

04/07/2016

4E4115

Roll No. _____

Total No of Pages: **3**

4E4115

B.Tech. IV-Sem (Main & Back) Exam; June-July 2016

Civil Engineering

4CE5A Building Planning

Time: 3 Hours

Maximum Marks: 80

Min. Passing Marks (Main & Back): 26

Min. Passing Marks (Old Back): 24

Instructions to Candidates:-

*Attempt any **five** questions, selecting **one** question from **each** unit. All Questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.*

Units of quantities used/ calculated must be stated clearly.

Use of following supporting material is permitted during examination.

(Mentioned in form No.205)

1. Table 9 – SP – 41 (S&T) - 1987

2. 1/2 size drawing sheet

UNIT-I

Q.1 (a) Write down the different criteria for selection of site for a building. Discuss economic and legal aspects. [10]

(b) Discuss types of buildings based on fire resistance. [6]

OR

Q.1 (a) Design a horizontal louver for northern India for an external wall facing south for completely cutting off summer sun and allowing winter sun. $\beta = 0$ (say) size of window 100 cm (H) $\times$ 200 cm (V). [8]

- (b) Discuss the means of energy conservation in buildings.

[8]

UNIT-II

- Q.2 (a) What do you mean by orientation of a building? Discuss factors affecting it. [8]
- (b) What do you understand by global climate? Discuss factors affecting global climate. [8]

OR

- Q.2 (a) What do you mean by building Bye-Laws? Discuss its objectives. [6]
- (b) Discuss regulations regarding: [10]
- (i) Open spaces
 - (ii) Lines of building frontages
 - (iii) Size of rooms.

UNIT-III

- Q.3 (a) What do you mean by planning of a building? Explain general scope of a building with examples. [8]
- (b) Discuss Roominess, Circulation, Flexibility and Privacy with respect to planning of a building. [8]

OR

- Q.3 (a) Discuss design of a residential building as per vastu. [8]
- (b) State and discuss any four factors affecting planning of building. [8]

UNIT-IV

- Q.4 Design and draw a residential building on a plot of $40' \times 70'$. There are roads on the North and East side of plot. Draw a plan and front elevation and mention schedule of rooms, doors, window and ventilators. [16]

OR

- Q.4 Design and draw a primary school of capacity 400 students. Estimate the size of plot, draw plan and front elevation and show the furniture detail of a classroom with dimension detail. [16]

UNIT-V

- Q.5 (a) What do you mean by acoustics of a building? Discuss acoustical requirements of a building. [6]
- (b) Discuss design of a cinema hall. [10]

OR

- Q.5 (a) Discuss lighting and ventilation requirements in a building [8]
- (b) Discuss fire fighting provisions in a building. [8]