Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-VII • EXAMINATION - SUMMER • 2015

Subject Code: X70601		t Code: X70601 Date: 08/05/20	Date: 08/05/2015	
Tir	ne:0 cructio 1. 2.	. Attempt all questions.	70	
Q.1	(a) (b)	Describe the characteristics of Embankment dams. Discuss the advantages and disadvantages of Gravity dams.	07 07	
Q.2	(a) (b)	Describe the factors governing the selection of site for a dam. Describe the various engineering characteristics of soil. OR	07 07	
	(b)	Explain the following terms: - Slope protection in earth dams Upstream impervious blanket Filters in earth dams.	07	
Q.3	(a) (b)	Write short note on settlement of rock fill dams. For a homogeneous earth dams 50 m high, and 2.0 m free board, a flow net was constructed and following results were obtained: Number of potential drops = 22 Number of flow channels = 4 The dam has a horizontal filter of 40 m length at its downstream end. Calculate the discharge per meter length of the dam if the coefficient of permeability of the dam is 3×10^{-3} cm/sec.	07 07	
Q.3	(a) (b)	OR Enlist various forces acting on a gravity dam. Explain any one in detail. Describe the elementary profile of a gravity dam.	07 07	
Q.4	(a)	Explain roller compacted concrete gravity dams. Describe the advantages of	07	
	(b)	roller compacted concrete gravity dam. Describe the combination of loading for design of gravity dams as per IS recommendations.	07	
		OR		
Q.4	(a) (b)	What is a spillway? Discuss briefly different types of spillways. Describe cavitation in an ogee spillway.	07 07	
Q.5	(a)	Define chute spillway with a sketch. Where would you prefer a chute spillway over an ogee spillway?	07	
	(b)	Write a short note on energy dissipation below spillway. OR	07	
Q.5	(a)	What is Head regulator and Cross regulator in the canal network? Enlist function of each with neat sketch.	07	
	(b)	Write a short note on Sarda type fall.	07	
