

04/07/2016

4E4115

Roll No. _____

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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. ½ 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' × 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]