

S-4231

Sub. Code

23MHF1C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Home Science

ADVANCED FOOD SCIENCE

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer all the questions.

1. What are the physical properties of solutions?
2. What are the types of food dispersion?
3. Write down the role of protein in food products
4. What are the factors influencing enzyme activity?
5. Why do you mean by the term Hydrogenation?
6. State the most important role of oil in food products
7. Write any two chemical factors of milk components
8. Write any two factors affecting foam formation
9. What is the main reason for spoilage of food?
10. Write the role of sweetener in food industry

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write the classification of foods based on viscosity characteristics.

Or

- (b) Write the starch rich foods and its composition.

12. (a) Write a short note on enzymes and its classification.

Or

- (b) Explain plant protein vs. animal protein.

13. (a) Explain the composition and properties of fat and oils.

Or

- (b) Write the different types of sugar.

14. (a) Write a short note on functional properties of foaming.

Or

- (b) Write a note on fermented and non fermented milk products.

15. (a) Discuss on properties of food additives.

Or

- (b) Discuss the role of colours in food products.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Highlight on the concepts of colloids and its classification
 17. Give a detailed description of proteins
 18. Write a note on the composition of Fats and oils.
 19. Write the microscopic structure of egg and its nutritional qualities
 20. Define food additives. Why there is a need for food additives
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S-4232

Sub. Code

23MHF1C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Home Science

ADVANCEDED HUMAN PHYSIOLOGY

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Write about meiotic cell
2. What are the functions of cell membrane?
3. What are white blood cells and its composition'?
4. What is systolic blood pressure?
5. Define lung volume.
6. What is Henry's law of partial pressure?
7. Define menstrual cycle
8. Draw the structure of gastrointestinal tract.
9. What is the need for renal function test?
10. What is the function of skin?

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write a short note on transportation across cell membrane.

Or

- (b) Narrate the types of stem cells.

12. (a) Discuss difference types of blood groups

Or

- (b) Write the salient feature of blood coagulation.

13. (a) Draw the structure of respiratory system.

Or

- (b) Why ventilation and artificial respiration is important?

14. (a) Discuss the role of hormones in lactation.

Or

- (b) Explain the process of absorption of fats in our body.

15. (a) Discuss – Brain barrier.

Or

- (b) Discuss on EEG.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Illustrate on Tissue structure and its function.
17. Write the function of heart and its systematic circulation.

18. Discusses the internal and external respiration.
 19. What are the special structures available in the GIT for absorption?
 20. 'The internal environment of the body is maintained by the autonomic nervous system' justify the statement.
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S-4233

Sub. Code

23MHF1E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Home Science

**Elective — FAMILY RESOURCE MANAGEMENT –
CONCEPT AND CONTEXT**

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Family management.
2. Write the factors influencing values.
3. State the steps involved in management.
4. Give the advantages of resources.
5. Differentiate between habitual and individual decision.
6. What is work curve?
7. Define Ergonomics.
8. How would you classify household tasks on the basis of energy costs?
9. Indicate the meaning of consumerism.
10. Compare human needs and wants.

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Give a detailed account on the concept of management.

Or

- (b) Bring out the significance of values in day to day living and the types of goals with examples.

12. (a) Describe the importance and role of resources in a family.

Or

- (b) Enumerate on the different types and the factors influencing decision making.

13. (a) Elaborate the characteristics and nature of time.

Or

- (b) Explain the types of income and their sources.

14. (a) State the management of energy during different stages of family living.

Or

- (b) Discuss the meaning and importance of work simplification.

15. (a) Highlight the states of today's consumer in our country.

Or

- (b) Write a detailed note on various NGO's activities towards consumer protection.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss on how values, goals and standards are interrelated with illustrations and examples.
17. Elaborate on the factors that influence the use and availability of resources.
18. Explain in detail the steps involved in preparing a budget.
19. Summarize on Mundel's classes of change in household activities.
20. Detail the following:
 - (a) Law of diminishing marginal utility
 - (b) Types of consumer market.

S-4235

Sub. Code

23MHF1E3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Home Science

Elective: PERCEPTIVES OF HOME SCIENCE

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Write any two methods of teaching
2. What do you mean by innovation?
3. What is the term maturation?
4. List two types of nursery schools
5. Define wool
6. How to choose clothing based on the season?
7. Why resources are important?
8. Write about colors and its nature.
9. Write any two differences between nutrition and dietetics.
10. Write the symptoms of iodine deficiency.

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Define Extension Education? Write the characteristics of extension education?

Or

- (b) How social change is possible through extension education. Discuss.

12. (a) Narrate the merits and demerits of parental disciplinary techniques.

Or

- (b) Explain the importance of early childhood education.

13. (a) Write a brief note on clothing.

Or

- (b) What are the special features of knitted fabrics.

14. (a) Explain the methods of resolving conflicts.

Or

- (b) Discuss the nature of colour schemes.

15. (a) Explain the uses of Bomb calorimeter.

Or

- (b) What are the complications of Diabetic Mellitus.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain the following
 - (a) Communication
 - (b) Innovation
 - (c) Social Change
 17. How would you know the child is exceptional? What are the factors of exceptional children?
 18. Which fibre is used for textiles? What are the general properties of textiles fibres
 19. What is the role of family resource management and discuss any two classifications
 20. Write a detailed note on Non -Communicable Disorders.
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S-4245

Sub. Code

23MHF3C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Home Science

RESEARCH METHODOLOGY AND STATISTICS

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are deciding variables?
2. Define research.
3. Identify the characteristics of a good sampling.
4. What is the purpose of continuous rating scale?
5. What is KAP?
6. List the uses of case studies.
7. Find the median for the following series:
4, 45, 60, 20, 83, 19, 26, 11, 27, 12, 52
8. What is a polygon curve?
9. What is the purpose of an EndNote?
10. Is Minitab still being used by researchers? Why?

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Is there a need for research in Food Science and Nutrition? Explain.

Or

- (b) Write in detail of epidemiological surveillance.

12. (a) Highlight the features of cluster sampling giving advantages and limitations.

Or

- (b) Explain primary scales of measurement giving examples.

13. (a) Prepare a table and explain the parts of the table.

Or

- (b) Detail on the ways by which unpublished sources are collected.

14. (a) For the following values compute SD.

5, 8, 7, 11, 9, 10, 8, 2, 4, 6

Or

- (b) Explain the steps involved in calculating a test statistic.

15. (a) Write short notes on footnotes and glossary.

Or

- (b) Explain the tools used to check plagiarism in a research.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. How is an *in vivo* and *in vitro* research conducted? Explain with examples.
 17. Explain how non-sampling errors can be rectified in a research.
 18. Compare interview and questionnaire.
 19. A random sample of 200 villages was taken from a district and the average population per village was found to be 485 with a standard deviation of 50. Another random sample of 200 villages from the same district gave an average population of 510 per village with a standard deviation of 40. Is the difference between averages of the two samples statistically significant? Give reasons.
 20. Recognize the role, importance and uses of computer in nutrition research.
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S-4246

Sub. Code

23MHF3C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Home Science

TRENDS AND ISSUES IN HUMAN DEVELOPMENT

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Write any three symptoms of pregnancy.
2. List out any two types of child birth.
3. Define Babyhood.
4. Meaning of development.
5. Define Parenting.
6. Meaning of cultural process.
7. Define Late Childhood.
8. What do you mean by Social relationship?
9. Meaning of Pre School Education.
10. Define Speech impaired.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Why postnatal care is important for mother and child health?

Or

- (b) Elaborate on how life begins.

12. (a) Write a short note on care during babyhood

(i) feeding

(ii) weaning

Or

- (b) Explain the Basic concept of maturation Vs learning.

13. (a) Appraise the emotional development during the earlywood period.

Or

- (b) Write the physical development of the early childhood period.

14. (a) Summarize the habit formation during late childhood.

Or

- (b) How can a child's early experience impact their future educational success?

15. (a) Explain any two types of Preschools in India.

Or

- (b) Write the common characteristics of gifted children.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain the signs and symptoms of Pregnancy.
 17. Discuss the process of physical and motor development during infancy. How does the family environment play a role in its developments.
 18. Analyse the factors influencing emotional development during the early childhood period.
 19. Sketch out the peer relationship during the late childhood period.
 20. Illustrate the classification of physically handicapped, hearing impaired and mentally handicapped.
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S-4247

Sub. Code

23MHF3C3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Home Science

**HOME SCIENCE EXTENSION EDUCATION AND
COMMUNICATION**

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is the aim of Extension Education?
2. Write any two objectives of Home Science Extension Education.
3. Write role of extension worker in village level.
4. Mention any two qualities of women extension worker.
5. Write the importance of program evaluation in extension education?
6. Write any two important objective of program planning.
7. List the teaching tools used in Extension Education.
8. List out the visual aids to be used during programs.

9. Expand ICDS and its functions in short.
10. What is Social forestry?

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Elaborate the aims of extension education in detail.

Or

- (b) Explain the meaning and objectives of Home Science Extension Education.

12. (a) Describe the importance of training the extension workers in current technology that plays vital role in program implementation.

Or

- (b) Write down the administrative set up in Central level for implanting rural development programmes.

13. (a) Explain the importance and scope of Extension education.

Or

- (b) Elaborate the steps involved in programme evaluation and its importance with examples.

14. (a) Distinguish the difference between individual and group approach in communicating with the people.

Or

- (b) Explain the importance of communication process in Extension Education.

15. (a) Elaborate the principles of Community Development programs in detail.

Or

- (b) Write a detail note on KVIC and its functions.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Illustrate the importance of Extension Education and how it connects people with innovations and new programs.
17. Elaborate the functions and qualities of an Extension Worker.
18. List out the steps in Program planning and criteria to be considered in detail.
19. Illustrate the importance of using different audio and visual methods in the community program.
20. Explain in detail about IRDP and its impacts in nation development.
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S-4248

Sub. Code

23MHF3C4

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Home Science

INSTITUTIONAL FOOD SERVICE MANAGEMENT

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Brief the concept of food establishment.
2. What is the importance of total quality management?
3. Mention the need of labour policy.
4. Give the concept of motivation.
5. How do you prepare for a successful equipment installation?
6. What does pattern work mean?
7. How will you determine the quality of raw materials?
8. What is break-even analysis?
9. Write the control measure of food contamination?
10. List about the dishwashing methods.

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Explain the recent trends in food service institutions.

Or

- (b) Detail the factors affecting the development of food service.

12. (a) Outline the different types of personnel management.

Or

- (b) Give a short note on the phases in a recruitment process.

13. (a) Why is design and layout important in food service area?

Or

- (b) Discuss the steps involved in the design process.

14. (a) Brief the importance and process of budgeting.

Or

- (b) Highlight the role of record keeping in management.

15. (a) Why is personal hygiene important in the food sector?

Or

- (b) Elaborate the main causes of food contamination.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Summarize the various approaches in management of food service.
 17. Illustrate the Mastering Food Service Management from goal to tools.
 18. Explain the design and equipment for restaurants and food service.
 19. Outline the key components of financial planning and its management.
 20. Elaborate on the importance of hygiene and sanitation in food sector.
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S-4249

Sub. Code

23MHF3E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Home science

Elective : FOOD PROCESSING AND TECHNOLOGY

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions

1. List out the enzymes used in food processing
2. What is primary and secondary food processing?
3. Write about quick cooking in dhal?
4. What is dehusking in milling?
5. Define canning of fruits?
6. What is senescence in fruit ripening.
7. Define Enzymatic browning.
8. What is gelatin?
9. Define post-harvest loss.
10. Write any two technology that reduce post harvest loss.

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Discuss about the traditional method used in food processing

Or

- (b) Classify enzymes based on their functions

12. (a) Enumerate steps involved in the process of pearling of barley

Or

- (b) Summarise the steps involved in the preparation of virgin coconut oil.

13. (a) Discuss the effect of processing on physiochemical properties of milk.

Or

- (b) Write the general principles underlying fruit spoilage.

14. (a) Explain the contaminations of poultry products

Or

- (b) Write in detail about any one method of fish preservation.

15. (a) Highlight the importance of post harvest technology

Or

- (b) Explain about fermented fruit products?

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Highlight on different methods of processing rice.
17. Write on milling of pulses and elimination of toxins.
18. Give in detail about centrifugal and pasturisation process of milk.
19. Describe the different factors affecting the volume and stability of egg white foam.
20. Explain the scope of post-harvest technology in improving food security.

S-4251

Sub. Code

23MHF3S1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Home Science

SPORTS NUTRITION

(CBCS – 2023 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the two main categories of exercise?
2. Define weight management in the context of sports.
3. What is the difference between weight loss and weight gain as preparation for competition?
4. Define muscular adaptation to exercise.
5. Write any two difference between Type I and Type II muscle fibers.
6. Define anaerobic glycolysis.
7. Why is it important for athletes to consume carbohydrates after exercise?
8. Define female athlete triad
9. What is carbohydrate loading.
10. Define dietary supplements.

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Differentiate aerobic and anaerobic exercise with examples.

Or

- (b) Describe the role of body mass index (BMI) in assessing an athlete's weight status. What are its limitations.

12. (a) How does regular aerobic exercise influence the cardiopulmonary system?

Or

- (b) Explain the process of oxidative phosphorylation and its significance in endurance exercise.

13. (a) What are the key steps involved in carbohydrate loading, and how does it benefit endurance athletes?

Or

- (b) Discuss the recommended protein intake for strength athletes and explain why it differs from that of endurance athletes.

14. (a) Outline the potential risks of both inadequate and excessive vitamin intake for athletes.

Or

- (b) What is the female athlete triad, and what are the risks associated with it? How can it be prevented or managed?

15. (a) What are the key considerations when developing a supplement protocol for an athlete?

Or

- (b) Evaluate the role of sports drinks in maintaining fluid and electrolyte balance during exercise. When are sports drinks more beneficial than water?

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Compare and contrast the training needs and strategies for resistance, endurance, and power athletes. How do these different types of athletes optimize their performance?
17. Describe the creatine phosphate energy system in detail, including the biochemical reactions and its role in high intensity exercise.
18. Explain how Protein requirement and essential aminoacids are adequate in vegetarian athletes quoting examples of Protein rich vegetarian foods.
19. Give detailed explanation of importance of calcium and iron in an athletes diet.
20. Explain how fluid and electrolyte balance contribute to prevent hypo hydration and hyper hydration?
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