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(Pages : 2)

Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, APRIL 2024**

(CBCSS)

Zoology

ZOL4C10—BIOTECHNOLOGY AND MICROBIOLOGY

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Answer any *four* of the following (Short Answer type questions) (Weightage : 2) :

- 1 What is cosmid ?
- 2 Define molecular probe.
- 3 What are the general features of phagemids ?
- 4 What is microsatellite ?
- 5 Define gene knockouts.
- 6 Write the Koch's four postulates.
- 7 What are the external structures found in the cell wall ?

(4 × 2 = 8 weightage)

II. Answer any *four* of the following (Short essay type questions) (Weightage : 3) :

- 8 Give a brief account on scope of biotechnology.
- 9 What is chimeric DNA and explain its construction ?
- 10 Give a brief note on Dot blot technique.
- 11 Differentiate Maxam Gilbert sequencing from Sanger sequencing.
- 12 Give a brief account on culture media used in animal cell culture.

Turn over

- 13 Give the contribution of Louis Pasteur to microbiology.
- 14 Halogens as a chemical disinfectant in microbial control - Explain.

(4 × 3 = 12 we)

III. Answer any *two* of the following (Long essay type questions) (Weightage: 5) :

- 15 Describe in detail about the process of gene cloning.
- 16 Describe in detail about the principle, procedure and applications of different blotting techniques.
- 17 Describe in detail about the Intellectual Property and its types.
- 18 Explain in detail about the principle, procedure and applications of pour plate method.

(2 × 5 = 10 we)