

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

Term-End Examination

June, 2019

00542

**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. In Part B all questions carry equal marks.*

PART A

1. A plot of land measures 25 m × 25 m. The front is facing east and is on 13 m wide road. 6 m wide service lane is on the rear of the plot. Prepare a suitable, proportionate and dimensioned plan and elevation of a Nursery School building with following requirements :
 - (a) One headmistress room
 - (b) One staff room for the teachers
 - (c) Three classrooms
 - (d) One activity room

- (e) One indoor games room (minimum size should be 40 sq.m.)
- (f) Two toilets (one exclusively for children)
- (g) A staircase

Keeping in view the ample open play area, as per local authority bye-laws, the total covered area for school building cannot exceed 50% of the plot area. Assume any suitable data, if required, but it should be clearly mentioned.

Comment in 200 – 250 words on the application of suitable planning principles considered while planning the proposed school building.

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PART B

2. (a) Describe two methods to lower subsoil water level for the purpose of execution of foundation. 5
- (b) What are the principal factors that govern the depth of foundation ? 5
3. (a) What are the advantages of block masonry ? Describe briefly its construction practices. 5
- (b) Explain the major roadblocks in the way of feasible solution to the Rural housing. 5
4. (a) Describe different types of Partitions giving merits and demerits of each. 5
- (b) Describe the importance of bond in brickwork. Describe their important types. 5
5. (a) Name the different classification of the materials with regard to their resistance to fire. 5
- (b) What are the proportion or combination of mortar used for plastering the (i) internal (ii) external surface of sand wall ? 5

6. (a) How does the orientation of the buildings influence the thermal comfort of the user ? Explain in brief. 5

(b) Define treads and risers in a staircase. How will you determine the dimensions of treads and risers in stairs ? 5

7. Write short notes on any **four** of the following : $4 \times 2 \frac{1}{2} = 10$

- (i) Acoustic insulation
 - (ii) Suspended ceiling
 - (iii) Water-proofing of mud walls
 - (iv) Bearing capacity of soils
 - (v) Exterior finishing materials
 - (vi) Raft foundation
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