

B.Tech. Civil (Construction Management)
BTCLEVI

00470

Term-End Examination

June, 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 11 m × 22 m. The front road is 18 m wide facing north. Service lane is on the rear measuring 6 m. Prepare a suitable plan of three bedroom residential house keeping in view the restrictions imposed by local body as maximum covered area to be 75% of the total plot area with minimum setback of 2 m in the front and also in the rear of the building. 14

2. (a) Give the classification under which the following buildings fall : 7×1
 - (i) Flats
 - (ii) Custodial institutions
 - (iii) Banks
 - (iv) Sale of merchandise
 - (v) Laboratories
 - (vi) Garages
 - (vii) Exhibition halls

- (b) Explain the basic requirements for judging the suitability of a site for all types of buildings. 7
3. (a) Describe the principal components of an educational building. 7
- (b) Explain the various points to be kept in mind during planning of rural houses. 7
4. Determine the minimum area of a plot for three-storied residential building having four flats of 140 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, and
- (b) FAR is to be restricted to 1.50.
5. (a) Explain various factors required to be considered while deciding the depth of a foundation. 7
- (b) Describe various types of stone masonry. 7
6. (a) Explain various types of stairs. 7
- (b) What do you mean by thermal insulation ? Explain its significance. 7

7. Write short notes on the following :

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

- (a) Combined foundation
- (b) Design of windows
- (c) Superstructure
- (d) Thermal comfort

8. Differentiate between the following :

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

- (a) Strip and Strap footing
 - (b) Revolving and Rolling door
 - (c) Bay and Corner window
 - (d) Glass and Glazing
-