

7228

BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

DCE - THIRD SEMESTER EXAMINATION

CONSTRUCTION MATERIALS

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

3×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. State any three properties of granite.
2. Write the classification of bricks as per ISI.
3. State any three characteristics of good sand.
4. List any three requirements of floor tiles.
5. State any three uses of white cement.
6. Define the water cement (W/C) ratio.
7. State any three advantages of 'ready mixed concrete'.
8. Write the three uses of varnish.
9. Write any three advantages of float glass.
10. State any three characteristics of good timber.

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** (a) Write the classification of rocks/stones.

**(OR)**

(b) Write the characteristics of good building stone.

**12.** (a) Explain the physical properties to be possessed by good building bricks as per ISI.

**(OR)**

(b) Explain the different stages involved in preparation of bricks.

**13.** (a) Define bulking of sand. Write four major differences between river sand and pit sand.

**(OR)**

(b) Write the uses of the (i) stoneware and (ii) glazed ware.

**14.** (a) Explain the properties of ordinary Portland cement.

**(OR)**

(b) Write the various ingredients and any three uses of plain cement concrete (PCC) and reinforced cement concrete (RCC).

**15.** (a) Explain the procedure of conducting initial and final setting time tests on cement.

**(OR)**

(b) Write short notes on Admixtures such as (i) plasticizers and (ii) retarders.

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## PART—C

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** Explain mixing of ingredients of concrete done by hand mixing and machine mixing.

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