



DO-003-1194005

Seat No. _____

M. Sc. (Micro) (Sem. IV) (CBCS) Examination

March – 2022

Micro - 423 : Environmental Biotechnology - II

Faculty Code : 003

Subject Code : 1194005

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 Answer the following : (Any seven out of Ten, 14
each of 2 marks)
- (1) Define lignin.
 - (2) What is acid mine drainage? How does mine drainage occur?
 - (3) What is in situ bioremediation? Enlist strategies for in situ bioremediation?
 - (4) What is Bioaugmentation?
 - (5) What is ambient environment?
 - (6) Enlist effect and impact of pesticides.
 - (7) Define pesticide.
 - (8) Enlist sources of PAHs
 - (9) Enlist factors which influence PAHs degradation
 - (10) Enlist the enzyme families which are implicated degradation of pesticide.
- 2 Answer the following : (Any two out of Three, 14
each of 7 marks)
- (a) Write a note on biodegradation of cellulose.
 - (b) Write an essay on biodegradation of hemicelluloses.
 - (c) Discuss in detail, biodegradation of lignin.

- 3** Answer the following : (each of 07 marks) **14**
(a) Write note on biodegradation of pesticide.
(b) Write a note on biodegradation of PAHs.
- OR**
- 3** Answer the following : (each of 07 marks) **14**
(a) Explain biodegradation of nitro aromatics.
(b) Write a note on biodegradation of chloroaromatics.
- 4** Answer the following : (each of 07 marks) **14**
(a) Write a note on acid mine drainage
(b) Explain in detail microbial methylation of mercury.
- 5** Answer the following : (Any **two** out of four, **14**
each of 7 marks)
(a) Explain in the detail, bioremediation.
(b) Discuss in detail bacteria involving various strategies of bioremediation.
(c) Explain in detail plant involving various strategies of bioremediation.
(d) Describe in detail, fungi involving various strategies of bioremediation.
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