Code No: R1931012 **R19** SET - 1

III B. Tech I Semester Supplementary Examinations, June/July-2022

CONCRETE TECHNOLOGY

(Civil Engineering)

Time: 3 hours Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each UNIT**

All Questions Carry Equal Marks

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UNIT-I

1. a) Discuss about the structure of hydrated cement. [8M]
   b) What is manufactured sand and what are the advantages of natural sand over manufacture sand? [7M]

(OR)

2. a) What are the different types of natural and artificial Pozzolans (Mineral admixtures)? [8M]
   b) What are the effects of Flyash on hardened concrete? [7M]

UNIT-II

3. a) Write the steps involved in the method of mix design as per IS. [8M]
   b) Explain the difference between bleeding and segregation of concrete. [7M]

(OR)

4. a) How will you measure the workability of fresh concrete? [8M]
   b) Describe the methods of control of temperature in placing mass concrete. [7M]

UNIT-III

5. a) Give the purpose of non-destructive test and explain about the Rebound hammer testing method. [8M]
   b) Explain the relationship between cube strength and cylinder strength of concrete. [7M]

(OR)

6. a) Discuss various factors influencing the modulus of elasticity of concrete. [8M]
   b) Explain the maturity concept of concrete. [7M]

UNIT-IV

7. a) Define the term shrinkage and mention the factors effecting on it. [8M]
   b) Discuss various factors which influence the modulus of elasticity of concrete. [7M]

(OR)

8. a) Explain the relation between creep and time and the effect of creep in concrete. [8M]
   b) Explain the situations where shrinkage cam happen and explain the types of shrinkage. [7M]

UNIT-V

9. a) Distinguish between high performance concrete and high density concrete. [8M]
   b) Briefly discuss the process of manufacturing light weight concrete and its applications. [7M]

(OR)

10. a) Briefly explain about the fiber reinforced concrete and its applications. [8M]
    b) Briefly explain about the polymer concrete and its applications. [7M]

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