

KNT/KW/16/5151

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 well labelled diagrams wherever necessary.

1. Define indicators of excretal pollution. Describe the process of bacteriological analysis of water by multiple tube dilution technique for coliforms. 10

OR

Describe various methods of chlorination used for water disinfection. 10

2. Explain the process of canning in detail. 10

OR

Describe various methods of pasteurizations. 10

3. Give an account of :

(a) Anderson's Air Sampler 5

(b) Mycorrhiza. 5

OR

Give an account of :

(a) Biopesticides 5

(b) Biofertilizers. 5

4. (a) Write a note on activated sludge. 2½

(b) Give diagram of trickling filter. 2½

(c) What is BOD and give its significance. 2½

(d) Describe the oxidation pond. 2½

OR

(e) Describe working and design of RBC. 2½

(f) Explain the biological process in sludge digester. 2½

(g) Describe septic tank. 2½

(h) Give the typical composition of sewage. 2½

5. Solve any **ten** :

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| (i) What is the use of alum in RSF method ? | 1 |
| (ii) Why is coagulation ? | 1 |
| (iii) Why thiosulphate is used, while collecting water sample for bacteriological analysis of water ? | 1 |
| (iv) What is ThOD ? | 1 |
| (v) Name any two physical characteristics of sewage. | 1 |
| (vi) What is Imhoff tank ? | 1 |
| (vii) What is microbial leaching ? | 1 |
| (viii) What is settling plate technique ? | 1 |
| (ix) What is PSB ? | 1 |
| (x) Define food intoxication. | 1 |
| (xi) Give the names of any two chemical preservatives. | 1 |
| (xii) What is freeze drying ? | 1 |