R20 Regulation *Subject code: 3P4AF*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech IV Semester Supplementary Examinations, June 2026

CONCRETE TECHNOLOGY

(CE)

Maximum Marks: 70 Date: 19.06.2026 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

IS: 10262 code book is allowed

	All the following questions carry equal marks (10X2M=20 Marks)	Marks	CO	BTL
1	List the different grades and types of cement.	2M	1	L1
2	Write about the plasticizers and superplasticizers.	2M	1	L1
3	List the methods adopted for determining the moisture content of aggregate.	2M	2	L1
4	Write short notes on bulking of sand.	2M	2	L1
5	Write about membrane curing.	2M	3	L1
6	List the methods of compaction.	2M	3	L1
7	List the factors affecting creep.	2M	4	L1
8	Write about non-destructive testing of concrete.	2M	4	L1
9	Write short notes on quality control concrete.	2M	5	L1
10	Define polymer concrete.	2M	5	L1

Part-B

	Answer All the following questions. (5X10M=50Marks)	Marks	CO	BTL
11	a) Discuss in detail on cement hydration and formation of C-S-H Gel. b) Write about heat of hydration.	5M 5M	1	L2
	OR			
12	a) Explain about the types of cement. b) Explain in detail on natural admixtures.	5M 5M	1	L2
13	List the tests done to determine the aggregate strength and explain any one method in detail.	10M	2	L2
	OR			
14	a) Explain the factors affecting AAR. b) Write the effects and preventive measures of AAR.	5M 5M	2	L2
15	Explain the factors affecting workability of concrete.	10M	3	L2
	OR			
16	With the help of neat sketch explain about Vee-bee consistometer test..	10M	3	L2
17	a) Explain about the maturity of concrete.	5M	4	L2

	b) Explain about the factors affecting creep.	5M		
	OR			
18	Explain about the NDT on concrete.	10M	4	L2
19	Obtain the mix design for M35 grade concrete.	10M	5	L2
	OR			
20	Explain about Self Compaction Concrete with its advantages and disadvantages.	10M	5	L2