

D-5655

Sub. Code

36511

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

First Semester

Home Science — Nutrition and Dietetics

HUMAN PHYSIOLOGY

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define unicellular organisms with example
2. What is the main function of Golgi apparatus?
3. What is the other name of lysosome?
4. What are the main functions of nervous tissue?
5. Which foods increase hemoglobin in blood?
6. How can we protect our lungs?
7. What type of respiration do humans have?
8. What is the main function of kidney?
9. Which is the largest endocrine gland in our body?
10. How our nervous system works?

PART B — (5 × 5 = 25 marks)

Answer ALL questions. Choosing either (a) or (b).

11. (a) Write the Structure and organization of prokaryotic cells.

Or

- (b) Outline the Physiology of Cytoplasm.

12. (a) Summarize the role of photosynthesis in Chloroplast.

Or

- (b) What is the difference between simple stratified and pseudostratified epithelial tissue?

13. (a) What are plasma proteins and their functions?

Or

- (b) What is erythroblastosis fetalis and how can it be prevented?

14. (a) State the Nutrition and metabolism of heart.

Or

- (b) Enumerate the mechanism of respiration.

15. (a) Explain in detail about Renal function test

Or

- (b) Discuss about Hormonal imbalance syndrome

PART C — (3 × 10 = 30 marks)

Answer any THREE questions out of Five

16. Write the Structural organization and functions of intracellular organelles
 17. Point out the Techniques to identify cardiovascular disorders
 18. Illustrate the important of liver in digestive system
 19. Outline the structure and functions of male reproductive organ
 20. Discuss about EEG and EMG
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36512

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

First Semester

Home Science — Nutrition and Dietetics

NUTRITION AND HEALTH

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are the essential nutrients?
2. Can humans live without nitrogen?
3. What are the signs and symptoms of over nutrition?
4. What are examples of nutrients?
5. What is the purpose of the recommended dietary allowances?
6. Why is preconception nutrition important?
7. What are the disadvantages of formula feeding?
8. What does supplementary food mean?

9. What is late maturity?
10. What are the old age problems?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, Choosing either (a) or (b).

11. (a) Describe about the Concept of adequate nutrition and malnutrition.

Or

- (b) List out ICMR Recommended Dietary Allowances.

12. (a) Write the requirements and storage of nutrients in normal pregnancy.

Or

- (b) Explain in brief about the factors in menu planning.

13. (a) Discuss about Tdap vaccine and rubella (MMR) vaccine.

Or

- (b) Write the Nutritional status of infants.

14. (a) Describe about the growth and development of preschool children.

Or

- (b) Outline the Physiological and psychological changes in adolescents.

15. (a) Explain in brief about Pre and post menopausal syndrome.

Or

- (b) Discuss about Nutritional deficiency control programme.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of five questions

16. Discuss about the nutritional problem in young and too old expectant mothers.
 17. Explain in detail about Hypersensitive disorders.
 18. Outline the Interventions to prevent malnutrition for infancy.
 19. Write the risk factors, prevention and methods of detection of infertility.
 20. Elaborate the pathophysiology of osteoporosis
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36513

DISTANCE EDUCATION

**M.Sc. (Home Science – Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2022.**

First Semester

ADVANCED FOOD SCIENCE

(CBCS 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define - Maillard reaction.
2. What is sensory evaluation?
3. Name any four essential amino acids found in protein.
4. What are Cole crops? give two examples
5. What does egg white consist of?
6. List the nutritive value of whole milk?
7. What is margarine?
8. What are the ways in which juice can be extracted from a fruit?
9. Mention the uses of saccharin.
10. What are the main nutrients found in GM foods?

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

11. (a) What are the various combinations of cooking methods?

Or

- (b) Write a short note on carbohydrates and leaching.

12. (a) What is resistant starch and what are the various forms of resistant starch?

Or

- (b) Write short notes on the following:

- (i) Net Protein Ration
- (ii) Biological Value (BV).

13. (a) What are enzymatic and non-enzymatic changes in fruits and vegetables?

Or

- (b) Discuss the methods of cooking of meat. What are the changes that occur in meat during cooking?

14. (a) Identify the main types of fish.

Or

- (b) Write a short note on sterilisation.

15. (a) Write a short note on the importance of fat on a diet.

Or

- (b) Differentiate between crystalline and non-crystalline candies.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the various methods of shelf life determination in foods.
 17. What do you understand by the post-harvest handling of vegetables? Discuss.
 18. Enumerate the process of pasteurization in detail.
 19. Elaborate the food contaminants of natural origin.
 20. Analyse the role of genetically modified foods in the existing times.
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36521

DISTANCE EDUCATION

**M.Sc. (Home Science – (Nutrition and Dietetics)) DEGREE
EXAMINATION, MAY 2022.**

Second Semester

NUTRITIONAL BIOCHEMISTRY

(CBCS 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What provides energy for all body functions?
2. What foods are richest in complex carbohydrates?
3. How do you increase glucose metabolism?
4. How is protein synthesized?
5. Which vegetable is rich in protein?
6. Give any two example of minerals
7. How does vitamin A help immune system?
8. Which nutrients give us energy?
9. What do hormones do to a woman?
10. What are the symptoms of electrolyte imbalance?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) List the classifications of carbohydrates.

Or

- (b) Outline the Inborn errors of carbohydrate.

12. (a) State the Biological role and value of proteins.

Or

- (b) Write the nutritional aspects of lipids.

13. (a) Enumerate the deficiency diseases of vitamins.

Or

- (b) Mention briefly about the absorption of minerals in mineral metabolism.

14. (a) Write the application of enzymes in clinical diagnosis.

Or

- (b) Outline the Structure and functions of DNA.

15. (a) Point out the major source of acid produced in the body.

Or

- (b) Specify the diseases of electrolyte imbalance.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of Five questions.

16. Explain in brief about Glycolytic pathway and their deficiency diseases.
 17. Describe about protein synthesis.
 18. Elaborate about β -oxidation and inborn errors of lipid metabolism.
 19. Discuss the factors affecting enzyme activity.
 20. Outline the role of nutrients in maintenance of fluid and electrolyte balance during disease condition.
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36522

DISTANCE EDUCATION

**M.Sc. (Home Science – (Nutrition and Dietetics)) DEGREE
EXAMINATION, MAY 2022.**

Second Semester

FUNCTIONAL FOODS AND NUTRACEUTICALS

(CBCS 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Why are probiotics important to human health?
2. What is the role of microbiota?
3. What is a good source of oligosaccharides?
4. What is the process of fermentation?
5. What are the functions of alkaloids?
6. What are the examples of a specific protein?
7. What is nutraceutical science?
8. What is lecithin used for?
9. What is the main cause of gout?
10. What happens during hypoglycemia?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Describe about prebiotics and symbiotic.

Or

- (b) Point out the mechanism of action of probiotics.

12. (a) Write the sources and bioavailability of prebiotics.

Or

- (b) Explain in detail about dietary fibre.

13. (a) Discuss about fermented Non-milk products.

Or

- (b) Outline the antinutrients present in amylase and lipase.

14. (a) State the scope and future prospects of nutraceuticals.

Or

- (b) List the properties and functions of lycopene.

15. (a) Explain in brief about nutraceuticals rich supplement in kelp and spirulina.

Or

- (b) Describe about anti-aging compounds.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of Five questions.

16. Outline the Potential applications of prebiotics in risk reduction of diseases.
 17. Discuss about nonnutrient effect of peptides and nucleotides.
 18. Point out the relation of nutraceutical science with human physiology and genetics.
 19. Write the role of nutraceuticals in treatment of cognitive disorders.
 20. Discuss about the role of Nutraceuticals for the treatment of circulatory problems and bronchitis.
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36523

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

Second Semester

Home Science – (Nutrition and Dietetics)

FOOD SERVICE MANAGEMENT

(CBCS 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is process of food fermentation?
2. Name the different types of restaurant kitchen layouts.
3. How to ensure that deep freezer storage is safe and hygienic?
4. What do you mean by conventional food service systems?
5. What are tangible and intangible tools of management?
6. List some of the important hygienic design features.
7. How food production is generally classified?

8. What are the key activities for controlling the presence of vectors?
9. List the constituents of employee handbook.
10. What is the use of sales return book?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Elucidate on-site and off-site catering management.

Or

- (b) Differentiate between fixed labour cost and variable labour cost.

12. (a) Explain the principles of purchasing.

Or

- (b) Explain the standard procedure of holding prepared foods in the kitchen.

13. (a) Analyse the skills of successful food service managers.

Or

- (b) Explain the points that must be followed for proper handling of kitchen equipment.

14. (a) Write a short note on automated take away service.

Or

- (b) Briefly explain the essentials of food safety and hygiene practices.

15. (a) Describe the importance of performance appraisal and communication.

Or

- (b) Write a short note on the key components of accounting systems.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the current scenario of food service industry in India.
17. Analyse the various factors that affect working performance of a restaurant.
18. Discuss the principles and techniques of effective management.
19. Explain in detail of HAACP standards.
20. Elaborate the importance of communication in marketing and its types.

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36531

DISTANCE EDUCATION

**M.Sc. (Home Science – Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2022.**

Third Semester

CLINICAL AND THERAPEUTIC NUTRITION

(CBCS 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write the purpose of a dietician.
2. What can you expect at a weight loss clinic?
3. What causes feeding problems in babies?
4. What are the basic health needs?
5. What are the common causes of febrile illness?
6. How do you know if you have gastrointestinal issues?
7. What causes ulcerative colitis?
8. Can you live without a gallbladder?
9. What are the most common metabolic disorders?
10. What foods to avoid if you have protein in your urine?

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write the Role of Nurses and Nutrition in Healthy Patients.

Or

- (b) Elaborate the professional ethics and obligations of dietitians.

12. (a) Discuss about regular diet and light diet.

Or

- (b) Mention briefly about acute, chronic and recurrent fevers.

13. (a) Briefly explain about dumping syndrome.

Or

- (b) Elaborate about celiac disease and steatorrhea.

14. (a) How does phenylketonuria affect the body?

Or

- (b) What effect does hypothyroidism have on the body?

15. (a) Elaborate about the dietary management and prevention for food allergy.

Or

- (b) Describe about diet during Alzheimer's disease.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Briefly explain the psychology of feeding the patient, problems of feeding children and assessment of patients needs.
 17. Discuss briefly about H1N1, dengue fever and Chikungunya.
 18. Describe about dietary regimen in cholecystitis, cholelithiasis and pancreatitis.
 19. Write the contributory factors and dietary modifications of glomerulonephritis and nephrosis.
 20. Elaborate about diet during burns, sepsis and trauma.
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36532

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

Third Semester

Home Science — (Nutrition and Dietetics)

DIETETICS IN LIFE STYLE DISEASES

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define stress.
2. Name any two anti-stress food
3. “Faulty eating habits contribute to obesity”, list any two factors.
4. Which Artificial sweeteners are preferred for diabetes?
5. How would you define Insulin resistance?
6. What are the foods, which are hard to digest and must be avoided for a patient with the condition of Dyslipidaemia?
7. Give the principles of diet in the treatment of Angina pectoris.

8. List two foods to be included to a patient suffering from Hypotension.
9. What are the factors that contribute to lifestyle diseases?
10. Mention any two Causes of Dysphagia.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, Choosing either (a) or (b).

11. (a) Write short notes on psychosomatic disorder
Or
(b) Describe the Biological effect of stress on brain.
12. (a) Enumerate the factors to be considered in planning a diet for gestational diabetes.
Or
(b) How will you plan the diet menu for underweight?
13. (a) Describe the modifications made in the diet for hypercholesterolemia.
Or
(b) Explain the factors responsible for cardio vascular disease.
14. (a) Describe the causes and complications of hypertension.
Or
(b) Distinguish the various types of cancer therapy.
15. (a) Explain the clinical features of Epilepsy.
Or
(b) How will you counsel the cancer patient based on dietary guidelines?

PART C — (3 × 10 = 30 marks)

Answer any THREE questions

16. Discuss the factors to be considered in the dietary management for stressed adult person.
 17. Discuss the nutritional recommendations for the management of Diabetes mellitus
 18. Enumerate the dietary guidelines for the prevention and treatment of ischemic heart disease.
 19. Plan a day's menu for an adult man with severe sodium restricted diet for a congestive heart failure patient.
 20. Elaborate the role of food in the prevention of cancer.
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36533

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

Third Semester

Home Science — Nutrition and Dietetics

COMMUNITY NUTRITION

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is the importance of a community nutrition?
2. How would you describe malnutrition?
3. How will you assess the nutritional status of pre-school children?
4. What are the advantages of diet survey?
5. List two objectives of the school lunch programme
6. Bring out the importance of iodine
7. What does CARE Provide?
8. State the main goal of ICMR

9. Write the objectives of prophylaxis program.
10. List the steps in the counselling process.

PART B — (5 × 5 = 25 marks)

Answer ALL questions. Choosing either (a) or (b).

11. (a) What are the factors affecting Health of the Community?

Or

(b) How can we prevent malnutrition in the community?
12. (a) Bring out the importance of assessment of nutritional status.

Or

(b) How eating habits affect the nutritional status of the adolescents?
13. (a) Describe the clinical features of Xerophthalmia

Or

(b) What dietary modification you would suggest to control anemia?
14. (a) Discuss the role of WHO in promoting nutrition education.

Or

(b) Write the aims and functions of UNICEF in combating malnutrition
15. (a) What are the impact of Green revolution?

Or

(b) Elaborate on the contribution of the ICDS program for the improvement of the nutritional status.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions

16. Comment on the concept that “the community has a direct responsibility for the health of individual”.
 17. How nutritional screening and assessment is done by using anthropometric measurement?
 18. With reference to preschool age children explain the prevalence of malnutrition and explain the preventive processes available.
 19. Discuss the role of international agencies in promoting nutrition education.
 20. Describe the steps involved in program planning process, write down one programme plan on Adolescent anaemia among girls.
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36541

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

Fourth Semester

Home Science – (Nutrition and Dietetics)

PAEDIATRIC NUTRITION

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define Nutrition
2. Illustrate the dietary data of infants
3. What is Immunization
4. Explain the abnormal sign of Cyanosis
5. List out the newborn sickness
6. Define PEM
7. Write a note on Vitamin A deficiency
8. Define Diarrhoea
9. Define Celiac disease
10. What is ADH disorder

PART B — (5 × 5 = 25 marks)

Answer ALL questions. Choosing either (a) or (b).

11. (a) Write a short note on physiological development of infants.

Or

- (b) Explain the food requirements for infants

12. (a) Write an brief account on immunization schedule during childhood.

Or

- (b) What is nutritional status? Explain the assessment of nutritional status.

13. (a) Discuss about nutritional management of premature baby.

Or

- (b) Explain briefly about jaundice.

14. (a) Discuss about the malnutrition of infants.

Or

- (b) Describe the nutritional management of typhoid.

15. (a) Give a brief account on inflammatory bowel disease.

Or

- (b) Explain the calculation of fluids and electrolytes in diet of infants.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions out of Five

16. Elaborate the assessment of nutritional status in infants
 17. Give an account on the short term and long term consequences in infants due to underweight nutrition.
 18. Discuss about the vitamin A deficiency diseases
 19. Explain in detail about the nutritional management for children with specific conditions.
 20. Describe the measures and plotting growth of infants
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36542

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

Fourth Semester

Home Science — Nutrition and Dietetics

FOOD MICROBIOLOGY AND SANITATION

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Germ theory of diseases
2. Mycology
3. *Saccharomyces cerevisiae*
4. Bread mold
5. Bacteriophages
6. Food contamination
7. Food additives
8. Appertization

9. Food poisoning

10. HACCP

PART B — (5 × 5 = 25 marks)

Answer ALL questions. Choosing either (a) or (b).

11. (a) Write a note on the development of microbiology?

Or

(b) Yeast is the importance organisms in Food Microbiology- Justify.

12. (a) Elucidate the general principles of microbial spoilage?

Or

(b) Give an account on food additives.

13. (a) Brief notes on Microbiology of fish.

Or

(b) Write the types of biological spoilage of canned foods?

14. (a) Describe – Salmoeellosis.

Or

(b) Write short notes on personal hygiene.

15. (a) Brief on packaging methods.

Or

(b) Elucidate Food laws.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions out of Five

16. Discuss in detail about scope of Food Microbiology.
 17. Write in detail about food preservation.
 18. Explain in detail about canned foods.
 19. Elaborate on food borne diseases.
 20. Briefly explain about the food sanitation.
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36543

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2022.

Fourth Semester

Home Science: Nutrition and Dietetics

FOOD BIOTECHNOLOGY AND BIOSTATISTICS

(CBCS 2018 – 19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define - Fermentation
2. What is the safest antibiotic?
3. What are xenobiotics and their examples?
4. What are microbial proteins made of?
5. What are the most commonly used additives?
6. What is the purpose of sampling?
7. Define – Continuous data
8. What type of data is survey data?
9. What is the best measure of central tendency?
10. How do you calculate percentile?

PART B — (5 × 5 = 25 marks)

Answer ALL questions. Choosing either (a) or (b).

11. (a) Summarize about Batch fermentation.

Or

- (b) Write the Synthesis and applications of Immobilized enzymes in food industry.

12. (a) Describe about Downstream processing

Or

- (b) Outline the sources and toxicity of Phthalates and cyanogens.

13. (a) Explain in brief about acidulants

Or

- (b) Point out the different types of alcoholic beverages

14. (a) Write the Basic definitions and applications of Biostatistics in food industry

Or

- (b) Use of computers in data processing and presentation.

15. (a) Outline the Measures of dispersion

Or

- (b) Write the importance of distributions in statistical studies.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of Five questions

16. Discuss the Impact of biotechnology on the nutritional quality of foods
17. Describe about Glucose syrup and high fructose syrup
18. Outline the Safety aspects of foods produced by biotechnology
19. Write the types and methods of collection of primary and secondary data.
20. What is regression coefficients? How does regression analysis help in decision making?
