

Bachelor of Science (B.Sc.) Semester-II (C.B.S.) Examination
BIOTECHNOLOGY (Microbiology & Cell Biology)
Compulsory Paper-1

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) **All** questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

1. Draw and explain various phases of a typical bacterial growth curve. 10

OR

Write notes on :

- (a) Chemostat 5
- (b) Turbidostat. 5

2. Describe various chemical agents used for microbial control. 10

OR

Describe various mechanisms of cell injury to control the growth of microorganisms. 10

3. Describe in detail the structure and functions of Golgi complex and peroxisomes. 10

OR

Give a detailed account of nucleus and ER. 10

4. Describe the various phases of cell cycle. 10

OR

Write notes on :

- (a) Neuromuscular junction 5
- (b) Mitosis. 5

5. Answer any ten of the following :

- (i) What is generation time ? 1
- (ii) What is synchronous culture ? 1
- (iii) What is meant by mesophilic organisms ? 1
- (iv) What is the effect of UV-rays on DNA ? 1
- (v) What is a germicide ? 1
- (vi) What is meant by microbiostasis ? 1
- (vii) Write the function of lysosomes. 1
- (viii) Write the functions of vacuoles. 1
- (ix) Which type of ER are involved in protein synthesis ? 1
- (x) What is a synapse ? 1
- (xi) What are microtubules ? 1
- (xii) Name the cells responsible for formation of myelin sheath. 1