

M.Sc. (Micro) Semester - 4 (CBCS) Examination**May/June-2021 (OLD COURSE)****ENVIRONMENTAL BIOTECHNOLOGY -2(ELECTIVE-1)****Time: 1:30 Hours****Marks: 42****Instructions:**

1. Figures to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
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Q. 1 Answer the following (any seven) (14)

1. What is surfactant?
2. Write the contribution of Har Gobind Khurana in environmental degradation.
3. Give two examples of PAHs degrading microorganisms.
4. What is phytoremediation?
5. Define – biodeterioration.
6. Write in brief about the methylation of arsenic.
7. What is acid mine drainage?
8. Write about the role archaea in bioremediation.
9. Write the uses of pectinase.
10. Give an example of microorganism involved in the methylation of mercury.

Q. 2 Answer the following (14)

1. Discuss the metabolic pathway of cellulose biodegradation.
2. Explain in detail the degradation of pectin.

Q.3 Answer the following (14)

1. Write a short note on pesticide biodegradation.
2. Write a note on *in situ* bioremediation.

Q.4 Answer the following (14)

1. Explain the microbial methylation of mercury and its health risks.
2. Describe microbial methylation of arsenic.

Q.5 Answer the following (14)

1. Discuss in detail 'Phytoremediation'.
2. Discuss the importance of GMOs in bioremediation organic pollutants.
