

**DIPLOMA IN CIVIL ENGINEERING
DCLE(G)**

Term-End Examination

June, 2017

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**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 :

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- (i) DPC is laid at the top of the foundation at plinth level from where the wall starts.
- (ii) Rough Ground Surface is used between walls and window/door frames while fixing them in walls.
- (iii) Moisture is not absorbed by cheap quality marble.

(iv) Reinforcement in compression and concrete in tension is taken for designing RCC elements.

(v) 1.25 mm thick strips of steel are used for making rolling shutters.

(vi) Thermocol can be used as filler material along with joint sealing compounds in expansion joints.

(vii) Scaffolding and Shuttering are the same thing.

(b) Match the following :

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|----------------------|----------------------|
| (i) Roller and Brush | a. Cement |
| (ii) Log Book | b. Roads |
| (iii) Slaked | c. Painting of walls |
| (iv) Batching Plant | d. Lime |
| (v) Super Elevation | e. Vehicle |
| (vi) Pressure Bulb | f. Foundation |
| (vii) Step Footing | g. Load on soil |

2. Explain stepwise any **two** of the following : $2 \times 7 = 14$

- (a) Training of labour at site
- (b) Laying of tiles in a bathroom
- (c) Repairing leakages in roof slab

3. (a) Discuss the methodology for anti-termite treatment for a building during construction and after construction.
- (b) Discuss the methodology for grouting and strengthening the pillars of a dilapidated overhead water tank. $2 \times 7 = 14$
4. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Assessment of skill gap of workers at site
- (b) Difference between on-the-job training and structured institute training
- (c) Laying of Terrazzo flooring
- (d) Erection of pipe scaffolding on external walls for plastering
5. (a) Explain roles and responsibilities of the Project Manager with respect to the building project.
- (b) Explain the safety measures to be taken at site to reduce accidents. $2 \times 7 = 14$
6. (a) Discuss the importance of tested and certified workers when compared to untrained and uncertified workers.
- (b) In your view, how can the productivity of a mason be calculated at site ? Discuss all the parameters that affect productivity. $2 \times 7 = 14$

7. Explain and define the following :

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

- (a) Grades of Cement
- (b) Grouting and Epoxy Treatment of Roofs
- (c) Cross-section of a National Highway
- (d) Runway Length and Direction