

University of Mumbai

Examination 2021

Program: Civil Engineering

Curriculum Scheme: Rev-2019

Examination: SE_ Semester_III

Course Code: CEC304 & Course Name: APDB (Architectural Planning & Design of Buildings)

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	In a Multi-Specialty Hospital, I.P.D consists of -----
Option A:	Reception, Office, Medical Shop
Option B:	X-Ray & Pathology Lab
Option C:	Consultancy Rooms
Option D:	Wards
2.	For a Floor to Floor height of 3.6 m.(Residential), how many TREADS will be there in each flight for a Dog-Legged Staircase, if the RISE is assumed to be 0.15 m.?
Option A:	10
Option B:	11
Option C:	12
Option D:	13
3.	If the Rise is 0.15 m., Tread is 0.3 m., Width of Landing is 1.2 m., for a School Building having Floor to Floor height as 3.9 m., (Dog-Legged Staircase), the over all length of Staircase in PLAN is -----
Option A:	3.6 m.
Option B:	4.5 m.
Option C:	4.8 m.
Option D:	5.0 m.
4.	When the F.S.I is 1.5 and Built-up area of the building is 300 Sq.m.,the PLOT AREA will be ----
Option A:	450 Sq.m.
Option B:	200 Sq.m.
Option C:	300 Sq.m.
Option D:	400 Sq.m.
5.	The minimum size of VENTILATOR is Toilet blocks, among the following will be generally
Option A:	0.1 m x 0.15 m
Option B:	0.15 m x 1.15 m
Option C:	1.0 m x 0.15 m
Option D:	0.3 mx0.6 m
6.	King Post Roof Truss is used for a Clear Span of -----
Option A:	15.25 m.
Option B:	12.5 m.

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Option C:	6.5 m.
Option D:	3.25 m.
7.	Following are the part of Green Building feautres
Option A:	Green Color, Solar Power
Option B:	Green Color, Rain Water Harvesting
Option C:	Solar Power, Green Trees
Option D:	Solar Power, Rain Water Harvesting
8.	I.C.U is provided in -----
Option A:	HOSTEL
Option B:	HOTEL(Lodging & Boarding)
Option C:	HOSPITAL
Option D:	CLINIC
9.	With respect to Wind direction &Sun-Lighting, the position of the PLAN of the Residential building is placed is known as -----
Option A:	ASPECT
Option B:	PROSPECT
Option C:	GROUPING
Option D:	ORIENTATION
10.	1-Point Perspective will have
Option A:	2 S.P, 2 P.P, 1 V.P
Option B:	2 S.P, 1 P.P, 1 V.P
Option C:	1 S.P, 1 P.P, 1 V.P
Option D:	1 S.P, 2 P.P, 1 V.P
11.	In a Residential building, ASPECT for a Bed Room is in -----
Option A:	S/S.E
Option B:	W/S.W
Option C:	N/N.E
Option D:	E/N.E
12.	In a 2-Point Perspective, the POINTS & Lines (of PLAN)touching the P.P, will have
Option A:	2 times Height in Perspective View
Option B:	3 times Height in Perspective View
Option C:	Half the Height in Perspective View
Option D:	Actual Heights in Perspective View
13.	In the Sectional Elevation of a building, the S.L(Sill Level) is the distance --
Option A:	From Floor Level to Starting point of Door height
Option B:	From Floor Level to Starting point of Window height
Option C:	From Foundation Level to Starting point of Door height
Option D:	From Foundation Level to Starting point of Window height
14.	Housing & Road Systems are the concept of -----
Option A:	Principles of Residential Buildings

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Option B:	Principles of Town Planning
Option C:	Zoning Regulations
Option D:	Green Building Concept
15.	When drawing a Plan for a scale of 1:50, the 12m.becomes -----
Option A:	6 cm.
Option B:	12 cm.
Option C:	24 cm.
Option D:	60 cm.
16.	To obtain Parallel lines, Curves, Concentric Circes, the following function is used in CAD drawing
Option A:	ARRAY
Option B:	OFFSET
Option C:	FILLET
Option D:	COPY
17.	In a High School building, the minimum Carpet area per Student in a Laboratory is ----
Option A:	1-2 Sq.m.
Option B:	2-3 Sq.m.
Option C:	3-4 Sq.m.
Option D:	4-5 Sq.m.
18.	The Floor-Floor height of 3.0 m. in a Residential building(Ground Floor structure) is measured ---
Option A:	From Ground level to Foundation level
Option B:	From Ground level to Plinth level
Option C:	Plinth level to Slab level
Option D:	Slab level to Parapet wall level
19.	Which mode allows the user to draw 90 degrees straight lines in CAD ?
Option A:	Osnap
Option B:	Ortho
Option C:	Linear
Option D:	Polar tracking
20.	Which command is used to divide an object into segments, having predefined length in CAD?
Option A:	Divide
Option B:	Chamfer
Option C:	Trim
Option D:	Measure

Q2	Solve any one question (A/B)	(20 Marks)
A	Design a single storey hospital building with following data: i) No of general wards= 2 with 8bed capacity in each, ii) 4 special rooms and 4 semi special rooms, iii) Reception area with adequate waiting, iv) laboratories/ X ray rooms, v) Lift/Staircase for future expansion, vi) Operation Theatres 20m²	

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	vii) Varandah, passage, sanitary units of appropriate dimensions should be provided. Show North direction and indicate door/ window locations, also mention internal dimensions and scale.
B	<p>Draw the LINE Plans of a Residential Bungalow, as (G+1) storied RCC Framed structure with following facilities.</p> <p>(i) Living Room = 20 Sq.m. (ii) Master's Bedroom (with A.T) = 20 Sq.m. (iii) Bed Room = 15 Sq.m. (iv) Guest Room = 15 Sq.m. (v) Kitchen = 12 Sq.m. (vi) Store Room = 12 Sq.m. (vii) Drawing Room = 15 Sq.m.</p> <p>Provide Toilets, Passages as per Bye-laws. Assume Floor to Floor height as 3.3 m.</p> <p>Show position of <u>Columns, Doors, Windows & Ventilators</u> in the proposed PLANS.</p> <p>Draw</p> <p>(i) Ground Floor LINE PLAN (ii) First Floor LINE PLAN</p>
Q3	Solve any 4 questions out of 6 questions . (4x5=20 Marks)
A	Differentiate between One-Point & Two-Point Perspective drawings for Rules & Procedure.
B	Discuss about "Slum Clearance & Redevelopment of Buildings"
C	Write on " Building Bye-laws & Regulations"
D	Explain the following planning considerations while designing Green building :(i) Site selection (ii) Orientation (iii) Sun path
E	Write about "Principles of Town Planning"
F	Write on "Principles of Planning for Residential Buildings"