

D-1661

Sub. Code

36511

DISTANCE EDUCATION

M.Sc. (Home Science – Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.

First Semester

HUMAN PHYSIOLOGY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. What is the difference between the cell membrane and the nuclear membrane?
2. Why nucleus is called the brain of the cell?
3. What is the function a chloroplast?
4. How do lysosomes digest food?
5. What hormones are produced by the endocrine glands?
6. Does nucleus contain DNA?
7. Why is epithelial tissue important?
8. What diseases cause high ESR?
9. How do sense organs work?
10. How does the nervous system works?

SECTION B — (5 × 5 = 25 marks)

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

11. (a) Write the structural organization of mitochondria.

Or

- (b) Mention briefly about epithelial tissues.

12. (a) Write the structure and functions of cartilage.

Or

- (b) Discuss about hyperpnoea and orthopnoea.

13. (a) Outline the basic properties of heart.

Or

- (b) Write the mechanism of secretion of digestive juices.

14. (a) What are the Symptoms of your Pancreas not working properly?

Or

- (b) Discuss about male and female contraception's.

15. (a) What is EEG test used to diagnose?

Or

- (b) Describe about hormonal imbalance syndromes.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Briefly explain the major structures and functions of the musculoskeletal system.

17. Mention briefly about Erythroblastosis foetalis.

18. Elaborate the mechanism of secretion of digestive juices and its regulation.
 19. Interpret the symptoms and causes of infertility in male and female.
 20. Write the structure and functions of exocrine glands.
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D-1662

Sub. Code

36512

DISTANCE EDUCATION

**M.Sc. (Home Science – Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.**

First Semester

NUTRITION AND HEALTH

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is Non-communicable diseases.
2. Expand BMR and AMR.
3. What is toxaemia in pregnancy?
4. List any four factors which influence the maternal nutritional status.
5. What do you mean by exclusive breast feeding?
6. Define LBW.
7. What is bulimia nervosa?
8. What do you mean by pre-menopausal syndrome?
9. Define gerontology.
10. Expand ICDS.

PART B — (5 × 5 = 25 marks)

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

11. (a) Discuss any five importance of RDA.

Or

- (b) Explain briefly the steps involved in planning a balanced diet.

12. (a) Explain the physiological changes during pregnancy.

Or

- (b) Discuss the role of folic acid and iron during pregnancy.

13. (a) 'Breast milk is the best milk'. Justify the statement.

Or

- (b) Write the RDA for pre-school children.

14. (a) Write the pre-pubertal and pubertal changes during adolescence.

Or

- (b) Describe the importance of nutrition during the period of menopause.

15. (a) Define the Ageing process. List any five importance of nutrition for old age.

Or

- (b) State the functions of nutrition deficiency control programme.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Define Malnutrition. Explain the causes and consequences of malnutrition.
 17. What measures should be taken to prevent anaemia during pregnancy? Discuss the role of government in this context.
 18. Explain the role of hormones in milk production. How will you initiate re-lactation?
 19. State the intervention programme for preventing malnutrition among preschool children.
 20. Discuss the points to be considered in planning diets for school children.
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D-1663

Sub. Code

36513

DISTANCE EDUCATION

M.Sc. (Home Science – Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.

First Semester

ADVANCED FOOD SCIENCE

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What does perishable food mean?
2. Define – Defoamer.
3. Name the primary physical properties that determine food quality.
4. What are hydrocolloids?
5. State the role of enzymes.
6. What are the postpartum changes in meat?
7. Why does shellfish taste sweet?
8. What are hydrolases?
9. What are the three main stages of brewing?
10. How has FSSAI defined preservatives?

PART B — (5 × 5 = 25 marks)

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

11. (a) Describe “Bound Water”. State the four types of bound water.

Or

- (b) Explain the properties and characteristics of colloids.

12. (a) State the most important nutritional property of carbohydrates.

Or

- (b) Write a detailed note on importance of protein foods for infants and children.

13. (a) Discuss the main types of salting methods.

Or

- (b) Analyse the process of rancidification in food stuff.

14. (a) Why is pasteurization an important process in manufacturing of beverages?

Or

- (b) List the main uses of artificial sweeteners.

15. (a) Explain the main cause of scombroid poisoning.

Or

- (b) Write a short note on recombinant DNA technology.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the various methods of cooking.
 17. List the various methods of fruit preservation? Describe any two methods in detail.
 18. What are the reasons which results in the spoilage of fish? Discuss in detail.
 19. Discuss in detail the process of manufacturing of beverages.
 20. What is GM food? Explain the advantages of genetically modified foods.
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D-1664

Sub. Code

36521

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, MAY 2023.

Second Semester

Home Science – Nutrition and Dietetics

NUTRITIONAL BIOCHEMISTRY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. How is energy produced in our body?
2. What are simple carbohydrates?
3. Can fasting help your blood sugar?
4. How many types of proteins are there?
5. What are the health effect of lipids?
6. What is the role of the nucleic acids?
7. What are the three main functions of nutrients?
8. What is the source of vitamin A?
9. What is hypothalamus?
10. What are the symptoms of dehydration?

PART B — (5 × 5 = 25 marks)

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

11. (a) State the sources and biological role of carbohydrate.

Or

- (b) Specify the nutritional aspects of carbohydrates.

12. (a) Write the classifications of proteins.

Or

- (b) Describe about lipid based metabolic diseases.

13. (a) Point out the genetic disorders of DNA and RNA.

Or

- (b) Write the Mechanism of action of enzyme.

14. (a) Enumerate the Inborn errors of protein metabolism.

Or

- (b) Elaborate about minerals deficiency diseases.

15. (a) Outline the physiological role of different buffer system.

Or

- (b) Distinguish about Hypothyroidism and hyperthyroidism.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss about inborn errors of carbohydrate metabolism
 17. Name the Classification and characteristics of vitamins.
 18. Write the applications of enzymes in clinical diagnosis and explain in brief about enzyme specificity.
 19. Write the Interrelation between hormones and nutrients
 20. Specify the diseases of electrolyte imbalance and maintenance in normal health.
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D-1665

Sub. Code

36522

DISTANCE EDUCATION

M.Sc. (Home Science - Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.

Second Semester

FUNCTIONAL FOODS AND NUTRACEUTICALS

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is a natural prebiotic?
2. What is homeostasis and its example?
3. What are types of disaccharides?
4. What is adverse health effect?
5. Which food is digested easily?
6. What happens during the process of translation?
7. What is a nutraceutical FDA?
8. What is ornithine alpha-ketoglutarate used for?
9. What is the difference between septic and sepsis?
10. What is the most common cause of hematuria?

PART B — (5 × 5 = 25 marks)

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

11. (a) Describe about Nutrient and Non-Nutrient products.

Or

- (b) Point out the Health effects of probiotics.

12. (a) Mention briefly about the Quality assurance and safety of probiotics.

Or

- (b) Discuss about Fermented milk products.

13. (a) Describe about the antinutrients present in protease saponin.

Or

- (b) Discuss about Conjugated linoleic acid and n-3 fatty acids.

14. (a) Write the Nutritive value and uses in cooking of spices and condiments.

Or

- (b) State the functions of minerals in the body.

15. (a) Explain in brief about Nutraceuticals rich supplement in mushroom extract and aloe Vera.

Or

- (b) Mention briefly about anti-inflammatory compounds.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Outline the taxonomy and important features of probiotic microorganisms.
 17. Point out the sources, bioavailability and effects on human health of Glucosinolates and Terpenoides.
 18. Write the applications of proanthocyanidins, grape products and flaxseed oil.
 19. Explain in detail about the medical plant derived nutraceuticals.
 20. Discuss about the role of Nutraceuticals for the treatment of nephrological and liver disorders.
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D-1666

Sub. Code

36523

DISTANCE EDUCATION

**M.Sc. (Home Science, Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.**

Second Semester

FOOD SERVICE MANAGEMENT

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Why is the food industry important?
2. Mention the four largest food companies.
3. How important is organizational chart in a food service establishment?
4. How do you layout a kitchen floor plan?
5. Give the four categories of kitchen equipment?
6. Ventilation important in a kitchen. Justify.
7. Is it a legal requirement to have an extractor fan in kitchen?
8. What is food service organization?
9. How are non conventional sources useful to us?
10. What skills do you need for HR?

PART B — (5 × 5 = 25 marks)

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

11. (a) Write a note on the career opportunities in food processing?

Or

- (b) Kitchen is the heart of the home- Justify.

12. (a) Elucidate the six types of kitchen layouts?

Or

- (b) Given an account on steps of purchasing food?

13. (a) Why raw materials and raw material specifications are important in animal product processing? Explain.

Or

- (b) Brief on difference between conventional and non conventional sources of energy?

14. (a) How can we maintain hygiene and sanitation in food industry?

Or

- (b) Write short notes on diseases are caused by poor hygiene?

15. (a) Brief on five major kinds of employment laws?

Or

- (b) How do restaurants do accounting? Explain in shortly.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss in detail about scope of food industry.
 17. Write in detail about food service management in hospitals.
 18. Explain the vending and mobile food service system.
 19. Elaborate on personal hygiene.
 20. Briefly explain about the most important legal issues in human resources management?
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D-1667

Sub. Code

36531

DISTANCE EDUCATION

**M.Sc. (Home Science – Nutrition and Dietetics)
DEGREE EXAMINATION, MAY 2023.**

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 the questions.

1. Define transitional feeding.
2. What is meant by tube feeding?
3. How to assess patient's need?
4. Short notes on clear liquid tube feeding
5. Define : Chikungunya.
6. What is ulcerative colitis?
7. How to handle diet follows in pancreatic disorder?
8. Define : celiac disease.
9. How to dietary management in food allergy?
10. What is epilepsy?

PART B — (5 × 5 = 25 marks)

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

11. (a) Explain about burn and trauma tract and it follow up diets.

Or

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

12. (a) Write about contributory factors of renal disorders.

Or

- (b) Explain about difference between hypothyroidism and hyperthyroidism.

13. (a) Write short notes about diet follow up in glomerulonephritis.

Or

- (b) Describe about gall bladder disorder follow up diets.

14. (a) Write detail about indigestion and carcinoma of the stomach.

Or

- (b) Explain about enteral and parental feeding in hospital.

15. (a) Give an account on routine hospital diets.

Or

- (b) Explain briefly about tuberculosis with suitable diet.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write about gastric surgery and dumping syndrome with febrile diet.
 17. Write about modification diet in rheumatic fever.
 18. Explain about stroke and surgery diet during metabolic stress.
 19. Explain briefly about hypothyroidism and lactose intolerance with diet conditions.
 20. Write about the surgery and complication of Gastro intestinal Tract.
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D-1668

Sub. Code

36532

DISTANCE EDUCATION

**M.Sc. (Home Science –Nutrition and Dietetics)
DEGREE EXAMINATION, MAY 2023.**

Third Semester

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. List the role of immune system.
3. State the components of body weight.
4. Write about surgical management for obesity.
5. List the symptoms of Diabetes mellitus.
6. What is Diabetes Insipidus?
7. Define hypercholesterolemia.
8. Write about cardiac failure.
9. Write about the Classification of cancer.
10. Define Epilepsy.

PART B — (5 × 5 = 25 marks)

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

11. (a) Write about the biological effects of stress on various systems of brain.

Or

- (b) Discuss on the dietary guidelines for the management of stress.

12. (a) Illustrate the types of Obesity.

Or

- (b) Write in detail about lifestyle modification.

13. (a) Review on artificial sweeteners.

Or

- (b) Describe the Classification of Blood lipids.

14. (a) Discuss the classification and causes of Hypertension.

Or

- (b) Elaborate on environmental risk factors of cancer.

15. (a) Role of food in the prevention of cancer.

Or

- (b) Write about the dietary treatment in Dysphagia.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Illustrate the causes and complications of Obesity.
17. Elaborate on the dietary management of diabetes mellitus.

18. Describe the causes, symptoms and clinical findings of Atherosclerosis.
 19. Discuss on energy metabolism and abnormalities in metabolism in cancer condition.
 20. Write about the Nutritional management in diseases of nervous system.
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D-1669

Sub. Code

36533

DISTANCE EDUCATION

**M.Sc. (Home Science – Nutrition and Dietetics)
DEGREE EXAMINATION, MAY 2023.**

Third Semester

COMMUNITY NUTRITION

(CBCS – 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. What is Nutritional Anthropometry?
2. Define the term “community nutrition”.
3. What is undernutrition?
4. List any two strategies to overcome malnutrition in India.
5. What is the role of environmental sanitation in health?
6. Mention any two objectives of the nutrition intervention programme.
7. What is ICMR?
8. Define nutrition education.
9. What is the white revolution?
10. Mention any two problems in conducting the nutrition education programme.

SECTION B — (5 × 5 = 25 marks)

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

11. (a) How will you assess the nutritional status of an individual clinically?

Or

- (b) Enumerate the nutritional problems of the community.

12. (a) Explain the ecology of malnutrition.

Or

- (b) State the prevalence of common nutritional problems in India.

13. (a) Describe the role of Food technological advancement in the effective nutrition intervention programme.

Or

- (b) Explain the importance of hygiene and sanitation in maintaining good health.

14. (a) What is the role of UNICEF in nutrition programme?

Or

- (b) Explain the activities of the World Bank in the nutrition education programme.

15. (a) Describe the different revolutions in agriculture.

Or

- (b) What are the principles of nutrition education programme?

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the assessment of nutritional status of a person by the direct method.
 17. Enumerate the prevalence, etiology, symptoms and consequences of protein energy malnutrition.
 18. Discuss the role of national and international organisations in combating malnutrition for under 5 years children.
 19. Explain the functions of the government organisation for nutrition intervention programme.
 20. Write a brief note on the international organisation in combating malnutrition.
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D-1670

Sub. Code

36541

DISTANCE EDUCATION

M.Sc. (Home Science) DEGREE EXAMINATION, MAY 2023.

Fourth Semester

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. What is anthropometric measurements?
2. Mention role of dietary data of infants.
3. Differentiate between infants and childhood.
4. What is newborn sickness?
5. State condition of jaundice.
6. What is scurvy?
7. Define PEM.
8. What is hepatitis?
9. What is celiac disease?
10. Write a comment on autism.

PART B — (5 × 5 = 25 marks)

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

11. (a) Write an outline about biochemical parameters of infant's nutrition.

Or

- (b) Explain about nutritional and requirements of infants.

12. (a) Describe about nutritional assessment of infant lactation.

Or

- (b) Write a brief note on

- (i) cyanosis
(ii) respiratory distress.

13. (a) Explain briefly about abdominal distention.

Or

- (b) Comment on the clinical nutrition in infants.

14. (a) Distinguish the short term and long term consequences in infants.

Or

- (b) Label the nutritional management of malnutrition of rickets.

15. (a) Give a brief account on constipation and fat absorption test.

Or

- (b) Explain the attention deficit hyperactivity disorder.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Give an account on immunization schedule during pregnancy.
 17. Explain the characteristics, causes and complication of infant lactation.
 18. Give an detailed account on obesity of childhood.
 19. Discuss about the underweight infant's nutrition.
 20. Describe about the inflammatory bowel disease.
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D-1671

Sub. Code

36542

DISTANCE EDUCATION

M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.

Fourth Semester

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. Virion
2. Mycology
3. *Saccharomyces cerevisiae*
4. Lytic cycle
5. Food poisoning
6. Preservation
7. Rigor mortis
8. Food hazards
9. Food laws
10. AGMARK.

PART B — (5 × 5 = 25 marks)

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

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

Or

- (b) Add a short note on bacterial cell wall.

12. (a) Elucidate the causes of spoilage of canned foods.

Or

- (b) Highlighting the general problems in food plant construction.

13. (a) Criticizing the general principles of microbial spoilage.

Or

- (b) Defending the Bureau of Indian standards.

14. (a) Give an account on food additives.

Or

- (b) Brief notes on Microbiology of fish.

15. (a) Write short notes on personal hygiene.

Or

- (b) Comparing on packaging methods.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Outlining in detail about canned foods.
 17. Elaborate on food borne diseases.
 18. Measuring the development of Microbiology.
 19. Write in detail on spoilage and preservation of poultry.
 20. Implementing the objectives and function of food laws and standards.
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D-1672

Sub. Code

36543

DISTANCE EDUCATION

M.Sc. (Home Science Nutrition and Dietetics) DEGREE
EXAMINATION, MAY 2023.

Fourth Semester

FOOD BIOTECHNOLOGY AND BIOSTATISTICS

(CBCS 2018-19 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Describe the term “Fermentations”.
2. What do you mean by the term transgenesis?
3. Explain - SCP.
4. Write a short note on “Haemagglutinins”.
5. Name any four Food additives.
6. What is Sampling Bias?
7. How many are the main types of data collection?
8. What is Random Sampling?
9. Define — Correlation.
10. What is Central tendency?

PART B — (5 × 5 = 25 marks)

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

11. (a) Write a short note on Food Biotechnology.

Or

- (b) Explain the basic design of fermenter and its parts.

12. (a) Give an account on Carcinogens in Food.

Or

- (b) Write about Fermented foods in biotechnology.

13. (a) Describe about Variables and its types.

Or

- (b) How is data classified and how are they measured?

14. (a) Give an account on regression equations and predictions.

Or

- (b) Differentiate between the t-statistic and F-statistic.

15. (a) Explain about the Sources of Bias and methods of Reducing Bias.

Or

- (b) Give an account on Importance of distribution in Statistical Studies.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Give an account on Fermentation technology and its process.
 17. Elaborate the process and applications of enzyme synthesis in food industries.
 18. Give a brief account on Impact of biotechnology on the nutritional quality of foods.
 19. Explain in brief about Sampling and its techniques.
 20. Explain briefly on methods of securing accuracy in tabulation.
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