

D 143265

(Pages : 2)

Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, APRIL 2026**

(CBCSS)

Zoology

ZOL 4C 10—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 Give any *four* features of cloning vectors.
- 2 Define cDNA and cDNA library.
- 3 What are the steps involved in PCR ?
- 4 Define Electroporation.
- 5 Define antisense RNA.
- 6 What is phenetic classification ?
- 7 Give the classification of virus based on the presence of nucleic acid with example.

(4 × 2 = 8 weightage)

II. Answer any *four* of the following. Short Essay Type Questions. Weightage 3 :

- 8 Give a brief note on artificial chromosome.
- 9 Give a brief account on FISH and GISH.
- 10 Give the difference between RAPD and RFLP.
- 11 Give a brief account on applications of transgenic animals.
- 12 Give a brief account on DNA cloning steps.
- 13 Give a brief notes on phases in microbial growth curve.
- 14 Give a brief notes on candidiasis.

(4 × 3 = 12 weightage)

Turn over

III. Answer any *two* of the following. Long Essay Type Questions. Weightage 5 :

- 15 Explain in detail about the applications of molecular probes.
- 16 Explain in detail about the Sanger method of DNA sequencing.
- 17 Describe in detail about the procedure and mechanism of gram staining.
- 18 Explain in detail about the causes, symptoms and treatment of AIDS.

(2 × 5 = 10 weightage)