M.Sc. DEGREE EXAMINATION,NOVEMBER 2019
II Year III Semester
Bioinstrumentation and Bioinformatics

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Mention any two points which determine the rate of sedimentation in centrifugation.
2. Expand the followingc: PLOT and WCOT.
3. What is Electromagnetic radiation?
4. Define Beer-Lambert law.
5. Write any two major difference between optical and electron microscopy.
6. Mention some uses of phase contrast microscopy.
7. Write any two important objectives of biological database.
8. What does SWISS PROT mean?
9. Comment on SNPs.
10. Define Monophyletic.
11. Why the degassing is important in High Performance Liquid Chromatography?
12. Comment on stretching vibrations.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Distinguish between TLC and HPTLC.
14. Describe the working principle of fluorescence spectroscopy.
15. Write the difference between SEM and TEM.
16. Give a general account on NCBI.
17. Write short note on genomics and proteomics and its application.
18. Describe the types of rotors used in centrifuge.
19. Write a short note on wet packing technique in column chromatography.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Explain the types of development techniques in paper chromatography with neat diagram.
21. Discuss the principle and instrumentation of Infrared Spectroscopy.
22. Write the Principle, Instrumentation and applications of Confocal microscopy with necessary diagram.
23. Discuss on Secondary Databases.
24. Write in detail on the methods of Phylogenetic analysis.

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