

MAH M Arch CET Current Architecture Practice

Sample Paper – 3

Duration: 12 Minutes

Maximum Marks: 20

Instructions

- This paper contains **10** Multiple Choice Questions (Single Correct Answer), modelled on the Current Architecture Practice portion of **MAH M Arch CET** entrance.
- Each correct answer carries **+2 marks**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct. Choose carefully.
- Syllabus level: **NBC 2016, UDCPR 2020, MRTP Act 1966, Architects Act 1972, and Green Building standards (Section V of MAH M Arch CET)**.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Questions

Q1. As per NBC 2016, a building is classified as a 'high-rise building' requiring enhanced fire and life safety provisions when its height exceeds:

- (A) 15 m
- (B) 18 m
- (C) 24 m
- (D) 12 m

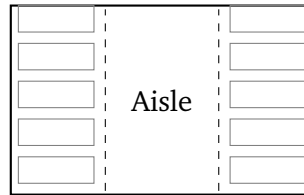
Q2. NBC 2016 Part 3 primarily deals with:

- (A) Fire and Life Safety requirements
- (B) Structural Design provisions
- (C) Development Control Rules and General Building Requirements



(D) Plumbing and Drainage Systems

- Q3.** A commercial building with a total floor area of $1,500 \text{ m}^2$ is proposed under UDCPR 2020. The standard parking layout for the building is shown below. If the UDCPR norm requires 1 Equivalent Car Space (ECS) per 50 m^2 of floor area for commercial use, how many ECS must the building provide?



Standard parking layout (indicative)

- (A) 25 ECS
(B) 40 ECS
(C) 20 ECS
(D) 30 ECS
- Q4.** Under UDCPR 2020, Transferable Development Rights (TDR) generated by a landowner surrendering land for public reservations can generally be used (received) on a plot that is:
- (A) Any plot in a different municipal corporation area
(B) On a road at least as wide as the road on the sender plot, within the same planning authority's jurisdiction
(C) Agricultural land outside the urban agglomeration
(D) In an eco-sensitive zone or coastal area
- Q5.** Under UDCPR 2020, a building that exceeds which height is categorised as a 'special building', necessitating clearance from the Director of Fire Services and additional structural scrutiny?
- (A) 15 m



- (B) 24 m
- (C) 30 m
- (D) 12 m

Q6. The key amendment to the Maharashtra Regional and Town Planning (MRTP) Act introduced in 2019 primarily focused on:

- (A) Revising FSI norms for all residential zones
- (B) Reconstituting the planning authorities under the Act
- (C) Streamlining the development plan revision process and introducing time-bound development permissions
- (D) Redefining occupancy categories for industrial buildings

Q7. Section 45 of the Architects Act, 1972 empowers:

- (A) The State Governments to register qualified architects independently
- (B) Architecture colleges to conduct qualifying examinations
- (C) The Council to fix minimum scales of fees for architectural services
- (D) The Council of Architecture to make regulations for carrying out the purposes of the Act

Q8. The National Institute of Urban Affairs (NIUA), which undertakes research and provides policy inputs on urban development and governance, is headquartered in:

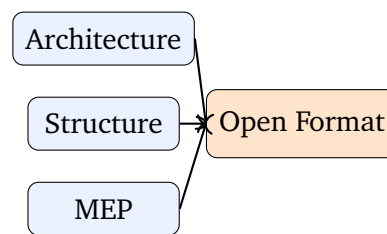
- (A) Mumbai
- (B) New Delhi
- (C) Bengaluru
- (D) Hyderabad

Q9. The IGBC Green Homes rating system, developed by the Indian Green Building Council (CII-IGBC), is specifically designed to evaluate and certify:



- (A) Large commercial complexes and IT parks
- (B) Government institutional buildings and universities
- (C) Residential buildings and housing projects
- (D) Industrial facilities and manufacturing plants

Q10. The diagram below shows three disciplines — Architecture, Structure, and MEP (Mechanical, Electrical, Plumbing) — each contributing models that converge into a single open, neutral data exchange format at the centre. This open standard that enables BIM interoperability across software platforms is:



Multi-discipline BIM collaboration

- (A) Industry Foundation Classes (IFC)
- (B) Drawing Exchange Format (DXF)
- (C) Building Energy Modelling (BEM) format
- (D) Computer-Aided Design (CAD) format



Detailed Solutions**Q1.****Solution**

Concept — NBC 2016 High-Rise Classification: The National Building Code of India 2016 defines a high-rise building as one whose height exceeds 15 m from the average surrounding ground level. Buildings in this category are subject to enhanced fire and life safety provisions including fire lifts, wet riser systems, and refuge floors. Answer: (A). **Step 1 — Locate the threshold in NBC 2016:** Part 4 (Fire and Life Safety) and the General Building Requirements section both reference 15 m as the trigger height for classifying a building as high-rise, mandating compliance with additional safety measures.

Why other options are wrong:

- Option A: 15 m — **Correct.** This is the NBC 2016 definition.
- Option B: 18 m — Incorrect; 18 m has no special classification significance in NBC 2016.
- Option C: 24 m — Incorrect; 24 m is sometimes cited in older local codes but is not the NBC 2016 high-rise threshold.
- Option D: 12 m — Incorrect; 12 m is not a high-rise threshold in NBC 2016.

Final Answer: As per NBC 2016, buildings exceeding **15 m** are classified as high-rise. ⇒ (A) 15 m

Answer: (A) [Go Back to Q1](#)

Q2.**Solution**

Concept — NBC 2016 Part Structure: NBC 2016 is organised into 12 Parts, each addressing a specific domain of building regulation. Understanding the scope of each Part is essential for practice under the Code. Answer: (C). **Step 1 — Identify Part 3 of NBC 2016:** Part 3 of NBC 2016 is titled “Development Control Rules and General Building Requirements.” It covers plot coverage, FAR/FSI, setbacks, heights, and general construction requirements applicable to buildings of all occupancies.

Why other options are wrong:

- Option A: Fire and Life Safety — This is covered under Part 4 of NBC 2016, not Part 3.



- Option B: Structural Design provisions — Structural design is addressed in Part 6 of NBC 2016.
- Option C: Development Control Rules — **Correct.** Part 3 covers DCR and general building requirements.
- Option D: Plumbing and Drainage Systems — These are addressed in Part 9 (Plumbing Services) of NBC 2016.

Final Answer: NBC 2016 Part 3 covers Development Control Rules and General Building Requirements. $\Rightarrow$ (C)

Answer: (C) [Go Back to Q2](#)

Q3.

Solution

Concept — UDCPR 2020 Parking Norms for Commercial Use: The Unified Development Control and Promotion Regulations (UDCPR) 2020 prescribe parking standards based on building use and floor area. For commercial buildings, the norm is 1 Equivalent Car Space (ECS) per 50 m² of total floor area. Answer: (D).

Step 1 — Apply the formula:

$$\text{Required ECS} = \frac{\text{Total Floor Area}}{\text{ECS norm}} = \frac{1500 \text{ m}^2}{50 \text{ m}^2/\text{ECS}} = 30 \text{ ECS}$$

Step 2 — Cross-check with the diagram: The indicative parking layout shows two bays of stalls with a central aisle, confirming a structured arrangement; the calculation drives the actual count independently of the indicative layout.

Why other options are wrong:

- Option A: 25 ECS — Results from incorrectly using 60 m²/ECS ($1500 \div 60 = 25$), which is not the UDCPR commercial norm.
- Option B: 40 ECS — Results from using 37.5 m²/ECS, which is not a standard UDCPR norm.
- Option C: 20 ECS — Results from incorrectly using 75 m²/ECS.
- Option D: 30 ECS — **Correct.** $1500 \div 50 = 30 \text{ ECS}$.

Final Answer: $1500 \div 50 = 30 \text{ ECS} \Rightarrow$ (D) 30 ECS

Answer: (D) [Go Back to Q3](#)



Q4.

Solution

Concept — UDCPR 2020 TDR (Transferable Development Rights): TDR is a mechanism under UDCPR 2020 that allows landowners who surrender land for public reservations (roads, parks, schools, etc.) to receive development rights certificates that can be used on other plots. The “receiver” plot must meet specific eligibility criteria. Answer: (B). **Step 1 — Key UDCPR TDR receiver plot conditions:** UDCPR 2020 stipulates that TDR can be utilised on a receiver plot fronting a road whose width is equal to or greater than the road width of the sender plot, and within the jurisdiction of the same planning authority that issued the TDR certificate. Cross-authority use is not permitted.

Why other options are wrong:

- Option A: Different municipal corporation area — Incorrect; TDR cannot be transferred across different planning authority jurisdictions under UDCPR.
- Option B: Road at least as wide, same jurisdiction — **Correct.** This is the UDCPR receiver plot condition.
- Option C: Agricultural land outside urban agglomeration — Incorrect; TDR can only be used in designated urban zones under the same planning authority.
- Option D: Eco-sensitive or coastal areas — Incorrect; these areas have specific restrictions and TDR cannot typically be loaded on such plots.

Final Answer: TDR receiver plots must front a road at least as wide as the sender plot and lie within the same planning authority’s jurisdiction. ⇒ (B)

Answer: (B) [Go Back to Q4](#)

Q5.

Solution

Concept — UDCPR 2020 Special Building Classification: UDCPR 2020 defines a “special building” as one whose height exceeds 15 m. Such buildings require mandatory clearance from the Director of Fire Services (Maharashtra) and are subject to additional structural scrutiny and fire safety infrastructure requirements. Answer: (A). **Step 1 — Identify the height threshold:** The UDCPR 2020 provision for special buildings sets the trigger at 15 m, aligning with the NBC 2016 high-rise definition. Above this height, extra compliance steps are mandatory before a building permit is issued.



Why other options are wrong:

- Option A: 15 m — **Correct.** This is the UDCPR 2020 special building threshold.
- Option B: 24 m — Incorrect; 24 m is not the UDCPR 2020 special building threshold.
- Option C: 30 m — Incorrect; 30 m is a threshold for certain additional fire safety measures but not the initial special building classification.
- Option D: 12 m — Incorrect; this height does not trigger special building status under UDCPR 2020.

Final Answer: Buildings exceeding **15 m** are classified as special buildings under UDCPR 2020. ⇒ (A) 15 m

Answer: (A) [Go Back to Q5](#)

Q6.

Solution

Concept — MRTP Act 1966 and 2019 Amendment: The Maharashtra Regional and Town Planning Act, 1966 governs land use planning and development permissions in Maharashtra. Significant amendments were made over the years to improve efficiency. The 2019 amendment addressed procedural reforms in development plan preparation and permission grant. Answer: (C). **Step 1 — Scope of the 2019 MRTP Amendment:** The Maharashtra government's 2019 amendment to the MRTP Act introduced key reforms to streamline the development plan revision process, establish time-bound procedures for granting development permissions, and reduce delays in the planning and permission pipeline. This was part of the state's ease-of-doing-business initiative for the construction sector.

Why other options are wrong:

- Option A: Revising FSI norms — FSI changes are typically issued through UDCPR or GRs, not through the primary MRTP Act amendment of 2019.
- Option B: Reconstituting planning authorities — Reconstitution is not the primary focus of the 2019 amendment.
- Option C: Streamlining development plan revision and time-bound permissions — **Correct.** This was the primary thrust of the 2019 MRTP amendment.
- Option D: Redefining occupancy categories for industrial buildings — Occupancy categories are addressed in building codes and UDCPR, not this particular MRTP amendment.



Final Answer: The 2019 MRTTP Act amendment primarily streamlined development plan revision and introduced time-bound development permissions. ⇒ (C)

Answer: (C) [Go Back to Q6](#)

Q7.

Solution

Concept — Architects Act 1972, Section 45: The Architects Act, 1972 established the Council of Architecture (CoA) and defined its powers and functions. Various sections of the Act delineate specific powers granted to the CoA, the Central Government, and other stakeholders. Answer: (D). **Step 1 — Read Section**

45 of the Architects Act: Section 45 of the Architects Act, 1972 specifically empowers the Council of Architecture to make regulations, with prior approval of the Central Government, for carrying out the purposes of the Act. These regulations cover matters such as conditions of enrolment, examination standards, professional conduct, and the maintenance of the register of architects.

Why other options are wrong:

- Option A: State Governments registering architects independently — The registration of architects is a central function of the CoA; States cannot register architects independently under the Act.
- Option B: Architecture colleges conducting qualifying examinations — Examinations and their recognition are overseen by the CoA, not individual colleges acting independently.
- Option C: Council to fix minimum fee scales — Fixing minimum fee scales is not an explicit power granted under Section 45; it may be recommended but is not legislated in this section.
- Option D: CoA making regulations for the Act — **Correct.** Section 45 grants the CoA power to make regulations.

Final Answer: Section 45 of the Architects Act, 1972 empowers the Council of Architecture to make regulations for carrying out the purposes of the Act. ⇒ (D)

Answer: (D) [Go Back to Q7](#)



Q8.

Solution

Concept — National Institute of Urban Affairs (NIUA): NIUA is India's premier research and training institution focused on urban development, urban governance, and municipal finance. It was established in 1976 under the aegis of the Ministry of Housing and Urban Affairs, Government of India. Answer: (B). **Step 1**

— **Identify NIUA's location:** NIUA is headquartered in **New Delhi**. It undertakes policy research, capacity building, and knowledge dissemination for urban local bodies and planning authorities across India. Being under the central ministry, its headquarters is in the national capital.

Why other options are wrong:

- Option A: Mumbai — Mumbai is Maharashtra's state capital and a major urban centre, but NIUA is not located there.
- Option B: New Delhi — **Correct.** NIUA is headquartered in New Delhi.
- Option C: Bengaluru — Bengaluru houses several research institutions, but NIUA is not among them.
- Option D: Hyderabad — Hyderabad is the capital of Telangana; NIUA is not headquartered there.

Final Answer: NIUA is headquartered in **New Delhi**. ⇒ (B) New Delhi

Answer: (B) [Go Back to Q8](#)

Q9.

Solution

Concept — IGBC Green Building Rating Systems: The Indian Green Building Council (IGBC), under the Confederation of Indian Industry (CII), has developed multiple green building rating systems tailored to different building typologies. Each rating system is purpose-built for a specific sector. Answer: (C). **Step 1** —

Identify the scope of IGBC Green Homes: IGBC Green Homes is specifically designed for **residential buildings and housing projects**, including apartments, villas, group housing, and affordable housing schemes. It evaluates sustainability across site planning, water efficiency, energy performance, materials, and indoor environment quality for the residential typology.

Why other options are wrong:

- Option A: Large commercial complexes and IT parks — These are covered by the IGBC Green Building (Commercial) or LEED India for Core & Shell



rating systems, not Green Homes.

- Option B: Government institutional buildings and universities — These would fall under IGBC Green Campus or IGBC Green Existing Buildings, not Green Homes.
- Option C: Residential buildings and housing projects — **Correct.** IGBC Green Homes targets the residential sector.
- Option D: Industrial facilities and manufacturing plants — Industrial buildings are addressed by IGBC Green Factory, not Green Homes.

Final Answer: IGBC Green Homes is designed for residential buildings and housing projects. ⇒ (C)

Answer: (C) [Go Back to Q9](#)

Q10.

Solution

Concept — BIM Interoperability and Open Standards: Building Information Modelling (BIM) involves multiple disciplines working with different software platforms. To enable seamless exchange of model data across software from various vendors, an open, vendor-neutral file format is required. This is addressed by the Industry Foundation Classes (IFC) standard. Answer: (A). **Step 1 — Identify**

IFC: Industry Foundation Classes (IFC) is an open, international standard (ISO 16739) developed by buildingSMART International. It enables interoperability between different BIM authoring tools (e.g., Revit, ArchiCAD, Tekla) by providing a neutral schema for sharing architectural, structural, and MEP model data without loss of information.

Step 2 — Relate to diagram: The diagram shows Architecture, Structure, and MEP each feeding into a central “Open Format” node. This open format that accepts data from all three disciplines and is software-agnostic is precisely what IFC represents.

Why other options are wrong:

- Option A: IFC (Industry Foundation Classes) — **Correct.** IFC is the open BIM interoperability standard.
- Option B: DXF (Drawing Exchange Format) — DXF is a CAD exchange format for 2D/3D geometry developed by Autodesk; it is not a full BIM data schema.
- Option C: BEM (Building Energy Modelling) format — BEM formats (e.g., EnergyPlus IDF) are specific to energy analysis and do not represent the full multi-discipline BIM open standard.



- Option D: CAD format — CAD format is a generic term; no single open CAD format replaces IFC for BIM interoperability.

Final Answer: The open standard enabling multi-discipline BIM interoperability is IFC (Industry Foundation Classes). ⇒ (A) IFC

Answer: (A) [Go Back to Q10](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	C	3	D	4	B	5	A
6	C	7	D	8	B	9	C	10	A

