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 2024

CONCRETE TECHNOLOGY

(Civil Engineering)

Maximum Marks: 70 Date:17.12.2024 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 which carries 10M.
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)		CO	Bloom Tx
1	Write short notes on setting time of cement.	1	L1
2	Define and write the functions of admixture.	1	L1
3	List the classification of aggregates.	2	L1
4	Write about Alkali aggregate reaction?	2	L1
5	Define workability.	3	L1
6	List the steps involved in concrete manufacturing.	3	L1
7	Write about the specimens used for testing hardened concrete.	4	L1
8	Write about the effect of creep on concrete.	4	L1
9	As per IS-10262: 2019, list the methods used for designing concrete.	5	L1
10	Define polymer concrete.	5	L1
	Part-B		
Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	A)List the chemical composition of cement and its percentage content.[5M] B)Write about the tests on physical properties on cement. [5M]	1	L2
	OR		
12	Explain about the chemical admixtures. [10M]	1	L2
13	A)Write about thermal properties of aggregates & its effect. [5M] B)Write short notes on soundness of aggregate. [5M]	2	L2
	OR		
14	List the methods adopted to determine the moisture content of aggregate. Also explain in detail on calcium carbide method. [10M]	2	L2
15	Explain the factors affecting setting time of concrete. [10M]	3	L2
	OR		
16	Explain different methods in measurement of workability by different tests.[10M]	3	L2

17	A)Explain about the maturity of concrete. [5M] B)Explain about the factors affecting creep. [5M]	4	L2
	OR		
18	Explain about the NDT on concrete. [10M]	4	L2
19	Obtain the mix design proportions for M35 grade of concrete. [10M]	5	L2
	OR		
20	Explain about Self Compaction Concrete with its advantages and disadvantages. [10M]	5	L2