

KAKATIYA UNIVERSITY, WARANGAL-506 009

B.Sc. Under CBCS System wef A.Y: 2021-22

Third Year : : Semester - V

GENERIC ELECTIVE (Common to all students)

WATER RESOURCES MANAGEMENT

(4 hrs/week) (Taught by ant Science Dept) (Credits:4) (Marks:100)

UNIT-I:

Introduction to water resources management, different types of water resources, water resources and its importance, Global distribution of water. Hydrological cycle, Conservation of water, recycling of water.

Unit-II:

Rain water harvesting, methods of roof top rain water harvesting in urban setting: Direct method - Storing rain water in tanks for direct use; indirect methods - Recharge pits, bore wells/dug wells, Recharge trenches. Over use of surface and ground water and control measures.

UNIT-III:

Importance of water shed and water shed management, Rain water harvesting in rural setting: Check dams, percolation tanks, gabion structure, continuous contour trenches, staggered contour trenches, farm ponds. Surface water and ground water pollution, control measures.

UNIT-IV :

Mission Bhagiratha: Telangana government water grid project for drinking water supply - aims and objectives and method of implementation. Mission Kakatiya: Telangana government project for the restoration of minor irrigation tanks, aims and objectives and method of implementation.

Text books:

- 1) Water Resources, Conservation and Management by Chatterjee, S.N.
- 2) Groundwater hydrology by Todd
- 3) Watershed management by J.V.S.Murthy
- 4) Applied Hydrogeology by Fetter.