

**Ph. D. (ENVIRONMENTAL
SCIENCE) (PHDEV)**

Term-End Examination

June, 2026

**REVE-004 : ENVIRONMENTAL
GEOMICROBIOLOGY**

Time : 3 Hours

Maximum Marks : 100

Note : (i) Answer any **five** questions out of eight questions.

(ii) All questions carry equal marks.

1. Describe a soil profile with a neatly labelled diagram.

Explain the nitrogen cycle with the help of a flowchart and the microorganisms involved in the processes. 10+10

2. Explain the role of microbes in : 10+10
- (a) compositing
- (b) bioremediation

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3. Explain the impacts of chemical pesticides used in agriculture on soil health and ground water pollution. 10+10
4. Discuss the working of a compound microscope with a neatly labelled diagram. 15+5
5. Discuss the applications of geomicrobiology in various disciplines. 20
6. Write short notes on the following. Explain their significance in environmental research : 4×5=20
 - (a) Spectroscopy
 - (b) Transmission electron microscopy
 - (c) Techniques in conventional microbiology
 - (d) Electrophoresis
7. Explain the types of geomicrobial agents. How do they influence geological processes ? 10+10
8. Discuss the importance of geomicrobiology in : 10+10
 - (a) Eco restoration
 - (b) Biomining

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