

Reg. No. :

Question Paper Code : 50331

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

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. What are the uses of stone as building material?
2. What is lightweight concrete blocks?
3. What is known as setting of lime?
4. Define cement mortar.
5. What are the methods of proportioning of concrete mixes?
6. Differentiate bleeding and segregation.
7. Write the uses of thermocol.
8. List the market form of steel.
9. List the various properties of Glass.
10. Define porcelain.

PART B — (5 × 13 = 65 marks)

11. (a) Explain deterioration and preservation of stone work.

Or

- (b) (i) Explain water absorption efflorescence test. (7)
- (ii) Explain the types of brick. (6)

12. (a) (i) Narrate the uses of ball mill. (5)
(ii) Demonstrate the procedure to find flakiness index. (8)

Or

- (b) Paraphrase the different types of cement.
13. (a) Explain the factors affecting workability. (5)
(b) (i) Explain any two tests for fresh concrete in detail. (5)
(ii) Describe the types of curing and importance of curing (8)
14. (a) (i) Describe the seasoning of timber. (7)
(ii) Explain in detail the causes of decay of wood work (6)

Or

- (b) Explain the mechanical treatment of steel.
15. (a) Discuss the various applications of ceramic products.

Or

- (b) Demonstrate Earth reinforcement using Geomembrane.

PART C — (1 × 15 = 15 marks)

16. (a) Explain the defects in timber with suitable diagrams.
(b) Explain the design procedure for IS methods in manufacturing concrete.