2022

M.Sc.

4th Semester Examination

MICROBIOLOGY

PAPER—493

(Practical)

Full Marks : 50

Time : 10 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

UNIT–493.1 ENVIRONMENTAL MICROBIOLOGY

1. On the basis of presence of alkaline phosphatase determine the pasteurization efficiency of the supplied milk sample.

(Procedure-2, Work-2, Result and interpretation-3.5)

Or

Perform the methyl red and citrate utilization test of the given bacterial culture and comment on your findings.

(Procedure-2, Work-2, Result and interpretation-3.5)

2. Comment on the potability of supplied water sample through MPN test.

(Requirements-2, Procedure-2.5, Result and comment-3)

Or

Calculate the amount of dissolve oxygen in the supplied water sample.

(Requirements-2, Procedure-2.5, Result and comment-3)

3. Viva-voce. 3

4. Laboratory note book. 2

5. Internal assessment. 5

UNIT–493.2 BIOPROCESS TECHNOLOGY

1. Compare the level of amylase activity from the culture of submerged and solid state fermentation.

(Procedure-2, Result-4, Inference-1.5]

2. Determine the lactic acid bacterial load in the supplied curd sample through selective plating technique.

(Procedure-2, Work-2, Result and interpretation-3.5)

Or

Determine the total titrable acidity of the supplied curd sample by taking lactic acid as standard.

(Procedure-2, Work-2, Result and interpretation-3.5)

3. Viva-voce. 3

4. Laboratory note book. 2

5. Internal assessment. 5

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