

# CBCS SCHEME

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17CT33

## Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Materials of Construction

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. With the help of a neat sketch, explain the blasting method of stone quarrying. (06 Marks)  
b. List the qualities of good bricks. (06 Marks)  
c. What is seasoning of timber? Explain any 3 methods of artificial seasoning. (08 Marks)

**OR**

- 2 a. List the requirements of a good building stone. (06 Marks)  
b. With the help of a neat sketch, explain burning of bricks in a clamp. Also mention its advantages and limitations. (08 Marks)  
c. Explain the following defects in timber:  
(i) Shakes (ii) Rind Gall (iii) Burls. (06 Marks)

### Module-2

- 3 a. Differentiate between Intermittent Flame Kiln and Intermittent Flair Kiln. (10 Marks)  
b. With the help of a flow chart, explain the manufacturing of cement by Wet Process. (10 Marks)

**OR**

- 4 a. Differentiate between Fat Lime and Hydraulic Lime. (10 Marks)  
b. With appropriate sketch, explain the procedure to conduct the following tests on cement,  
(i) Normal consistency (ii) Specific Gravity. (10 Marks)

### Module-3

- 5 a. Explain in brief hardening, tempering and annealing methods of heat treatment. (09 Marks)  
b. List the engineering properties of glass. (06 Marks)  
c. Compare Asphalt, Bitumen and Tar. (05 Marks)

**OR**

- 6 a. List the properties and applications of  
(i) Wrought iron  
(ii) Stainless steel  
(iii) Copper  
(iv) Lead (12 Marks)  
b. Briefly explain compounding of rubber. (08 Marks)

### Module-4

- 7 a. List the desirable properties of thermal insulators. Give examples. (10 Marks)  
b. With the help of neat sketch, explain the following surface preservative methods:  
(i) Hot dipping  
(ii) Metal spraying. (10 Marks)

OR

- 8 a. List the desirable properties of sound insulators. (10 Marks)  
b. Briefly explain the ingredients of an oil borne paint. (10 Marks)

**Module-5**

- 9 a. Briefly explain the various classification of plastic. (12 Marks)  
b. What are refractories? List the desirable properties of refractories. (08 Marks)

OR

- 10 a. With the help of neat sketch, explain  
(i) Extrusion Moulding (10 Marks)  
(ii) Injection Moulding (10 Marks)  
b. List the properties and uses of various acidic and basic refractories. (10 Marks)

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