

M.Sc Sem-3 Examination**502****Food Science & Nutrition****November-2024****Time : 2-30 Hours]****[Max. Marks : 70**

Instructions: All questions in Sections I & II carry equal marks

Illustrate your answers with neat diagrams wherever necessary.

Question 1 Write the following

- (i) Give a brief note on types of variables. (7 Marks)
- (ii) What is measure of dispersion? Explain in detail. (7 Marks)

OR

- (i) What is hypothesis testing? Explain with example. (7 Marks)
- (ii) Give a note on anova test. (7 Marks)

Question 2 Write the following

- (i) Write short note on significance of report writing (7 Marks)
- (ii) Write short note on various interpretation techniques in research. (7 Marks)

OR

- (i) Explain concept of variables. (7 Marks)
- (ii) Write short note on hypothesis and its types (7 Marks)

Question 3 Write the following

- (i) Write short note on differential centrifugation. (7 Marks)
- (ii) Write short note on types of centrifugation and centrifugation machines. (7 Marks)

OR

- (i) Write short note agarose gel electrophoresis (7 Marks)
- (ii) Explain principles and application of ion exchange chromatography (7 Marks)

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Question 4 Write the following

- (i) Explain the principle and working of Dark Field Microscope. Add its applications. (7 Marks)
- (ii) Explain the basic principle of UV/Visible Spectroscopy. (7 Marks)

OR

- (i) Explain the principle of Microscope and describe the instrumentation of Bright Field Microscope. (7 Marks)
- (ii) How are the different light wavelengths classified? (7 Marks)

Question 5 Attempt any seven out of twelve

(14 Marks)

- (i) What is parametric test?
 - (ii) Which test can be performed when there are two groups for mean comparison?
 - (iii) What is Pearson correlation?
 - (iv) How do we interpret figures in research?
 - (v) What is alternative hypothesis?
 - (vi) What is control group in research?
 - (vii) What is meaning of research?
 - (viii) What is adsorption?
 - (ix) What is stationary phase in chromatography?
 - (x) What is use of HPLC technique?
 - (xi) Which factors affect separation in electrophoresis
 - (xii) Enlist the types of Eye pieces used in Light Microscope.
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