Unique Paper Code (UPC)	:	32531101-OC
Name of the Paper	:	Introduction to Microbiology and Microbial Diversity
Name of the Course	:	B.Sc. (Hons.) Microbiology
Semester	:	1
Duration	:	4 hours including time taken for downloading question paper and uploading answer sheets
Maximum marks	:	75

On first page, please write the following details:

1. Date and time of examination (DD/MM/YYYY, Hours:Min)
2. Examination Roll Number
3. Name of the Program, i.e. B.Sc. (H) Microbiology
4. Semester
5. Unique Paper Code (UPC)
6. Title of the Paper
7. Name of the College
8. Email ID of the student
9. Mobile Number of the student

SET 1

Attempt any ***four*** questions. **All** questions carry equal marks. Please write your answers on A4 size sheets and put the page number at the top of each page.

1. How was the Germ Theory of disease proven? State Koch's postulates. Discuss the contributions of two important scientists in the development of field of environmental microbiology. 5.75+4+9

2. Depict the lifecycle of *Plasmodium* using diagrams. Briefly describe at least 3 modes of nutrition seen in the protozoa citing suitable examples. Explain the following terms: trophozoite, cyst, micronucleus, ascus, teleomorph and basidiocarp. 6.75+6+6

3. Differentiate between haplontic and diplohaplontic life cycles in fungi using diagrams and suitable examples. Write a short note on the role of fungi in the environment. Briefly describe three types of mycelial aggregations citing suitable examples. 8+4.75+6

4. Describe the eukaryotic flagella and its arrangement in algae. Differentiate between lateral and scalariform conjugation with the help of diagrams. Who described the parasexual cycle

in fungi? Explain and depict it diagrammatically. 6+6+6.75

5. Write a note on reserve food material and eye spot in algae. Name the microorganism involved in the production of the following: citric acid; carrageenan, penicillin, amylase and yogurt. Define Coenobium and diagrammatically explain daughter colony formation in *Volvox.* 7+5+6.75

6. Explain how the controversy between spontaneous generation versus biogenesis was finally resolved. Describe Whittaker's classification system. Differentiate between lytic and lysogenic cycles. 6.75+6+6