The American Concrete Institutes (ACI)

Initially formed as ‘National Association of Cement Users’ in 1904 and renamed as ACI nine year 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 20,000 direct members and actively working 88 Chapters all over the world, covering 112 nations 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 2,000 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 2019.

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.

BASIS FOR EVALUATION OF ENTRIES

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>CRITERIA</th>
<th>MAX MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>MIX DESIGN REPORT</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>CONSISTENCY OF DENSITY</td>
<td>10</td>
</tr>
<tr>
<td>3.</td>
<td>MAX. VARIATION (WITHIN +2 MPA)</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>ACCURACY OF CUBICAL DIMENSIONS</td>
<td>15</td>
</tr>
<tr>
<td>5.</td>
<td>PARTIAL REPLACEMENT WITH FLY ASH</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>IF 15% REPLACEMENT</td>
<td>15</td>
</tr>
<tr>
<td>7.</td>
<td>CEMENT CONTENT TO STRENGTH RATIO</td>
<td>20</td>
</tr>
<tr>
<td>8.</td>
<td>USE OF ADMIXTURE</td>
<td>10</td>
</tr>
<tr>
<td>MAXIMUM MARKS POSSIBLE</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Invitation for
IC-ACI - All India Students’
"CONCRETE CUBE TEST”
COMPETITION – 2019

Dear Sir,

In continuation of these competitions, launched and carried through 2017 & 2018, we cordially invite Students of Civil Engineering Colleges/Institutes to participate in the All India Concrete Cube Test Competition 2019, to be held by various Student’s Chapter of IC-ACI from 1st week of December, 2019 thru 31st January, 2020. The last date for submission of the Cubes for the test is 3 days prior to testing at any nodal centers, will be as per guidelines given by Mentors of relevant Student’s Chapter.

This competition is only for Students of any Civil Engineering College/Student’s Chapters of ACI in the following categories.

a) Members of Students’ Chapters of IC-ACI.
b) Students of Civil Engineering Disciplines.

(Any Institute/College)

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

Winners will be awarded appropriate trophies and the participants will be issued with Certificate of Participation and given publicity through the Chapter’s Journal, and other technical journal and chapter website. Special prize would be awarded for making concrete with blended cement and/ or use of admixtures/fiber.

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, Students’ Chapter Activities
Principal Coordinator

CONVENERS
Mumbai
Prof. V. B. Vavran
Shri Bhagubhai Mahatpada
Polytechnic,
Mumbai.

PERUNUDU (ERODE)
Dr. G. S. Ramprasadheep
Kongu Engineering College,
Perunudu, Erode Dist,
Tamil Nadu.

BHUBANESWAR
Dr. Ms. Indrani Chattopadhyay
C.V Raman College of
Engineering, Bhubaneswar

COIMBATORE
Prof. Elayaraja Sellappan
PSG Institute of Technology and
Applied Research, Coimbatore

RAJKOT
Prof. Ankur Bhogayata
Marwadi Education
Foundation’s Group of
Institutions, Rajkot, Gujarat

VAIYAKALMEDU (ERODE)
Dr. E. K. Mohanraj
Nandha Engineering College
(Autonomous) Vaiyakalmedu,
Erode, Tamil Nadu.

NERUL (NAVI MUMBAI)
Ms. Priyanka Jadhav
Tata Engineering
College. Navi Mumbai.

KOLKAPUR
Prof. Chetan Patil
Sanjay Ghodawat group of
Institutions, Kolhapur.

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 engineers. Any Student of Civil Engineering to experience through this competition, the art and science of producing good quality concrete.

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 highest 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 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 Professionally responsible for compliance of all 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:
a) Ordinary Portland Cement (IS:269/IS1194/IS 12269).
b) Portland Slag Cement (IS: 456).
c) Portland Pozzolana Cement (1489 Part I).
d) Partial replacement of cement with other cementitious materials like FlyAsh 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 35 Mpa

6. Cube Specimen:
Cubical test specimens shall be of 150 x 150 x 150 mm in size with 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 more than 28 days and less than 36 days.

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.
Invitation for participating in the IC-ACI Student's

"CONCRETE CUBE TEST"
COMPETITION - 2019

From

To,
The Convener,

IC-ACI Student's Chapter @

Dear Sir,

We the following. Three Students forming a Group from

Institute/College @

are willing to participate in the IC-ACI Student's Cube Testing Competition 2019, being held during the period December, 2019 to 31st January, 2020.

We shall submit the Cubes, Three days prior of Testing & Evaluation, as intimated by the Nodal Center.

* Optional

* We would like to remain present during the actual evaluation and Testing of the Cubes at the date & time of Testing as informed by relevant nodal center of IC-ACI Student's Chapter @

Thanking you,

Names:

1. __________________________

2. __________________________

3. __________________________

Institute / College : __________________________