



R18 Regulation

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 2E5AA

**B.Tech V Semester Regular/Supplementary Examinations, December 2021**  
**CONCRETE TECHNOLOGY**  
(Civil Engineering)

**Maximum Marks: 70**

**Date: 07.01.2022**

**Duration: 3 hours**

- Note:
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

**Part-A**

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Write about any four different types of cement.
- 2 Define hydration of cement.
- 3 Write about alkali-aggregate reaction in concrete?
- 4 List the strength and mechanical properties of aggregate.
- 5 Define curing of concrete.
- 6 List the factors causing bleeding of concrete.
- 7 Define Shrinkage cracking.
- 8 Write short notes on Sulphate attack in concrete?
- 9 Write about light weight concrete.
- 10 Write down the advantages of Fibre Reinforced Concrete?

**Part-B**

Answer All the following questions.

(5X10M=50Marks)

- 11 Explain the different types of admixtures. (10M)
- OR
- 12 Describe the setting time and soundness test of cement. (10M)
  - 13 Write in detail about the following: (1) Thermal Properties of aggregate (2) Bulking of sand (3) Soundness of Aggregate (4) Fineness modulus. (10M)
- OR
- 14 Explain the different tests that are conducted on coarse aggregate used in concrete. (10M)
  - 15 Explain the factors affecting workability and different tests to measure the workability of concrete. (10M)
- OR
- 16 Describe the steps involved in manufacturing concrete. (10M)

- 17 i) Explain the factors affecting the strength of hardened concrete.  
ii) Write short note on Acid attack and Creep of concrete. (5M+5M)  
OR
- 18 Explain the different methods of nondestructive tests with its advantages and limitations. (10M)
- 19 Explain the properties of Polymer Impregnated Concrete. (10M)  
OR
- 20 Describe Indian standard method of mix design in detail. (10M)