

UKA TARSADIA UNIVERSITY

B.Pharm. (3rd Semester)

Subject :030020302 - Microbiology

Duration: 3 Hours

Max. Marks: 70.

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

Section-1

Q-1 (A) Do as directed.

[07]

- I) Define taxonomy.
- II) Explain autotrophs.
- III) What is microscope?
- IV) Define aerobic bacteria.
- V) Explain lithotrophs.
- VI) What is mesosomes?
- VII) Explain magnification.

Q-1 (B) Answer the following in brief. (Any 4)

[08]

- I) Describe applications of fluorescence microscope.
- II) Write a note on Koch's postulates.
- III) Write the function of capsule.
- IV) Write the disadvantages of the pour plate method.
- V) Write a note on spread plate method.
- VI) Write the principle for acid-fast staining.

Q-2 Answer the following.

[10]

- A) Write a note on Whittaker's five-kingdom concept.

OR

- A) Describe the structure of Bacteria with the help of neat and labeled diagram.

- B) Write in brief about applications and scope of Pharmaceutical Microbiology.

OR

- B) Write a note on phase contrast microscope.

Q-3 Answer the following in detail. (Any 2)

[10]

- A) Write the principle and application of transmission electron microscope.
- B) Explain in detail structure of the cell wall of gram-positive and gram-negative bacteria.
- C) Write the classification of bacteria depending on the nutritional requirements.

Section-2

Q-4 (A) Do as directed.

[07]

- I) What is sanitization?
- II) Explain Preservative.
- III) Explain inactivation factor.

- IV) Enlist any two methods used for evaluation of disinfectants.
- V) Define immunity.
- VI) Explain killed vaccines.
- VII) What is cell mediated immune response?

Q-4 (B) Answer the following in brief. (Any 4)

[08]

- I) Write a note on gaseous sterilization.
- II) Write a note on quaternary ammonium compounds.
- III) Describe factors affecting disinfection action.
- IV) Differentiate between T-lymphocytes and B-lymphocytes.
- V) Explain the term phagocytosis.
- VI) Write a note on Browne's tubes.

Q-5 Answer the following.

[10]

- A) Explain in detail application of monoclonal antibodies.

OR

- A) Describe the importance of actinomycetes.
- B) Explain in short the classification of fungi.

OR

- B) Write a note on interferon.

Q-6 Answer the following in detail. (Any 2)

[10]

- A) Explain in short different techniques used for cultivation of viruses.
- B) Define sterilization. List the different methods used for sterilization with suitable examples. Explain the sterilization by radiation.
- C) Write a note on production of monoclonal antibodies.