DIPLOMA IN CIVIL ENGINEERING
DCLE(G)

ꝺꝺ982 **Term-End Examination**
December, 2016

BCE-062 : CONSTRUCTION SUPERVISION AND BUILDING MAINTENANCE

Time : 2 hours   *Maximum Marks : 70*

*Note : Question no. 1 is **compulsory**. Attempt any **four** out of the remaining questions.*

1. (a) Write *True* or *False* (T/F) for the following statements :   *8×1=8*

    (i) Bricks need to be cured for 24 hours before use.

    (ii) D.P.C. is sometimes made of cement concrete also.

    (iii) Workers below the age of 18 should not be allowed at project site.

    (iv) If cement is kept for six months, its strength reduces by 30%.

    (v) 20·4 bags of cement are required per cubic metre of mix for 1 : 1 ratio.

(vi) In Flemish Bond in every course, one brick is kept in Header position and next in Stretcher position.

(vii) Construction Joints and Expansion Joints are same in concrete slab.

(viii) Rolling shutters are normally made from wide strips of steel having thickness of 1·25 mm.

(b) Define the following :   *3×2=6*

(i) Crown in Road (show in sketch)

(ii) Sub-Grade

(iii) Lap Joint in Timber (sketch)

2. (a) Explain/define the following terms in a building :   *4×2=8*

(i) Balcony

(ii) Basement

(iii) Carpet Area

(iv) FAR (Floor Area Ratio)

(b) How does a supervisor monitor the progress of the work ? Explain any method of monitoring.   *6*

3. Explain in detail, the methodology for the execution of the following at a project site : $4 \times 3\frac{1}{2} = 14$

(a) Site clearance

(b) Laying and marking of plan at site for foundation

(c) Shoring and Timbering in earthwork

(d) Termite treatment before construction

4. (a) What are the roles and responsibilities of a Security Supervisor at site ? How does it affect the work at site ?

(b) List out the means and provisions for security to be arranged at a project site including traffic, material and personnel. $7+7=14$

5. Explain with sketches the following types of flooring : $4 \times 3\frac{1}{2} = 14$

(a) Bricks or Interlocking Flooring

(b) Terrazzo Flooring

(c) Glazed Tile Flooring

(d) Wooden Flooring

6. (a) Give a neat sketch of a manhole duly labelled and explain the construction methodology in steps.

(b) How many types of drain pipes are available in the market (from material point of view) ? Explain the use of PVC and cast iron pipes with reasons. $7+7=14$

7. Write short notes on the following : $4 \times 3\frac{1}{2} = 14$

   (a) Difference between internal and external painting

   (b) Methodology of fixing a door in a room/cubical

   (c) Role of construction supervisor

   (d) Documents and registers to be maintained in a store

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