

3E1452

Roll No. : _____

Total Printed Pages : **3****3E1452****B. Tech. (Sem. III) (Main & Back) Examination, January - 2013**
3CE2 Building Material & Construction

Time : 3 Hours]

[Total Marks : 80

[Min. Passing Marks : 24

Attempt any five questions. Selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

1. NIL2. NIL**UNIT - I**

- 1 (a) Discuss the various characteristics of a good building stone. 8
- (b) What are the different laboratory test which are performed on a stone ? Discuss crushing strength test. 8

OR

- 1 (a) What are the different stages of manufacturing of bricks ? Describe in brief the burning of bricks in Bull's Trench Kiln. 8
- (b) Describe how bricks are classified ? Discuss IS classification of bricks. 8

UNIT - II

- 2 (a) What are the ingredients of OPC ? State the functions and limits of each of them. 8

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[Contd...

- (b) What do you mean by normal consistency ? What is its significance ? How is it tested ?

8

OR

- 2 (a) What are the characteristics of lime ? Discuss IS classification of lime.

8

- (b) What is bulking of sand ? Discuss characteristics and uses of sand.

8

UNIT - III

- 3 (a) State and discuss different methods of seasoning of timber.

8

- (b) Discuss classification of timber on the basis of grading.

8

OR

- 3 (a) What are the various ingredients of plastics ? Give their specific uses.

8

- (b) What are the various ingredients of paints ? State the functions of each of them.

8

UNIT - IV

- 4 (a) State various components of a building. Discuss the functional requirement of super structure.

8

- (b) Classify building based on occupancy.

8

OR

- 4 (a) Name the various types of foundations generally used. Discuss construction of spread footing foundation.

8

- (b) Discuss causes of failure of foundations and their remedial measures.

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UNIT - V

- 5 (a) What is the significance of bonding in brick work ? Differentiate between English Bond and Double Flemish bond with sketches. 10
- (b) Explain the differences between Brick-Masonry and Stone Masonary. 6

OR

- 5 (a) Discuss various types of pointing with sketches. 8
- (b) What are the common defects of plastering what are their causes and remedies ? 8

