ST.JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

VIII SEMESTER BTH 8755(2)

BIOTECHNOLOGY WATER AND SOIL ANALYSIS

TIME: 2 Hrs/ Week Max. Marks: 50

(Skill Enhancement Course – SEC)

W.e.f 20AH Batch

OBJCECTIVE: To enable the students to

- 1. Perform soil samples preparation
- 2. Determine soil pH, WHC SOC
- 3. Learn to determine Total Acidity and Alkalinity of Water
- 4. Determine pH, conductance, BOD and COD of waste water

COURSE OUTCOMES: Students will

- **CO1:** Be able to list out different types of nurseries and beds
- **CO2:** Indentify the nursery tools, implements and containers.
- **CO3:** Develop skill on potting media preparation and plant production
- **CO4:** Learn the technique of establishing cutting, layering, grafting etc.

PRACTICAL COURSE:

- 1. Preparation of soil samples
- 2. Determination of soil pH
- 3. Determination of WHC (water holding capacity)
- 4. Determination of sand, silt and clay per cent
- 5. Determination of SOC (Soil organic carbon)
- 6. To determine Total Acidity and Alkalinity of Water
- 7. To determine the total hardness of the water sample
- 8. To determine pH and conductance of waste water
- 9. To determine Dissolved oxygen of waste water
- 10. To determine Biological and Chemical oxygen demand of waste water

REFERENCES

- 1. Laboratory Mannual of Water and Wastewater Analysis, D.R. Khanna, R. Bhutiani, Daya Publishing House, Delhi, 2008
- 2. Chemical and Biological Methods for Water Pollution Studies, R.K. Trivedy, P.K.Goel, Oriental Printing Press, Aligarh, 1986
- 3. Practical Methods in Ecology and Environmental Science, R.K.Trivedy, P.K.Goel, C.L.Trishal, Environmental Publications, Karad (India) 1987
- 4. Analytical Chemistry-Alka Gupta (PragatiPrakashan)
- 5. Soil chemicals Analysis P.R. Hesse
- 6. Soil testing manual by department of agriculture and cooperation, India

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