

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – V • EXAMINATION – WINTER - 2017**

**Subject Code: 3350607****Date: 14-11-2017****Subject Name: Irrigation Engineering****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.
4. Each question carry equal marks (14 marks)

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|------------|-----|--|-----------|
| <b>Q.1</b> | (a) | State the different methods of irrigation and explain any one of them                                    | <b>07</b> |
|            | (b) | Explain in brief the ill effects of irrigation.  | <b>03</b> |
| <b>Q.2</b> | (a) | Define and Derive the relation between base, delta and duty  | <b>07</b> |
|            | (b) | Explain importance of planning for irrigation projects and its objectives .                              | <b>03</b> |
| <b>OR</b>  |     |  |           |
|            | (b) | Write a note on merits and demerits of earthen dam.  | <b>07</b> |
| <b>Q.3</b> | (a) | How can a gravity dam fail? What precautions should be taken against the factors leading to the failure? | <b>07</b> |
|            | (b) | Write a note on benefits of irrigation .   | <b>03</b> |
| <b>OR</b>  |     |  |           |
| <b>Q.3</b> | (a) | Describe the various methods adopted as anti-water logging measure.                                      | <b>07</b> |
|            | (b) | What is Sprinkler Irrigation system? Which are the favorable conditions for sprinkler irrigation system? | <b>03</b> |
| <b>Q.4</b> | (a) | Distinguish between rock-fill dam and composite dam  | <b>07</b> |
|            | (b) | What is Drip Irrigation? Draw layout of drip irrigation.   | <b>03</b> |
| <b>OR</b>  |     |  |           |
| <b>Q.4</b> | (a) | Write a note on factors affecting location of spillway   | <b>07</b> |
|            | (b) | Explain & Draw the sketch of furrow method and contour farming   | <b>03</b> |
| <b>Q.5</b> | (a) | Differentiate between sprinkler irrigation and drip irrigation.  | <b>07</b> |
|            | (b) | Write a note on storage zones of reservoir .   | <b>03</b> |
| <b>OR</b>  |     |  |           |
| <b>Q.5</b> | (a) | Write the factors affecting consumptive use of water.  | <b>07</b> |
|            | (b) | Explain any four forces acting on gravity dam .  | <b>03</b> |

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