Unique Paper Code (UPC)   :   32531101

Name of the Paper   :   Introduction to Microbiology and Microbial Diversity

Name of Course   :   B.Sc. (Hons.) Microbiology

Semester   :   1

Maximum Marks   :   75

Duration   :   4 hrs including time taken for downloading question paper and uploading answer sheets

Instructions to Candidates

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

1. Which period is called the Golden age of Microbiology and why? Discuss **any three** major developments that took place during this period which established microbiology as a separate discipline of science. Who postulated the Germ Theory of disease? Outline this theory with its significance.   2.75 + 12 + 4

2. Draw a well-labelled diagram, classify and write the economic importance of *Chlamydomonas* and *Rhizopus*. Explain citing a suitable example that how fungi get the benefits of recombination without undergoing sexual reproduction? Differentiate between the following pair of terms: Oospore and Zoospore; Holocarpic and Eucarpic fungi; Isogamy and Anisogamy.   8 + 4.75 + 6

3. Outline the differences between prokaryotic and eukaryotic microorganisms. Explain in detail the classification system being used presently for classifying microorganisms. Who is known as Father of Bacteriology and why?   8 + 6 + 4.75

4. Differentiate between diplontic and diplobiontic life cycles. Write a note on eye spot, and flagellation in algae. Discuss the development and importance of the superbug?

8 + 6 + 4.75

5. Diagrammatically explain lytic and lysogenic cycles of a bacteriophage. Discuss the contributions of Joseph Lister, Elie Metchnikoff and Paul Ehrlich in the field of medical microbiology and immunology. How do microorganisms contribute towards human health and medicine.

8 + 6 + 4.75

6. Diagrammatically explain sexual reproduction in *Paramecium.* Discuss various modes of nutrition in protozoa. What are prions and who discovered them?

8 + 6 + 4.75