Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2723305 **Date: 31/05/2016**

Subject Name: Water Use Management

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.**

Q.1	**(a)**	Enlist the factors affecting water absorption by plant. Explain the environmental factors affecting water absorption by plant.	**07**
	(b)	What do you understand by soil water retention? Explain soil water retention curve with neat sketch.	**07**
Q.2	**(a)**	Enlist the factors affecting transpiration. Explain soil factor and plant factor influencing the transpiration by plant.	**07**
	(b)	Explain the different classification of consumptive use of water by crops.	**07**
		OR	
	(b)	Explain soil water depletion method of estimating the consumptive use of water by crops.	**07**
Q.3	**(a)**	Enlist the factors governing the cropping pattern in an irrigated area. Explain any two in detail.	**07**
	(b)	Explain the factors affecting depth of irrigation.	**07**
		OR	
Q.3	**(a)**	Explain the procedure for evolving cropping pattern for an irrigation command area.	**07**
	(b)	Discuss the precautionary measures that can be adopted when saline water is to be used for irrigating crops?	**07**
Q.4	**(a)**	Explain sprinkler irrigation system in detail.	**07**
	(b)	Differentiate water conveyance efficiency and water application efficiency. Discuss the factors on which water conveyance efficiency depends.	**07**
		OR	
Q.4	**(a)**	What are the reason for formation of saline & alkaline soils? Explain reclamation of affected soils.	**07**
	(b)	Discuss the hydraulics of flow in drip irrigation system. Why drip irrigation system is preferred than any other methods of irrigation system?	
Q.5	**(a)**	Define water logging. Explain the various layout of surface drains adopted for land drainage.	**07**
	(b)	Why modernization of irrigation projects is needed for effective management of the available of water resources.	**07**
Q.5	**(a)**	Define drainage coefficient. Discuss the various tile drainage system with neat sketch.	**07**
	(b)	Explain in brief canal automation system.	**07**

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