

Total No. of Pages: 2

Register Number:

Name of the Candidate:

**5536**

**B.Sc. DEGREE EXAMINATION, 2013**

**(CONSTRUCTION MANAGEMENT)**

**(FOURTH SEMESTER)**

**440 : ELEMENTS OF CONCRETE**

December]

[Time : 3 Hours

**Maximum : 75 Marks**

**Answer ONE question from each unit**

**(5 × 15 = 75)**

**UNIT- I**

1. a) Explain the terms Setting and Hardening of cement.  
b) Explain the structure of hydrate cement.

(OR)

2. a) Explain Bulking of aggregate.  
b) Explain the classification of aggregates in detail.

**UNIT- II**

3. a) Define the term workability. What are the factors affecting workability?  
b) Explain setting time of concrete.

(OR)

4. a) Write short notes on manufacturing of concrete.  
b) Explain the quality of mixing water.

**UNIT- III**

5. a) Explain the importance of water/cement ratio in detail.  
b) Define Abram's law with an example.

(OR)

6. a) Explain compression tests of concrete.  
b) What are testing methods for concrete? Explain NDT in detail.

**UNIT- IV**

7. a) What are the factors affecting durability of concrete in detail?  
b) Explain quality control of concrete.

(OR)

8. a) Write short notes on statistical methods and Acceptance criteria.  
b) What are the factors in the choice of mix proportions?

**UNIT- V**

9. a) Explain in detail on No fines concrete.  
b) Write short notes on Light weight aggregate concrete.

(OR)

10. a) Explain polymer concrete in detail.  
b) Write short notes on cellular concrete.

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