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**Code: 5G674**

IV B.Tech. I Semester Supplementary Examinations May/June 2022

**Concrete Technology**

( Civil Engineering )

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks )

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**UNIT-I**

1. a) Explain the procedure involved in the testing of consistency, initial setting and final setting time of cement in detail? 8M
- b) Write the functions of admixtures? 6M

**OR**

2. a) Classify the coarse aggregates based on shape and size and explain in detail? 7M
- b) Discuss the method of constructing a gradation curve for fine aggregates. 7M

**UNIT-II**

3. a) Describe the various factors that affect workability of concrete? 8M
- b) Discuss the merits and demerits of compaction factor test and Slump cone test for Concrete? 6M

**OR**

4. a) Compare the factors governing the Tensile strength and Compressive strength of hardened concrete? 9M
- b) Explain maturity concept of concrete? 5M

**UNIT-III**

5. a) Explain the steps involved in any one of the Non-destructive testing methods for concrete? 7M
- b) Explain the method of evaluating the modulus of elasticity of hardened concrete in the laboratory? 7M

**OR**

6. a) Discuss the effects of creep? 6M
- b) Discuss about the effects of shrinkage of concrete. Write the factors which influence the shrinkage of concrete? 8M

**UNIT-IV**

7. a) Discuss the factors governing choice of mix proportions? 8M
- b) Describe quality control of concrete? 6M

**OR**

8. a) Identify the factors that have influence on durability of concrete? 7M
- b) Discuss briefly about IS code method of concrete mix proportioning? 7M

**UNIT-V**

9. a) Explain Cellular concrete and fibre reinforced concrete? 7M
- b) Discuss the factors affecting the properties of the fibre reinforced concrete? 7M

**OR**

10. a) Write short notes on polymer concrete and no fines concrete? 7M
- b) Discuss the applications of the special concretes? 7M

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