Total No. of Questions: 6 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Engineering
End Sem Examination May-2024
CE3CO21 Building Planning & Drawing

Programme: B.Tech. Branch/Specialisation: CE

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. The part of building constructed below ground level is known as _____. **1**
(a) Plinth (b) Superstructure (c) Lintel (d) Foundation

ii. The minimum area of window should be _____ of the floor area in case of public buildings. **1**
(a) 10% (b) 15% (c) 20% (d) 25%

iii. Assembly buildings are- **1**
(a) Marriage hall (b) Theatres
(c) Assembly hall (d) All of these

iv. What is the full form of NBC? **1**
(a) National Building Code (b) National Building Centre
(c) National Business Centre (d) None of these

v. What is the full form of BIM? **1**
(a) Building Information Modelling
(b) Business information Modelling
(c) Building Instruction Modelling
(d) Business Instruction Modelling

vi. _____ in a building means free passage of clean air in a building. **1**
(a) Habitation (b) Ventilation (c) Protection (d) Sanitation

vii. The word orientation means to give _____ to the building. **1**
(a) Proper alignment (b) Proper direction
(c) Component (d) Elegance

viii. _____ refers to the effect produced by deriving the maximum benefits from minimum dimensions of the room. **1**
(a) Compactness (b) Roominess
(c) Grouping (d) Privacy

ix. Which of the following types of plans in a plan is at the roof level? **1**
(a) Foundation level plan (b) Floor plan
(c) Structural plan of a typical floor (d) Terrace plan

x. The plan of the buildings and elevations & sections accompanying the notice shall be drawn to a scale_____. **1**
(a) 1:10 (b) 1:50 (c) 1:100 (d) 1:500

Q.2 i. Enlist few functions of arches and lintels. **2**

ii. Explain the requirement and few necessary functions of a good foundation. **3**

iii. What are the different types of foundation? Explain any two in detail with a sketch. **5**

OR iv. Name different types of staircase. Sketch any one type enlisting its components in detail. **5**

Q.3 i. What are building bye-laws? Explain their utility. **3**

ii. Write short note on classification of buildings and open spaces in buildings. **7**

OR iii. Explain the measures to be taken while planning & designing for fire protection of building. **7**

Q.4 i. What are traps? Explain any two with sketches where necessary. **3**

ii. Write short notes on water distribution system in a building and acoustics of building. **7**

OR iii. Why is natural lighting and ventilation important in a building? How it can be achieved during building planning? Explain different types of ventilation. **7**

Q.5 i. What is form follow function? **2**

ii. What is orientation? Explain in detail its importance for any building & factors affecting building orientation. **8**

OR iii. Explain the various principles of planning with examples wherever required. **8**

Q.6 Attempt any two:

i. What are the different types of lines in technical drawings? **5**

ii. Write a short note on scaling of objects. Explain with example. **5**

iii. What do you mean by plan, section & elevation of a building? Explain with a neat sketch and detail. **5**

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Marking Scheme

CE3CO21 Building Planning & Drawing

Q.1	i)	d) Foundation		**1**
	ii)	c) 20%		**1**
	iii)	d) All of the above		**1**
	iv)	a) National Building Code		**1**
	v)	a) Building Information Modelling		**1**
	vi)	b) Ventilation		**1**
	vii)	b) proper direction		**1**
	viii)	b) Roominess		**1**
	ix)	d) Terrace Plan		**1**
	x)	c) 1:100		**1**
Q.2	i.	Functions of Arches & Lintels		**2**
	ii.	Requirement of foundation	1 Marks	**3**
		Functions of a good foundation	2 Marks	
	iii.	Different types of foundation	2 Marks	**5**
		Shallow or deep or, isolated, sloped, stepped, raft, grillage, combined, pile (Explain Any Two)	3 Marks	
OR	iv.	Different types of staircase	2 Marks	**5**
		Component parts with a neat sketch	3 Marks	
Q.3	i.	Building bye-laws and their utility	3 Marks	**3**
	ii.	Classification of building	3.5 Marks	**7**
		Open spaces in building	3.5 Marks	
OR	iii.	Measures to be taken in fire protection while planning & design	5 Marks	**7**
		How it can be achieved	2 Marks	
Q.4	i.	Definition and utility of traps	1 Marks	**3**
		Nahni trap, grease trap, etc. (Any Two)	2 Marks	
	ii.	Water distribution system in building	3.5 Marks	**7**
		Acoustics of building	3.5 Marks	
OR	iii.	Importance of natural light and ventilation in a building	2 Marks	**7**
		How it can be achieved as per bye-laws	2 Marks	
		Different Types of ventilation.	3 Marks	
Q.5	i.	Form Follow function	2 Marks	**2**
	ii.	Orientation & its importance for any type of building structure	6 Marks	**8**

		Factors affecting building orientation	2 Marks	
OR	iii.	Various principles of planning, Aspect, prospect, grouping, roominess, circulation (horizontal & vertical), sanitation, lighting, utilities etc. with examples	8 Marks	**8**
Q.6		Any Two:		
	i.	Explain different types of lines in technical drawing		**5**
	ii.	Scaling of object, concept and necessary example		**5**
	iii.	Sketch a small building or a part explaining plan, section and elevation or explain through example of any portion of a building.		**5**

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