

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-V • Examination – WINTER • 2014****Subject Code: 3350607****Date: 04-12-2014****Subject Name: Irrigation Engineering****Time: 10:30 am - 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.
4. English version is considered to be Authentic.

- Q.1** Answer any seven out of ten. **14**
1. State benefits of irrigation.
 2. Define terms : (i) Duty (ii) Delta
 3. Define terms : (i) Crop period (ii) Base period
 4. Explain kor watering and kor depth.
 5. State the function of canal head regulator.
 6. Write the name of perennial crops.
 7. Write the name of major irrigation projects in India.
 8. State ill effects of over irrigation.
 9. Give the name of earthen dam in Gujarat.
 10. Give the purpose of spillway.
- Q.2** (a) Write necessity of irrigation. **03**
- OR
- (a) Give merits of irrigation. **03**
- (b) Explain G.C.A. and C.C.A. **03**
- OR
- (b) Explain flow irrigation system. **03**
- (c) State methods of irrigation and explain any one of them. **04**
- OR
- (c) Write limitations of sprinkler irrigation system. **04**
- (d) Differentiate between drip irrigation system and sprinkler irrigation system. **04**
- OR
- (d) Write points for selection of site of Bandhara. **04**
- Q.3** (a) Write causes of Water logging. **03**
- OR
- (a) What are the preventive measures for water logging. **03**
- (b) Explain relation between duty and delta. **03**
- OR
- (b) Write factors affecting duty. **03**
- (c) Explain 'crop rotation'. **04**
- OR
- (c) Duty for one crop is 2000 hactre/cumecs. Base period is 120 days. If no. of watering is 6. Then calculate average depth of water. **04**
- (d) Write points for selection of site for a reservoir. **04**
- OR
- (d) Write short note on reservoir losses. **04**
- Q.4** (a) Explain benefit - cost ratio. **03**
- OR
- (a) Give classifications of dams. **03**
- (b) State the forces acting on gravity dam. **04**

OR

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| | (b) Write factors affecting selection of type of dam. | 04 |
| | (c) Explain zones of storage of reservoir with neat sketch. | 07 |
| Q.5 | (a) State types of failure of dam. | 04 |
| | (b) Write short note on ogee spillway. | 04 |
| | (c) State advantage of earthen dam . | 03 |
| | (d) Write the causes of silting in reservoir. | 03 |
