

**B.Tech. Civil (Construction Management) /
(BTCLEVI)**

Term-End Examination

00935

June, 2017

**ET-521(A) : PLANNING AND CONSTRUCTION OF
BUILDINGS**

Time : 3 hours

Maximum Marks : 70

Note : *There are two parts in the question paper. Part A is compulsory. Attempt any four questions from Part B, carrying equal marks.*

PART A

1. Prepare a suitable proportioned and dimensioned plan of a residential building whose details are as given below :

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- (a) Three bedrooms including one for guests
- (b) Three toilets
- (c) One drawing-cum-dining room
- (d) A kitchen
- (e) Utility space
- (f) Little storage space
- (g) A staircase

Restrictions :

Total covered area cannot exceed 60% of the plot area.

Privileges :

- (i) A canopy is permissible at roof level throughout the breadth of the building.
- (ii) A balcony on the rear side is permissible.

PART B

2. (a) What are the causes for the settlement of foundations ? 3
- (b) Under what conditions are individual RCC footings, combined RCC footings and raft foundations needed to be provided ? 7
3. (a) What is the purpose of providing a bond in the construction of a brickwork ? 4
- (b) Define the following terms with neat sketches is needed : 6
- (i) Bond stone
- (ii) Concrete blocks
- (iii) Ashlar chamfered stone masonry
4. (a) Draw a dimensioned sketch of a battened, ledged and braced door. 5
- (b) A suitable stair is to be provided in an office building. The staircase has the dimensions 2.8 m × 6 m. The vertical distance between the floors is 3.6 m. Two doors measuring 1.2 m each are provided in longitudinal walls, facing each other and located 50 cm from the transverse wall. Draw the staircase. 5



5. (a) Define the following in detail with neat sketches : 5
- (i) Quoins stone
 - (ii) Sills stone
 - (iii) Belts stone
 - (iv) Cornice stone
 - (v) Coping stone
- (b) What are the different materials used to finish ceilings in a building ? 5
6. (a) What are the various acoustical materials used and how are they painted ? 6
- (b) Explain the construction of a wind rose diagram for a particular site. 4
7. (a) How does orientation influence thermal comfort ? 5
- (b) Explain the action of pozzolanic materials in lime mortar. 5
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