

B. Sc. MICROBIOLOGY
SEMESTER- 1ST
FUNDAMENTALS OF MICROBIOLOGY
BMB-101

Duration: 3 Hrs.

Marks: 70

Part : A (Objective) = 20

Part : B (Descriptive) = 50

[PART-B : Descriptive]

Duration: 2 Hrs. 40 Mins.

Marks: 50

[Answer question no. One (1) & any four (4) from the rest]

1. Explain with a neat diagram the principle of fluorescent microscope. 10
2. Describe the Gram (-)ve bacterial cell wall with a neat diagram. Differentiate between Gram (+)ve and Gram (-)ve bacteria. 5+5=10
3. Explain the mode of drug action of penicillin, sulfanilamide and quinolone. 4+4+2=10
4. Define prebiotic and probiotic. Describe the production of tempeh and sauerkraut with a flow chart diagram. 2+8=10
5. To be considered as a successful process for food preservation what important criteria the process need to fulfil? Add a brief note on lyophilization technique. Write the important purposes a preserved microbial culture serves. 2+3+7=10
6. Define the system of binomial nomenclature. Discuss briefly the important rules for naming a microorganism. Mention the important functional roles played by rhizospheric microbes in soil. 1+5+4=10
7. Define microbial culture media. Classify microbial culture media on the basis of specific requirements with example for each type. Discuss briefly why culture media is important for laboratory cultivation of microbes. 2+4+4=10
8. Discuss briefly the factors affecting microbial distribution in aquatic environment. Add a brief note on water borne diseases in man. 7+ 3=10