

Beam It

The time has finally come for those lessons in concrete mix design and structural mechanics to be put into practice. Follow the design specifications and build the structure with the materials provided. Can you get the proportions right so as to come up with the structure that can bear the greatest load?

Rules

- Each team shall comprise of a minimum of 3 members and a maximum of 4 members.
- The competition would be a three-day event as follows:
 - Day 1: Casting the beams, columns and slabs.
 - Day 2: Mould removal & Curing
 - Day 3: Assembling the structure & Load bearing test.

Specifications

Materials

- All the necessary materials including reinforcements and adhesives would be provided. The slab, beam and column should be cast only with the concrete and admixtures supplied. **Please note that usage of materials other than the ones provided will lead to disqualification.**
- Quantity of reinforcements provided would be the same for all teams.
- Additional materials may be provided if the requirements are justified.

Grading Criteria

The structure would be evaluated based on the following criteria:

- **Ultimate Failure Load:** The maximum load the structure can withstand without failure.
- **Cost Efficiency:** The lower the cost of the materials used, the better the grade.
- In case of a tie, the structure with the lower self-weight would be favoured.
- The decision of the judges would be final and binding.