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**INTERNATIONAL CENTRE FOR APPLIED SCIENCES**  
(Manipal University)  
**III SEMESTER B.S. DEGREE EXAMINATION – NOV. / DEC. 2016**  
**SUBJECT: BUILDING CONSTRUCTION-II (CE 231)**  
(BRANCH: CIVIL & ARCHITECTURE)  
Friday, 25 November 2016

**Time: 3 Hours**

**Max. Marks: 100**

- ✓ Answer ANY FIVE full Questions.
- ✓ Missing data, if any, may be suitably assumed

1. (a) Define foundation and mention its functions.  
(b) With the help of neat sketch explain the method of plate load test for determining the bearing capacity of a soil.  
(c) What are the essential requirements of good foundation? **(6+10+4)**
  
2. (a) Describe the following terms  
(i) Stretcher (ii) Queen closer (iii) Quoins  
(b) Explain with the help of neat sketch:  
i) English bond  
ii) Flemish bond  
(c) Write a short notes on (i) Silver lock's bond, (ii) Header bond **(3+12+5)**
  
3. (a) Explain King post truss with help of a neat sketch.  
(b) Explain with help the neat sketch:  
(i) Sky light (ii) Gable window (iii) Dormer window (iv) Metal window **(10+10)**
  
4. (a) The inside dimensions of a staircase in a residential building is 2mX4.6m. The height of floor is 3.30 m and the roof consists of R.C.C slab of 12cm thickness. Design a proper layout of an R.C.C stair for this building (Plan and elevation).  
(b) Write short notes on  
i. Plain brick partitions  
ii. Reinforced brick partitions  
iii. Brick noggin partitions **(10+10)**

5. (a) What are the factors affecting the choice of flooring materials ?  
 (b) With help of neat sketch explain (i) Cement Concrete flooring (ii) Terrazzo flooring  
 (iii) Mosaic flooring. **(8+12)**
6. (a) Mention the objects of providing plastering to the exposed surfaces.  
 (b) Describe the procedure for carrying out the plaster in cement mortar in two coats.  
 (c) Write short notes on (i) Smooth cast finish (ii) Sand faced finish (iii) Textured finish  
**(5+6+9)**
7. (a) Define scaffolding and mention the different types of scaffoldings.  
 (b) With the help of neat sketch explain the following  
 (i) Flying shoring  
 (ii) Putlog scaffolding  
 (c) Discuss in detail the Pit method of underpinning. **(5+10+5)**
8. (a) Estimate by center line method the quantities of the following items of a two roomed building from the given plan and section (Fig.1 (a) and (b)). All walls are of same section lintels over doors. Windows and shelves are 15cm thick. Doors - 1.2mX2.10m, Windows - 1mX1.5m, Shelves 1m X1.5m.  
 (i) Earth work in excavation of foundation  
 (ii) Lime concrete in foundation  
 (iii) 1<sup>st</sup> class brickwork in cement mortar 1:6 in foundation and plinth.
- (b) Determine the quantities of various materials required for the following items of works for 10m<sup>3</sup>:  
 i) Cement concrete 1:5:10 in foundation or floor with brick ballast 40mm thick gauge-unit 1 m<sup>3</sup>.  
 ii) Cement concrete 1:2:4, unit 1 m<sup>3</sup>. **(12+8)**

## TWO ROOMED BUILDING

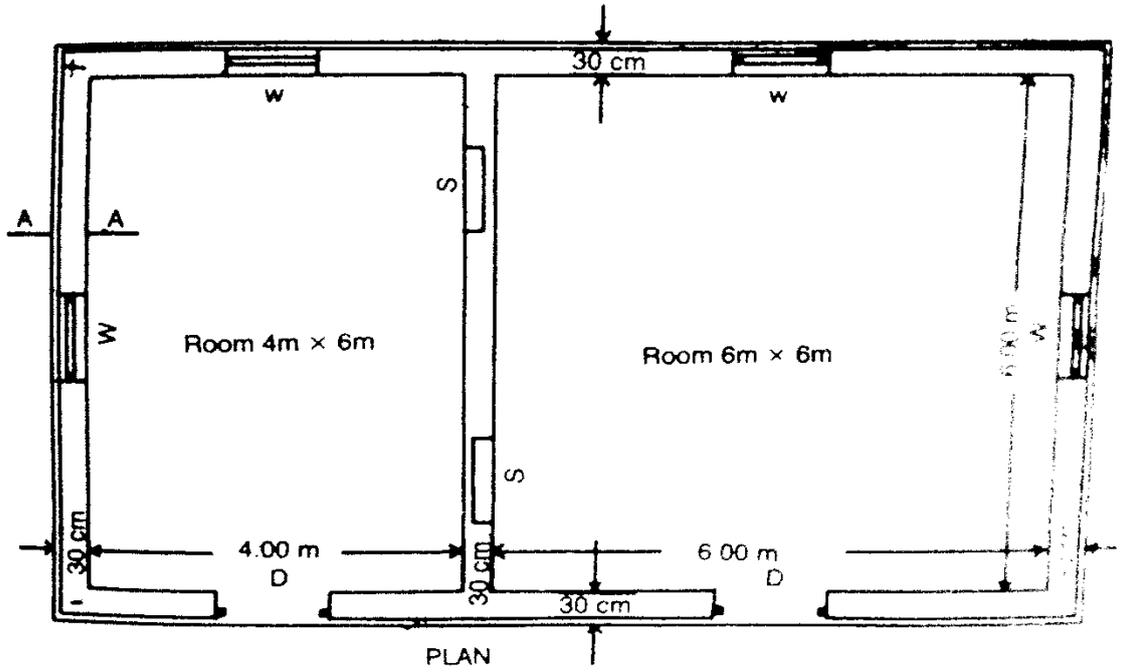


Figure.1 (a)

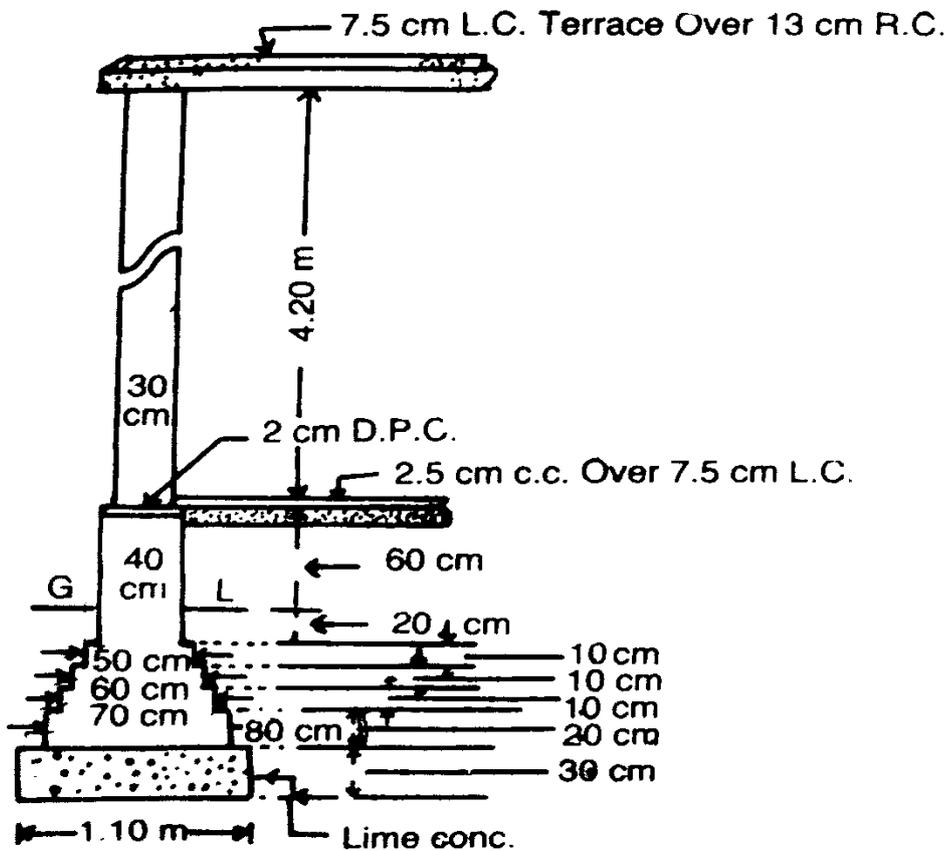


Figure.1 (b)

