

**DIPLOMA IN CIVIL ENGINEERING  
DCLE(G) / DCLEVI / ACCLEVI**

**Term-End Examination**

**December, 2013**

**BET-015 : ENGINEERING MATERIALS**

*Time : 2 hours*

*Maximum Marks : 70*

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*Note : Question number 1 is compulsory. Attempt any four more questions out of remaining questions. All questions carry equal marks. Missing data may be suitably assumed.*

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1. Choose the correct alternative : 7x2=14

(a) Ground Glass :

- (i) Is made by melting powdered glass  
paints surface
- (ii) Is made by grinding its one side
- (iii) Is used for getting light without  
transparency
- (iv) All of the above

(b) The steel used in RCC work, is :

- (i) Iron
- (ii) High Carbon steel
- (iii) Mild steel
- (iv) Stainless steel

- (c) The rocks which are formed by gradual deposition, are :
- (i) Metamorphic rocks
  - (ii) Sedimentary rocks
  - (iii) Igneous rocks
  - (iv) None of these
- (d) The size of modular bricks, are :
- (i)  $22.5 \times 10 \times 8.5$  cm.
  - (ii)  $22.5 \times 8.0 \times 9.0$  cm.
  - (iii)  $10.0 \times 10.0 \times 9.0$  cm.
  - (iv)  $19.0 \times 9.0 \times 9.0$  cm.
- (e) The property by virtue of which lime sets under water, is known as :
- (i) Calcining
  - (ii) Slacking
  - (iii) Setting
  - (iv) Hydraulicity
- (f) Ultimate Strength to the cement is provided by :
- (i) Tetra calcium alumino ferrite
  - (ii) Tri-calcium silicate
  - (iii) Di calcium silicate
  - (iv) Tri calcium aluminate

- (g) Initial setting of cement is caused due to,
- (i) Tetra calcium alumino ferrite
  - (ii) Tri-calcium silicate
  - (iii) Di calcium silicate
  - (iv) Tri calcium aluminate
- (a) Describe in detail the types of glass with their properties and usage. 7
- (b) Write down in details the market form of steel. 7
- (a) Write down in the tabular form Recommended Mixes of concrete. 7
- (b) Describe the functions of sand in mortar and tests for sand. 7
- (a) Write down the desired properties of the cement concrete in details. 7
- (b) Describe the properties of good coarse aggregate. 7
- (a) Describe the tests for the acceptance of bricks for building construction. 7
- (b) Write down the suitability of stones for various types of construction. 7

6. (a) Describe the constituent parts of paint and their functions.
- (b) Write down the characteristics of good timber.
7. Write short notes on the following : 4x3<sup>1</sup>/<sub>2</sub>
- (a) Slump test of concrete
- (b) Uses of steel in construction work
- (c) List of Acoustics Material
- (d) Composition of plastics
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