATION

TASK

- ❖ Design a TRUSS BRIDGE using popsicle sticks, fevicol adhesive that can sustain maximum load satisfying the following constraints.
 - a) Dimensions
 - b) Weight
 - c) Overlapping
 - d) Use of adhesive
- ❖ There will be one point on satisfying each constraint.



DIMENSIONS

- ❖ The bridge must have two sides, top and bottom.

Top length :- 450 mm (+/- 10 mm)

Bottom length :- 600 mm (+/- 10 mm)

Height :- 100 mm

- ❖ There should be hollow block at center of 50mm x 50mm.
- ❖ There will be penalty for breaking these rule.



WEIGHT

- The weight of the bridge should not be more than **500gm**.
- There will be penalty for breaking these rule.

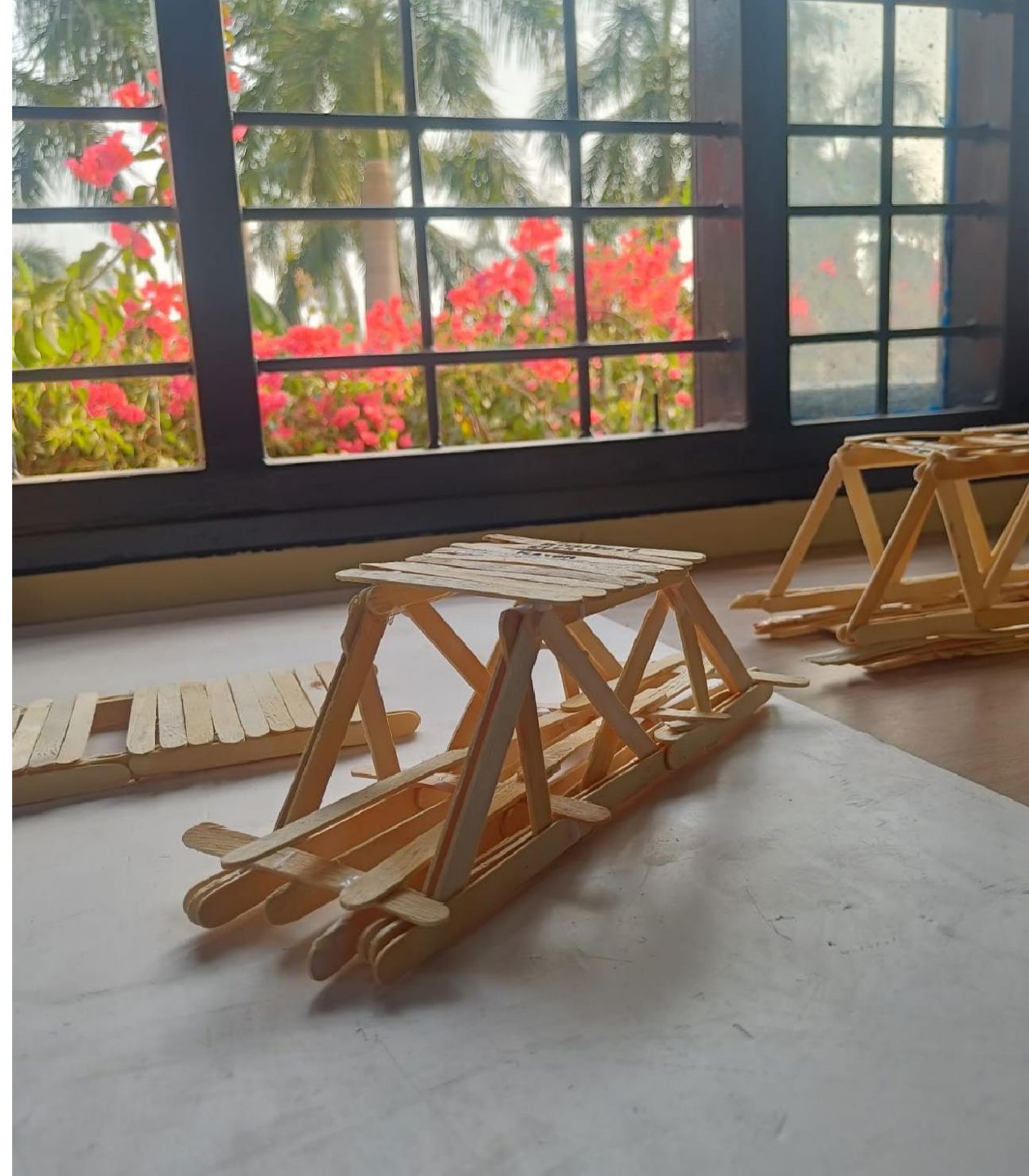


OVERLAPPING

- More than 5 popsicles sticks should not be overlapped.
- There will be penalty for breaking these rule.

USE OF ADHESIVE

- Adhesive can only be used to join Popsicle sticks together.
- Adhesives cannot be applied on the Free surface of a member made of Popsicle sticks to increase its strength.
- There will be penalty for breaking these rule.



GAME PLAY

20 minutes will be given to all the teams to make final changes in their structure before testing.

TEST 1 :-

The dimension and weight of the structure will be measured.

The material constraint like overlapping of sticks & use of adhesives will be checked.

The bridges will not satisfying these constraints lose points accordingly.

TEST 2 :-

Loading will be done on the structure.

IMPORTANT NOTE :-

Solid structure is not allowed i.e. there should be truss bridge.

Roadway should not be solid.



DEFINITION OF FAILURE :-

The structure is considered failed when any of the following happens :-

The loading registered when any crack sound occurs at any component of the bridge or bridge deck or the structure fails to follow any of the mentioned constraints.

Vertical Deflection of the center of the beam exceeds 50 mm.

RULES :-

- 1) Shape of the deck should be rectangular in the longitudinal direction.
- 2) Once the structure is weighed, you are not allowed to modify your structure in anyway.
- 3) Any team that is not ready at the time specified will be disqualified immediately.
- 4) Judge's decision shall be final and binding on all.
- 5) The organizers reserve all rights to change any overall of the above rules as they fit.



JUDGING CRITERIA :-

The bridge will satisfying all the constraints or having maximum points and sustain maximum load will be consider as winner.

All the decision are taken by coordinator and co-coordinator

TEAM SPECIFICATIONS :-

The team may consist of maximum four members.

Registrations can be done before the event and even spot entries can take participation.

ELIGIBILITY :-

Any student from any institution with valid ID card and registration receipt are eligible to take part in these competition.

CERTIFICATE POLICY :-

- Certificate of excellence will be given to the top 3 winners.
- Certificate of participation will be awarded to all.

