



Regulation R18
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 2E5AA

B.Tech V Semester Supplementary Examinations, June/July 2023
Concrete Technology
(Civil Engineering)

Maximum Marks: 70

Date:01.07.2023 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. Total 10 questions it consists.
4. Part-B 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 List out different types of cement.
- 2 What is meant by hydration of cement?
- 3 Define bulking of sand..
- 4 What is the difference between flaky and elongated aggregates
- 5 List out the factors affecting workability.
- 6 Define segregation.
- 7 Define shrinkage of concrete.
- 8 List out different non-destructive methods used of concrete testing.
- 9 What is meant by fiber reinforced concrete?
- 10 Explain 'effective water' in a mix.

Part-B

Answer All the following questions. (5X10M=50Marks)

- 11 Explain in detail the following types of cement: [5+5]
a) Rapid hardening cement b) Ordinary portland cement
OR
- 12 Explain the initial setting time and final setting time of cement with a neat sketch. [10]
- 13 Explain the procedure of Abrasion test by using Los Angeles abrasion testing machine. [10]
OR
- 14 Explain alkali aggregate reaction. State the measures to control the AAR. [10]
- 15 List out the different methods used to measure the workability of concrete. Explain any one of them in detail. [10]
OR
- 16 Explain with a neat sketch the procedure of slump cone test along with its types. [10]
- 17 Define creep of concrete. Write down the factors affecting the creep of concrete. [10]
OR
- 18 Explain in brief the procedure of finding tensile strength of concrete. [10]
- 19 What is Mix Design? Explain in detail the various factors affecting the choice of concrete mix design. [10]
OR
- 20 Explain the following: [5+5]
a) Polymer concrete b) High density concrete