

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

Term-End Examination

June, 2014

00809

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. All questions carry equal marks.*

1. Choose the correct answer from the given four alternatives : $7 \times 2 = 14$
- (a) The stretcher bond in brick masonry can be used only when the thickness of wall is
- (i) 90 mm
 - (ii) 180 mm
 - (iii) 190 mm
 - (iv) 280 mm
- (b) In case of foundations on black cotton soils, the most suitable method to increase the bearing capacity of soils is to
- (i) increase the depth of foundation
 - (ii) drain the soil
 - (iii) compact the soil
 - (iv) replace the poor soil

- (c) In the construction of arches, sand box method is used for
 - (i) centring
 - (ii) actual laying of arch work
 - (iii) striking of centring
 - (iv) None of the above

- (d) The designation of frames of doors, windows and ventilators shows their
 - (i) width
 - (ii) height
 - (iii) type and size
 - (iv) All of the above

- (e) The opening left in flat roofs for lighting purpose is called
 - (i) Lantern
 - (ii) Dormer window
 - (iii) Skylight
 - (iv) Gable window

- (f) Pitched and sloping roofs are suitable for
 - (i) coastal regions
 - (ii) plain regions
 - (iii) covering large areas
 - (iv) All of the above

- (g) The type of flooring suitable for use in churches, theatres, public libraries and other places where noiseless floor covering is desired, is
- (i) cork flooring
 - (ii) glass flooring
 - (iii) wooden flooring
 - (iv) linoleum flooring
2. (a) What are the causes for settlement of foundations ? What are the factors to be considered while deciding the depth of a foundation ? 7
- (b) What are the types of foundations of buildings and other structures ? Explain raft foundation with neat sketch. 7
3. (a) Explain the various tests to be carried out to ascertain the quality of bricks. Explain the purpose of providing bond in construction of a brickwork. 7
- (b) What are the common types of building stone and in what situations are they used ? 7
4. (a) Describe about pre-construction anti-termite treatment and explain how post-construction anti-termite treatment is carried out in buildings. 7
- (b) Describe various methods of damp proofing. Explain with neat sketch the methods of damp proofing treatment to foundation of buildings. 7

5. (a) Explain the details of an RCC lintel having *chajja* projection by neat sketch. Explain various types of lintels. 7
- (b) Explain with the help of neat sketch, the method of erection of centering for arch construction. 7
6. (a) Explain types of scaffolding and describe any two of the most commonly used types of scaffolding with the help of neat sketches. 7
- (b) Explain in detail the difference between floors and floorings. Explain the procedure of construction of (i) Terrazzo flooring or (ii) Mosaic flooring. 7
7. (a) What are the commonly used sizes of doors? Differentiate between the constructional aspects of the core used in solid core and cellular core type flush doors. 7
- (b) Explain classification of windows according to material used. Explain with the help of neat sketches the construction of a metal window. 7
8. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Depth of foundation
- (b) Materials used for Damp proofing course
- (c) Revolving and Swinging door
- (d) Reinforced Brick flooring