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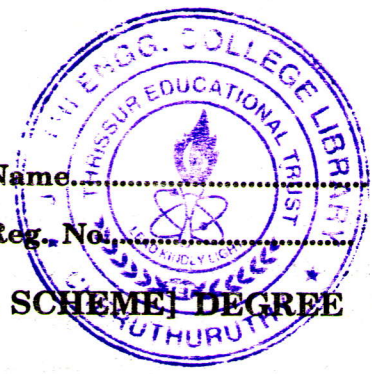
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SEVENTH SEMESTER B.TECH. (ENGINEERING) [2014 SCHEME] DEGREE EXAMINATION, NOVEMBER 2017

Civil Engineering

CE 14 704 (E)—CONCRETE TECHNOLOGY

Time : Three Hours   Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 marks.

1. Brief on the process of hydration.

2. Write a note on special aggregate.

3. Mention the merits and demerits of mineral admixtures.

4. When do you call the concrete as light weight concrete ?

5. What is meant by radiation shielding concrete ? Brief.

6. Distinguish between High Strength Concrete and High Performance Concrete.

7. How do you measure the cover of the reinforcement in a concrete element ?

8. What are the factors considered in the mix design of the medium strength concrete ?

9. Compare plastic shrinkage and drying shrinkage.

10. Write the importance of durability properties of concrete.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 marks.

11. What are the effects on properties of concrete if silica fume, fly ash, metakaolin are blended with cement ? Explain.

Or

12. What is chemical admixture ? Illustrate the action and interaction and their influence on properties of concrete.

13. Write short notes on :

    (a) Autoclaved aerated concrete.   (8 marks)

    (b) No fines concrete.   (7 marks)

Or

Turn over

14. In what situation self compact concrete is preferred ? Explain its fresh properties.

15. Describe the following methods :

    (a) Pull out and pull off methods.   (8 marks)

    (b) Chloride and carbonation tests.   (7 marks)

Or

16. Do the mix design for M60 concrete as per BIS. Assume the necessary data as per code.

17. Explain in detail the importance of elastic properties of aggregate for making a good concrete.

Or

18. Discuss the relationship between strength and durability of concrete. How it will influence the concrete ?

[4 × 15 = 60 marks]