(Pages : 3)

P – 2570

Reg. No. : .....

Name : .....

Fifth Semester B.Sc. Degree Examination, December 2022

First Degree Programme Under CBCSS

Zoology

Core Course

ZO 1541 : CELL AND MOLECULAR BIOLOGY

(2019 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer the following questions (In **one** or **two** sentences. **1** mark each)

1. Peroxisomes
2. Hetrochromatin
3. Endomitosis
4. Lymphoma
5. Senile dementia
6. Nucleotide
7. Replication fork
8. Conjugation
9. Wobble hypothesis
10. SOD

(10 × 1 = 10 Marks)

P.T.O.

II. Answer **any eight** of the following (Not to exceed one paragraph. **Each** carries **2** marks)

11. Chargaff's rule
12. Central dogma of molecular biology
13. Biogenesis of ribosomes
14. Smooth Endoplasmic Reticulum
15. Genetic code
16. Apoptosis
17. Cytoskeleton
18. Solenoid fibre
19. Polytene chromosome
20. Oncogenes
21. Oeteoporosis
22. RNA polymerase
23. Peptidoglycan
24. Autophagosome
25. Mitotic apparatus
26. TATA box

(8 × 2 = 16 Marks)

III. Answer **any six** of the following (Not to exceed **120** words. Each carries 4 marks)

27. Endo symbiont hypothesis
28. Clover leaf model of t. RNA

29. Types of ribosomes

30. Nucleolar organizer

31. Metaphase chromosome

32. Lamp brush chromosomes

33. Synaptonemal complex

34. One gene one enzyme hypothesis

35. Lac operon

36. Philadelphia chromosome

37. Anaphase promoting complex

38. Functions of microfilaments

(6 × 4 = 24 Marks)

IV. Answer **any two** of the following (Each carries **15** marks)

39. Write an essay on DNA replication in prokaryotes, and describe about the repair mechanism of DNA.

40. Give an account on fluid mosaic model of plasma membrane. Add a note on functions of plasma membrane.

41. Write an essay on bacterial recombination.

42. Explain the characteristics and types of cancer. Add a note on theories on the origin of cancer.

43. Write an essay on polymorphism of lysosomes. Add a note on functions of lysosomes.

44. Write an essay on cell cycle. Add a note on significance of meiosis.

(2 × 15 = 30 Marks)
