



R20 Regulation

Subject code: 3E7AA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Regular Examinations, November 2023

WATER RESOURCES ENGINEERING-II (CIVIL ENGINEERING)

Maximum Marks: 70

Date: 12.12.2023 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. 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.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

		Bloom Tx
1	Define mass curve and demand curve.	L1
2	List out the factors affecting sedimentation.	L1
3	What are the modifications given to an elementary profile to get practical profile?	L1
4	Mention the forces acting on a gravity dam.	L1
5	List the types of earth dams.	L1
6	What is meant by phreatic line of an earth dam?	L1
7	Give the classification of weirs.	L1
8	Mention the various components of a diversion headwork.	L1
9	How would you select suitable type of cross drainage work?	L1
10	What do you understand by the term level crossing?	L1

Part-B

Answer All the following questions.

(5X10M=50Marks)

11	A. Write short notes on gravity dam and buttress dam. [5] B. Discuss the steps involved in selecting a site for reservoir construction. [5]	L2 L2
	OR	
12	A. List the factors affecting the selection of types of dams. [5] B. Explain the factors governing the selection of site for a dam. [5]	L2 L2
13	A. Derive an expression for the limiting height of a low gravity dam. [5] B. Differentiate between low and high gravity dam. [5]	L3 L2
	OR	
14	A masonry dam 10 m high is trapezoidal in section with a top width of 1 m and bottom width of 8.25 m. The face exposed to water has a batter of 1:10. Test the stability of the dam. Find out the principal stresses at the toe and heel of the dam. Assume unit weight of water = 1000 kg/m ³ and permissible shear of joint = 14 kg/cm ² . [10]	L3
15	A. What are the factors which affect the spillway capacity? [5] B. Explain the various components of spillway. [5]	L3 L2

	OR	
16	Discuss the causes of failure of earth dams and their remedies. [10]	L2
17	A. Explain the functions of canal head regulator. [5] B. Discuss the functions of various components of a diversion work. [5]	L2 L2
	OR	
18	A. Explain Bligh's creep theory. [5] B. Describe briefly with neat sketches the various types of weirs. [5]	L2 L2
19	A. What is meant by falls? Where are they located? [4] B. Briefly discuss the components of various types of falls with neat sketches. [6]	L2 L2
	OR	
20	A. What points will you consider while selecting the site of a cross-drainage work? [5] B. List out various functions of a distributary head regulator. [5]	L2 L3