

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2017.

Fourth Semester

Civil Engineering

CE 6401 – CONSTRUCTION MATERIALS

(Common to Environmental Engineering)

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write any four tests on stones.
2. Define light weight clay Bricks.
3. What do you understand by 53 grade cement?
4. What do you mean by graded aggregate?
5. Distinguish between bleeding and segregation.
6. List out the methods of transportation of concrete.
7. What are the Advantages of using veneer?
8. Name any four merits of aluminum in construction.
9. What are the forms of sealants?
10. Define the term Refractories.

PART B — (5 × 13 = 65 marks)

11. (a) Explain the various types of common building stones and their uses. (13)

Or

- (b) Describe various tests to be conducted for testing of conventional bricks. (13)

12. (a) How do you perform the tensile strength of cement? Also explain the effect of fineness of cement. (13)

Or

- (b) Enumerate the various methods for testing of traditional coarse aggregates. Discuss any two of them in brief. (13)

13. (a) Explain any two tests for testing of conventional fresh concrete. (13)

Or

- (b) With sketches explain any two tests for testing of workability for self-compacting concrete. (13)

14. (a) (i) Describe the characteristics of good timber.

(ii) Explain in detail about:

- (1) Plywood
(2) Thermacole.

Or

- (b) Explain in detail about:

- (i) Paint. (5)
(ii) Distemper (4)
(iii) Bitumen. (4)

15. (a) (i) Discuss the various forms of commercial glass. (7)
(ii) Write an explanatory note on Mechanical properties of ceramics. (6)

Or

- (b) Brief explains the following terms:

- (i) Fibre glass reinforced plastic (7)
(ii) Composite materials (6)

PART C — (1 × 15 = 15 marks)

16. (a) Describe the various applications of geosynthetic in civil engineering construction works. (15)

Or

- (b) Explain any three types of special concrete and their applications. (15)