KNT/KW/16/5090

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

MICROBIOLOGY (Microbial Physiology)

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. Describe various ingredients with their role in non synthetic media. 10

OR

Describe selective and enriched media with suitable examples. 10

2. Describe various phases of growth curve in detail. 10

OR

Describe chemostat and turbidostat techniques for continuous culture. 10

3. (a) Explain mechanism of dry heat sterilization with suitable example. 5
(b) Explain control by ultraviolet radiation. 5

OR

(c) Write a note on plasmolysis and plasmoptysis. 5
(d) Explain HEPA Filtration and Laminar Air Flow System. 5

4. (a) Explain mode of action of quarternary ammonium compounds. 2½
(b) Explain role of heavy metals in microbial control. 2½
(c) Describe mechanism of damage to cell wall. 2½
(d) Explain action of chlorine as a disinfectant. 2½

OR

(e) Explain mode of action of alcohol on bacteria. 2½
(f) Describe concept of phenol co-efficient. 2½
(g) Describe mechanism of damage to cell membrane. 2½
(h) Explain microbial control by antimetabolites. 2½

5. Solve any **TEN** :
(i) Define Axenic culture.
(ii) Define chemolithotrophs.
(iii) Define phototrophs.
(iv) What is budding ?
(v) What is fragmentation ?
(vi) Define generation time.
(vii) Define disinfectant with example.
(viii) Define tyndalization.
(ix) What is microbiostatic ?
(x) Give two examples of gaseous chremosterilizers.
(xi) Give two examples of Aldehyde used as antimicrobial agent.
(xii) What is lysol ? 1×10=10