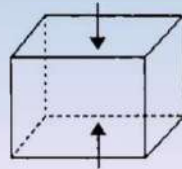


ALL INDIA STUDENTS' "CONCRETE CUBE TEST" COMPETITION – 2024

ORGANIZED BY



15th January to 28th February 2025

Deadline – 15th March, 2025

At

RAJKOT (Gujarat)

KOLHAPUR (Hatkanangale-Maharashtra)

NAGPUR (Maharashtra)

NERUL (Navi Mumbai)

COIMBATORE (Neelambur)

TAMILNADU (Kancheepuram)

PUNE (Akurdi-Maharashtra)

RAIGARH (Chattishgarh)

ANTHIYUR (Nachimuthupuram)

PUNE (Haveli-Maharashtra)

KOLHAPUR (Kasaba-Bawada-Maharashtra)

AHMEDABAD (Gujarat)

ALIGARH (Uttar Pradesh)

MUMBAI (MAHARASHTRA)

PERUNDURAI ERODE (Tamilnadu)

VAIKKALMEDU ERODE (Tamilnadu)

BHUBHANESHWAR (Odisha)

SHAMSHABAD (Telangana)

COIMBATORE

SANGLI (Maharashtra)

PALGHAR (Maharashtra)

KOLHAPUR (Ichalkaranji-Maharashtra)

KOLHAPUR (Salokhenagar-Maharashtra)

KOLHAPUR (Yadrav-Maharashtra)

CHENNAI (Tamilnadu)

NAVI MUMBAI (Rasayani)



CONTACT US:

INDIA CHAPTER OF AMERICAN CONCRETE INSTITUTE

2-3, Nagree Terraces, Soonawala Agiary Road, Mahim (W), Mumbai 400016, India.

India Chapter of American Concrete Institute
2-3 Nagree Terraces, Soonawala Agiary Road,
Mahim (West), Mumbai - 400 016
Tel.: 022-24469175 / 35230065
E-mail: infoicaci@gmail.com • Web: www.icaci.com

Invitation for
IC-ACI - All India Students'
“CONCRETE CUBE TEST”COMPETITION – 2024

Dear Sir,

In continuation of this competition, initially launched in 2017 and carried through 2018, 2019-2020, 2022, 2023. We at India Chapter of ACI cordially invite Students of Civil Engineering Colleges/Institutes to participate in the All India Concrete Cube Test Competition 2024, to be held by various Student's Chapters of IC-ACI from 15th January 2025 to 28th February 2025. The last date for submission of the Cubes for the test is from 15th March 2025 to testing at any nodal centers, and will be as per guidelines given by Mentors of relevant Student's Chapters.

The competition is open to all students of the IC-ACI Student Chapters, as well as students of Accredited Civil Engineering Colleges. Any institute not having an IC-ACI Students Chapter is also welcome to participate.

Any Institute not having Students Chapter of IC-ACI, are welcome to initiate modalities for initiation of “Students” Chapter of IC-ACI, at their Institute.

Winners, who will be individually notified of the results by email, will be awarded attractive trophies and Cash Incentive Prizes of Rs.10,000/- for 1st position, Rs.7,000/- for 2nd position, Rs.3,000/- for 3rd position and given publicity on all India Chapter communication platforms such as the India Chapter Journal, Concrete India, and the Chapter website.

We look forward to your participation, for which there is no entry fee.

Thanking you,
Yours faithfully,

SATISH C. DHUPELIA
Past President & Director
India Chapter of American Concrete Institute
Convener & In-charge, IC-ACI Students' Chapter Activities
Principal Coordinator,
E:mail: satishcdhupelia@yahoo.com

ORGANISING COMMITTEE	
ER. SATISH C. DHUPELIA	
COMPETITION MENTOR AND PRINCIPAL CO-ORDINATOR	
Dr. V. B. Vanvari CO-CONVENER – MUMBAI SECTION Former Head of Department - Civil Shri Bhaghubhai Mafatlal Polytechnic Irla, Mumbai	Prof. Dr. Ankur Bhogayata CO-CONVENER – RAJKOT SECTION Marwadi University, Gujarat
Dr. G.S.Rampradheep CO-CONVENER – ERODE SECTION Kongu Engineering College, Erode, Tamil Nadu	Dr. Chetan Patil CO-CONVENER – KOLHAPUR SECTION Sanjay Ghodawat University, Kolhapur

MENTORS OF VARIOUS IC-ACI STUDENTS' CHAPTERS		
RAJKOT Prof. Naresh Thatikonda Department of Civil Engineering Marwadi University, Rajkot-360003, Gujarat Email:naresh.thatikonda@marwadieducation.edu.in Mobile No.: 9959261981	MUMBAI Prof. Neelam Petkar Shri Bhaghubhai Mafatlal Polytechnic Irla Natakkar Ram Ganesh Gadkari Marg,Vile Parle (West), Mumbai – 400 056 E-mail: neelamp26@gmail.com Mobile No.: 99309 22116	KOLHAPUR (HATKANANGALE) Dr. Chetan Patil Sanjay Ghodawat University, Gate No.583 to 585, A/P Atigre, Tal. Hatkanangale, Kolhapur-416 118 E-mail: patilchetans78@gmail.com Mobile No.: 94230 41617
PERUNDURAI (ERODE) Dr. G.S. Rampradheep Department of Civil Engineering Kongu Engineering College, Perundurai, Erode Dist, Tamilnadu – 638 060 E-mail: rampradheep.civil@kongu.edu Mobile No.: 97500 33500	NAGPUR Prof. Shrikant Solanke G.H. Raisoni College of Engineering, Gate No.3, Hingna Road, Digdoh Hills, Nagpur – 440 016. E-mail:shrikant. Solanke@raisoni.net Mobile No.: 9960959821	VAIKAALMEDU (ERODE) Dr. E. K. Mohanraj Nandha Engineering College (Autonomous), Erode - 638 052 Tamil Nadu E-mail: mohanraj.krishnasamy@nandhaengg.org Mobile No.: 73737 23722 / 98427 94011
NERUL (NAVI MUMBAI) Dr. (Mrs.) Priyanka Salunkhe Terna Engineering College Plot No.12, Sector 22, Opp. Railway Station, Nerul West, Navi Mumbai: 400706 E-mail: priyankajadhaviitb@gmail.com Mobile No.: 79776 79203	BHUBANESHWAR Dr. Biraja Prasad Mishra C. V. Raman Global University, Bidyanagar, Mahura, Janla, Bhubaneswar- 752054. Email: birajaprasad.mishra@cgu- odisha.ac.in Mobile No.: 7008493524	COIMBATORE (NEELAMBUR) Prof. Elayaraja Sellappan PSG Institute of Technology and Applied Research, Avinashi Road, Neelambur, Coimbatore – 641 062 E-mail: elayaraja@psgitech.ac.in Mobile No.: 94860 90930
TELANGANA, HYDERABAD Dr. G. Mallikarjun Rao Vardhaman College of Civil Engineering, (Autonomous), Shamshabad, Telangana – 501 218 E-mail: hodcivil@vardhaman.org / gmyadav25@gmail.com Mobile No.: 99637 40850	TAMIL NADU (KANCHEEPURAM) Dr. S. Sindhu Nachiar SRM Institute of Science and Technology, Kattankulathur, Kancheepuram, Tamil Nadu – 603 203 E-mail: sindhus@srmist.edu.in Mobile No.: 94430 21432	COIMBATORE Mrs. B.S. Meenakshi KPR Institute of Engineering & Technology, Coimbatore – 641 407. E-mail: meenabeme@gmail.com Mobile No.: 94865 93447
PUNE Dr. Sandeep M. Shiyekar D.Y. Patil College of Engineering, Dr. D.Y. Patil Educational Complex, Sector No.29, Nigdi, Pradhikaran, Akurdi, Pune – 411 044 E-mail: smshiyekar@dypcoeakurdi.ac.in Mobile No.: 98223 77577	SANGLI Prof. Mayur Maske Rajarambapu Institute of Technology (RIT), Rajaramnagar, Uran Islampur, Dist. Sangli – 415 414 E-mail: mayur.maske@ritindia.edu Mobile No.: 98907 11139	RAIGARH (CHATTISHGARH) Dr. Tulika Gupta O.P. Jindal University, O.P. Jindal Knowledge Park Gharghoda Road, Punjipathra, Raigarh – 496 107 E-mail: tulika.gupta@opju.ac.in Mobile No.: 98904 04742
PALGHAR Mr. Shreeshail Heggond St. John Technical College of Engg. & Management, St. John Technical Campus, Vevoor, Manor Road, Palghar – 401 404 E-mail: shreeshailh@sjcem.edu.in Mobile No.: 87933 51791	ANTHIYUR Dr. R. Shanmugam, Sakthi Polytechnic College, Sakthinagar, Nachimuthupuram, Anthiyur. Erode District: 638315 Tamil Nadu E-mail:rsmbvned@gmail.com Mobile No.: 98429 33199	KOLHAPUR (ICHALKARANJI) Prof. Milind Krishna Chavan, Sharad Institute of Technology Polytechnic, Yadrav-Ichalkaranji, Kolhapur – 416 121 E-mail: milindia.mld@gmail.com, Mobile No.: 90963 00167
PUNE (HAVELI) Prof. Anand Kudoli, Pimpri Chinchwad College of Engg & Research,Plot No. B, Sector 110, Gate No.1, Laxminagar, Ravet, Haveli, Pune – 412 101. Email: anand.kudoli@pccoer.in Mobile No.: 82753 76912	KOLHAPUR (SALOKHENAGAR) Prof. Gaurav R. Desai D. Y. Patil Pratishthan's Engineering College, 465, 'A' Ward, Salokhenagar, Kolhapur 416 007 E-Mail: grd6839@gmail.com Mobile No.: 91756 05795	KOLHAPUR (KASABA-BAWADA) Prof. Varsha Doijad D.Y. Patil College of Engineering and Technology, Kasaba- Bawada, Kolhapur – 416 006 E-mail: varshacivilcm@gmail.com MobileNo.:9860317224
KOLHAPUR (YADRAB-ICHALKARANJI) Mrs. Pranoti Omprakash Shirole, Sharad Institute of Technology, College of Engg., Yadrav-Ichalkaranji, Kolhapur – 416 121 E-mail: pranoti.h31@gmail.com Mobile No.: 89835 44966	AHMEDABAD (GUJARAT) Prof. Dhara Shah CEPT University, Faculty of Technology, Kasturbhai Lalbhai Campus, University Road, Navrangpura, Ahmedabad, Gujarat 389 009 E-mail: dharashah@cept.ac.in Mobile No.: 97277 92830	CHENNAI (TAMIL NADU) Dr. S. Selvakumar Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science & Technology, No.42, Avadi – Vel Tech Road, Vel Nagar, Avadi, Chennai 600062 E-mail: selvakumars@veltech.edu.in Mobile No.: 9715425400
ALIGARH (UTTAR PRADESH) Dr. Mohd. Shariq Zakir Hussain College of Engg & Technology Aligarh Muslim University, Aligarh – 202 002, Uttar Pradesh. E-mail: mshariq.cv@amu.ac.in Mobile No.: 98979 03968	NAVI MUMBAI Ms. Gayatri Harshal Pathak Pillai HOC College of Engineering & Technology, HOC Colony, Rasayani Via Panvel, Dist:Raigad: 410207 E-mail: gayatri@mes.ac.in Mobile No.: 8451885176 / 8108202122	

COMPETITIONS GUIDELINES

1. Objectives:

Concrete is the most common and versatile construction material. Those who deal with concrete need to have 'Hands on' experience and genuine feel of concrete making, to understand its quality and behaviour. Concrete making with variations in characteristics of cement, proportioning of aggregates, chemistry of material and chemical admixtures, control of water binder ratio, is a challenge to any civil engineer. The India chapter of ACI wants to encourage young Students of Civil Engineering to experience through this competition, the art and science of producing good quality concrete, and hands' on Destructive Testing of very cubes made by them.

2. The Competition:

To produce concrete to achieve, as closely as possible, a compressive strength of 30 Mpa on the day of competition at the time of testing the cubes. Other parameters of mix design maybe chosen by the competitors to obtain the closest specified strength on the day of testing.

3. Eligibility:

- 3.1 The competition is open to all Students of Engineering Colleges, who fall in the category of students of any civil engineering discipline.
- 3.2 A team of competitors shall consist of maximum three participants. More than 1 team from the same institution can also take part in the competition, but each team shall have different set of participants and mix design.
- 3.3 The completed 'Data Sheet' must form part of Mix Design Report duly certified by a senior member of the institution, viz Head of The Department / Faculty Member etc. who shall be personally responsible for compliance of all the guidelines by the participants.

4. Use of Materials:

- 4.1 Coarse and fine aggregates from natural sources shall comply with the requirements of IS:383. The maximum size of coarse aggregates, gravel or crushed stones shall not exceed 20 mm.
- 4.2 Cement shall be any of the following:
 - b) Ordinary Portland Cement IS:269/IS8112/IS 12269.
 - c) Portland Slag Cement (IS : 455).
 - d) Portland Pozzolana Cement (1489 Part I).
 - e) Partial replacement of cement with other Cementitious materials like Fly/Ash etc.
- 4.3 Chemical admixtures which conform to IS:9103 or ASTM C-494 or 1017, as applicable may be added.

5. Mix Design:

The mix shall be designed to achieve strength of 30 Mpa on 28 days, water cured cube sample, while testing. And not more than 33 Mpa

6. Cube Specimen:

Cubical test specimens shall be of 150 x 150 x 150 mm in size within a tolerance limit of 2 mm, cast as monolithic one unit. Any reinforcing by provision of bars, fibers or mesh, impregnation with materials like any polymer, epoxy or any synthetic glues or similar binders or modifiers is not permissible.

7. Curing and age of cubes:

- 7.1 Minimum 28 days curing shall be done in clean fresh water at ambient temperature in accordance with Codes.
- 7.2 Age of cubes on the day of testing shall be preferably 28 days but not more than 36 days of casting.

8. Submission of entry:

- 8.1 A mix Design Report with all test results of trial mixes and finally adopted mix design, highlighting parameters used to obtain design strength with completed 'Data Sheet' and 'Cement Test Certificate' shall be submitted with each entry.
- 8.2 Each Entry will be by a group of Three Students.
- 8.3 Minimum 3 cubes shall be submitted with each entry.
- 8.4 Marks 'X' from corner of the upward face of the cubes to receive the test load.
- 8.5 Name of participants / organization or their addresses should be indicated or marked on the cubes.
- 8.6 Covering container /package of the cubes shall be marked with sender's name and address.
- 8.7 The cubes shall be sent by participants (which are not nodal centers) to the addresses of Conveners at respective location nearby, to those given in introduction so as to reach three days prior to the date of Testing. Delivery of the cubes to the said address is the responsibility of the competitors.

All expenses towards cost of materials, casting of cubes, packing and delivering thereof to the said address shall be borne by the competitors.

Cubes damaged in transit shall be rejected.

Competitors shall have the responsibility of delivering the cubes in good condition.

9. Test of Cubes:

- 9.1 Testing of cubes will be start at 10:00 hrs. on the date and at the address of nodal centers of "Conveners" or as notified by them.

Competitors are welcome to attend, if they so desire, during testing of their Cubes @ designated Testing Centers.

- 9.2 Testing will be done as per IS:516. The average strength of 3 cubes in direct compression shall be considered for merit adjudged from following:
 - a) Ratio of strength to cement content.
 - b) Uniformity of results.
 - c) Deviation from target strength.
 - d) Special marks for use of fly Ash.

10. Adjudgement:

- a) The Chapter Board of Direction has decided that individual Conveners at various centers will be judges.
- b) The decision of the Judges regarding Acceptability of Cubes for the entry and evaluation of merit shall be final.
- c) The decision of the Board of Direction of India Chapter of ACI shall be final and binding.
- d) All successful candidates shall be informed of the result by post/e-mail. Exact date and venue of distribution of prizes/certificates will be informed well in advance.
- e) The marks obtained by each Entry, will be based on indicative marking sheet as under:

BASIS FOR EVALUATION OF ENTRIES

SR. NO.	CRITERIA	MAX MARKS
1.	MIX DESIGN REPORT	20
2.	CONSISTANCY OF DENSITY	10
3.	MAX. VARIATION (WITHIN +2 MPA)	10
4.	ACCURACY OF CUBICAL DIMENSIONS	15
5.	PARTIAL REPLACEMENT WITH FLY ASH	
A	IF 15% REPLACEMENT	10
B	IF 25% REPLACEMENT	15
6.	CEMENT CONTENT TO STRENGTH RATIO	20
7.	USE OF ADMIXTURE	10
	MAXIMUM MARKS POSSIBLE	100

ABOUT US

The American Concrete Institutes (ACI)

Initially formed as ‘National Association of Cement Users’ in 1904 and renamed as ACI nine years later, the Institution functions to improve the “Design, Construction, Manufacture”. Use of Maintenance of Concrete Products and Structures with the motto ‘Progress through acknowledge’. With above 30,000 direct members and actively working 94 chapters, 244 student chapters all over the world, spanning over 120 countries it has attained stature as an international organization and is acclaimed as “Treasure House on Concrete” with more than 500 technical documents related to concrete and concrete technology and regular upgradation on the subject. These publications are unique and exclusive. With its Headquarters at Farmington Hill, Michigan, USA, it is further encouraging “Engineering Education, scientific investigation and research by organizing the efforts of its members on non-profit public service basis, in gathering, correlating and disseminating information.

India Chapter of ACI

Indian Professionals exchange information and dissemination of knowledge about concrete technology with USA from the early days of 20th century even before there was ACI. Our Chapter, established on 26th December, 1979, has today an All India membership of more than 2,500 individual and organizational members.

Through its continued and tireless services in organizing seminars, workshops, symposia technical meetings with professional Bodies, special lectures by experts on selected topics and site visits, the Chapter has attained a rare distinction from ACI, USA, as Outstanding chapter for successive years. It was also acknowledged with ‘Outstanding International Activity’ in 1984 and “Excellent Chapter Award” in 2000 through 2023.

The Chapter has a rich technical library for professionals and research scholars, conducts certification course for ‘Construction Supervisors’, publishes quality journal and special technical publications to provide information on developments in the field of concrete technology, held annual competition for excellence in concrete through tests of concrete cubes, gave away tri-annual award of outstanding concrete structures and holds interactive meetings with BIS for updating of codes. It is striving today to improve the practice of concrete technology to new heights in the country.