

B.Sc. (NEP) - Semester-I
BSCMI501 - Microbiology - General Microbiology and Microbial Technique

P. Pages : 2

Time : Three Hours



GUG/W/24/15923

Max. Marks : 40

1. What is spontaneous generation theory? How did various scientists disproved this theory? 8

OR

a) Discuss about the contribution of Louis Pasteur in the development of Microbiology. 2

b) Give the contribution of A.M. Chakraborty in the field of Microbiology. 2

c) Describe three jar experiment of Francesco Redi. 2

d) Discuss Koch's Postulates. 2

2. Explain structure and stages of endospore sporulation. 8

OR

a) Discuss Fluid-Mosaic model of cell membrane. 2

b) Differentiate between prokaryotes and eukaryotes. 2

c) Describe Animal inoculation method of virus cultivation. 2

d) Give general characteristics of Archaeobacteria in brief. 2

3. Discuss the procedure and mechanism of Gram Staining. 8

OR

a) Discuss the working of Dark field microscopy in brief. 2

b) Describe the endospored staining method. 2

c) Give brief account on selective media. 2

d) Give the information about spread plate method. 2

4. Explain the role of temperature as a physical agent of sterilization. 8

OR

a) Discuss about Quaternary ammonium compound. 2

- b) Give the role of phenol as a chemical agent for microbial control. 2
- c) Describe the role of heavy metals as a chemical agents for microbial control. 2
- d) Discuss the characteristics of an ideal disinfectant in brief. 2

5. Solve **any eight** of the following (one mark each)

- a) Who established the process of Pasteurization? 1
- b) Who discovered an antibiotic Penicillin? 1
- c) Who proposed the use of cotton plug in microbiology? 1
- d) Which is the basic component of bacterial cell wall? 1
- e) Define Virus. 1
- f) What is the function of flagella? 1
- g) What is Resolving Power? 1
- h) Give the full form of SEM. 1
- i) Enlist any two stock culture collection centres. 1
- j) Define Microbiostatic agent. 1
- k) What is Sterilization? 1
- l) Enlist any two chemical gaseous agents for microbial control. 1
