

AQ – 838

First Semester M. Sc. (Part-I) (CBCS) Examination

MICROBIOLOGY

(Environmental Microbiology)

Paper – IV

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

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- Note :** (1) All questions are compulsory.
(2) All questions carry equal marks.
(3) Draw diagrams wherever necessary.

1. Discuss food chain, ecosystem and community. 16

OR

- (a) Explain Role of bacterial technology in achieving sustainable development. 8
(b) Discuss the concept of habitat in biosphere. 8

2. Explain nitrogen fixation in detail with mechanism of nitrogen fixation. 16

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OR

- (a) Describe nitrogen cycle. 8
- (b) Explain Mechanism of nitrogenase. 8

3. Describe phosphorous cycle and explain the role of phosphobacter in crop production. 16

OR

- (a) Describe carbon cycle with general aspects. 8
- (b) Explain selenium cycle with significance. 8

4. Describe biotransformation of arsenic and mercury. 16

OR

- (a) Explain biotransformation of pesticides. 8
- (b) Explain Microbiology of acid mine drainage. 8

5. Explain biodeterioration of pharmaceutical products and stone work. 16

OR

- (a) Discuss leaching techniques. 8
- (b) Discuss Applications of bioleaching. 8

