

(Pages : 3)

J – 4132

Reg. No. :

Name :

Second Semester M.Sc. Degree Examination, May 2020

Zoology

ZO 223 – CELL BIOLOGY, MOLECULAR BIOLOGY AND BIOINFORMATICS

(2013 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

PART – A

I. Write very brief notes on **any ten** of the following. **Each** questions **2** marks.

1. Uniporter
2. Cyclin dependent kinases
3. Euchromatin
4. Excision repair
5. SINEs
6. Bloom syndrome
7. Sigma factor
8. Beta- Lysine
9. HACNS1

P.T.O.



10. Gyrase
11. Photoreactivation
12. Genome size
13. FASTA
14. e-value
15. Date mining

(10 × 2 = 20 Marks)

PART – B

II. Write short notes on **any six** of the following. **Each** question carries **4** marks.

16. Explain check points in the cell cycle.
17. Write a short note on scaffold proteins.
18. Describe briefly the mini satellite and micro satellite DNAs.
19. Explain the regulation of transcription.
20. What is the mechanism involved in the elongation?
21. Write a short account on the translation machinery.
22. Explain briefly the linking number and writing number.
23. What is the TATA box? Explain its role in transcription.
24. What are the properties of databases?
25. Describe homology modelling.

(6 × 4 = 24 Marks)



PART – C

III. Write short essay on **any three** of the following. Each question carries **7** marks.

26. Explain the role of symporters and antiporters on Co-transport.
27. Write an account on super coiling in eukaryotes.
28. Differentiate prokaryotic and eukaryotic transcription.
29. Explain the role of hormones in protein synthesis.
30. Write the steps required in the construction of rooted phylogenetic tree.

(3 × 7 = 21 Marks)

PART – D

IV. Write an essay on **any one** of the following. Each question carries **10** marks.

31. Give a detailed account of signal transduction pathways.
32. Discuss the DNA replication and repair in reference to prokaryotic and eukaryotic cells.

(1 × 10 = 10 Marks)

