

Reg. No. :

Question Paper Code : 20320

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2022.

Third/Fourth Semester

Civil Engineering

CE 8391 — CONSTRUCTION MATERIALS

(Common to Environmental Engineering)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Classify bricks.
2. Write the applications of light weight concrete blocks.
3. What is meant by hydration of cement?
4. Recall grading of aggregate.
5. List the manufacturing process of concrete.
6. Write the methods in compaction of concrete.
7. What are the market forms of timber?
8. Say the types of steel used in building construction.
9. What is meant by composite materials?
10. Write the use of fiber textiles.

PART B — (5 × 13 = 65 marks)

11. (a) Explain any two tests on stones.

Or

- (b) Explain the compressive strength and water efflorescence tests on bricks.

12. (a) Describe the test procedure to find the soundness of cement.

Or

- (b) Elucidate the crushing and impact strength tests on coarse aggregates.

13. (a) Enlighten about the transportation and placing process of concrete.

Or

- (b) Describe the properties and application of ready-mix concrete.

14. (a) Explain the applications of plywood and veneer.

Or

- (b) Recall the physical and chemical properties of Aluminium.

15. (a) Explain the properties and uses of fiber glass reinforced plastic.

Or

- (b) Describe the applications of laminar composites.

PART C — (1 × 15 = 15 marks)

16. (a) Explain the applying process of varnishes and distemper.

Or

- (b) Enumerate the role of geomembranes and geotextiles for earth reinforcement.