

MAH M Arch CET Current Architecture Practice

Sample Paper – 2

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.

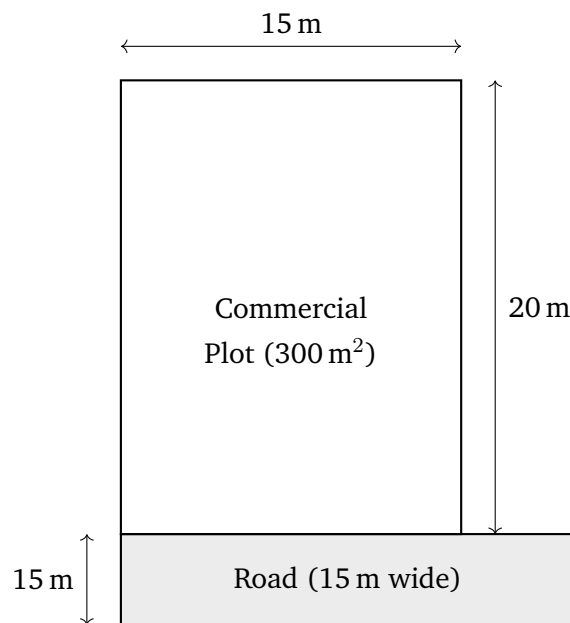
Questions

- Q1.** Under NBC 2016 Part 4, buildings are classified into construction types based on fire resistance. Which construction type involves a protected non-combustible structural system (e.g., steel framing with fire-protection cladding)?
- (A) Type I — Fire Resistive
(B) Type II — Protected Non-Combustible
(C) Type III — Unprotected Combustible
(D) Type IV — Ordinary Construction
- Q2.** NBC 2016 mandates provision of a passenger lift in a building when its height exceeds:
- (A) 10 m



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

Q3. The site plan below shows a commercial plot of $15\text{ m} \times 20\text{ m}$ on a road 15 m wide in a non-MMR urban local body. Under UDCPR 2020, what is the maximum permissible built-up area if the base FSI for commercial use on this road width is 2.0?



- (A) 300 m²
- (B) 900 m²
- (C) 600 m²
- (D) 1200 m²

Q4. For a building on a road of width 9 m in a Maharashtra urban local body area, UDCPR 2020 limits the maximum permissible building height based on the road width. The maximum height is:

- (A) 13.5 m
- (B) 9.0 m
- (C) 18.0 m



(D) 12.0 m

Q5. Under the Maharashtra Regional and Town Planning (MRTP) Act, 1966, who is empowered to finally approve and sanction the Regional Plan?

- (A) The local planning authority
- (B) The appointed Town Planning Officer
- (C) The Municipal Corporation
- (D) The State Government

Q6. Under the MRTP Act, 1966, which authority is empowered to issue an Interim Development Order (IDO) to regulate development in a planning area during the period before the Development Plan is finally sanctioned?

- (A) The State Government
- (B) The Planning Authority
- (C) The Regional Planning Board
- (D) The Town Planning Officer

Q7. Under the Architects Act, 1972, a complaint of professional misconduct against a registered architect is referred to:

- (A) The High Court of the respective State
- (B) A State Architects Council
- (C) A Disciplinary Committee constituted by the Council of Architecture
- (D) The Ministry of Housing and Urban Affairs

Q8. The LEED v4 (Leadership in Energy and Environmental Design) rating awards Platinum certification to buildings that achieve a minimum of:

- (A) 80 points
- (B) 60 points



(C) 50 points

(D) 70 points

Q9. In Building Information Modelling (BIM), Level of Development (LOD) 300 is characterised by a model element that is:

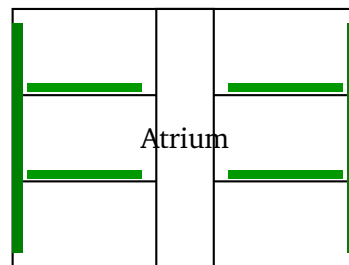
(A) Represented as a generic symbol with approximate dimensions only

(B) A concept-level placeholder with no dimensional accuracy

(C) A fabrication-ready model with exact specifications and tolerances

(D) Modelled as a specific system with defined quantity, size, shape, location, and orientation

Q10. The building section below depicts a multi-storey structure with planted floor slabs (green roofs on each level), vertical vegetation panels on the facade, and a central atrium allowing natural light and air penetration. This design strategy is an example of:



Planted slabs, vertical green panels, central atrium

(A) Brutalism

(B) Biophilic Design

(C) Deconstructivism

(D) Parametric Architecture



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

Concept — NBC 2016 Construction Types (Fire Resistance): NBC 2016 Part 4 classifies buildings by construction type based on the fire resistance of their structural and enclosure elements. Type I is the most fire-resistant (fully fire-resistive), while types progress toward less protection. Answer: (B). **Step 1 — Identify the construction types:** NBC 2016 recognises five main construction types. Type I (Fire Resistive) uses non-combustible materials with the highest fire-resistance ratings. Type II (Protected Non-Combustible) uses non-combustible materials such as steel that are fire-protected with cladding or spray-applied coatings, but with lower fire-resistance ratings than Type I.

Step 2 — Match the description: The question specifically states “protected non-combustible structural system (steel framing with fire-protection cladding)”, which precisely describes Type II.

Why other options are wrong:

- Option A: Type I — Fire Resistive uses fully fire-resistive (concrete/masonry) construction, not merely protected steel.
- Option B: Type II — Protected Non-Combustible is the correct answer.
- Option C: Type III — Unprotected Combustible involves combustible elements with no fire protection.
- Option D: Type IV — Ordinary Construction uses masonry walls with timber floors/roofs; it is not specifically a protected non-combustible category.

Final Answer: Protected non-combustible structural system ⇒
Type II — Protected Non-Combustible

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



Q2.

Solution

Concept — NBC 2016 Lift Provision Requirement: NBC 2016 Part 8 (Building Services) prescribes mandatory lift installation thresholds based on building height to ensure accessibility and vertical circulation in mid-rise and high-rise buildings. Answer: (D). **Step 1 — Recall the threshold:** Under NBC 2016 Part 8, a passenger lift is mandatory in buildings whose height exceeds 15 m. This threshold aligns with the definition of mid-rise buildings requiring mechanical vertical transport.

Step 2 — Eliminate incorrect values: 10 m and 12 m are below the threshold; 18 m is above it. The code specifies 15 m as the trigger height.

Why other options are wrong:

- Option A: 10 m is too low; lifts are not mandatory at this height under NBC 2016.
- Option B: 12 m is also below the mandatory threshold.
- Option C: 18 m is above the threshold; lifts would already be required before a building reaches 18 m.
- Option D: 15 m is the correct mandatory provision height per NBC 2016 Part 8.

Final Answer: Passenger lift mandatory when building height exceeds $\Rightarrow$ 15 m

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

Q3.

Solution

Concept — UDCPR 2020 Floor Space Index (FSI): FSI (also called FAR) is the ratio of total built-up area to plot area. Maximum built-up area = $\text{FSI} \times \text{Plot Area}$. Answer: (C). **Step 1 — Identify plot area:** From the site plan, plot dimensions are $15 \text{ m} \times 20 \text{ m}$.

$$\text{Plot Area} = 15 \times 20 = 300 \text{ m}^2$$

Step 2 — Apply base FSI: The road width is 15 m and base FSI for commercial use is given as 2.0.

$$\text{Maximum Built-up Area} = \text{FSI} \times \text{Plot Area} = 2.0 \times 300 = 600 \text{ m}^2$$



Why other options are wrong:

- Option A: 300 m^2 equals only the plot area ($\text{FSI} = 1.0$), not 2.0.
- Option B: 900 m^2 would correspond to $\text{FSI} = 3.0$, which is not the given base FSI.
- Option C: 600 m^2 is the correct answer ($\text{FSI } 2.0 \times 300 \text{ m}^2$).
- Option D: 1200 m^2 would correspond to $\text{FSI} = 4.0$, exceeding the given base FSI.

Final Answer: $2.0 \times 300 \text{ m}^2 = 600 \text{ m}^2$

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

Q4.

Solution

Concept — UDCPR 2020 Height Restriction Based on Road Width: Under UD-CPR 2020, the permissible building height in urban local body (ULB) areas is linked to the abutting road width. The general rule is that the maximum building height shall not exceed 1.5 times the road width. **Answer: (A).** **Step 1 — Apply the formula:**

$$\text{Maximum Height} = 1.5 \times \text{Road Width} = 1.5 \times 9 \text{ m} = 13.5 \text{ m}$$

Step 2 — Verify: The $1.5\times$ multiplier ensures adequate light, ventilation, and fire-fighting access relative to the road. For a 9 m road, 13.5 m is the cap.

Why other options are wrong:

- Option A: 13.5 m is the correct answer ($1.5 \times 9 \text{ m}$).
- Option B: 9.0 m would imply a 1:1 ratio, which is not the UDCPR provision.
- Option C: 18.0 m would require a 12 m road ($18/1.5 = 12 \text{ m}$), not a 9 m road.
- Option D: 12.0 m corresponds to a road width of 8 m ($12/1.5 = 8 \text{ m}$), not 9 m.

Final Answer: $1.5 \times 9 \text{ m} = 13.5 \text{ m}$

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



Q5.

Solution

Concept — MRTP Act 1966, Regional Plan Approval Authority: The Maharashtra Regional and Town Planning Act, 1966 establishes a hierarchy for preparing and sanctioning statutory plans. Section 19 of the MRTP Act vests the power to finally sanction a Regional Plan in the State Government. Answer: (D). **Step 1 —**

Recall the MRTP hierarchy: A Regional Plan is prepared by the Regional Planning Board and submitted to the State Government. After considering objections and suggestions, the State Government issues the final sanction. This distinguishes Regional Plans from Development Plans, which are sanctioned by the State Government but prepared by local planning authorities.

Step 2 — Confirm: Under Section 19 of the MRTP Act, 1966, the State Government is the sanctioning authority for the Regional Plan.

Why other options are wrong:

- Option A: The local planning authority prepares the Development Plan, not the Regional Plan, and does not have final sanction power.
- Option B: The Town Planning Officer is an executive functionary; sanction is not vested in this officer.
- Option C: The Municipal Corporation has no role in sanctioning a Regional Plan.
- Option D: The State Government is the correct sanctioning authority.

Final Answer: Final sanctioning authority for Regional Plan ⇒
The State Government

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

Q6.

Solution

Concept — MRTP Act 1966, Interim Development Order (Section 15): Before a Development Plan is finalised and sanctioned, a planning area may lack statutory land-use regulation. Section 15 of the MRTP Act, 1966 empowers the *Planning Authority* to issue an Interim Development Order (IDO) to control development during this interim period. Answer: (B).

Step 1 — Purpose of the IDO: Between the declaration of a planning area and the sanctioning of the Development Plan, uncontrolled development can prejudice the plan. The IDO acts as a temporary regulatory instrument to manage land use



and prevent harmful development during the plan-preparation period.

Step 2 — Issuing authority: Section 15 of the MRTP Act confers the power to make and publish an IDO on the Planning Authority (typically the Municipal Corporation, Municipal Council, or the designated authority for the area). The State Government may approve or modify the IDO, but the power to issue it rests with the Planning Authority.

Why other options are wrong:

- Option A: The State Government may approve or modify an IDO but does not itself issue it under Section 15.
- Option B: Correct — the Planning Authority issues the Interim Development Order under Section 15 of the MRTP Act, 1966.
- Option C: The Regional Planning Board prepares Regional Plans; it has no role in issuing IDOs for local planning areas.
- Option D: The Town Planning Officer is an appointee who prepares Town Planning Schemes; they do not issue IDOs.

Final Answer: Authority empowered to issue IDO under MRTP Act, 1966 (Section 15) ⇒ The Planning Authority

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

Q7.

Solution

Concept — Architects Act 1972, Disciplinary Proceedings: The Architects Act, 1972 establishes the Council of Architecture (CoA) as the statutory body regulating the architectural profession in India. Section 30 of the Act deals with disciplinary proceedings against registered architects. Answer: (C). **Step 1 — Recall the statutory mechanism:** Under the Architects Act, 1972, when a complaint of professional misconduct is received, the Council of Architecture constitutes a Disciplinary Committee to investigate the matter. This committee examines the complaint, hears the architect, and recommends action to the Council.

Step 2 — Confirm the body: The Disciplinary Committee is constituted by the Council of Architecture; it is not a court, a state body, or a ministry.

Why other options are wrong:

- Option A: The High Court is an appellate forum after CoA proceedings, not the first point of reference.



- Option B: There is no “State Architects Council” under the Architects Act; the CoA is a single national body.
- Option C: A Disciplinary Committee constituted by the Council of Architecture is the correct authority.
- Option D: The Ministry of Housing and Urban Affairs has no direct disciplinary role over individual architects under the Act.

Final Answer: Complaint of misconduct referred to ⇒
Disciplinary Committee of the Council of Architecture

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

Q8.

Solution

Concept — LEED v4 Certification Thresholds: LEED (Leadership in Energy and Environmental Design) v4, published by the US Green Building Council (USGBC), awards certification at four levels based on total points earned across categories such as Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, and Indoor Environmental Quality. Answer: (A). **Step 1 — Recall the LEED v4 point thresholds:**

- Certified: 40–49 points
- Silver: 50–59 points
- Gold: 60–79 points
- Platinum: 80 points and above

Step 2 — Identify Platinum threshold: A minimum of 80 points out of a possible 110 points is required for Platinum certification under LEED v4.

Why other options are wrong:

- Option A: 80 points is the correct minimum for Platinum certification.
- Option B: 60 points is the Gold threshold minimum, not Platinum.
- Option C: 50 points qualifies for Silver certification, not Platinum.
- Option D: 70 points falls within the Gold range (60–79), not Platinum.

Final Answer: LEED v4 Platinum minimum ⇒ 80 points

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



Q9.

Solution

Concept — BIM Level of Development (LOD): The Level of Development (LOD) framework, defined by the American Institute of Architects (AIA) and adopted internationally, describes the degree of completeness of a BIM model element at each stage of design and construction. Answer: (D). **Step 1 — Recall LOD definitions:**

- LOD 100: Conceptual mass or symbol; no dimensional accuracy.
- LOD 200: Generic system with approximate size, shape, and location.
- LOD 300: Specific system with defined quantity, size, shape, location, and orientation; suitable for construction documents.
- LOD 400: Fabrication-ready; includes exact specifications, tolerances, and installation details.
- LOD 500: As-built; verified in field.

Step 2 — Match LOD 300: LOD 300 elements are modelled as specific systems with defined quantity, size, shape, location, and orientation — accurate enough for coordination and construction documentation but not yet fabrication-ready.

Why other options are wrong:

- Option A: Generic symbol with approximate dimensions describes LOD 200, not LOD 300.
- Option B: Concept-level placeholder with no dimensional accuracy describes LOD 100.
- Option C: Fabrication-ready model with exact specifications describes LOD 400.
- Option D: Specific system with defined quantity, size, shape, location, and orientation correctly describes LOD 300.

Final Answer: BIM LOD 300 ⇒ Specific system with defined quantity, size, shape, location, and

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



Q10.

Solution

Concept — Biophilic Design: Biophilic design is an architectural approach that integrates living nature and natural processes directly into buildings and urban environments. Key elements include planted surfaces (living walls, green roofs), natural light, water features, and spatial configurations such as atriums that mimic natural environments. Answer: (B). **Step 1 — Identify the design elements:**

The building section shows (a) planted floor slabs (green roofs at each level), (b) vertical vegetation panels on the facade, and (c) a central atrium for natural light and air. These are all hallmarks of biophilic design, which seeks to maintain occupant connection with nature.

Step 2 — Rule out other styles: Brutalism is characterised by exposed raw concrete and mass; Deconstructivism by fragmented, non-rectilinear forms; Parametric Architecture by algorithmically generated geometries. None of these prescribe living vegetation or atria as defining features.

Why other options are wrong:

- Option A: Brutalism emphasises raw materiality (béton brut), not living plants or nature integration.
- Option B: Biophilic Design is the correct answer — integration of nature into the built environment.
- Option C: Deconstructivism is defined by fragmented forms and spatial complexity, not vegetation.
- Option D: Parametric Architecture uses computational algorithms to generate form; vegetation is not a defining characteristic.

Final Answer: Planted slabs, vertical vegetation, and atrium ⇒ Biophilic Design

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



Answer Key

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

