

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 2

Water Resources Management

Subject Name Ground Water Management

| Sr.No | Course content |
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| 1. | Availability of ground water, types of aquifers, ground water investigation methods, aquifer parameters and their determination, development of ground water. |
| 2 | Well hydraulics, types of wells, multiple well system, well design criteria, construction and maintenance. |
| 3 | Groundwater basin management and conjunctive use, artificial recharge of aquifers, methods of artificial recharge |
| 4 | Sea Water intrusion in coastal aquifers, methods of its prevention and control, Groundwater pollution remediation and legislation |
| 5 | Introduction to ground water flow and contaminant transport process |

List of Experiments:

1. Measurement of hydraulic permeability using Darcy's Apparatus
2. Use of rainfall Simulator for artificial recharge
3. Aquifer parameters and ground water basin management

Reference Books:

1. Groundwater Resources Evaluation – W. C. Walton
2. Geohydrology – Roger Dewlest
3. Groundwater Hydrology – D. K. Todd
4. Numerical analysis by Analog and Digital models for seepage and groundwater flows- D.R.Ruston & S.C.Redshow
5. Groundwater – H. M. Raghuna
6. Numerical Ground Water Hydrology -A.K.Rastogi