

NKT/KS/17/5151

**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**

- (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 :
- (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