

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019

Subject Code: 2174001**Date: 23/11/2019****Subject Name: Irrigation and Water Resources Engineering****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) Write short note on surcharge storage.	03
(b) Give causes and remedial measures of water logging.	04
(c) Write short note on Direct Run-off Hydrograph(DRH) and explain factors affecting it	07
Q.2 (a) Explain remedial measures for saline water logging.	03
(b) Give comparison of Kennedy's theory and Lacey's theory.	04
(c) Give detailed classification of canal based on function.	07
OR	
(c) Explain Lacey's theory for design of unlined channel.	07
Q.3 (a) Explain Level crossing with neat sketch.	03
(b) Give classification of crops based on crop seasons.	04
(c) Explain in detail seepage failure in earthen dam.	07
OR	
Q.3 (a) Explain syphon aqueduct with neat sketch.	03
(b) Explain factors affecting duty.	04
(c) Explain different type of forces acting on gravity dam.	07
Q.4 (a) Explain flood routing and enlist methods of routing.	03
(b) Explain chute spillway in detail.	04
(c) Give Calculation to determine reservoir capacity from mass inflow curve.	07
OR	
Q.4 (a) Explain types of reservoir based on its purpose.	03
(b) Explain types of fall and explain any one in detail.	04
(c) Explain Factors affecting site selection of reservoir.	07
Q.5 (a) Explain side channel spillway in detail.	03
(b) Enlist types of aquifers and explain any one in detail.	04
(c) Write short note on	07
1) Water logging.	
2) Reservoir sedimentation.	
OR	
Q.5 (a) Explain reclamation of saline land.	03
(b) Give limitations of Bligh's creep theory.	04
(c) Write short note on	07
1) Base flow separation.	
2) Safe yield of reservoir.	
