American Concrete Institute
Iran Chapter

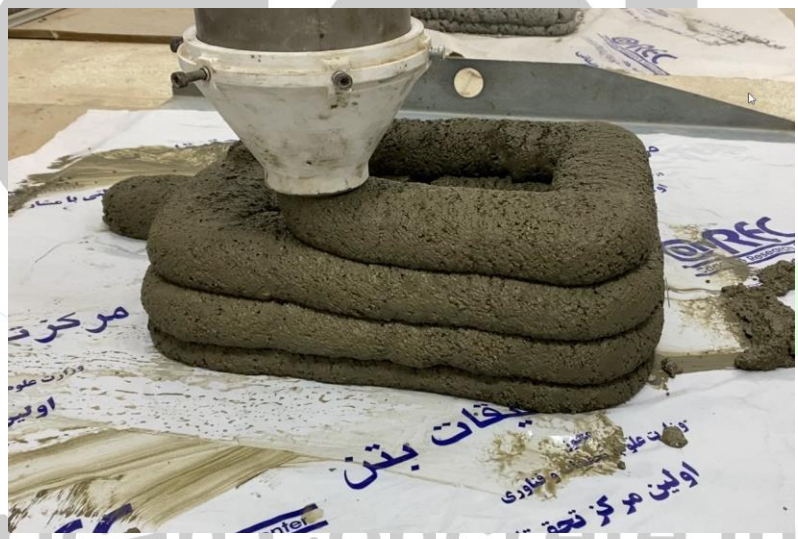
آیین نامه مسابقات بین المللی دانشجویی بتن شاخه های منطقه‌ای (ACI)

ACI IRAN CHAPTER

3D Printed Concrete Competition (3DPCC) - 2025

مسابقه پرینت سه بعدی بتن

۳ و ۴ دی ماه سال ۱۴۰۴



بیست و هشتمین همایش سالیانه انجمن بین المللی بتن آمریکا (ACI) – شاخه ایران

۳ و ۴ دی ماه سال ۱۴۰۴

با همکاری وزارت علوم، تحقیقات و فناوری

مجری:

وزارت علوم، تحقیقات و فناوری
مرکز تحقیقات بتن (متب)
تحصیلات تکمیلی مهندسی عمران
با مجوز ۵۱۱۶-۲۲

ConREC aci Iran Chapter
Concrete Research & Education Center
Affiliated with ACI International Concrete Institute
Advancing Concrete Knowledge

علاقمندان می توانند جهت ثبت نام و کسب اطلاعات بیشتر به پایگاه اینترنتی

www.aciiranchapter.org مراجعه کرده و یا با شماره تلفن ۸۸۶۶۴۱۵۱ تماس حاصل فرمایند.

دانشجویان علاوه بر سایت انجمن می توانند تمامی آیین نامه های مسابقات دانشجویی و فرم ثبت نام را از کانال تلگرام انجمن دانلود نمایند.

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The ACI Iran Chapter & Concrete Research & Education Center (ConREC) will host the very **First 3D Concrete Printing Student Competition 2025**: Conception, Design and 3D-printing of a Cement-Based Structural Element.

This is a unique opportunity for undergraduate, MSc, and PhD students to take part in the competition.

- Explore additive manufacturing in structural concrete
- Compete Nationally in innovation, efficiency, and creativity
- Test your design live at Concrete Research & Education Center (ConREC) Laboratory
- Recognition in the ACI Iran Chapter community

1. OBJECTIVES AND PRIZES

1.1 Objectives

The National 3D Printed Concrete Competition (3DPCC) aims to enhance the specialized knowledge and practical skills of students and researchers in the field of advanced concrete technologies and digital construction.

This event provides a scientific, educational, and competitive platform through which students can become familiar with the fundamental concepts of 3D concrete printing, printable concrete mix design, and the practical operation of concrete printing machines.

During the competition, teams are required to print a concrete element with specified dimensions, thereby demonstrating their ability to integrate material science, construction technology, and process control in 3D concrete printing.

The competition is organized by the Concrete Research & Education Center (ConREC) and the ACI Iran Chapter Student Competition Committee.

The ultimate objective of the competition is to cultivate a new generation of engineers proficient in advanced construction technologies, foster research-driven innovation among students, and contribute to the nationwide advancement of 3D concrete printing science and practice.

1.2 Prizes

The evaluation of teams will be based on the overall quality of their 3D printed element, the strength and surface performance of the printed concrete, the technical quality of the submitted proposal and online presentation, and the team's ability to respond to the judges' questions during the interview session.

Teams achieving the highest combined scores will be ranked as First, Second, and Third Place Winners. Each winning team will receive an official certificate of recognition, be featured in the Concrete Research & Education Center's newsletter, and be recognized on the official website of the ACI Iran Chapter (www.aciiranchapter.org) .

2 RULES

2.1 Eligibility

1. Each team must consist of students officially enrolled in a recognized university or research institute at the undergraduate or graduate level (Bachelor's, Master's, or Ph.D.) at the time of the competition.

2. All team members must be from the **same university or institution**. Inter-university teams are not permitted.

3. Each team shall include **a minimum of two (2)** and **a maximum of five (5)** student members.

4. Each team must have **one faculty advisor**, who will supervise the technical content of the proposal, verify the accuracy of mix designs, and ensure that the team complies with the rules and regulations of the competition.

5. The team's **faculty advisor** may provide general guidance and mentorship but shall not be directly involved in the design, testing, or preparation of materials and printed elements.

6. Because the competition includes an **online interview and presentation**, all team members are required to attend the scheduled virtual defense session and respond to the judges' questions within the allocated time.

7. Registration dates and submission deadlines are provided at the end of these rules. Teams will receive official confirmation of registration from the Competition Secretariat of the National 3D Printed Concrete Competition (3DPCC) and must ensure that all required documents are submitted on time.

8. The Persian translation of the eligibility rules is attached to this document as **Attachment A**.

2.2 Materials

a. The printed concrete mixtures shall employ **cementitious materials as the primary binder**, in accordance with the definition provided in **Section 2b** of this document.
Chemical admixtures, complying with the requirements of **ASTM C494** or **ASTM C1017**, may be used to achieve the desired workability, setting time, or rheological properties necessary for 3D printing performance.

b. The cementitious materials shall include **Portland cement** conforming to **ASTM C150**, **blended cements** meeting **ASTM C595** or **ASTM C1157**, and **expansive cement** in accordance with **ASTM C845**.
Supplementary cementitious materials (SCMs) such as **fly ash** and **natural pozzolans** conforming to **ASTM C618**, **silica fume** conforming to **ASTM C1240**, and **slag cement** conforming to **ASTM C989** may also be used.

c. Supplementary cementitious materials (SCMs) including **fly ash**, **silica fume**, and/or **slag cement** may be incorporated into the concrete mixtures; however, they shall be used **as separate constituents** and **not as blended products** with Portland cement.

d. Epoxy-based resins are strictly prohibited.
Acceptable polymeric modifiers include **latexes** and **redispersible powders** based on **SBR (styrene–butadiene rubber)**, **Acrylics**, **PVA, PVE**, or other similar **cement-compatible polymer systems**.
Cellulose ethers and **PCE-based admixtures** are permitted for rheology control.
The use of any other polymer system must be justified in the proposal with appropriate references and technical reasoning.

e. Fibers may be incorporated into the proposed printable concrete mixtures to enhance performance.
Permitted fibers include **polypropylene**, **polyvinyl alcohol (PVA)** and **alkali-resistant glass fibers**, provided that their maximum length and dosage are compatible with extrusion-based 3D printing (maximum fiber length: **12 mm**; recommended dosage: **≤ 2% by volume**).
The use of metallic fibers (e.g., steel fibers), asbestos, and plastic fibers is strictly prohibited.
Any fiber addition must be clearly justified in the proposal, including the **rationale, dosage, and expected influence** on both the **fresh** and **hardened** properties of the mix.

f. The **maximum aggregate size** for the printable concrete mixtures used in this competition shall be limited to material **passing the No. 8 sieve (2.36 mm)**.

g. Any type of **non-metallic aggregate** may be used in the mix.

h. Geopolymers, ceramics or other material are not permitted.

i. The incorporation of any **colorant or pigment** in the concrete mixture is **strictly prohibited**.
All printed mixes must retain their **natural cementitious color**.

2.3 Proposal Structure

The proposal shall include the following sections:

2.3.1 Title Page

- **Title:** *Proposal for the National 3D Printed Concrete Competition (3DPCC)*
- **Team name** and **list of members**, along with their **university or academic institution**
- **Email address and phone number** of the team representative
- **Name of the faculty advisor**

2.3.2 Abstract (Maximum 300 words)

- A general statement of the **project's objective**, the **proposed materials**, and the **expected innovation** of the design.

2.3.3 Introduction and Problem Statement (1–2 pages)

- Explanation of the **importance of 3D concrete printing** in the construction industry
- Identification of major **technical challenges** (printability, rheology, mechanical strength, durability, etc.)
- Statement of the **team's motivation and objectives** in developing the proposed design

2.3.4 Literature Review (2–3 pages)

- Review of **relevant international studies and projects** related to 3D printed concrete
- Analysis of the **strengths and weaknesses** of prior works
- Definition of the **team's research position and approach** compared to existing studies

2.3.5 Research Objectives and Innovation

- Specification of the **primary objectives** (e.g., achieving a printable, dimensionally stable concrete mix)
- Description of the **innovative aspects** and differentiation from prior research or conventional mix designs

2.3.6 Research Methodology and Proposed Concrete Mix Design

- Presentation of the **proposed concrete mix table**, including both **weight- and percentage-based proportions**
- Description of **materials and their specifications** (cement, pozzolanic materials, approved fibers, fine aggregates ≤ 2.36 mm, water, and admixtures)
- **Scientific justification** for the selected mix proportions
- Description of the **mixing process and sequence**
- Discussion of **rheological parameters** (slump, flow, viscosity) and their relevance to printability

2.3.7 Evaluation Method and Performance Criteria

- Prediction of **concrete behavior during the printing process**
- Expected **compressive strength** of **10×10×10 cm cube specimens**
- Expected **flexural strength** of **beam specimens** (dimensions as specified in the competition guidelines)
- Assessment of **interlayer bonding** and surface quality
- Identification of **potential challenges** and the **team's proposed solutions**

2.3.8 References

Citations of **research papers, standards, codes, and scientific references**, including relevant **ACI** and **ASTM** documents.

2.3.9 Appendices

Images of the **proposed raw materials** and results of **preliminary experiments**, if available.

2.4 Proposal Evaluation

All submitted proposals will be reviewed by the **Jury Committee of the National 3D Printed Concrete Competition**. Each proposal will be evaluated and scored based on the following criteria, for a total of **70 points** allocated to the written report and **30 points** to the online presentation and Q&A.

Table 1: Report evaluation

Formatting	2
Cover page	1
Abstract	3
Introduction	7
Literature Review	4
Objectives & Innovation of the Research	7
Research Method and Proposed Concrete Mix Design	14
Evaluation Method and Performance	10
Conclusions	14
References and Sources	4
Appendices	4

2.5 Proposal Defense (Online Interview)

To ensure a comprehensive evaluation of each team's scientific and technical capabilities, all participating teams are required to **defend their proposal in an online interview session** before the jury committee.

- Each team will be given a **maximum of 15 minutes** for the defense session.
- The team shall deliver a **10-minute presentation** followed by **5 minutes of questions and answers** from the judges.
- The interview will be conducted **online**, and the **presence of all team members** is mandatory.
- The jury will assign scores based on the following criteria:
    - **Technical and scientific mastery** of the team members regarding the content of the proposal
    - **Clarity and effectiveness** of presentation and communication

- **Logic and technical accuracy** of the responses provided to the judges' questions

The overall proposal score will be distributed as follows:

- **70%** based on the **written proposal** quality
- **30%** based on the **online defense and Q&A session**

The **top six teams** achieving the highest total scores will qualify for the **next stage of the competition** (the practical 3D printing phase).

2.6 Concrete Printing Phase

Team Attendance

Prior to the competition day, all teams are required to attend a **mandatory orientation session** at the **3D Concrete Printing Center of the Concrete Research & Education Center (ConREC)** to become familiar with the printer, procedures, and safety regulations.
Attendance of **at least one member from each team** is mandatory.

Material Delivery

- All materials, including **cement, sand, pozzolanic materials, fibers, and chemical admixtures**, must be delivered **separately** and clearly **labeled** with their **name, type, and weight**.
- **Pre-mixed materials** will **not** be accepted under any circumstances.

Required Concrete Volume

- **Printer hopper capacity:** 28 liters.
- Each **printed element (column)** will be produced using **a single 28-liter batch** of printable concrete.
- In the event of an unsuccessful print, the team must have sufficient additional materials prepared to produce **one more 28-liter batch** for a **second printing attempt**.
- In addition, each team must prepare materials for casting **three cube specimens (≈3 liters)** and **two beam specimens (≈10 liters)**, as well as an additional **10% of total materials as a contingency allowance**.

In total, each team must supply enough materials to produce a **minimum of 75 liters (approximately 165 kilograms)** of fresh concrete, assuming a **concrete density of 2200 kg/m³**.

Mix Adjustment

If the printed mix demonstrates **unsatisfactory printability**, the jury may allow the team to **modify the mixture once** by adding **chemical admixtures** to improve performance, after which printing may resume.

Safety Requirements

All individuals present in the laboratory are required to wear **protective clothing**, including **lab coats or coveralls**, **gloves**, and **safety goggles** throughout the session.

Time Allocation

Each team will be allotted a total of **three (3) hours**, including **mixing, printing, cleaning, and site handover**.

2.7 Geometry and Printing of the Concrete Element (column):

- The printed element shall be a **square column** with dimensions of **25 × 25 cm**, consisting of **five (5) layers** along the **Z-axis**.
- Each layer shall have a thickness of **3 to 4 cm (±5 mm tolerance)**.
- The **printing operation** will be conducted **by the official operator** from the **Jury Committee**.
- In the event of printing difficulties, each team will be granted **a maximum of two printing attempts** (2 × 28 liters).

2.8 Sampling and Testing

- From the fresh concrete, **three cube specimens (10×10×10 cm)** and **two beam specimens (10×10×50 cm)** shall be prepared.
- The compressive strength test of the cube specimens shall be conducted seven (7) days after casting, in the presence of a team representative, in accordance with **ASTM C39** or **BS EN 12390-3**. The final compressive strength shall be the actual measured strength of the cube specimens at failure, and no conversion factors shall be applied.
- The **flexural strength test** of the beam specimens shall also be performed **after seven (7) days**, following the **ASTM C293** or **INSO 17731** (single-point loading) standard procedure.

2.9 Curing and Age of Specimens

- After printing and casting, all specimens shall be **cured according to standard laboratory practices** to ensure consistent and comparable test results.
- The **printed element** (column) shall **not be subjected to water curing**; it shall remain **in ambient laboratory conditions** and be **covered with plastic sheets** to prevent rapid moisture loss.

- The **cube and beam specimens**, however, shall be **cured by immersion in water** in accordance with **ACI curing procedures** to maintain full hydration.
- The **curing period and testing age** for both compressive and flexural strength tests shall be **seven (7) days** after casting.

3. Scoring

The total score for the **Practical Stage** is **100 points**, distributed as follows:

- **Visual Quality:** 70 points
- **Mechanical Properties:** 30 points

Visual Evaluation (70 points)

The printed element will be evaluated based on the following criteria:

- **Uniformity and overlap of printed layers**
- **Interlayer bonding quality**
- **Layer stability and absence of collapse or deformation**
- **Homogeneity of concrete and absence of cracks or voids**
- **Dimensional accuracy and consistency of layer thickness**

Note: In the event of **complete collapse of the printed element**, the **mechanical evaluation will not be conducted**, and **no mechanical score** will be assigned.

Table 3-A — Visual Evaluation (70 points)

Evaluation Criteria	Points
Uniformity and overlap of printed layers	15
Interlayer bonding quality	15
Layer stability and absence of collapse or deformation	15
Homogeneity of concrete and absence of cracks or voids	10
Dimensional accuracy and consistency of layer thickness	15
Total (Visual Evaluation)	**70**

Table 3-B — Mechanical Evaluation (30 points)

Evaluation Criteria	Points
Compressive strength of cube specimens	15
Flexural strength of beam specimens	15
Total (Mechanical Evaluation)	**30**

3.1 Mechanical Scoring Formulas

The **Mechanical Evaluation (30 points)** consists of two parts:

- **Compressive Strength (15 points)**
- **Flexural Strength (15 points)**

The following equations shall be used to calculate the score for each test.

(a) Compressive Strength Scoring (15 points)

Compressive Strength (MPa)	Points
$f_c \geq 35$	15
$20 \leq f_c < 35$	$15 \times \frac{(f_r - 20)}{15.0}$
$f_c < 20$	0

(b) Flexural Strength Scoring (15 points)

Flexural Strength (MPa)	Points
$f_r \geq 4.0$	15
$3.0 \leq f_r < 4.0$	$15 \times \frac{(f_r - 3.0)}{3.0}$
$f_r < 3.0$	0

4. Judging

- The judges will be appointed by ACI Iran Chapter Student Competition Committee
- Judges may be different for each testing category.
- The judges will make the final determination on compliance with the rules and penalties for rules violations. Disqualified entries shall not be included in the scoring or considered for awards. All penalties will be explained fully to the teams.
- The decision of the judges will be final, and appeals will not be considered. Suggestions for improvement may be submitted to the ACI Iran Chapter.
- The official and governing version of this document is the English version. The Persian translation is provided solely to assist participants in understanding the rules.

5. Registration and Material Submission

Registration is **mandatory** for all participating teams. Teams must register through the **competition webpage** on the **ACI Iran Chapter website** by **5:00 p.m. on 6 December 2025**. Registration confirmation will be sent via email.

The **electronic proposal** must also be submitted **no later than 5:00 p.m. on 6 December 2025** through the **official submission link** provided on the competition webpage. Teams will receive an email confirming successful submission. Failure to receive confirmation indicates that the submission was **not completed**.

As specified on the competition webpage, the **Letter of Verification**, details of all **team members**, and the **Proposal** are required to complete the team's registration. Details and templates for these required documents will be available on the **student registration portal**.

Teams are strongly advised **not to wait until the final day** to submit their materials to avoid potential delays in completing all required documents. **Failure to provide all required documentation** will result in **disqualification** from the competition. **Late submissions** will be subject to penalties, up to and including **disqualification**.

The **top 20 teams**, based on their **written proposal scores**, will be invited to participate in an **online interview** with the judging panel.

After the first stage of the competition which includes the **Proposal Evaluation** and **Online Interview**, **6** selected teams will be notified of the date for their **laboratory visit and orientation session** at the **3D Concrete Printing Center of the Concrete Research & Education Center (ConREC)**, where they will become familiar with the printer, procedures, and safety regulations.

Following the orientation, teams will be notified of the **scheduled date for the Practical Stage**, during which they will bring their prepared materials for the **Printing of the Concrete Element (column)** and participate in the **Concrete Printing Phase**.

6. Results and Exhibition

- The competition results will be officially announced during the **Closing Ceremony of the 28th Annual ACI Iran Chapter Convention and the National Conference on Concrete and Earthquake (December 25, 2025)**.
- The printed elements will be **displayed for two days** at the conference venue.
- The printed specimens **will not be returned** to the teams and will be **transferred to the Competition Secretariat** for documentation and record purposes.

7. Compliance with ACI 3D Printed Concrete Competitions Rules

ACI reserves the right to perform detailed examination and check entries for compliance with the

competition rules. Due to the complexity of this task, the examination may be done after the competition. If the examination shows that a team did not follow the rules, the team, their advisor and all his/her teams will be disqualified. The ACI Iran Chapter competition committee will further document recommendations to sanction the team and its advisor and/or the school/university's participation in future competitions. Failure to supply the required submittals or failure to meet the established deadlines may result in penalties, up to and including disqualification.

8. Contact Information

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Attachment A:

Eligibility Rules

مسابقه پرینت سه‌بعدی بتن(3DPCC) :

مسابقه ملی پرینت سه‌بعدی بتن که توسط انجمن بین‌المللی بتن – (ACI) شاخه ایران و با همکاری مرکز تحقیقات بتن (متب) برگزار می‌شود، با رویکردی نوین در زمینه فناوری‌های ساخت دیجیتال و توسعه فناوری پرینت سه‌بعدی بتن طراحی شده است. این مسابقه ملی دانشجویی به عنوان اولین مسابقه پرینت سه‌بعدی بتن در ایران و منطقه برگزار می‌شود و گامی مهم در گسترش دانش و فناوری‌های نوین ساخت در کشور به شمار می‌رود.
شایان ذکر است که مرکز تحقیقات بتن (متب) و انجمن بین‌المللی بتن(ACI) – شاخه ایران پیش‌تر نیز در سال ۲۰۱۸ میلادی نخستین مسابقه ملی تحت عنوان (پل چاپ‌شده با پرینتر سه‌بعدی) را در کنار سایر مسابقات ملی سالیانه بتن با موفقیت برگزار نموده است.

هدف:

به منظور ارتقای دانش تخصصی و مهارت عملی دانشجویان مقاطع کارشناسی، کارشناسی ارشد و دکتری در زمینه فناوری‌های نوین بتن، چاپ سه‌بعدی بتن و ساخت دیجیتال، این مسابقه با هدف آموزش نسل جدیدی از مهندسان آشنا با فناوری‌های آینده ساخت‌وساز بتنی شکل گرفته است.

در این مسابقه، تیم‌های شرکت‌کننده مأموریت دارند یک المان بتنی چاپ‌شده را با استفاده از طرح اختلاط بتن قابل پرینت طراحی و اجرا نمایند .این طرح باید ترکیبی از نوآوری علمی، توان فنی، کنترل فرآیند و کیفیت ساخت را به نمایش بگذارد.

تیم‌ها موظف‌اند پروپوزال فنی شامل طرح اختلاط پیشنهادی، مصالح مصرفی، روش چاپ و نوآوری‌های خود را تهیه کرده و در مرحله نخست از آن به‌صورت آنلاین دفاع نمایند .در مرحله دوم، تیم‌های برتر به مرحله عملی راه یافته و باید المان بتنی (ستون مربعی ۲۵×۲۵ سانتی‌متر) را با استفاده از پرینتر بتن مرکز تحقیقات بتن (متب) چاپ کنند.

این مسابقه بستری علمی، آموزشی و رقابتی فراهم می‌سازد تا شرکت‌کنندگان بتوانند ضمن تجربه عملی کار با دستگاه پرینتر بتن، ارتباط میان علم مواد، فناوری ساخت و کنترل فرآیند چاپ بتن را در عمل درک کنند.

هدف نهایی این رقابت، تربیت مهندسان خلاق، پژوهش‌محور و آشنا با فناوری‌های نوین ساخت، ارتقای سطح پژوهش‌های دانشگاهی در زمینه پرینت بتن، و گسترش دانش ملی در زمینه چاپ سه‌بعدی بتن در ایران و منطقه است.

۱- قوانین مسابقه پرینت سه بعدی بتن:

تیم های شرکت کننده در مسابقه :

۱-۱ اعضای تیم ها، دانشجویان دانشگاه های سراسری، آزاد و موسسات آموزش عالی(مقطع کارشناسی، کارشناسی ارشد و دکتری مهندسی عمران، معماری، مکانیک، معدن، مهندسی شیمی و ... در تمامی گرایش ها)، مراکز آموزش عالی، مراکز تحقیقاتی پژوهشی دولتی و غیر دولتی می باشند. لازم به ذکر است تعداد تیم های شرکت کننده از هر دانشگاه، موسسه آموزش عالی، حداکثر دو تیم می باشد که لازم است اعضای تیم ها متفاوت باشند.

مثال:

تیم A از دانشگاه A (استاد راهنما:A و اعضای گروه: ۱و ۲ و ۳ و ۴ و ۵)

تیم B از دانشگاه A (استاد راهنما:A و اعضای گروه: ۶ و ۷ و ۸ و ۹ و۱۰)

۱-۲ شرایط مذکور (بند ۱-۱) ویژه مسابقه جدید پرینت سه بعدی بتن می باشد و برای سایر گرایش های مسابقات دانشجویی ملی بتن (ACI)-شاخه ایران امسال صادق نمی باشد.

۱-۳ چنانچه تعداد تیم های شرکت کننده در این گرایش به حداقل ۶ تیم برسد مسابقه برگزار می شود در غیر اینصورت مسابقه برگزار نخواهد شد.

۱-۴ هرتیم شامل حداقل ۲ نفر و حداکثر ۵ نفر عضو به همراه ۱ نفر استاد راهنما از همان دانشگاه یا موسسه می باشد.

۱-۵ اعضای تیم می توانند از مقاطع تحصیلی متفاوتی باشند.

۱-۶ هر شخص تنها می تواند در یک تیم عضویت داشته و تیم شرکت کننده می باید معرفی نامه مهمور به مهر از دانشگاه یا موسسه معرفی شده را ارائه دهد.

۱-۷ هر دانشگاه یا موسسه برنده حداکثر یک رتبه (مقام) خواهد بود.

۱-۸ استاد راهنما فقط مسئولیت هدایت اعضای تیم و رعایت قوانین مسابقه از طرف تیم را بر عهده دارد .

۱-۹ هر استاد راهنما نمی تواند سرپرستی بیش از دو تیم از یک دانشگاه یا موسسه را بر عهده بگیرد.

۱-۱۰ فرم های ثبت نام از طریق ایمیل یا فکس می بایست ارسال شود. شرکت کنندگان فرم ثبت نام را می بایست از وب سایت www.aciiranchpter.org دانلود و تکمیل نموده، به همراه مدارک خواسته شده شامل(معرفی نامه برروی سربرگ دانشگاه یا گواهی اشتغال به تحصیل، کپی کارت دانشجویی معتبر، کپی کارت ملی، فیش واریزی ثبت نام) به دبیرخانه همایش از طریق ایمیل به آدرس convention@aciiranchapter.org و یا از طریق فکس به شماره ۸۸۷۹۷۴۵۴ ارسال نمایند.

۱-۱۱ فرم ثبت نام مسابقه پرینت سه بعدی بتن با فرم ثبت نام سایر مسابقات دانشجویی متفاوت می باشد و لازم است بصورت جداگانه دانلود، تکمیل و برای دبیرخانه ارسال شود.

۱-۱۲ آخرین مهلت ثبت نام برای شرکت در مسابقه پرینت سه بعدی بتن، ساعت ۱۷:۰۰ روز سه شنبه مورخ ۱۵ آذر ماه ۱۴۰۴ می باشد.

۱-۱۳ آخرین مهلت ارسال پروپوزال ساعت ۱۷:۰۰ مورخ ۱۵ آذر ماه ۱۴۰۴ می باشد.

۱-۱۴ شرکت کنندگان در این مسابقه می بایست فرم ثبت نام تکمیل شده و فایل پروپوزال خود را از طریق ایمیل convention@aciiranchapter.org به دبیرخانه مسابقات ارسال نمایند.

۱-۱۵ تاریخ تحویل مدارک:

شرکت کنندگان می بایست یک نسخه گزارش چاپ شده (Hard copy) پروپوزال خود را طبق فرمت آورده شده در آیین نامه به همراه اصل مدارک (شامل اصل فرم ثبت نام و معرفی نامه برروی سربرگ دانشگاه یا گواهی اشتغال به تحصیل) را به صورت حضوری در روز برگزاری مسابقه و پرینت المان بتنی در محل مرکز پرینت بتن مرکز تحقیقات بتن(متب) به کمیته داوران مسابقات ارایه نمایند.
تحویل مدارک توسط یک نفر (سرپرست و یا نماینده تیم) انجام می شود.

۱-۱۶ هزینه واریزی جهت ثبت نام به هیچ عنوان عودت داده نمی شود.

۱-۱۷ استاد راهنما باید از اعضای هیات علمی و یا مدرسین دانشگاه تیم دانشجویی مربوطه باشد .

- ✓ حضور استاد راهنما در روز مسابقه و زمان برگزاری مسابقه تیم خود الزامی است و عدم حضور باعث حذف تیم دانشجویی می شود.
- ✓ همراه داشتن معرفی نامه از دانشگاه و اصل کارت دانشجویی در روز مسابقه و همایش الزامی است.

۱-۱۸ گزیده هایی از مسابقات ملی بتن مورخ ۳ و ۴ دی ماه سال ۱۴۰۴ به صورت زنده (Live) از وب سایت مرکز تحقیقات بتن www.ConREC.ac.ir پخش می شود. جهت اطلاع از جزئیات پخش مسابقات بتن به وب سایت مراجعه نمایید.

۱-۱۹ نتایج بیست و هشتمین دوره مسابقات دانشجویی ملی بتن، مورخ ۴ دی ماه سال ۱۴۰۴ در مراسم اختتامیه جشنواره و کنفرانس بتن و زلزله مرکز تحقیقات بتن (متب) اعلام می شود.

قابل توجه شرکت کنندگان بیست و هشتمین دوره مسابقات سالیانه ملی دانشجویی

انجمن علمی بین المللی بتن آمریکا (ACI)– شاخه ایران:

به مناسبت **بیست و هشتمین** سال مسابقات سالیانه ملی دانشجویی انجمن علمی بین المللی بتن آمریکا (ACI)–شاخه ایران به اطلاع می رساند: با مجوز **بنیاد ملی نخبگان** به شماره ۸۹۷۱/۱۵، این مسابقات به مشابه مسابقات مهارتی دانشجویی مورد تایید و حمایت **بنیاد ملی نخبگان** قرار گرفته است و برترین های این مسابقات از امتیازهایی که برای این قبیل مسابقات در شیوه نامه های بنیاد تعیین شده است، بهر ه مند می شوند.

❖ قابل توجه کلیه دانشجویان و شرکت کنندگان در بیست و هشتمین همایش ملی سالیانه بتن و زلزله:

همایش ملی سالیانه بتن و زلزله و آیین نامه مسابقات دانشجویی مرکز تحقیقات بتن (متب) طبق مصوبه وزارت علوم، تحقیقات و فناوری متعلق و خاص این مرکز بوده و استفاده از آنها خارج از مسابقات فوق پیگرد قانونی خواهد داشت.