

ASSIGNMENT-1
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
VIROLOGY
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-I

1. a) Give an account on the morphological variations in viruses with suitable diagrams.
- b) Explain the diseases caused by viroids and prions.

UNIT-II

2. a) Write an account on the general methods of purification of viruses.
- b) Describe the haemagglutination and immunofluorescence serological methods for detection of viruses.

UNIT-III

3. a) Give an account on mechanical and biological transmission of plant viruses.
- b) Explain the chemical and vector based control measures of plant diseases.

ASSIGNMENT-2
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
VIROLOGY
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-IV

1. a) Write an account on ultrastructure and life cycle of Influenza virus.
- b) Describe the ultrastructure and life cycle of Adenovirus.

UNIT-V

2. a) Give a general account on types and production of vaccines.
- b) Write an account on interferons and antiviral drugs.

ASSIGNMENT-1
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
MICROBIAL BIOCHEMISTRY AND ANALYTICAL TECHNIQUES

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-I

1. a) Give an account on structures and biological importance of structural and storage polysaccharides.
- b) Explain the physicochemical properties of fatty acids and glycolipids.

UNIT-II

2. a) What are the essential amino acids. Explain their biological significance.
- b) Write an account on types of peptides and peptides of non-protein origin.

UNIT-III

3. a) Give an account on mechanism and factors influencing the enzyme action.
- b) Explain the methods of lipid separation and analysis.

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MICROBIOLOGY- I SEMESTER
MICROBIAL BIOCHEMISTRY AND ANALYTICAL TECHNIQUES

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-IV

1. a) Write an account on principle, instrumentation and applications of Mass spectroscopy.
- b) Describe the instrumentation of centrifugation and types of centrifuges.

UNIT-V

2. a) Explain the principle and applications of adsorption and gel filtration chromatography.
- b) Describe the principle and applications of Immuno and Pulse field gel electrophoresis.

ASSIGNMENT-1
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
BACTERIOLOGY

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-I

1. a) Give an account on different criteria used in bacterial taxonomy and classification.
- b) Explain the ultrastructure of a typical bacterial cell.

UNIT-II

2. a) Write an account on general methods of isolation of bacteria.
- b) Describe the different procedures for maintenance and preservation of bacterial cultures.

UNIT-III

3. a) Give an account on continuous culturing and synchronous culturing of bacteria.
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- b) Explain in detail about the factors affecting the bacterial growth.

ASSIGNMENT-2
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
BACTERIOLOGY

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-IV

1. a) Write an account on general characters and reproduction of Actinomycetes.
- b) Describe the general characters and significance of Archaeobacteria.

UNIT-V

2. a) Explain the taxonomic and characteristic features of *Clostridium* and *Escherichia*.
- b) Describe the characteristic features of bacterial genera *Nitrosomonas* and *Staphylococcus*.

ASSIGNMENT-1
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
BIOLOGY OF EUKARYOTIC MICROBES

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-I

1. a) Give an account on ultrastructure of cell wall and cell membrane of Eukaryotic cell.
- b) Explain the morphological features and functions of Eukaryotic Ribosomes and Golgi apparatus.

UNIT-II

2. a) Write an account on the role of check points in regulation of eukaryotic cell cycle.
- b) Describe the different stages of meiotic cell division.

UNIT-III

3. a) Give an account on algal blooms and toxins.
- b) Explain the classification of algae.

ASSIGNMENT-2
M.Sc. Degree Examination, APRIL/MAY-2025
MICROBIOLOGY- I SEMESTER
BIOLOGY OF EUKARYOTIC MICROBES

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

UNIT-IV

1. a) Write an account on agricultural and industrial importance of fungi.
- b) Give an account on edible and poisonous mushrooms and cultivation of paddy straw mushrooms.

UNIT-V

2. a) Give an account on locomotion and nutrition in Protozoa.
- b) Describe in brief about *Trichomonas* and *Balantidium* genera of protozoa.