

B.Sc. (NEP) Semester-II
BSCBT601 - Major - Biotechnology Paper-II - Fundamentals of Microbiology

P. Pages : 2

Time : Two Hours



GUG/S/25/16775

Max. Marks : 40

1. Explain in detail principle and application of SEM. 8

OR

a) Draw a diagram of compound microscope. 2

b) Write a note on contribution of Robert Koch. 2

c) Describe numerical aperture. 2

d) Draw ray diagram of TEM. 2

2. Describe in detail structure of cell wall of gram positive bacteria. 8

OR

a) Write a note on endospore structure. 2

b) Draw a well labelled diagram of typical bacterial cell. 2

c) Differentiate between cell membrane of bacteria and archaea. 2

d) Write a note on bacterial flagella. 2

3. Describe in detail lytic cycle. 8

OR

a) Write general characteristics of yeast. 2

b) Describe endospore staining. 2

c) Write general characteristics of viruses. 2

d) Write a note on symmetry of viruses. 2

4. Describe any one method in detail for isolation of pure culture. 8

OR

a) Write in brief about growth curve. 2

b) Write a note on beef extract. 2

- c) Describe temperature as a physical method of microbial control. 2
- d) Write a note on synchronous culture. 2

5. Attempt any eight.

- a) What is Pasteurization? 1
- b) Define resolving power. 1
- c) Write contribution of Edward Jenner. 1
- d) What are different shapes of bacteria. 1
- e) What are Pilli. 1
- f) Give any two examples of Endospore producing bacteria. 1
- g) Define stain. 1
- h) What are viruses. 1
- i) What is lysogeny. 1
- j) What is Agar. 1
- k) What is Chemostat. 1
- l) What is gaseous sterilization. 1
