

# P P SAVANI UNIVERSITY

Fourth Semester of B. Arch Examination

June 2022

SAAR2273 Building Construction & Technology-IV

07.06.2022, Tuesday

Time: 9:00 a.m. To 10:30 a.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** Answer the Following: (MCQ/Short Question/Fill in the Blanks)

[10]

- (i) On designing retaining walls it is necessary to take care of \_\_\_\_\_ exerted by soil mass.
- (a) Erosion
  - (b) Lateral pressure
  - (c) Surcharge
  - (d) Lateral stress
- (ii) Dampness spreads upwards from the ground only.
- (a) True
  - (b) False
- (iii) How is the base-level bending moment of a cantilever retaining wall expressed as a function of its height H?
- (a) H
  - (b) H/2
  - (c) H/3
  - (d) H/4
- (iv) A \_\_\_\_\_ is defined at the upper most part of the building which is constructed in the form of a framework to give protection to the building against rain, heat, snow, wind, etc.
- a) Roof
  - b) Truss
  - c) Chajja
  - d) Lintels
- (v) Which one of the following is the correct statement about R.C. retaining wall?
- (a) toe slab and heel slab are provided with reinforcements at top face
  - (b) toe slab and heel slab are provided with reinforcement at bottom face
  - (c) toe slab is provided with reinforcement at top face and heel slab at bottom face
  - (d) toe slab is provided at bottom face and heel slab at bottom face
- (vi) A bay window is a multi-panel window, which:
- (a) Is provided at corners
  - (b) Runs parallel to the wall
  - (c) Embeds inside wall
  - (d) Projects outside wall
- (vii) Mullion is \_\_\_\_\_ member employed to sub divide a window or door opening vertically.

- (a) Horizontal
  - (b) Inclined (at 45°)
  - (c) Vertical
  - (d) Inclined (at 60°)
- (viii) Vault is an architectural term for:
- (a) Cable
  - (b) Bridges
  - (c) Arch
  - (d) Dam
- (ix) Shell structure does not have any?
- (a) Bending moment
  - (b) Compressive stress
  - (c) Tensile stress
  - (d) Shear stress
- (x) \_\_\_\_\_ are the pieces of timber which extends from the eaves to the ridge.
- (a) Battens
  - (b) Purlins
  - (c) Eaves
  - (d) Rafters
- Q - 2 What are PEB structures? Advantages of PEB structures? [05]  
OR
- Q - 2 What are the merits and demerits of concrete flooring? [05]
- Q - 3 What is dampness in building? Discuss its possible causes and effects on the building structure? [10]  
OR
- Q - 3 State the general principles that should be observed in providing damp- proofing? [10]
- Q - 4 (a) List the various roof coverings which are generally used for pitched roof in India. Describe the method of laying and fixing them with neat sketches? [15]  
(b) Discuss the various factors which require due consideration while selecting a roof covering for a building?
- OR
- Q - 4 Explain the construction of the following: [15]  
Doors by means of neat sketches giving their suitability
- a) Ledged and braced door.
  - b) Framed and braced door.
  - c) Panelled doors.
  - d) Solid core flush door.
  - e) Glazed or sash door.

\*\*\*\*\*