

NKT/KS/17/5104

**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

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