Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II– EXAMINATION – WINTER - 2016

Subject Code: 2723305 Date: 21/11/2016

Subject Name: Water use Management

Time: 2:30 pm to 5:00 pm Total Marks: 70

Instructions:

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

	Q.1	(a)				07	
(b) Discuss, briefly, the factors affecting water requirements of a crop					07		
	Q.2	(a)	a) Define and explain consumptive use of water.				
			List the various factors which affect it.				
	(b) Work out delta for wheat and rice from the following data:					07	
			Data	Wheat	Rice		
			Base period	150 days	120 days		
			Depth of water for one irrigation	6 cm	10 cm		
			Interval between successive watering	15 days	10 days		
	OR						
		(b)	What are the different methods adopted to maintain soil fertility? Define succession cropping and inter-cropping.				
	Q.3	(a)) Discuss planning and design of sprinkler system.				
	C	(b)					
		()	Compare in a tabular form furrow, sprinkler and drip irrigation methods. OR				
	Q.3	(a)	Draw general arrangement of sprinkler irrigation and describe the main component parts of sprinkler system.				
		(b)				07	
	Q.4 (a) How will you classify drains? Compare surface drains versus sub-surface drains.				s sub-surface	07	
		(b)	b) Calculate the most efficient bottom width for a drainage channel to carry a flow of 2m depth in clay soil. Compute the velocity and the discharge capacity of the channel if the channel gradient is 0.04 percent.				
			OR				
	Q.4 (a) Describe reclamation and management of salt-affected soils.					07	
(b) Discuss conjunctive use of surface water and groundwater.					07		
	Q.5	(a) Discuss modernization of existing irrigation projects.				07	
	Q.c	(b)	Explain command area development organization and their role in water management.				
OR						0.5	
	Q.5	(a)	Describe automation and control and regu			07	
		(b)	Explain operation and management of irri	gation projects.		07	