

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER- 2 • EXAMINATION – WINTER - 2023

Subject Code:3723305**Date: 17 Jan 2024****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 and explain advantages and disadvantages of irrigation. **07**
(b) Write a short note on classification of irrigation soil. **07**
- Q.2** (a) What is the importance of water use management? Explain with a case study. **07**
(b) Discuss water quality and water standards for the purpose of irrigation. **07**
- OR**
- (b) Elaborate the soil moisture tension relationships of hygroscopic water, capillary water and gravitational water. **07**
- Q.3** (a) Define soil fertility. What are the different methods for maintaining the soil fertility? **07**
(b) Explain the term crop rotation. Enumerate the factors to be considered while planning for crop rotation. **07**
- OR**
- Q.3** (a) Prepare a list of various methods of determining the consumptive use of water. Explain each method in brief. **07**
(b) What are the various factors affecting the duty of water. **07**
- Q.4** (a) Differentiate between sprinkler irrigation and drip irrigation. **07**
(b) Classify surface and sub surface drainage system with their merits and demerits. **07**
- OR**
- Q.4** (a) What are the causes and preventive measures of water logging? **07**
(b) Write a short note on reclamation of saline or alkaline soil. **07**
- Q.5** (a) Compare the conventional system and automation system for the canal operation. **07**
(b) What is command area development organization? What is their role in water management? **07**
- OR**
- Q.5** (a) Describe the significance of Water Quality Modelling along with its applications. **07**
(b) How the modernization of existing irrigation projects can help in optimizing them? **07**
