

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2024

M.Sc. 2nd Semester (BT)

COURSE CODE (CREDITS): **20MSWBT232**

MAX. MARKS: 25

COURSE NAME: **Environmental Biotechnology**

COURSE INSTRUCTORS: **Dr. Ashok Kumar Nadda**

MAX. TIME: 1 Hour 30 Minutes

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Section I

Q1. Answer the following questions. Each question is carrying one mark only.

- a) (Marks 1)
- b) What are electrogenic bacteria? Mention their two examples. (Marks 1)
- c) Name and virus used as biocontrol agents. What are the target organism for virus based biocontrol (Marks 1)
- d) Enlist the major enzymes produced by white rot fungi to degrade lingo-cellulosic biomass.(Marks 1)
- e) How does the lead and mercury affect the health of human beings? Name the diseases produced by these pollutants. (Mark 1)

Section II

Q 2 Give a detailed account of superbug construction? How superbug is effective for the removal of various hydrocarbon based pollutants. (Marks 3)

Q 3 Discuss the various mechanism of metal-microbe interaction. Give suitable examples. (Marks 3)

Q 4 What are the sources of actinovate and serenade that are available commercially in the market? Comment on their role to prevent the development of disease in the plants. (Marks 3)

Q 5 Discuss the principle of uranium degradation. How do the microorganisms will be utilized for the removal of radioactive waste in the polluted environment? (Marks 3)

Section III

Q 6 Discuss the role of white rot fungi in the removal of pollutants from earth. Write the various mechanisms of white rot fungi based bioremediation (Marks 4)

Q 7 Discuss various types of biofertilizers that help in the absorption of nitrogen, phosphorous and sulphur by plants. Give examples and their role in crop improvement (Marks 4)

JUIT TEST-2 EXAMINATION-APRIL-2024