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CE - 402**B.E. IV Semester**

Examination, June 2014

Concrete Technology

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Time : Three Hours**Maximum Marks : 70**

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each question are to be attempted at one place.
 iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is cement? Classify different types of cement. 2
- b) What is the significance of water cement ratio in cement concrete. 2
- c) Explain advantages and disadvantages of concrete. 3
- d) What is admixture? Describe the various important functions the admixtures can perform, if used. 7

Or

Explain the various in gradients of cement concrete with function of each. 7

Unit - II

2. a) What do you mean by plastic state and hardened state of concrete. 2
- b) Explain the term workability of concrete. 2
- c) Explain creep of concrete. 3

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- d) What do you understand by rheology of concrete? Mention the factors affecting rheological properties. 7

Or

Explain in detail thermal properties of concrete. 7

UNIT - III

3. a) What is concrete mix design? 2
- b) Write short note on sampling and acceptance criteria for concrete. 2
- c) Explain factors governing concrete mix design. 3
- d) What are different methods of concrete mix design? Give step by step procedure for proportioning of concrete mixes. 7

Or

Describe in detail design of plastic concrete mix. 7

UNIT - IV

4. a) What is curing of concrete? 2
- b) Write short note on inspection and testing of concrete. 2
- c) What is statistical quality control explain in brief. 3
- d) Describe the various techniques used for concreting under-water. 7

Or

List the various tests to ascertain the quality of concrete. Describe in detail any two of them. 7

UNIT - V

5. a) What is reinforced cement concrete (RCC), how it is made. 2
- b) Explain prestressed concrete. 2
- c) What is ferrocement? Explain its advantages in brief. 3
- d) Explain in detail Ready Mix Concrete (RMC) and the admixtures used in RMC. 7

Or

- e) Explain polymer concrete and its composition in detail. 7

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