

A-1026

Total Pages : 3

Roll No.

ENSE-653/EVS-507

M.Sc. ENVIRONMENTAL SCIENCE (MSCES)

(Environmental Microbiology and Biotechnology)

3rd/2nd Semester Examination, Session December 2024

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

Section-A

(Long Answer Type Questions) 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

1. Define the term microorganisms. Explain the Diversity and ecological significance of the microorganisms.
2. Discuss the various types of toxicity tests and also mention the factors on which these tests depend.
3. Write an essay on solid wastes management.
4. Explain in detail about biological treatment process of waste water.
5. What is Ecotoxicology ? What are the factors influencing toxicity ? Discuss in detail.

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section 'B' contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is the scope of Environmental microbiology ?
2. Compare the difference between prokaryotes and eukaryotes.
3. Discuss the role of indicator organisms in the treatment of drinking water.

4. What are Pollutants ? Explain the processes used for the degradation of organic pollutants.
5. What is Genetic Engineering ? Discuss about the Environmental release of GEOs and its consequences.
6. Differentiate between batch and continuous culture.
7. Write a short note on Recombinant DNA.
8. Write short note on (any *two*) of the following :
 - (a) Application of gene transfer
 - (b) Nucleic acid
 - (c) Extra cellular polymers
 - (d) Microcosm
