

D-7658

Sub. Code

36511

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, DECEMBER 2022

First Semester

Home Science — Nutrition and Dietetics

HUMAN PHYSIOLOGY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define multicellular organisms with example
2. What is the main function of ribosome?
3. What is the main function of the nucleolus?
4. What are characteristics of ligaments?
5. What are the three types of blood?
6. How can you get more oxygen to lungs?
7. What are the early signs of respiratory failure?
8. What is the largest excretory organ in our body?
9. Which gland is known as master gland?
10. What is nervous system and its function?

PART B — (5 × 5 = 25 marks)

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

11. (a) Draw the Structure and organization of Eukaryotic cells.

Or

- (b) What is the difference between rough ER and smooth ER?

12. (a) Write the main functions of the musculoskeletal system. Explain in brief.

Or

- (b) What are the characteristics of connective tissue?

13. (a) What is the most abundant protein in plasma? Explain in brief.

Or

- (b) Describe the process of blood coagulation

14. (a) Mention briefly about Blood pressure and factors affecting it.

Or

- (b) What is the most common cause of dyspnea? What is the best treatment for dyspnea?

15. (a) Write the Mechanism of secretion of digestive juices.

Or

- (b) Describe about Gland secretion syndrome

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write the Structure and functions of cartilage, muscle and joints.
 17. Describe the Anatomy and physiology of respiratory organs
 18. Outline the Etiology of male and female infertility
 19. Discuss about automatic nervous system
 20. Enumerate the mechanism of action of hormones.
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D-7659

Sub. Code

36512

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, DECEMBER 2022

First Semester

Home Science — Nutrition and Dietetics

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 autotrophic and heterotrophic nutrition?
2. Where do humans get their nitrogen?
3. What is the difference between malnutrition and malnourishment?
4. Which nutrients give us energy?
5. What is a good metabolic rate?
6. What is the role of immunization?
7. What are the disadvantages of breastfeeding?
8. What is food supplement and examples?

9. What men menopause called?
10. What are the examples of sports events?

PART B — (5 × 5 = 25 marks)

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

11. (a) Explain in brief about Balanced diets.
- Or
- (b) Point out the Importance of preconceptual nutrition.
12. (a) Discuss about Basal metabolic rate and active metabolic rate.
- Or
- (b) Outline the factors affecting maternal nutritional status.
13. (a) Discuss about measles and mumps vaccine
- Or
- (b) Write the Nutritional allowances for the infants.
14. (a) Point out the Food habits and nutrient intake of preschool children.
- Or
- (b) Mention in brief about the hormonal changes during menopause.
15. (a) Discuss about Integrated Child Development Services (ICDS) programme
- Or
- (b) Discuss about the Quantity of fluids and food taken by an athlete.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain in detail about Gestational diabetes and its food requirements.
 17. Difference between hunger, appetite and satiety
 18. Outline the Interventions to prevent malnutrition among preschoolers.
 19. Describe about supplementary feeding and food security programme
 20. Discuss about food product created and processed for consumption by astronauts in outer space.
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D-7660

Sub. Code

36513

DISTANCE EDUCATION

M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, DECEMBER 2022

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. Define parboiling.
2. Mention the role of hydrocolloids in food.
3. What is the meaning of shelf life?
4. Differentiate between cellulose and hemicelluloses.
5. Name some protein foods for infants and children.
6. What do you understand by pigments of vegetables and fruits?
7. Explain the role of seaweeds in food.
8. What is rancidity?
9. Define food additives with examples.
10. What are crystalline and non-crystalline candies?

PART B — (5 × 5 = 25 marks)

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

11. (a) Distinguish between caramelization and crystallization.

Or

- (b) Give a brief account of different methods of cooking.

12. (a) What is the nutritive value of breakfast, cereals, and fermented products?

Or

- (b) Explain flesh foods and their composition.

13. (a) Write short notes on the nutritive value of pulses and nuts.

Or

- (b) Write an account on post-harvest changes of fruits.

14. (a) Write short notes on the nutritive value of milk and milk products.

Or

- (b) Elucidate the role of fat and its change on heating.

15. (a) Elaborate on the nutritional significance of beverages.

Or

- (b) Write about GM foods.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of FIVE questions.

16. Discuss in detail the functional properties of food.
 17. Why is there a need for evaluation of food quality? Explain the quality attributes of food.
 18. Write a note on the nutritional importance of vegetables and fruits. Explain the effect of cooking pigment and nutrients.
 19. Describe the composition, physical and functional properties of milk products.
 20. Write a detailed account of food additives and food safety.
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D-7661

Sub. Code

36521

DISTANCE EDUCATION

**M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, DECEMBER 2022**

Second Semester

NUTRITIONAL BIOCHEMISTRY

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Which foods are simple carbohydrates?
2. Which food has most protein?
3. Define — Deamination
4. What are the primary bile acids?
5. Draw the structural components of Biomembrane.
6. Define- Essential fatty acids.
7. Write the sources of Riboflavin
8. Define - Enzyme kinetics
9. What are the nutritional importance of carbohydrates?
10. Write the body fluid components and compartments

PART B — (5 × 5 = 25 marks)

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

11. (a) Illustrate the Inborn error of carbohydrate metabolism.

Or

- (b) Write the chemical and physical properties of proteins.

12. (a) Distinguish between sterols and steroids.

Or

- (b) Explain the Mineral nutrients needed in the body.

13. (a) Write the Application of enzymes in clinical diagnosis.

Or

- (b) Write the structure and functions of DNA

14. (a) Interrelation between hormones and nutrients

Or

- (b) Write the Physiological role of different buffer system

15. (a) Discuss the Diseases of electrolyte balance

Or

- (b) Write the Major source of acid produced in the body.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Mechanism controlling fluid and electrolyte movement diffusion.
 17. Discuss about the 3 types of diabetes mellitus.
 18. Write the types, absorption and role of minerals in metabolism.
 19. Describe about the classification and mechanism of enzyme action.
 20. Elaborate the Inborn error of lipid metabolism.
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D-7662

Sub. Code

36522

DISTANCE EDUCATION

**M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, DECEMBER 2022**

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. Define prebiotics.
2. Differentiate between nutrient and non-nutrient.
3. What do you understand by dietary fibre?
4. Define haemagglutinins.
5. What is the role of minerals?
6. Define nutraceuticals.
7. List out the use of flaxseed oil.
8. What is the role of Kelp and spirulina?
9. List out some anti-aging compounds.
10. Mention the nutraceutical remedies for bronchitis

PART B — (5 × 5 = 25 marks)

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

11. (a) Write about the classification of functional foods.

Or

- (b) Write a few words on the quality assurance of probiotics

12. (a) Explain the chemistry and sources of phenolics?

Or

- (b) Brief Conjugated linoleic acids?

13. (a) Write about the sources of nutraceuticals?

Or

- (b) Explain the importance of dietary fibre and resistant starch

14. (a) Explain the functions of metalonin

Or

- (b) How medicinal plants derived nutraceutical help anti-aging?

15. (a) Write the nutraceutical remedies for Osteoporosis?

Or

- (b) Write about Garcina cambogia.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of FIVE questions.

16. Describe the chemistry, source and bioavailability of prebiotics. Mention its effects on human health and potential application in risk reduction of diseases.
 17. Give lights on the historical perspective and classification of nutraceuticals.
 18. Give a detailed account of terpenoids and phenolics.
 19. Explain the applied aspects of nutraceutical science with genetics and human physiology.
 20. Write an account on nutraceutical remedies for nephrological and liver disorders.
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D-7663

Sub. Code

36523

DISTANCE EDUCATION

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

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. List the factors that contributed to the increase in food service industry.
2. What does Off-premise catering mean?
3. List the components of a commercial kitchen.
4. What is material management?
5. What should be the essential constituents of a patient's diet?
6. List a few responsibilities of a manger.
7. Define operative budget.
8. Define the functional area of the ware washing in food service units.

9. What is HACCP?
10. What are the main elements of marketing for every enterprise?

PART B — (5 × 5 = 25 marks)

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

11. (a) Write a short note on the scope of food service industry.

Or

- (b) Describe the ways to stay within budgeted labour cost.

12. (a) Explain how TCS foods can be hazardous to health.

Or

- (b) Give a brief outline of an organizational chart for a food service team in hospitals.

13. (a) Describe the things to be considered while managing the food preparation area.

Or

- (b) Discuss the self-service styles.

14. (a) Describe the kitchen equipment maintenance standard procedures.

Or

- (b) Write a short note on training and coaching.

15. (a) Explain the marketing strategies in hospital food service.

Or

- (b) Briefly explain the cash book of accounting.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Analyse on-site and off-site catering management in detail.
17. Describe the important types of commercial food production equipment.
18. Enumerate the different categorizations of waiter service.
19. Examine the role, benefits and standards and regulations of FSSAI.
20. Elaborate the key components of accounting system.
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D-7664

Sub. Code

36531

DISTANCE EDUCATION

M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, DECEMBER 2022

Third Semester

CLINICAL AND THERAPEUTIC NUTRITION

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What services do dietitians provide?
2. What is the difference between a nutritionist and a dietitian?
3. Why is force feeding bad?
4. Which diet is best for weight loss?
5. What are febrile illness symptoms?
6. What causes gastrointestinal?
7. What happens if ulcerative colitis is left untreated?
8. Who is most likely to gallstones?
9. What causes nephrosis?
10. What is the first organ to fail?

PART B — (5 × 5 = 25 marks)

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

11. (a) How does nutrition relate to health?

Or

- (b) Write the Opportunities for nurses in nutrition education and jobs.

12. (a) Discuss about soft diet and full liquid diet

Or

- (b) Explain in detail about tuberculosis

13. (a) Illustrate about Crohn's disease

Or

- (b) Mention briefly about malaria.

14. (a) What triggers lactose intolerance? Explain in brief.

Or

- (b) How do you feel when you have hyperthyroidism?

15. (a) Elaborate about the dietary management and prevention during cardiovascular diseases.

Or

- (b) Describe about gastrointestinal tract surgery and complications.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Briefly explain the enteral and parental feeding in hospital
 17. Discuss briefly about celiac disease, tropical sprue and steatorrhea
 18. Describe about Irritable bowel disease and colon cancer.
 19. Illustrate about dietary regimen in cirrhosis, hepatitis and hepatic coma.
 20. Write the contributory factors and dietary modifications of nephrosclerosis and nephrolithiasis.
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D-7665

Sub. Code

36532

DISTANCE EDUCATION

**M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, DECEMBER 2022**

Third Semester

DIETETICS IN LIFE STYLE DISEASES

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Define 'psychosomatic disorder'.
2. Give any two demerits of artificial sweeteners
3. What is glycemic index?
4. List two reasons why high fibre foods should be given to obese people.
5. Mention the factors influence the hyperlipidaemia.
6. Give the principles of diet in the treatment of atherosclerosis.
7. List two foods to be avoided to a patient suffering from hypertension.
8. How would you describe the term 'epilepsy'

9. Give any two common cancer problems among men.
10. What is dysphagia?

PART B — (5 × 5 = 25 marks)

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

11. (a) Write short notes on stress.

Or

- (b) Explain the factors that contribute to lifestyle diseases.

12. (a) Illustrate the types of diabetes.

Or

- (b) How will you plan the diet menu for underweight?

13. (a) Explain the classification of lipids.

Or

- (b) How will you identify atherosclerosis with the symptoms?

14. (a) What are the points to be considered in planning a diet for hypertension?

Or

- (b) Write short notes on (i) immune therapy
(ii) Bone marrow transplantation

15. (a) Justify the nutritional requirements of Hyperkinetic behaviour syndrome.

Or

- (b) Summarize the merits and demerits of chemotherapy

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain obesity. Write any two important methods implemented for assessment of obesity
 17. Give a whole day menu for an adult obese woman suffering from type 2 diabetes mellitus.
 18. Enumerate the risk factors and dietary guidelines for the prevention and treatment of myocardial infarction
 19. Describe the classification of hypertension and explain the DASH diet.
 20. How cancer risk could be reduced? Justify the dietary modification of cancer.
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D-7666

Sub. Code

36533

DISTANCE EDUCATION

**M.Sc. (Home Science — Nutrition and Dietetics) DEGREE
EXAMINATION, DECEMBER 2022**

Third Semester

COMMUNITY NUTRITION

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are the components of “community nutrition”?
2. Mention the two forms of PEM
3. Define Nutritional Assessment.
4. What is diet survey?
5. List two main sources of error in taking anthropometric measurements
6. Bring out the importance of Vitamin A.
7. Expand: CHEB, CARE
8. Write the objectives of ICMR.
9. What is the main goal of prophylaxis program?
10. Define Yellow revolution

PART B — (5 × 5 = 25 marks)

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

11. (a) Write the concept of community nutrition

Or

- (b) How do you prevent PEM?

12. (a) Bring out the importance of assessment of nutritional status.

Or

- (b) How will you correct an Iodine deficiency disorder?

13. (a) Define 'Nutrition Surveillance'. Write in short about objectives and importance of nutritional surveillance.

Or

- (b) What are the common nutritional problems in India?

14. (a) Discuss the role of FAO and WHO in promoting nutrition education.

Or

- (b) State the main aim and Functions of ICMR and UNICEF

15. (a) Write short notes on (i) Blue revolution and (ii) White revolution

Or

- (b) How will you prevent the food from spoilage?

PART C — (3 × 10 = 30 marks)

Answer any **THREE** questions.

16. Describe PEM and give any four preventive measures for PEM.
 17. Explain the various types of dietary surveys with merits and demerits.
 18. Discuss the need for an integrated approach to overcome the problem of malnutrition
 19. How will you plan, execute and evaluate nutrition education programmes for adolescent girls in a rural community?
 20. If you meet the post-harvest losses of fruits and vegetables, what are the strategies you use to reduce them?
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D-7667

Sub. Code

36541

DISTANCE EDUCATION

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

Fourth Semester

PEDIATRIC NUTRITION

(CBCS 2018 – 2019 Academic Year Onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define Infancy.
2. What are Biochemical parameter of dietary data?
3. What is Premature baby?
4. Define Jaundice.
5. List out the newborn sickness.
6. Define Anaemia.
7. What are the types of Hepatitis?
8. Define Epilepsy.
9. List out the measures of infants growth.
10. Explain the fat adsorption test.

PART B — (5 × 5 = 25 marks)

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

11. (a) Write a short note on clinical and dietary data of infants.

Or

- (b) What is difference between infancy and childhood?

12. (a) Write an brief account on nutritional management of low birth weight babies.

Or

- (b) What is nutrition? Explain the nutritional assessment of infant's lactation.

13. (a) Discuss about the identification of newborn sickness.

Or

- (b) Explain briefly about abdominal distention.

14. (a) Give a short note on obesity of childhood.

Or

- (b) Describe the nutritional management of TB.

15. (a) Give a brief account on lactose tolerance.

Or

- (b) Explain the disorder of attention deficit hyperactivity.

PART C — (3 × 10 = 30 marks)

Answer any THREE out of five questions.

16. Give an account on immunization schedule during pregnancy.
 17. Explain the detailed account on the nutritional assessment of infant's lactation.
 18. Discuss about the nutritional management for children with hepatitis diseases.
 19. Explain in detail about the celiac disease and inflammatory bowel disease.
 20. Define AIDS. Explain the nutritional management for children with AIDS.
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D-7668

Sub. Code

36542

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, DECEMBER 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. Biogenesis
2. Brewer's yeast
3. Moulds
4. Food spoilage
5. Asepsis
6. Rigor mortis
7. Food intoxication
8. Food sanitation
9. Food hazards
10. AGMARK

PART B — (5 × 5 = 25 marks)

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

11. (a) Give an account of cultural characteristics of microorganisms.

Or

- (b) Describe industrial importance of yeast.

12. (a) Briefly explain about viruses in foods.

Or

- (b) Explain the contamination of foods from external source.

13. (a) Explain in detail about spoilage of cereals.

Or

- (b) Elucidate the causes of spoilage of canned foods.

14. (a) Explain the bacterial food borne illness.

Or

- (b) What are the general problems in food plant construction?

15. (a) Bring out the nutrition labeling and nutrition claims.

Or

- (b) Explain the Bureau of Indian standards.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Elaborate the development of Microbiology.
17. Discuss in detail about microbiology of fruits and vegetables.

18. Write in detail on spoilage and preservation of poultry.
 19. Explain in detail about food borne poisoning.
 20. Explain the objectives and function of food laws and standards.
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D-7669

Sub. Code

36543

DISTANCE EDUCATION

M.Sc. DEGREE EXAMINATION, DECEMBER 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. What is the function of a bioreactor?
2. What are the side effects of antibiotics?
3. What are the diseases caused by bacteria?
4. What are the products of microbial fermentation?
5. What are the importance of food additives?
6. What is data collection?
7. Define – Discrete data.
8. What are the types of surveys?
9. What are the objectives of central tendency?
10. How do you find the percentile rank?

PART B — (5 × 5 = 25 marks)

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

11. (a) Outline the process of soluble enzymes in food industry.

Or

- (b) Describe about Continuous fermentation.

12. (a) Write the types and applications of Biochips.

Or

- (b) List out the sources and toxicity of lead and mercury.

13. (a) What are the ingredients in cheese making? Explain in brief.

Or

- (b) Describe about gossypols and lathyrogens.

14. (a) Explain in detail about representative sample.

Or

- (b) Write the methods of collection of secondary data.

15. (a) Discuss about discrete and continuous variables.

Or

- (b) What are the types of Correlation? Explain in brief.

PART C — ($3 \times 10 = 30$ marks)

Answer any **THREE** out of five questions.

16. Describe the methods used to produce microbial proteins.
 17. Outline the Synthesis, Process and applications of isomerase and invertase in food industries.
 18. Explain in detail about Spirulina and yeast biomass production.
 19. Discuss about Tabulation scheme, preparation of tabular forms and methods of securing accuracy in tabulation.
 20. Write the importance of normal and binominal distributions in statistical studies.
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