

CBCS Scheme

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15CT33

Third Semester B.E. Degree Examination, Dec.2017/Jan.2018 Materials of Construction

Time: 3 hrs.

Max. Marks: 80

*Note: 1. Answer any FIVE full questions, choosing one full question from each module.
2. Use of IS 10262-2003 is permitted.*

Module-1

- 1 a. List the requirements of good building stones. (05 Marks)
b. Explain different types of bricks generally used in construction industry. (05 Marks)
c. Briefly explain the differences among clay tiles and glazed tiles used for flooring. (06 Marks)

OR

- 2 a. Write explanatory notes on the following:
i) Veneers
ii) Plywood
iii) Particle boards
iv) Black boards (10 Marks)
b. What is preservative treatment? Describe the three main groups of preservatives. (06 Marks)

Module-2

- 3 a. What is hydraulic lime? How is it obtained? State its applications. How can fat lime be converted into hydraulic lime? (08 Marks)
b. What are the advantages and disadvantages of using lime? (08 Marks)

OR

- 4 a. What are Bouge compounds? Explain their role in setting and hardening process of Portland cement? (08 Marks)
b. Describe the main properties of hardened concrete. (08 Marks)

Module-3

- 5 a. Explain the properties and uses of the following metals:
i) Cast iron
ii) Wrought iron
iii) Steel (08 Marks)
b. Distinguish between hardening, tempering and annealing process. (08 Marks)

OR

- 6 a. List the desirable properties and uses of
i) Common glass
ii) Commercial glass
iii) Borosilicate glass. (06 Marks)
b. Briefly state the uses of rubber in building construction. What are its advantages? (05 Marks)
c. Differentiate between bitumen and asphalt. (05 Marks)

Module-4

- 7 a. Explain the necessity and materials used for thermal and sound insulation. (05 Marks)
b. Enumerate the ingredients of paints that enhance its performance. (05 Marks)
c. What is cement paints? How it is manufactured? List its applications. (06 Marks)

OR

- 8 a. Explain the properties of a good electrical insulators. (05 Marks)
b. Differentiate between paint, varnish and distemper. (06 Marks)
c. What safety precautions should be used while working with paints? (05 Marks)

Module-5

- 9 a. Differentiate between thermoplastics and thermosetting materials. Describe various applications of plastics in construction industry. (08 Marks)
b. What are refractory bricks? Explain the classification of refractory bricks. (08 Marks)

OR

- 10 a. What are the advantages and disadvantages of plastics? (08 Marks)
b. Describe polycarbonate or PVC corrugated sheets and PVC foam sheets. (08 Marks)
