R20 Regulation *Subject code: 3E7AA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Supplementary Examinations, November 2025

WATER RESOURCES ENGINEERING-II

(CE)

Maximum Marks: 70 Date: 26.11.2025 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.**

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Mention the parts of dam.	2M	1	L1
2	Define surcharge storage.	2M	1	L1
3	What are essential requirements of spillway?	2M	2	L1
4	Enumerate priming devices for siphon spillways.	2M	2	L1
5	What is rock toe in an earth dam.	2M	3	L1
6	What is importance of fish ladder in diversion work.	2M	3	L1
7	Distinguish between low and high gravity dam.	2M	4	L1
8	Define sub proportional outlet.	2M	4	L1
9	Write notes on inspection galleries.	2M	5	L1
10	Define silt ejectors.	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Draw a neat sketch of reservoir with parts and explain how the storage capacity of a reservoir is fixed.	10M	1	L2
	OR			
12	Explain in detail about various classification of dams and its uses.	10M	1	L2
13	Discuss the classification of earth dams with neat sketches bringing out their relative merits and Demerits.	10M	2	L2
	OR			
14	Explain in detail about how to control seepage failure in earth dams.	10M	2	L2
15	What is meant by semi modular outlet and explain proportionality of an outlet, how APM outlet is working as semi module outlet.	10M	3	L2
	OR			
16	Explain the functions of upstream and downstream piles and inverted floor at the downstream end of impervious floor.	10M	3	L2
17	Draw a neat sectional view of weir showing the various parts what is exit gradient how it affects the design weir.	10M	4	L2

	OR			
18	Compute the discharge over an ogee spill way with coefficient of discharge C= 2.2 at a head of 4.2m. the effective length of the spillway is 120 m. neglect the velocity of approach.	10M	4	L2
19	What is meant by canal drops why are canal drops constructed in a canal system.	10M	5	L2
	OR			
20	Write in detail about sarada type fall and straight fall.	10M	5	L2