

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

00670

Term-End Examination

December, 2014

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

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **five** questions. All questions carry equal marks.

1. A plot of land measures 12 m × 24 m. The front road is 24 m wide facing North. Service lane is on the rear measuring 9 m. Prepare a suitable plan of three bedroom residential house keeping in mind the restrictions imposed by local body as maximum covered area to be 75% of total plot area with a minimum setback of 2 m in the front and also in the rear of the house. 14

2. (a) Give the classification under which the following buildings fall : 7×1

- (i) Lodging houses
- (ii) Sanatoria
- (iii) Offices
- (iv) Dairies
- (v) Underground shopping centres
- (vi) Warehouses
- (vii) Theatres

- (b) Discuss in brief the various types of buildings as classified by NBO, 1983. 7
3. (a) Explain the determinants for design of a building. 7
- (b) Discuss in brief the various types of rural houses. 7
4. Determine the minimum area of a plot for three storied residential building having four flats of 162 m^2 area in each floor for the given data : 14
- (a) Area for staircase and access should not exceed 25% of the ground floor area of the building.
- (b) FAR is to be restricted to 1.50.
5. (a) Describe the methods to lower sub-soil water level for the purpose of excavation of foundations. 7
- (b) Describe the various tests required to be carried out to ascertain the quality of bricks. 7
6. (a) Briefly discuss the various types of window movement. 7
- (b) Explain the different ways in which stone is used as a facing material. 7

7. Write short notes on the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Grillage foundation
- (b) Design of stairs
- (c) Bonds in brick work
- (d) Thermal insulation

8. Differentiate between the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Ultimate and Safe bearing capacity of soil
 - (b) Swinging and Sliding door
 - (c) Pivoted and Sliding window movement
 - (d) Straight and Open well stair
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