

Total No. of Questions : 8]

SEAT No. :

PA-1179

[Total No. of Pages : 2

[5925]-201

S.Y. (Civil Engineering)

**BUILDING TECHNOLOGY AND ARCHITECTURAL PLANNING
(2019 Pattern) (Semester - III) (201001)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Figures to the right indicate full marks.
- 3) Draw neat figures wherever necessary.
- 4) Assume necessary data.
- 5) Use of scientific calculator is allowed.

- Q1) a)** Enlist various types of fixtures for doors and explain anyone with a neat sketch. **[6]**
- b) State the types of flat terraced roofing and explain any one of them. **[6]**
- c) Explain in brief, the following: **[6]**
- i) Timber Linter
 - ii) Stone lintel

OR

- Q2) a)** Draw a neat labeled sketch of semicircular - arch and show: **[6]**
- i) Key stone
 - ii) Crown
 - iii) Springing line
- b) Enlist any four types of floor finishes and explain mosaic flooring. **[6]**
- c) Explain swing door with the help of a sketch. **[6]**

- Q3) a)** Enlist various types of residential buildings and explain any one in detail. **[6]**
- b) Explain steps for design of dog legged staircase. **[6]**
- c) Write a short note on rating system for green building. **[5]**

OR

P.T.O.

- Q4) a)** What are the fundamental requirements of residential building? [6]
 b) What do you understand by Leadership in Energy and Environmental desing (LEED)? [6]
 c) What are the salient features of Green Building? [5]

- Q5) a)** A hospital is to serve a population of 20000 and is to be designed on a site measuring 100m × 150m. Separate ward for men and women, W.C.s, nurses' rooms, etc are to be provided and details have to be worked out. Draw a line plan to a suitable scale. [12]
 b) What are the salient features of engineering student's hostel building? [6]

OR

- Q6) a)** Design a single storeyed restaurant building on a highway. The following units are to be provided: [12]

Entrance and general stationery shop	45 sqm
Dining Hall	300 sqm
Service	35 sqm
Kitchen	45 sqm
Store room	18 sqm
Cloak room for keeping baggage	15sqm
W.C For gents	2 nos
W.C for ladies	2 nos

Draw to a scaled 1 : 50 or suitable

- i) Line plan showing locations of doors and windows.
 b) What are the salient features of vegetable market building. [6]
- Q7) a)** Write a short note on land use zoning and mention the requirements of each. [6]
 b) Compare fire resisting properties of concrete and stone. [6]
 c) Explain with sketches, wind and stack effect. [5]

OR

- Q8) a)** What do you understand by RERA Act? [6]
 b) What are the considerations for natural lighting in a residential building? [6]
 c) Explain with a neat diagram winter air conditioning. [5]

