

**Diploma in Civil Engineering (DCLE(G)
DCLEVI/DMEVI/DELVI/DECVI/DCSVI)**

Term-End Examination

December, 2013

00958

BET- 024 : E/M ENGINEERING

Time : 2 hours

Maximum Marks : 70

Note : All questions are compulsory. Use of Scientific calculator is permitted. Assume missing data if any.

1. Select the correct answer from the given four alternatives for the following multiple choice type questions **1x14=14**
- (a) If the diameter of a conductor is increased to double, keeping length constant, the resistance :
- (i) reduced to one fourth
 - (ii) reduced to half
 - (iii) increased to one fourth
 - (iv) increased to double
- (b) The property which supports flow of current is known as :
- (i) Resistance
 - (ii) Conductance
 - (iii) Inductance
 - (iv) Capacitance

- (c) The SI unit of magnetic field is :
- (i) Tesla
 - (ii) Newton
 - (iii) Ampere
 - (iv) Ohm
- (d) The form factor of a sinusoid is :
- (i) 1.11
 - (ii) 2.22
 - (iii) 3.33
 - (iv) 4.44
- (e) A voltmeter is essentially a galvanometer having :
- (i) high resistance in series
 - (ii) high resistance in parallel
 - (iii) low resistance in series
- (f) A device which stores electrical charge is called :
- (i) Capacitor
 - (ii) Conductor
 - (iii) Resistor
 - (iv) Battery
- (g) When the transformer raises the voltage it is called :
- (i) Voltage transformer
 - (ii) Power transformer
 - (iii) Step up transformer
 - (iv) Step down transformer
- (h) The DC generator has two parts namely :
- (i) a stator and a motor
 - (ii) a stator and a pump
 - (iii) a motor and a pump
 - (iv) a stator and a rotor

3. (a) Explain the relative advantages and disadvantages of brick, stone and block masonry constructions. 7
- (b) Describe about pre-construction anti-termite treatment. Explain how post construction anti-termite is carried out in buildings. 7
4. (a) Describe the precautions that should be taken for preventing dampness in building. Describe the possible causes and effects of dampness on the performance of a building structure. 9
- (b) Explain the details of an RCC lintel having chajja projection by means of a neat sketch. 5
5. (a) Give the classification of arches with the help of neat sketches. 7
- (b) Explain with the help of neat sketches cantilever scaffolding and trestle scaffolding. 7
6. (a) Explain the procedure of construction 7
- (i) Terrazo flooring and
- (ii) Mosaic flooring with the help of neat sketches.
- (b) Explain the procedure of construction 7
- (i) Reinforced - cement concrete floor, and
- (ii) Double joist timber floor

7. (a) Explain classification of Doors with neat sketches. 7
- (b) Explain advantages of flush shutter door. 7
Name some of the non-wooden materials that can be used for a door shutter.
8. (a) Describe briefly the fixtures and fastenings used for doors and window. 7
- (b) Explain fan lights and sky lights provided in the buildings. 7
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