

MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2025
2020, 2021, 2022 ADMISSIONS SUPPLEMENTARY
Food Science And Nutrition SEMESTER IV - ELECTIVE COURSE
FN4E03TM20 - Biophysical Techniques

Time : 3 Hours**Maximum Weight : 30****Part A****I. Answer any Eight questions. Each question carries 1 weight.****(8x1=8)**

1. Write a note on Thin Layer Chromatography(TLC).
2. What is retention factor?
3. Write a note on Moving Boundary Electrophoresis.
4. Define Isoelectric pH of a protein.
5. Brief on the reaction catalyzed by lyases.
6. Discuss the role of enzymes as biological catalysts in the human body.
7. Define Absorbance.
8. What are the components of a colorimeter?
9. Write a short note on Urea Breath test.
10. Write a note on the acidimetric method of microbiological assay of amino acids.

Part B**II. Answer any Six questions. Each question carries 2 weight****(6x2=12)**

11. Comment on the advantages and disadvantages of paper chromatography.
12. Discuss the principle and procedure of column chromatography.
13. Elucidate the technique of Isoelectric focussing.
14. Elaborate on the different factors that influence enzyme activity.
15. Elaborate the role of enzymes as crucial biological catalysts in the human body.
16. Give an account of principles and applications of colorimetry.
17. Explain the principle and instrumentation of a flame photometer with a diagram.
18. Explain the three methods used in assay of amino acids.

Part C**III. Answer any Two questions. Each question carries 5 weight****(2x5=10)**

19. Elaborate on the principle and applications of Gas Chromatography.
20. What is electrophoresis? Discuss the advantages and disadvantages of the different media used for electrophoretic separations.
21. Explain the Michaelis Menten Kinetics of enzyme activity.
22. Explain the principle, instrumentation and application of Atomic Absorption Spectroscopy.