

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

**Term-End Examination**

**June, 2016**

00280

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

*Time : 3 hours*

*Maximum Marks : 70*

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**Note :** Attempt any **five** questions. All questions carry equal marks. Use of scientific calculator is allowed.

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1. A plot of land measures 10 m × 16 m. The front road is 12.0 m wide facing south. Service lane is on the rear which measures 6 m. Prepare a suitable plan of a 2-bedroom residential building as per local municipality bye-laws, as maximum covered area to be 70% of total plot area with minimum setback of 3 m in front and 3 m on the rear of the house. 14
  
2. (a) Explain FAR for a residential building and assembly buildings. 7
  
- (b) Explain the planning principles followed in designing a restaurant. 7

3. (a) Explain in detail the components of rural houses. Enlist different classifications of materials with regard to their resistance to fire. 8
- (b) Explain various factors which cause local deviations from zonal climate. Also list different causes of atmospheric pollution in urban sites. 6
4. (a) Explain the principles of planning of residential buildings. 7
- (b) Explain fire-resistance regulation for residential buildings of type-3 and type-4. 7
5. (a) Explain the components of rural houses. Describe the reasons for cracking in lime plaster. 6
- (b) Explain the components of brick panel roofing. Describe the procedure of water-proofing of a mud wall. 8
6. (a) What are the methods of lowering down the subsoil water level for the purpose of excavation of a foundation ? 6
- (b) Explain the relative advantages and disadvantages of brick, stone and block masonry constructions, respectively. 8

7. (a) Draw a neat sketch of a battened-ledged and braced door with suitable dimensions. 4
- (b) Explain fan light and sky light window with the help of a neat sketch. 5
- (c) What are the advantages of using Reinforced Cement Concrete in the construction of a staircase compared to other materials? 5
8. (a) Explain different types of roofing materials used in a building. 4
- (b) Explain different types of materials used for suspended ceilings/false ceiling. 3
- (c) Explain different types of acoustic materials. 3
- (d) Explain the role of orientation on thermal comfort. 4
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