

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PDDC - SEMESTER-VII • EXAMINATION – SUMMER • 2015**

**Subject Code: X70605****Date: 14/05/2015****Subject Name: Irrigation water management****Time: 02:30 pm - 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) Enlist types of surface irrigation methods. Explain any one in detail. **07**  
(b) Describe the various water management issues related to the field of irrigation. **07**
- Q.2** (a) Compare the sprinkler as well as drip irrigation in detail. **07**  
(b) Explain with sketch the various components of sprinkler irrigation. **07**
- OR**
- (b) Explain with sketch the various components of drip irrigation. **07**
- Q.3** (a) Explain the applications of RS and GIS in the field of irrigation. **07**  
(b) Write short note on application of fertilizers and chemicals through pressurized irrigation systems. **07**
- OR**
- Q.3** (a) Explain factors affecting land leveling for agricultural purpose. **07**  
(b) Explain necessity of drainage and give the comparison of surface and sub surface drainage. **07**
- Q.4** (a) What is irrigation efficiency? Explain any two in detail. **07**  
(b) Describe the operation and maintenance of drip irrigation system. **07**
- OR**
- Q.4** (a) Write short note on irrigation scheduling. **07**  
(b) Define application, storage and water use efficiency and explain how application efficiency can be improved. **07**
- Q.5** (a) Describe in detail the operation and maintenance of canal irrigation system. **07**  
(b) Describe the operation and maintenance of sprinkler irrigation system. **07**
- OR**
- Q.5** (a) Explain ill-effects and preventive measures of water logging. **07**  
(b) Give the difference between furrow methods, border strip method and check basin method. **07**

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