

**Diploma in Electrical and Mechanical
Engineering**

Term-End Examination

June, 2011

BCE-025 : ELEMENTARY CIVIL ENGINEERING

Time : 2 hours

Maximum Marks : 70

Note : Question no. 1 is compulsory. Attempt any four more questions out of questions no. 2 to 7. All questions carry equal marks. Explain your answer with the help of neat and labelled sketches.

Choose the correct alternative. **7x2=14**

- (a) Indian Railways are divided into :
- (i) nine zones (ii) sixteen zones
(iii) seven zones (iv) twelve zones
- (b) The bearing capacity of soil goes on increasing as the depth of foundation :
- (i) increases (ii) decreases
(iii) remains same (iv) none of the above
- (c) The strongest bond in brick work is :
- (i) Flemish Bond (ii) Strecher Bond
(iii) English Bond (iv) Header Bond

(d) M 40 grade of concrete is judged by the strength criteria of :

(i) 40 kN/m² (ii) 40 N/m²

(iii) 40 N/cm² (iv) 40 N/mm²

(e) Indian Standard Medium Weight Beam is represented as :

(i) ISMB (ii) ISHB

(iii) ISWB (iv) ISLB

(f) The suitable door for entrance in an air conditioned building is a :

(i) louvered door (ii) revolving door

(iii) collapsible door (iv) swinging door

(g) Runway is usually oriented in the direction of :

(i) Head wind (ii) Cross wind

(iii) Prevailing wind (iv) Wind

2. (a) Describe the importance of Irrigation Engineering. Also write the different methods of irrigation system. **4+3=**

(b) Classify different types of building as per National Building code of India, 1970.

3. (a) Explain in brief soil phases. Why soil is called as three phase system ? 5+2=7
- (b) Explain the procedure of determining the width and depth of shallow foundation.
4. (a) Explain the various points to be observed while supervising the stone masonry.
- (b) Briefly describe the different methods of damp proof treatment.
5. (a) What do you mean by concrete ? Explain the advantages and disadvantages of concrete.
- (b) Draw the process diagram of concrete. Explain various operation in brief. 3+4=7
6. (a) Explain the construction procedure of concrete roads.
- (b) Explain the various features to be considered while locating a door in a room.
7. Write short notes on *any four* of the following :
- (a) Bond in Brickwork 4x3½=14
- (b) Bleeding of concrete
- (c) Built up sections
- (d) Airport Layouts
- (e) Plaster in three coats
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