

Bachelor of Science (B.Sc.) Semester-IV (C.B.S.) Examination

MICROBIOLOGY (Applied Microbiology)

Paper—II

Time : Three Hours]

[Maximum Marks : 50

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

(2) Draw suitable diagrams wherever necessary.

1. Describe various methods of chlorination. 10

OR

Describe water treatment process using rapid sand filter. 10

2. What is meant by 'fixed film' process ? Discuss the working of trickling filter. 10

OR

Describe the following :

(i) Activated sludge

(ii) Sludge digester. 10

3. (A) Describe Anderson air sampler with its merits and demerits. 5

(B) Discuss microbial leaching of copper. 5

OR

(C) Explain the role of *Bacillus thuringiensis* as biopesticides. 5

(D) Give an account of phosphate solubilising bacteria as Biofertilizer. 5

4. (A) Give the flow sheet diagram of canning process. 2½

(B) Discuss soft rots in spoilage of vegetables. 2½

(C) Write a note on chemical preservation of foods. 2½

(D) Differentiate between quick freezing and slow freezing. 2½

OR

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| (E) Describe pasteurization treatment given to various types of foods. | 2½ |
| (F) Discuss staphylococcal food intoxication. | 2½ |
| (G) Explain the effect of sugar and salt on microbial growth. | 2½ |
| (H) Discuss Salmonellosis. | 2½ |
5. Solve any **ten** questions :
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| (i) What are faecal streptococci ? | 1 |
| (ii) What is false presumptive test ? | 1 |
| (iii) Name any two media used for confirmation of E. Coli. | 1 |
| (iv) Define B.O.D. | 1 |
| (v) Give example of double storey tank used in sewage treatment. | 1 |
| (vi) Name the organisms found in symbiotic association in oxidation ponds. | 1 |
| (vii) What are Bioaerosols ? | 1 |
| (viii) What are mycorrhiza ? | 1 |
| (ix) What is meant by impingement ? | 1 |
| (x) What is neurotoxin ? | 1 |
| (xi) What are food additives ? | 1 |
| (xii) What is the difference between food intoxication and food infection ? | 1 |