Reg. No. : ....

Name : ....

Fifth Semester B.Sc. Degree Examination, December 2022

First Degree Programme Under CBCSS

Zoology

Core Course V

ZO 1542 — CELL BIOLOGY AND MOLECULAR BIOLOGY

(2013 & 2014 Admission)

Time : 3 Hours   Max. Marks : 80

I.   Answer **all** questions in **one** or **two** sentences. Each question carries **1** mark.

1.   Apoptosis.

2.   S.O.D

3.   Lampbrush Chromosome.

4.   Operon.

5.   Polymerases.

6.   Ubiquitin.

7.   Proteosomes.

8.   Amitosis.

9.   Centriole.

10. Molecular phylogenetics

(10 × 1 = 10 Marks)

II. Answer any **eight** of the questions. Each question carries **2** marks. Answer in **one** paragraph

11. Subunits of Ribosome.

12. Lysosomal Enzymes.

13. Function of Nucleolar Organiser.

14. Comment on Central Dogma Reverse.

15. Mention the role of Chaperones in Protein structure.

16. Cell theory.

17. What is Transduction in Molecular Biology?

18. Biomolecules.

19. Contributions of Nirenberg and his associates.

20. Functions of Golgi Body.

21. What are Transcription factors?

22. Differentiate tRNA from mRNA.

(8 × 2 = 16 Marks)

III. Answer any **six** of the questions. [Each question carries **4** marks.] Answer should not exceed **120** words.

23. Fluid Mosiac Theory of Plasma Membrane.

24. Cellular changes in Ageing.

25. Stages in Electro Transport Chain.

26. Process of Cell Signaling.

27. Comment on Trans membrane Transport.

28. Describe Griffith's experiment.

29. Chromatin condensation and coiling.

30. Explain Messelson and Stahl experiment.

31. Characteristics of Cancer Cells.

(6 × 4 = 24 Marks)

IV. Answer any **two** of the questions. [Each question carries **15** marks] Answer as a short essay.

32. Write an essay on Gene Expression, in molecular biology.

33. Explain the Composition and Structure of Nucleic acids, with apt models.

34. Describe the stages in a Cell Cycle, and mention their significances.

35. Give an outline on the various Theories of Ageing.

(2 × 15 = 30 Marks)

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