



QP CODE: 20100826



Reg No :

Name :

B.Sc DEGREE (CBCS) EXAMINATION, MARCH 2020

Fourth Semester

B.Sc Biotechnology Model III

Core Course - BT4CRT11 - BIOPHYSICS AND BIOINFORMATICS

2017 Admission onwards

8A0A3369

Time: 3 Hours

Marks: 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Define work in a thermodynamic system.
2. What is meant by a hypertonic solution?
3. What is GM counter?
4. What is Scintillation counter?
5. Disulfide bonds.
6. What is DNA?
7. What is biological database?
8. What is UniProt?
9. What is DrugBank?
10. What is structure visualization?
11. What is the principle of phylogenetic analysis?
12. What is Ab initio protein modeling?

(10×1=10)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. What are the properties of water?
14. What is tracer technology? Give examples.
15. Describe the applications of spectrophotometry.
16. Explain the working principle of UV-VIS spectroscopy.
17. Explain tertiary and quaternary structure of proteins.
18. Explain DNA Sequence polymorphisms.
19. Briefly explain the types of biological data bases.
20. Outline the steps for multiple sequence alignment.
21. Write a note on homology modelling.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Write an account on colloids. Describe the properties.
23. Explain in detail working principle of colorimeters.
24. Describe in detail about chaperons and their role in protein folding with examples.
25. Write an essay on the history of Bioinformatics.

(2×10=20)

