

PRODYOGIKI '19

Sand Tower Competition

Sand is a granular material composed of finely divided rock and mineral particles. It is defined by size, being finer than gravel and coarser than silt. Sand can also refer to a textural class of soil or soil type; i.e., a soil containing more than 85 percent sand-sized particles by mass. It is also used as an ingredient in the construction of buildings, towers, bridges and in many other civil constructions.

PROBLEM STATEMENT

Teams need to make a model of a sand tower using the basic sand, water and simple wood sticks.

Note: Material for sand tower will be provided (Team ISTE will provide all the materials required to make a sand tower)

MODEL RULES

- (a) Size restrictions: the diameter of the tower should not be more than 25 cm.
- (b) Only wooden sticks are allowed for reinforcement of the tower.
- (c) Only water is allowed for the binding of sand. You can not get any lubricant for the binding of sand
- (d) Team can use maximum of 6 sticks for the reinforcement of the tower. No extra sticks will be provided.

NOTE: If any team found violating any of the above rules, ISTE has all the rights to disqualify them.

JUDGING CRITERIA

- **Time (15 points)** : Time given to make the tower is 30 minutes . if you are able to make the model in time then you will get the full marks 5 marks are deducted for every 15 minutes.
- **Height(30 points)** : The minimum height of tower should be 45 cm. no max. limit for height.
- **Shear force(35 points):** A amount of weight will be put on the tower to check the shear force.
- **Diameter (20 points):** The diameter of the tower should not be more than 25 cm.

RULES AND REGULATIONS

- Maximum team size is limited to 4 members per team.
- Teams are not allowed to touch their model once judging criteria started .

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- The decision of the judges shall be final and abiding. The participant that violates the rule above or the spirit of the competition will be disqualified.