

B.Sc. Sem.-1 Examination

CC 3 P 101

Microbiology

December-2025

[Max. Marks : 70]

Time : 2-30 Hours]

Instructions:

1. All questions are compulsory.
2. Figures on the right indicates marks.
3. Mention correct question number against the answer.
4. Draw figures wherever necessary.

Q.1 Explain the difference between prokaryotic and eukaryotic microorganisms. (14)

OR

Q.1 (A) Write a detailed note on archcobacteria. (07)

(B) Discuss Carl Woese's three-kingdom classification system in detail. (07)

Q.2 Describe spontaneous generation and experimental evidence of biogenesis in detail. (14)

OR

Q.2 (A) Define pure culture and list out Koch's postulates. (07)

(B) Write a note on the contribution of Louis Pasteur to immunology. (07)

Q.3 "DNA as a hereditary molecule" discuss this statement by explaining the contributions of Colin MacLeod, Maclyn McCarty, and Oswald Avery. (14)

OR

Q.3 (A) Write a short note on the stages of phagocytosis. (07)

(B) Describe the discovery of TMV. (07)

Q.4 Explain the principle and applications of phase contrast microscopy. (14)

OR

Q.4 (A) Write a note on microbiological stains. (07)

(B) Explain the applications of electron microscopy. (07)

Q.5 Attempt any seven out of twelve. (14)

- 1 Define prokaryotic microbes with one suitable example.
- 2 What is nomenclature?
- 3 Write two examples of algae.
- 4 Write a contribution of Antonie van Leeuwenhoek.
- 5 Define chemotherapy
- 6 Write a contribution of Paul Ehrlich.
- 7 What is interferon? Write one example of it.
- 8 Define antitoxin.
- 9 Write a contribution of Martinus W. Beijerinck
- 10 Write the use of decolorizer in smear preparation with a suitable example.
- 11 What is resolving power?
- 12 Name any two acidic dyes.