

Exam.Code:0005

Sub. Code: 0478

1128

B.A./B.Sc. (General) Fifth Semester

Industrial Microbiology

IMB-501: Biodegradation of Wastes and Pollutants

Time allowed: 3 Hours

Max. Marks: 33

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

x-x-x

I. Attempt the following:-

- a) Land fills
- b) Bio-indicators
- c) Bioleaching
- d) Effluent
- e) Vermicomposting

(5x1)

UNIT - I

II. a) What is the composition of solid waste? How composting and incineration are useful for solid waste disposal?

b) What kind of waste can be disposed of by landfilling method? What are the advantages and disadvantages of this method? (2x3½)

III. a) What do you know about the solid waste disposal? Explain.

b) How microbes help in degradation of industrial solid waste? (2x3½)

UNIT - II

IV. a) How waste water treatment is carried out to make water potable?

b) Discuss the importance of disinfection of water? (2x3½)

V. a) Define sewage and sludge. Which methods are applicable for sewage treatment?

b) Explain the methods of primary treatment of waste water. (2x3½)

UNIT - III

VI. a) Discuss the physical and chemical methods of disinfecting water

b) How the presence of E.coli in water is confirmed? Why the water containing E.coli is considered unfit for drinking? (2x3½)

P.T.O.

(2)

VII. Explain the following:-

- a) Disinfection of potable water supplies
- b) Water safety measures

(2x3½)

UNIT - IV

VIII. Write note on the following:

- a) Oil pollution and its treatment
- b) Degradation of hydrocarbons

(2x3½)

- IX. a) Define bioremediation .Discuss the important microbes involved in the process.
b) Why the presence of alkyl-Benzyl sulphonates is dangerous in the environment?
How their removal is possible?

(2x3½)

x-x-x