

M.Sc. (Micro) Semester - 3 (CBCS) Examination**DEC/JAN. - 2020 - [NEW COURSE]****Ecology and Environmental Microbiology (Elective (New))****Time: 1:30 Hours****Marks: 42****Instructions:**

1. Figure 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. Write in brief about food chain.
2. What is ecological succession?
3. What is phytoremediation?
4. Explain the role of phosphate in ecology.
5. Enlist the biogeographical zones of India.
6. What are xenobiotics?
7. What is biostimulation?
8. Give two examples of pesticide degrading microorganisms.
9. Write the role of GMO environmental microbiology.
10. Enlist the molecular methods used for pollution monitoring.

Q. 2 Answer the following (any two)**14**

1. Discuss the quantitative structure of community.
2. Write a note on 'Ecological pyramids'.
3. Explain Biotic interaction with suitable example

Q. 3 Answer the following (any two)**14**

- a) Write a note on 'nitrogen cycle'.
- b) Write a note on 'forest ecosystem'.
- c) Explain basic principle of conservation.

Q. 4 Answer the following (any two)

- a) Write a note on bioremediation of heavy metals.
- b) Explain the pesticide biodegradation in detail.
- c) Write note on Biodegradation of petroleum hydrocarbons.

Q. 5 Answer the following (any two)**14**

- a) Explain the production of biofuels in detail.
- b) Discuss the various chemical methods used for pollution monitoring.
- c) Explain microbial enhanced oil recovery.