R20 Regulation *Subject code: 3P4AF*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech IV Semester Supplementary Examinations, December 2025

CONCRETE TECHNOLOGY

(CE)

Maximum Marks: 70 Date: 30.12.2025 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.

IS 10262 CODE BOOK IS ALLOWED

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Write short notes on setting time of cement.	2M	1	L1
2	Define and write the functions of admixture.	2M	1	L1
3	List the classification of aggregates.	2M	2	L1
4	List the thermal properties of aggregates.	2M	2	L1
5	Define workability.	2M	3	L1
6	List the steps involved in concrete manufacturing.	2M	3	L1
7	Write about the specimens used for testing hardened concrete.	2M	4	L1
8	Write about the effect of creep on 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) Write about the Bouge' s compounds and list them. b) Discuss in detail about the properties of Bouges compounds.	5M 5M	1	L2
	OR			
12	List the chemical admixtures and explain in detail about any five chemical admixtures.	10M	1	L2
13	a) Write about thermal properties of aggregates & its effect. b) Write short notes on soundness of aggregate.	5M 5M	2	L2
	OR			
14	Explain in detail about fineness modulus of sand and its procedure.	10M	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	Explain about Abrahams Law and Gel space ratio.	10M	4	L2
	OR			
18	a) Explain the relationship between creep of concrete and time. b) Explain about the types of shrinkage.	5M 5M	4	L2
19	Obtain the mix proportions for M30 grade concrete.	10M	5	L2
	OR			
20	Explain about Self Compaction Concrete with its advantages and disadvantages.	10M	5	L2