

Reg. No.

B E DEGREE EXAMINATIONS, MAY 2011
Second Semester Civil Engineering
(Common to Agricultural and Irrigation Engineering
and Civil Engineering ,Tamil medium)
CE 9152 Construction Materials

Time: 3 Hrs

Max Marks: 100

Answer all questions

Part A(10x 2 = 20 Marks)

1. Write short notes on preservation of stones.
2. What are the advantages of hollow blocks?
3. What are disadvantages in manufacturing cement?
4. Name any two alternate materials to sand.
5. State any two methods of improving workability of concrete.
6. What are advantages of doing mix design for concrete?
7. What are disadvantages of knots in wood?
8. What is sealant? where it is used in building?
9. State the composition of glass.
10. What are geo membranes?

Part B (5 x 16 = 80 Marks)

11. Explain in detail about the following:
 - (i) Geotextiles. (5)
 - (ii) Earth reinforcement (5)
 - (iii) FRP (6)
- 12a. What are the chemical changes in burning of bricks? With neat sketches explain any two methods of burning of bricks indicating the suitability and advantages of each method.

OR

12(b) Explain in detail about the following:

- (i) Quarrying of stones with hand tools. (4)
- (ii) Quarrying of stones by blasting. (8)
- (iii) Efflorescence test on bricks. (4)

13(a) List the chemical requirements of cement specified by the IS code of practice. Describe the dry and wet process of manufacture of cement with a flow diagram.

OR

13(b) Describe the mandatory tests recommended to assess the strength of coarse aggregates for use in concrete.

14(a) What do you mean by workability of concrete? Enumerate the various tests to be conducted on concrete to determine the workability of concrete with sketches.

OR

14(b) Explain in detail with sketches any two tests to be conducted for strength properties of hardened concrete.

15(a) What is the composition of steel? What is the effect of carbon on strength of steel? Explain in detail the heat treatment of steel.

OR

15(b) Explain in detail about the advantages of Aluminum in construction .Also explain about its alloys.