

I B. Tech II Semester Supplementary Examinations, January/February - 2023
BUILDING MATERIALS AND CONCRETE TECHNOLOGY

(Only for Civil Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE Questions ONE Question from Each Unit
All Questions Carry Equal Marks

UNIT - I

1. a) Briefly describe the various defects in bricks. [7M]
 b) Write the characteristics of good tail. [7M]

(OR)

2. a) Briefly explain the purpose and the procedure for Attrition test on stone. [7M]
 b) What are the precautions to be taken while dressing a stone? Explain. [7M]

UNIT - II

3. What are the materials used as supplementary Cementitious materials. Explain about Fly ash and its classification. [14M]

(OR)

4. a) Explain about silica Fume and its contribution to strength in concrete. [7M]
 b) Explain the chemical reaction during hydration of cement. [7M]

UNIT - III

5. a) What are the different tests on workability of concrete? Explain any one test in detail. [7M]
 b) Explain the significance of the tests on concrete at fresh state while we are interested only in concrete at hardened state. [7M]

(OR)

6. a) Describe in detail Vee-Bee consist meter test to determine workability of concrete. [10M]
 b) Explain workability of concrete and tests to be done while determining it. [4M]

UNIT - IV

7. a) Write down about the Maturity concept of concrete and its strength in Tension and Compression. [7M]
 b) What are the factors that affect the creep and shrinkage of concrete? [7M]

(OR)

8. What is Shrinkage of concrete and types and discuss about the factors affecting the shrinkage of concrete. [14M]

UNIT - V

9. What are the factors affecting the measurement of pulse velocity? Mention its applications? Draw neat sketch of UPV. [14M]

(OR)

10. Explain in detail about the Rebound Hammer Test (NDT) that is conducted on existing structure to assess its strength with a neat diagram. [14M]

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