

P P SAVANI UNIVERSITY

Fifth Semester of B. Arch. Examination

December 2022

SAAR3274 Building Construction & Technology-V

19.12.2022, Monday

Time: 10:00 a.m. To 12:00 p.m.

Maximum Marks: 40

Instructions:

1. Write main answer sheet no. in your block report under main supplementary.
2. Read instructions carefully before starting.
3. All construction lines must be clearly visible for drawing based answers.
4. Use proper intensity of lines in drawings. Neatness of drawing and lettering is important.
5. Assume suitable data where necessary.
6. Data given and assumed, in questions must be mentioned in the answers.

Q - 1	Fill in the blanks:	[05]	CO	BTL
I.	_____keep the membrane in proper form and ensure air loads are applied evenly.	1	1	1
II.	Doubly curved in the same direction is _____ form in tensile structure.	1	1	1
III.	ALDAI PARK is the example of _____ form of tensile structure.	1	1	1
IV.	All chord members intersect at _____to each other and form equilateral triangular grids in Three-way latticed grids.	1	2	2
V.	A pyramid with a square base that is essentially a part of _____.	1	1	1
Q - 2	Definitions.(Any 3)	[06]		
I.	Sub module	1	1,2	1
II.	Pin connection	1	1	1
III.	space frame	1	2	2
IV.	Conoids	1	1	1
Q - 3	Answer the questions.	[15]		
I.	Differentiate between Modular structure system and conventional system	1	4	4
II.	Differentiate between Flat slab system and slab beam system	1	4	4
III.(a)	Braced dome configuration with sketch for open exhibition Centre.	1	3	3
	or			
(b)	Orthogonal square pyramid space grids with openings	1	4	4
Q - 3	Answer the following.(Any 2)	[14]		
I.	Out of your Studio project, select any one large column free space by using space frame construction technique that you have designed and sketch out the plan, section and detail showing material and joinery.	1	6	6
II.	Explain in brief precast concrete portal frame and timber portal frame structure.	2	3,4	3,4
III.	Enlist material used in membrane structure. Describe any two materials in detail.	1	2	2

CO : Course Outcome Number

BTL : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create