

A-0925

Total Pages : 3

Roll No.

ENSE-653/EVS-507

M.Sc. (Environmental Science) (MSCES)

Environmental Microbiology and Biotechnology

Examination February, 2026

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.

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(1)

P.T.O.

1. What are Xenobiotics ? Explain the sources and stabilization of xenobiotics in Ecosystem ?
2. What do you understand by Gene Transfer ? Explain the steps involved in Gene Transfer.
3. Explain the term bioremediation. What are technologies involved in Bioremediation ?
4. Discussed the methods of waste treatment for domestic use.
5. Explain the general characteristics and mode of replication of viruses.

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. Write short notes on (any *two*) of the following :
 - (a) Recalcitrant compounds
 - (b) Properties of plasmids
 - (c) Differentiate organic and inorganic pollutant

2. Explain the term genes and chromosomes.
3. Explain the Enzymes involved in Gene transfer.
4. Explain about Eukaryotic and prokaryotic cell.
5. Discuss the enzymes involved in waste treatment.
6. Discuss the various techniques used in tertiary treatment.
7. What are the indicator organisms ? Explain with examples.
8. Explain the growth phases of microbial cell in batch culture.
