



NATIONAL CUBE CONTEST THIRD EDITION



Organised By

**ICI Students Chapter &
Civil Engineering Association**

PSG College of Technology, Coimbatore

In association with



Website : cubecontest.psgtech.ac.in

About the Competition

1. **OBJECTIVES** : The primary aim of this competition is to create awareness and promote the correct application of concrete mix design principles among young students, practicing engineers, and builders. Concrete remains one of the most widely used materials in construction; however, there is a pressing need to emphasize its quality and optimize its usage to ensure economy, particularly in the context of rising material costs. Effective mix proportioning plays a critical role in achieving the desired properties of concrete—workability, strength, durability, and cost-efficiency. A well-designed concrete mix tailored for specific requirements can lead to substantial savings and extend the lifespan of structures.

This competition provides a unique opportunity for engineering students and young engineers in the construction industry to gain practical, hands-on experience in understanding the behavior of concrete with different mix proportions. By actively participating in the process of designing and testing concrete mixes, participants will develop a deeper understanding of concrete properties and learn to achieve optimal performance. The experience gained through this competition will serve as a valuable foundation for their future endeavors in producing high-quality, durable, and economical concrete solutions.

2. **STRENGTH CRITERIA** : The participants should prepare the mix adhering to the guidelines to achieve a 28 days cube compressive strength of **50-55 MPa**.

3. **ELIGIBILITY** : Open to civil engineering students of all colleges and practicing engineers.

- A team of minimum three and maximum five participants are allowed.
- Each institution can have multiple teams with different mix design, but a student can participate in only one team.
- The submitted mix design report (in the given format) must be included and duly certified by the faculty mentor, who will be personally responsible for ensuring participants adhere to all guidelines.

4. **MATERIALS** : Coarse and fine aggregates from natural sources must meet IS:383 requirements, with a maximum coarse aggregate size of 20 mm.

- Acceptable types of cement - Portland Pozzolana Cement (1489 Part I), Composite Cement (IS 16415 : 2015).
- Use of OPC is not permitted. Usage of Blended cement is preferred.
- Chemical admixtures conforming to IS:9103 may be used.

5. **DETAILS OF CUBES** : Cubical test specimens must be 150 x 150 x 150 mm in size, cast as one monolithic unit. Reinforcing fibres, impregnation with materials, or any similar modifications are not allowed.

- The top face of the cube to receive the compression load is to be marked with unique identification code received after registration. No other identification marking to be given on the cube by the participants.
- Use of any reinforcement, fibre, epoxy or polymer is not permitted and the team would be disqualified, if it were found to be doing so.

6. **SUBMISSION OF ENTRY** : Three cubes along with mix sheet and casting video should be submitted at the address given below. The packing box/ container should have the name of the team and the address.

Send your cubes to

Advanced Concrete Research Laboratory,
K Block Ground Floor, PSG College of Technology,
Avinashi Road, Peelamedu, Coimbatore 641004.

7. **TESTING OF CUBES** : Testing of cubes will be done on the date given by participants (i.e, when the age of cube is more than 28 days and less than 36 days).

- Competitors are welcomed on the day of testing of their cubes at ACRL Lab, PSG College of Technology.

- Testing will adhere to IS:516 standards, and the average strength of three cubes in direct compression will be considered for merit assessment based on strength-to-cement content ratio, Uniformity of results, Deviation from the target strength, Special recognition for the use of fly ash/ admixtures.

8. **EVALUATION** : The evaluation will be based on the following criteria.

S.No	CRITERIA	MAXIMUM MARKS
1	MIX DESIGN REPORT	20
2	DESIGN STRENGTH & ACTUAL STRENGTH	20
3	UNIFORMITY OF RESULTS	15
4	CEMENT CONTENT TO STRENGTH RATIO	20
5	USE OF ADMIXTURE	10
6	INNOVATION AND OTHER CRITERIA	15
	MAXIMUM MARKS	100

9. **ANNOUNCEMENT OF RESULTS** : All winners and the concerned institutes/organizations will be informed.

- Final Decisions will be made by the Evaluation committee (experts from industry and leading institutions).
- The certificates for winners and participants will be distributed in the function to be held in PSGCT.

10. **PRIZE DETAILS** : With a prize pool of Rs.1,00,000 sponsored by Srinivasan Associates private Limited, Coimbatore, the cash prizes are distributed in the felicitation function.

External participants		Internal participants	
First	₹25,000	First	₹10,000
Second	₹ 15,000	Second	₹ 5,000
Third	₹ 10,000	Third	₹ 3,000

*Surprising gifts to all participating teams of worth ₹30,000.

Invitation

Dear Sir/Madam,

You are invited to participate in the **National Cube Contest Third Edition** as per the following programme. The participants have to cast concrete cubes to achieve average cube strength of **50-55 MPa** for a sample of cubes on the date of testing.

The competition is held for,

Student: Civil engineering students of engineering colleges

Professional : Civil engineers practicing in the field of construction, Contractors / clients / consultants / test labs of government or private institutes.

Programme of the competition is as follows:

Submission of Cubes	On or before 20.03.2026
Result Declaration	To be announced
Award Function	To be announced

All participants would be given certificates and the winners will be awarded with cash prizes.

Yours faithfully,

Organizing Committee, CEA & ICI Students Chapter PSG Tech.

For Registration, visit: cubecontest.psgtech.ac.in

Any Queries Contact,

Email: ici.civil@psgtech.ac.in

Phone : +91 8072899952 - Vinoth Kumar S,
Secretary, ICI Students Chapter.

+91 9344813153 -Rahul G V,
Secretary, Civil Engineering Association

Faculty Coordinator : Dr S Praveen Kumar,
Associate Professor,
Department of Civil Engineering,
PSG College of Technology.
9894861585