Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER–VI • EXAMINATION – SUMMER 2013

Subject Code: X60603 **Date: 07-06-2013**

Subject Name: Irrigation Engineering

Time: 10.30 am - 01.00 pm **Total Marks: 70**

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

Q.1	**(a)**	Classify the methods of surface irrigation and discuss any one in detail.	**07**
	(b)	Compare drip irrigation with sprinkler irrigation.	**07**
Q.2	**(a)**	Discuss the causes of failure of earthen dam.	**07**
	(b)	Explain duty and Delta.	**07**
		OR	
	(b)	Discuss the causes of water logging.	**07**
Q.3	**(a)**	What are modes of failure of a gravity dam? Discus them.	**07**
	(b)	How will you calculate silt pressure and water pressure acting on a gravity dam?	**07**
		OR	
Q.3	**(a)**	What is phreatic line? How will you locate it on an earthen dam?	**07**
	(b)	Discuss the forces acting on a gravity dam.	**07**
		OR	
Q.4	**(a)**	Write short note on a Canal Head Regulator.	**07**
	(b)	What is spillway? What are its component parts?	**07**
		OR	
Q.4	**(a)**	Explain Khosla's method of Independent Variables.	**07**
Q.4	**(b)**	Explain Irrigation efficiencies in detail.	**07**
		OR	
Q.5	**(a)**	How the salinity in the coastal area can be prevented?	**07**
	(b)	Compare Bligh' Creep theory and Lane's Weighted theory.	**07**
		OR	
Q.5	**(a)**	Discuss the limiting height of a low gravity dam.	**07**
	(b)	How the saline land can be reclaimed?	**07**

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