

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (OLD) EXAMINATION – SUMMER 2019****Subject Code: 170602****Date: 14/05/2019****Subject Name: Irrigation Engineering****Time: 02:30 PM TO 05:00 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) Explain each component of Diversion head work with a neat sketch. **07**
(b) Explain Drip irrigation with neat sketch. **07**
- Q.2** (a) Explain irrigation efficiencies. **07**
(b) Explain the methods of assessment of irrigation water. **07**
- OR**
- (b) Explain the factors affecting duty. How can duty be improved? **07**
- Q.3** (a) Explain Khosla's method of independent variables for design of a weir. **07**
(b) Explain balancing depth of a canal. Derive an expression for the same. **07**
- OR**
- Q.3** (a) Compare Kennedy's and Lacey's silt theories. **07**
(b) Explain with the help of neat sketches various types of cross drainage works. **07**
- Q.4** (a) Write a note on canal lining. **07**
(b) Explain Sarda type fall in detail. **07**
- OR**
- Q.4** (a) Explain the terms: (1) Saturation capacity (2) Field capacity (3) Wilting point **07**
(b) Write a note on canal escape. **07**
- Q.5** (a) Write a note on water logging and remedial measures to prevent it. **07**
(b) Discuss the benefits and ill effects of irrigation. **07**
- OR**
- Q.5** (a) Explain various methods of surface irrigation. **07**
(b) Discuss briefly causes of failure of weirs and their remedies. **07**
