

**DIPLOMA IN CIVIL ENGINEERING (DCLE(G)) /
ADVANCED LEVEL CERTIFICATE COURSE IN
CIVIL ENGINEERING (DCLEVI / ACCLEVI)**

Term-End Examination

June, 2018

00823

BET-015 : ENGINEERING MATERIALS

Time : 2 hours

Maximum Marks : 70

Note : *Question number 1 is compulsory. Attempt any
four more questions out of the remaining questions.
All questions carry equal marks.*

1. Choose the correct answer from the given alternatives : $7 \times 2 = 14$
- (a) The rocks which are formed by structural changes in earth are
- (i) Metamorphic rocks
 - (ii) Sedimentary rocks
 - (iii) Igneous rocks
 - (iv) None of the above
- (b) The following soil is good for making bricks :
- (i) Silty
 - (ii) Alluvial
 - (iii) Sand
 - (iv) Black cotton

- (c) One bag of cement has a volume of
- (i) 10 litres
 - (ii) 25 litres
 - (iii) 35 litres
 - (iv) 50 litres
- (d) M 20 grade of concrete is judged by the strength criterion of
- (i) 20 N/km^2
 - (ii) 20 N/m^2
 - (iii) 20 N/cm^2
 - (iv) 20 N/mm^2
- (e) Plywood has the advantage of
- (i) same tensile strength in all directions
 - (ii) greater tensile strength in longer direction
 - (iii) greater tensile strength in shorter direction
 - (iv) No tensile strength
- (f) The vehicle used in case of enamel paints is usually
- (i) milk
 - (ii) linseed oil
 - (iii) water
 - (iv) varnish

- (g) Major ingredients for production of glass are
- (i) sand, soda and lime
 - (ii) clay, soda and lime
 - (iii) sand, clay and soda
 - (iv) sand, clay and lime
2. (a) What is natural bed of stone ? Explain its significance. 7
- (b) Describe the various types of tiles with the help of a systematic diagram. 7
3. (a) Explain manufacturing of cement by wet process. 7
- (b) Describe the classification of lime as per IS : 712-1973. 7
4. (a) What do you mean by bulking of sand ? Explain the procedure of determining it. 7
- (b) Describe the different methods of transportation of concrete. 7
5. (a) Classify trees according to their mode of growth. 7
- (b) Discuss the various methods of preservation of timber. 7

6. (a) Explain the process of varnishing a wooden surface. 7
- (b) Discuss the various ways in which stone is used as a facing material. 7
7. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Preservation of Stone Work
- (b) Hydration of Cement
- (c) Compaction of Concrete
- (d) Failure of Paint
8. Differentiate between the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Stratified and Unstratified rocks
- (b) Cement and Lime
- (c) Fine and Coarse aggregate
- (d) Natural and Artificial Seasoning
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