

2012

B.Sc. (Hons.) Biotechnology

Fifth Semester

BIOT-502-T: Environmental Biotechnology

Time allowed: 3 Hours

Max. Marks: 67

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

x-x-x

I. Explain the following:-

- a) BOD and COD
 - b) Solar energy as modern fuel
 - c) Biomagnification
 - d) Primary and secondary pollutants
 - e) Oxidation pond
 - f) Bio-fertilizer and Bio-pesticides
 - g) IPM
 - h) Composting and Land filling
 - i) Lichen as bioindicator
 - j) Photochemical smog
- (10x1½)

UNIT - I

- II. a) What is soil pollution? Describe different types of pollutants causing soil pollution.
b) Define Noise Pollution. Discuss its impacts on human health and its control measures. (7,6)
- III. a) Difference between Renewable and Non-renewable energy sources. Discuss impacts of fossil fuels on environment.
b) Define Air Pollution. Explain primary and secondary air pollutants and their impact on human health. (7,6)

UNIT - II

- IV. a) Discuss Activated Sludge methods of waste water treatment.
b) Describe Upward Flow Anaerobic Sludge Blanket Reactor for waste water treatment. (7,6)

P.T.O.

(2)

- V. a) What is Water Pollution? Discuss different physico-chemical methods for measurement of water pollution.
b) Describe Trickling Filter method of waste water treatment. (7.6)

UNIT - III

- VI. a) Discuss main components and applications of Integrated Pest Management.
b) Give an account on biodegradation of Azo dyes. (7.6)
- VII. a) What are Bio-fertilizers? Describe Rhizobium, Algae and Azolla as bio-fertilizers.
b) Explain various factors effecting biodegradation of pesticides. (7.6)

UNIT - IV

- VIII. What are Bio-indicators? Discuss different types of bio-indicators with suitable examples. (13)
- IX. a) What is Solid Waste management? Explain management of Municipal Solid Waste.
b) Describe in brief Vermi-composting. (7.6)

x-x-x