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Roll No _____

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B.Sc. (Part-II) Examination, 2018

INDUSTRIAL MICROBIOLOGY

Second Paper

(Environmental Microbiology)

Time : Three Hours

Maximum Marks : 50

Note : Answer **all** questions. Marks for each question are indicated in the right-hand margin. The answer to short answer type questions should not exceed 200 words and the answers to long answer type questions should not exceed 500 words.

1. Define aeromicrobiology. What types of microbes are found in the air? Are they relevant to public health? 10

OR

Write notes on:

- (i) Bioaerosols
- (ii) Aeromicrobiological pathway.

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2. Describe the methods of water purification used in municipal water supplies. 10

OR

Write notes on the following:

- (i) Activated sludge process
- (ii) Bacteriological analysis of water.

3. With suitable examples, write a short account of various kinds of microbial interactions. 10

OR

Write notes on the following:

- (i) Phyllosphere microorganisms
- (ii) Mutualism

4. Write a comparative account of the chief characteristics of bacteria, actinomycetes and fungi of surface soils. 5

OR

Write notes on symbiotic nitrogen fixation.

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5. With suitable examples, write a short account of the microorganisms involved in biodeterioration of monuments of cultural heritage. 5

OR

Discuss about Sulfur cycles.

6. With suitable examples, discuss the role of microorganisms in solid waste disposals. 5

OR

What are Mycorrhizae? Compare the three different types of Mycorrhizae.

7. Write notes on the following: 5

- (i) Biofilter's
- (ii) Lichens

OR

Explain the following:

- (i) Composting
- (ii) Oxidation Ponds.