

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

Term-End Examination

June, 2013

BET-015 : ENGINEERING MATERIALS

Time : 2 hours

Maximum Marks : 70

Note : Question number 1 is compulsory. Attempt any four more questions out of questions number 2 to 8. All questions carry equal marks.

1. Choose the most appropriate alternative in the following questions : 7x2=14

(a) Slate is :

- (i) Igneous
- (ii) Sedimentary
- (iii) Metamorphic
- (iv) None of the above

(b) A first class brick when immersed in cold water for 24 hours should not absorb water more than :

- (i) 25% (ii) 20%
- (iii) 15% (iv) 10%

of its own dry weight.

- (c) Le-Chatelier's method is used for determining the :
- (i) Soundness of cement
 - (ii) Setting time of cement
 - (iii) Tensile strength of cement
 - (iv) Compressive strength of cement
- (d) Seasoning makes timber :
- (i) Lighter
 - (ii) Heavier
 - (iii) No change in weight
 - (iv) None of the above
- (e) The liquid medium used in paints is :
- (i) Oil
 - (ii) Linseed Oil
 - (iii) Thinner
 - (iv) Turpentine
- (f) Ground glass is :
- (i) made by grinding its one side
 - (ii) made by melting powdered glass paints on its surface
 - (iii) is used for getting light without transparency
 - (iv) All the above
- (g) The property by virtue of which lime sets under water is known as :
- (i) Slacking
 - (ii) Setting
 - (iii) Hydraulicity
 - (iv) Calcining

2. (a) Describe various methods of Quarrying Stones. 7
(b) Explain the purpose of dressing of stones. 7
3. (a) Describe the functions of various constituent of brick earth. 7
(b) Explain the properties of good Tiles. 7
4. (a) What are the raw materials used for the manufacture of cement ? Give compound composition of ordinary Portland Cement. 7
(b) Lime is considered one of the important building materials. Justify this statement. 7
5. (a) Describe any one test conducted for concrete. 7
(b) What do you mean by Bulking of Sand ? Explain its importance. 7
6. (a) Explain the structure of a tree. 7
(b) Describe the various types of defects in timber due to natural forces. 7
7. (a) Discuss various defects in painting. 7
(b) Explain the process of distempering. 7
8. (a) Describe the manufacturing of rolled glass and its uses. 7
(b) Discuss various ways in which stone is used as a facing material. 7