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QP CODE: 22101376

Reg No :

Name :

**B.Sc DEGREE (CBCS) IMPROVEMENT / REAPPEARANCE EXAMINATIONS,
MAY 2022**

Fourth Semester

B.Sc Biotechnology Model III

Core Course - BT4CRT11 - BIOPHYSICS AND BIOINFORMATICS

2017 Admission Onwards

2EB1BD36

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What are the physical properties of water?
2. What is a dispersion medium?
3. What is colorimetry?
4. Explain IR spectroscopy.
5. Heat shock proteins.
6. What is VNTR?
7. Define Bioinformatics.
8. Who coined the term 'Bioinformatics'?
9. What is GenBank?
10. What is insilico drug designing?
11. Differentiate rooted and unrooted trees.
12. What are protein visualization tools? Give examples.

(10×1=10)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Briefly explain osmosis.
14. What is Carbon dating?
15. Describe the working principle of GM counters.
16. Working principle of Scintillation counters.
17. Explain Glycosidic bonds and Ester bonds.
18. Explain primary and secondary structure of proteins.
19. What are the various search methods available on DrugBank?
20. FASTA tool is used for global alignment. Justify.
21. Explain the methods used for structural analysis of proteins?

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Explain the Laws of thermodynamics.
23. Describe the principle and applications of spectrophotometry.
24. Explain in detail the various DNA conformations.
25. Give a brief account of the types and uses of protein databases in bioinformatics.

(2×10=20)

