NKT/KS/17/5056

Bachelor of Science (B.Sc.) Semester—I (C.B.S.) Examination

BIO-CHEMISTRY

(Microbiology and Virology)

Compulsory Paper—2

Time : Three Hours] [Maximum Marks : 50

Note :— All questions are compulsory and carry equal marks.

1. Explain with ray diagram, working, principle and applications of phase contrast microscopy. 10

OR

Write notes on :—

(a) Controversy over spontaneous generations. 5

(b) Concept of immunization. 5

2. Describe the principle and technique of Gram staining. 10

OR

Give a detailed description of Lytic cycle of a Bacteriophage. 10

3. Explain the cell wall structure of Gram negative Bacteria. 10

OR

Give a detailed description of endospore structure and its formation. 10

4. What is growth curve ? Discuss about various phases of growth curve in detail. 10

OR

Explain the classification of microorganisms on the basis of Physical conditions required for growth. 10

5. Solve any **TEN** of the following :—

(i) Define Numerical aperture. 1

(ii) Define Resolving power. 1

(iii) In what way EM condensers are different from condensers used in light microscopy ? 1

(iv) What is meant by simple staining ? 1

(v) Name the stains used in acid fast staining. 1

(vi) Name any one endospore forming Bacteria. 1

(vii) Define Plasmid. 1

(viii) What are fimbrae ? 1

(ix) What is a capsule ? 1

(x) What is meant by continuous culture ? 1

(xi) What are microaerophilic bacteria ? 1

(xii) Define Generation Time. 1