Bachelor of Science (B.Sc.) Semester–II (C.B.S.) Examination

BIOTECHNOLOGY (MICROBIOLOGY & CELL BIOLOGY)

Compulsory Paper—1

Time : Three Hours] [Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.
(2) Draw well labelled diagrams and give examples wherever necessary.

1. Describe in detail the growth curve and its phases. 10

OR

Describe different methods of obtaining continuous culture of bacteria. 10

2. Describe the mechanism of cell injury. 10

OR

Write short notes on :

(a) Surface tension - a method of physical control of microbes 2½

(b) Dry heat sterilization 2½

(c) Osmotic pressure 2½

(d) Concept of biological control. 2½

3. Write notes on :

(a) Golgi complex 5

(b) Lysosomes 5

OR

(c) Peroxisomes 5

(d) Endoplasmic reticulum. 5

4. Write short notes on :

(a) Nerve cell structure 5

(b) Mitosis 5

OR

(c) Synaptic transmission 5

(d) Cell cycle. 5

5. Solve any **ten** of the following :

(i) What do you mean by synchronous culture ? 1

(ii) What is a pure culture ? 1

(iii) What is generation time ? 1

(iv) Define sterilization. 1

(v) Name any one halogen used for microbial control. 1

(vi) What is microbiostasis ? 1

(vii) What is the function of Glyoxisomes ? 1

(viii) What is the difference between rough and smooth endoplasmic reticulum. 1

(ix) What is nucleoplasm ? 1

(x) What are microtubules ? 1

(xi) Define meiosis. 1

(xii) What are motor neurons ? 1

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