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BCE-025

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

Term-End Examination, 2019

BCE-025 : ELEMENTARY CIVIL ENGINEERING

Time : 2 Hours

Maximum Marks : 70

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

1. Choose the correct answer from the given alternatives : [7×2=14]

(a) Slump test is performed to determine :

- (i) Permeability of concrete
- (ii) Durability of concrete
- (iii) Workability of concrete
- (iv) Rise and fall of concrete



- (b) In the cross section of a weld, throat is the :
- (i) Average dimension
 - (ii) Minimum dimension
 - (iii) Maximum dimension
 - (iv) Rough dimension
- (c) In case of completely dry soil, the voids are filled with :
- (i) Air
 - (ii) Water
 - (iii) Soil Particles
 - (iv) Air and water both
- (d) M-25 grade concrete is judged by the strength criteria of :
- (i) 25 kN/mm^2
 - (ii) 25 N/m^2
 - (iii) 25 kN/m^2
 - (iv) 25 N/mm^2
- (e) The vertical face of a window or door opening which supports the frame is called as :
- (i) Transom
 - (ii) Jamb
 - (iii) Horn
 - (iv) Panel
- (f) Indian Railways are divided into :
- (i) Twelve zones
 - (ii) Nine zones
 - (iii) Sixteen zones
 - (iv) Seven zones

- (g) Runway is usually oriented in the direction of :
- (i) Prevailing wind (ii) Cross wind
 - (iii) Head wind (iv) Rear wind
2. (a) Discuss the significance of bond in brick works. [7]
- (b) Describe the practical application of surveying in brief. [7]
3. (a) What are the applications of Civil Engineering to allied field ? [7]
- (b) How width and depth of foundation can be decided ? Explain. [7]
4. (a) Explain various types of riveted joints with neat sketches. [7]
- (b) Define built up section. Also draw neat sketch of built up section. [7]
5. (a) Draw process diagram of concrete operations, explain any one process. [7]
- (b) Explain properties of concrete in plastic stage. [7]

6. (a) What are the rules to be considered while locating a door ? [7]
- (b) Give classification of door based on material used. [7]
7. (a) Explain classification of roads. [7]
- (b) Explain importance of road drainage. [7]
8. Write short notes on **any four** of the following : [4×3½=14]
- (i) Water proofing
 - (ii) Bulking of sand
 - (iii) Different type of Trusses
 - (iv) Plate load test
 - (v) Airport layout
 - (vi) Terrazo flooring
 - (vii) Bearing capacity of soil

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