08-12-2025

Printing Pages : 1 Paper Code : M.Sc.FN-105 (C) (SVSU): 2025-2026/R

Enrollment No. | | | | | | | | | | | | | |

**Program Name- M.Sc. Home Science (Food and Nutrition)**
**I Year /I Semester Examination**
**Subject Name-Methods of Investigation**
**Subject Code-M.Sc.FN-105**

[Time: 3:00 Hours] [Max. Marks: 70]

**I Long Question: Answer Any Three** [10×3=30]

1. Explain the techniques and applications of Gas Liquid Chromatography (GLC).
2. Discuss the methodology, advantages and limitations of electrophoresis.
3. Explain the classification and importance of bioassays.
4. Describe the principles of colorimetry and photometry. Discuss their merits and demerits.

**II Short Question: Answer Any Five** [5×5=25]

1. Write the difference between human and animal studies.
2. State the principle of flame photometry and name two elements estimated using it.
3. What are the main types of buffers used in biological experiments?
4. Explain paper chromatography.
5. Define retention factor (Rf) and explain its significance.
6. What are stable isotopes, and why are they preferred in human metabolic studies?
7. Write short notes on radioactive isotopes.
8. Mention any two applications of ELISA in nutrition or health science.

**III Very Short questions: Answer All Questions** [1×15=15]

1. What is the pH of a neutral solution?
2. Expand HPLC.
3. Full form of TLC.
4. Define animal studies.
5. What is strong acid?
6. Give one example of base.
7. Full form of GLC.
8. Define electrophoresis
9. Name one animal used in bioassay studies.
10. What is an isotope
11. Mention the full form of UV.
12. Write one limitation of AAS.
13. ELISA
14. Difference between buffer and acid
15. Name one salt

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04-12-2025

**Printing Pages : 1** **Paper Code : M.Sc.HS-101** **(C) (SVSU): 2025-2026/R**

**Enrollment No.** | | | | | | | | | | | | | |

**M.Sc. Food & Nutrition**
**I YEAR EXAMINATION**
**Research Methodology and Academic Writing**
**Paper Code: M.Sc.-HS-101**

**[Time: 3:00 Hours]** **[Max. Marks: 70]**

## I. Long Question: Answer Any Three [10x3=10]

1. What is scientific writing? Explain the various types of scientific writing.
2. What do you understand by research? Explain the different types of research.
3. The research process begins with problem identification and ends with report preparation. Explain the various stages involved in the research process in detail.
4. Why is data collection essential in research? Explain the various methods used for data collection.

## II. Short Question: Answer any Four [ 5×4=20]

1. What is research design in research methodology?
2. What is the difference between Research methods and Research methodology?
3. Explain data analysis.
4. What is the role of statistics in Research?
5. What is a research report?
6. What is the difference between parametric and non-parametric statics methods?
7. Write down the advantages of tabulation in Research.

## III. Very Short Question: Answer All Question [ 10×2=20]

1. What is Primary Data?
2. Define Cluster Sampling.
3. What is a Monograph?
4. Explain Participatory Learning Assessment.
5. What is Plagiarism?
6. Define Applied Research.
7. What is the Observation method in research?
8. What does Reliability refer to in research?
9. What is Qualitative Data?
10. What are Bibliographies?

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29-11-2025

Printing Pages : 1 Paper Code : M.Sc.FN-104 (C) (SVSU): 2025-2026/R

Enrollment No. | | | | | | | | | | | | | |

**Program Name: M.Sc. Home Science (Food and Nutrition)**
**I Year II Semester EXAMINATION**
**Subject Name: ADVANCES IN FOOD MICROBIOLOGY**
**Subject Code: MSCFN-104**

[Time: 3:00 Hours] [Max. Marks: 70]

**I. VERY SHORT ANSWER QUESTIONS (Answer All Questions)** [1×15=15]

1. Define viruses.
2. Name one Gram-negative bacterium found in food.
3. Mention one factor influencing bacterial growth temperature.
4. Define yeast fermentation.
5. Give one example of an anaerobic bacterium.
6. Define food intoxication.
7. Name one chemical disinfectant other than alcohol.
8. Give one source of contamination in canned foods.
9. Define genetically engineered microorganisms.
10. Give an example of a traditional fermented Indian food.
11. Define HACCP.
12. Mention one virus causing food poisoning.
13. Name one motile bacterium involved in food spoilage.
14. Define water quality.
15. Give one example of an indicator organism in food microbiology.

**II. SHORT ANSWER QUESTIONS (Answer Any Five)** [5×5=25]

1. Describe bacterial morphology and their classification based on shape.
2. Explain general characteristics of viruses and bacteriophages.
3. Discuss microbial spoilage of fruit and vegetables.
4. Explain the chemical methods of microbial destruction in foods.
5. Discuss the role of traditionally fermented foods in health.
6. Explain the principles and significance of GMP in food processing.
7. Discuss BOD and COD as indicators of water quality.

**III. LONG ANSWER QUESTIONS (Answer Any Three)** [10×3=30]

1. Explain bacterial groups based on morphology, motility, and sporulation, and their significance in food spoilage and preservation.
2. Discuss microbial spoilage of milk, bread, and meat with preventive measures.
3. Explain food-borne infections and intoxications due to bacteria, moulds, and viruses with control measures.
4. Discuss the importance of genetically engineered microorganisms, probiotics, and single-cell proteins in food biotechnology and human health.

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25-11-2025

Printing Pages : 1 Paper Code : M.Sc.FN-102 (C) (SVSU): 2025-2026/R

Enrollment No. | | | | | | | | | | | | | |

**Program Name- M.Sc. Home Science (Food and Nutrition)**
**I YEAR/ 1st SEMESTER EXAMINATION**
**Subject Name- Advanced Nutritional Biochemistry**
**Subject Code-M. Sc.FN-102**

[Time: 3:00 Hours] [Max. Marks: 70]

**I Long Question: Answer Any Three** [10×3=30]

1. Discuss the classification and digestion of fat.
2. Explain the structure and function of carbohydrate. Describe its functions in detail.
3. Describe the synthesis and biological role of phospholipids and lipoproteins.
4. Explain the complete metabolism process of protein.

**II Short Question: Answer Any Five** [5×5=25]

1. Differentiate between DNA and RNA.
2. Write a note on the urea cycle.
3. Explain the working principle of flame photometry.
4. What is the electron transport chain?
5. Define prostaglandins and give their functions.
6. Explain the significance of the pentose phosphate pathway.
7. Write short notes on colorimetry and its applications.

**III Very Short questions: Answer All Questions** [1×15=15]

1. ATP
2. NADH
3. FAD
4. Oxaloacetate
5. Enzyme specificity
6. Peptide bond
7. Globular proteins
8. Cholesterol regulation
9. β-oxidation
10. Hormone receptor
11. cGMP
12. tRNA
13. Mutation
14. Spectrophotometer
15. Gas chromatography

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Printing Pages : 1 Paper Code : M.Sc.FN-103 (C) (SVSU): 2025-2026/R

Enrollment No. | | | | | | | | | | | | | |

**M.Sc in Food & Nutrition**
**I YEAR/ 1st SEMESTER EXAMINATION**
**HUMAN PHYSIOLOGY**
**Paper code- M.Sc FN – 103**

**[TIME: 3 HOURS]** **[MAX. MARKS: 70]**

**ATTEMPT ALL QUESTIONS.**

**I Long Question: Answer Any Three** **[10×3=30]**

1. Explain the principles and factors affecting meal management. Discuss how socio-economic and cultural factors influence meal planning.
2. Describe the nutritional requirements and food selection during pregnancy. Plan a day's diet for a moderately active pregnant woman.
3. Discuss the concept and classification of therapeutic diets. Explain the steps in the adaptation of normal diets for therapeutic purposes.
4. Explain the dietary management of obesity and suggest modifications in the normal diet to manage the condition effectively.

**II Short Question: Answer Any Five** **[5×5=25]**

1. Write a short note on meal planning for lactating mothers.
2. What are the factors affecting food intake in the elderly?
3. Define Enteral and Parenteral feeding with suitable examples.
4. Describe the nutritional requirements of school-going children.
5. Explain the role of snacks and school lunch in the diet of children.
6. Discuss the dietary management of anaemia.
7. Explain the importance of balanced diet principles in meal planning.

**III Very Short questions: Answer All Questions** **[1×15=15]**

1. Meal management
2. Balanced diet
3. Nutritional requirements
4. Weaning
5. Lactation
6. Food selection
7. Therapeutic diet
8. Parenteral nutrition
9. Obesity
10. Anaemia
11. Constipation
12. Geriatric nutrition
13. Fever
14. Breastfeeding
15. Snack planning

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