PG Even Semester Examination, September, 2023

BIOTECHNOLOGY

(4th Semester)

Course No: BTYCC-401
(Advanced Techniques in Proteomics)

FM: 70
Pass Marks : 28
Time: 3 Hours

The figures in the right margin indicate full marks for the question

1. (a) State the principle of ion-exchange chromatography, and explain its procedure. 3+5=8

   (b) Discuss the principle and applications of affinity chromatography. 4+2=6

Or

2. (a) Write a note on MALDI-TOF. 8

   (b) Explain the technique of 2D-PAGE. 6

3. (a) Explain the principle of a Geiger-Muller Counter. 6

   (b) State the applications of radiotracers in biological studies. 8

Or

4. (a) Discuss the biogenesis of miRNA and its role in gene silencing. 8

   (b) Write a note on southern Blotting. 6

5. Discuss the different approaches used for sequencing of nucleic acids. 14

Or

6. Write short notes on the principles and applications of : (a) NMR (b) CD 7+7=14

7. What is comparative genomics? How can you determine gene function by sequence comparison? 14

Or

8. Write short notes on the following : 5+5+5=14

   (a) Pharmacogenomics

   (b) Toxicogenomics

   (c) Metagenomics

9. Discuss the techniques of two hybrid assay and phage display. 7+7=14

Or

10. Discuss the applications of proteomics in disease diagnosis. 14

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