

**DIPLOMA IN CIVIL ENGINEERING (DCLE(G))/
ADVANCED LEVEL CERTIFICATE COURSE IN
CIVIL ENGINEERING (DCLEVI/ACCLEVI)**

Term-End Examination

June, 2018

00283

BCE-024 : CONSTRUCTION TECHNOLOGY – I

Time : 2 hours

Maximum Marks : 70

Note : *Question no. 1 is compulsory. Attempt any four more questions out of questions no. 2 to 8. Support your answers with neat sketches. All questions carry equal marks.*

1. Choose the correct answer from the given alternatives : $7 \times 2 = 14$
- (a) In case of foundation on black cotton soils, the most suitable method to increase the bearing capacity of soil is
- (i) By compacting soil
 - (ii) By increasing the depth of foundation
 - (iii) By draining the soil
 - (iv) By replacing the poor soil
- (b) The wall which helps in maintaining the surface of the ground at different elevations on either side of the structure is known as
- (i) Partition wall
 - (ii) Retaining wall
 - (iii) Cavity wall
 - (iv) Pier

- (c) The nominal size of modular bricks is
- (i) 19 cm × 9 cm × 9 cm
 - (ii) 22.9 cm × 11.4 cm × 7.5 cm
 - (iii) 20 cm × 10 cm × 10 cm
 - (iv) 22.5 cm × 11.1 cm × 7 cm
- (d) The highest part of extrados of an arch is known as
- (i) Key
 - (ii) Spandril
 - (iii) Arcade
 - (iv) Crown
- (e) The type of window provided on the sloping side of a pitched roof is called
- (i) Dormer window
 - (ii) Gable window
 - (iii) Lantern
 - (iv) Airy window
- (f) The treatment to prevent entry of dampness into a building is known as
- (i) OPC
 - (ii) DPC
 - (iii) PCC
 - (iv) RCC

- (g) The type of ground flooring which is perfectly noiseless is known as
- (i) Terrazzo flooring
 - (ii) Glass flooring
 - (iii) Cork flooring
 - (iv) Mosaic flooring
2. (a) Explain the various factors needed to be considered for the selection of suitable type of foundation for a given situation. 7
- (b) Explain the design of a wall footing. 7
3. (a) Explain different functions served by cavity wall in a building. 7
- (b) When do you use reinforced brickwork ? Explain the details of its construction. 7
4. (a) Explain the various ways in which an arch fails. 7
- (b) What do you mean by scaffolding ? Explain its various components. 7
5. (a) Discuss the design of windows in a room. 7
- (b) Describe the classification of doors based on working operations. 7
6. (a) What is the object of plastering ? Explain in brief, the different types of plasters adopted for external finishing of wall surfaces. 7
- (b) Discuss the essentials of termite proofing. 7

7. Differentiate between the following :

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

- (a) Stone and Brick masonry
- (b) English and Flemish bond
- (c) Plastering and Flooring
- (d) Revolving and Swing doors

8. Write short notes on the following :

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

- (a) Retaining Wall
 - (b) Settlement of Foundations
 - (c) Under-reamed Piles
 - (d) Waterproofing
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