

C-8338

Sub. Code

96323

B.Sc. DEGREE EXAMINATION, APRIL 2023

Second Semester

Nutrition and Dietetics

PRINCIPLES OF NUTRITION

(2016 onwards)

Duration: 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List the uses of RDA.
2. Define Dietary fibre.
3. Mention the sources of protein.
4. State the requirement of Lipids.
5. Write about the units of Energy.
6. Mention the determinations of BMR.
7. List the sources of Magnesium.
8. Mention the deficiency of copper.
9. State the deficiencies of Vitamin K.
10. List the sources of Vitamin D.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write about the Nutritional classification of carbohydrates.

Or

- (b) State the methods of regulating blood sugar levels.

12. (a) Elaborate the functions of protein.

Or

- (b) Explain the classification of Lipids.

13. (a) Write about Physiological energy value of foods.

Or

- (b) Review on sources of BMR.

14. (a) What are the general functions of Minerals?

Or

- (b) Write about the effect of imbalance of sodium and potassium.

15. (a) Explain the general sources and functions of Vitamin E.

Or

- (b) Elaborate of the sources, functions and deficiencies of Vitamin Folic acid.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the role of fibre in preventing diseases.

Or

- (b) Elaborate the functions of Lipids and essential fatty acids.

17. (a) Illustrate the determination of energy value of foods by direct calorimetry.

Or

- (b) Write about the sources, requirement and deficiency of Calcium.

18. (a) Explain about the sources, functions and deficiency of Iodine.

Or

- (b) Write about the sources, functions and deficiency of Vitamin C.

C-8339

Sub. Code

96324

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Second Semester

Nutrition and Dietetics

NUTRITION FOR WOMEN

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Nutrition.
2. How will you define a balanced diet?
3. Define gestational diabetes mellitus.
4. List the significance of iron during pregnancy
5. List any four lactagogues foods
6. Write any two advantages of breastfeeding for the mother
7. Define immunisation.
8. What do you mean by weaning foods?
9. What is a growth spurt?
10. Define Binge Eating Disorder

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the functions of fat-soluble vitamins.

Or

- (b) Briefly explain about basic five food groups.

12. (a) Plan and justify a day's menu for a pregnant woman.

Or

- (b) What is the nutritional requirement of pregnancy?

13. (a) What is the role of hormones during lactation?

Or

- (b) Describe the composition of breast milk.

14. (a) What are the advantages of breastfeeding?

Or

- (b) Explain briefly about low-cost supplementary foods in India.

15. (a) Describe the dietary guideline for adolescence.

Or

- (b) State the nutritional problems of adolescence.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the salient features of malnutrition.

Or

- (b) Explain in detail on physiological changes in pregnancy.

17. (a) Write a brief account on complications of pregnancy

Or

- (b) Write a short note on the nutritional requirement during lactation.

18. (a) Briefly explain about nutritional requirement of infancy.

Or

- (b) Describe the growth pattern of adolescence.

C-8340

Sub. Code

96325

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Second Semester

Nutrition and Dietetics

NUTRITION THROUGH LIFE CYCLE

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Expand RDA.
2. List any two principles of menu planning.
3. Name the first secretion from the breast after delivery.
4. What are lactagogues?
5. Define LBW?
6. What is catch-up growth during preschool years?
7. List the feeding problems of school children.
8. What are the consequences of malnutrition in early marriage?
9. What is the requirement of protein and iron for the reference men and women?
10. What do you mean by gerontology?

Part B

(5 × 5 = 25)

Answer **all** the questions.

11. (a) What are the factors which influence the nutritional requirements of all age groups?

Or

- (b) Explain briefly the different stages of pregnancy.

12. (a) What is the role of the hormone in lactation?

Or

- (b) Distinguish between cow's milk and breast milk.

13. (a) What are the different developmental tasks of infancy?

Or

- (b) Briefly explain the various low-cost supplementary foods available in India.

14. (a) Plan one healthy packed lunch for a school going child and justify each item.

Or

- (b) What are the secondary sexual characteristics developed during adolescence?

15. (a) What are the common nutrition and health issues of adulthood?

Or

- (b) Define geriatrics? And explain the changes in body composition during old age.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the complications in pregnancy.

Or

- (b) What are the points to be considered in planning a menu for a pregnant woman and plan a whole day's menu for early gestation?

17. (a) Enumerate the factors which influence lactation failure.

Or

- (b) State the different nutrition-related problems of preschool children.

18. (a) Explain the different food habits of adolescence.

Or

- (b) Explain in detail on the physiological and psychological changes that occur during old age.

C-8341

Sub. Code

96342

B.Sc. DEGREE EXAMINATION, APRIL 2023

Fourth Semester

Nutrition and Dietetics

DIETETICS – I

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is dietetics?
2. Mention role of high protein.
3. Define gastrostomy.
4. State condition of anaemia.
5. What is gastritis?
6. Explain haemorrhoids.
7. What is cirrhosis?
8. Define phenylketonuria.
9. Write a comment on autism.
10. What is Down's syndrome?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write an outline about goals of diet therapy.

Or

- (b) Explain about routine hospital diets.

12. (a) Write a brief note on (i) TPN (ii) PEM.

Or

- (b) Describe about jejunostomy.

13. (a) Discuss about diet planning for overweight and underweight people.

Or

- (b) Explain the pathogenesis of gastrointestinal tract disease.

14. (a) Distinguish the cirrhosis and hepatic coma.

Or

- (b) Label the nutritional care for patients with inborn.

15. (a) Give a brief account on overview of the disability.

Or

- (b) Explain the attention deficit hyperactivity disorder.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Classify therapeutic diet. Discuss the principles of diet therapy.

Or

- (b) Explain the diet planning and preventive measures for iron deficiency anaemia.

17. (a) Give an account on pathogenesis, causes, and dietary planning for Gastritis and peptic ulcer.

Or

- (b) Discuss about the pathogenesis, causes, symptoms and dietary planning for liver diseases.

18. (a) Describe about the prognosis, symptoms, dietary management of phenylketonuria and galactosoemia

Or

- (b) Explain in detail about nutritional care for the children with special needs.

C-8342

Sub. Code

96343

B.Sc. DEGREE EXAMINATION, APRIL 2023

Fourth Semester

Nutrition and Dietetics

FOOD SERVICE MANAGEMENT – I

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Describe “food service”.
2. What are ANP and MDM?
3. What are the qualities needed for a Good leader?
4. Define “Food Service Management”.
5. What document mean by personnel management?
6. Explain the terms of ‘Motivation’.
7. Mention any two advantages of fuel economy.
8. What are the responsibilities of a food services manager?
9. Define “sanitation”.
10. How will ‘you dispose the food waste?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the types of catering services.

Or

- (b) Write a short note on “feeding programme”.

12. (a) Enumerate the principles for effective leadership.

Or

- (b) Enumerate the types of food service organization.

13. (a) Why it is important to maintain good human relations?

Or

- (b) Describe the importance of Bookkeeping and how will you maintain accounts book?

14. (a) Explain the different types of fuels used in cookery.

Or

- (b) As food service manager, how will you educate your employee for safety procedures?

15. (a) Explain the importance of personal hygiene.

Or

- (b) How do you save and protect leftover food?

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the profit oriented food service establishment.

Or

- (b) Elaborate the objectives and needs of school meal programme.

17. (a) Explain the need and importance of Training Programmes for employees in Food Service Sectors.

Or

- (b) Explain the Labour laws governing food service establishment.

18. (a) Discuss the importance of safety procedure in food service establishment.

Or

- (b) Write about the Food Safety awareness programmes to food handlers and consumers.

C-8343

Sub. Code

96344

B.Sc. DEGREE EXAMINATION, APRIL 2023

Fourth Semester

Nutrition and Dietetics

BAKERY AND CONFECTIONARY

(2016 onwards)

Duration: 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Draw the structure of wheat kernel.
2. What is the difference between enriched and unenriched flour?
3. Mention the role of milk in baking.
4. Name the chemical leavening agents used in baking.
5. Define “major equipment”.
6. Describe “oven”.
7. What are the ingredients needed in bread making?
8. List two common mistakes of cake making.
9. Define “cocoa”.
10. Name any four major components of Toffee.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write about the structure and composition of wheat grain.

Or

- (b) Describe the classification of baked foods.

12. (a) Explain the role of chemical leavening agent in baking.

Or

- (b) How do you select the packaging materials?

13. (a) Distinguish the types of oven.

Or

- (b) Explain the types of minor equipment.

14. (a) Distinguish the types of icing.

Or

- (b) Describe the methods of cookie making.

15. (a) How will you make Fruit drops?

Or

- (b) How will you plan to prepare hard boiled candies?

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss the factors which influence the development of the food service establishment.

Or

- (b) Explain the methods of making batters and dough.
17. (a) How do you maintain the major and minor equipment?

Or

- (b) Explain the methods of bread making.
18. (a) Explain the steps involved in the process of raw materials.

Or

- (b) Explain the factors influencing the quality of the confectionary product.
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C-8344

Sub. Code

96346

B.Sc. DEGREE EXAMINATION, APRIL 2023

Fourth Semester

Nutrition and Dietetics

**FOOD PRODUCT DEVELOPMENT AND MARKETING
STRATEGY**

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define food product development.
2. Mention about religious variations in development of dietary pattern.
3. Define Standardization.
4. What is shelf life?
5. Define Infancy.
6. State the uses of score card.
7. Define marketing.
8. List the steps involved in market promotion.
9. State the condition for sale.
10. Define sanitation.

Part B

(5 × 5 = 25)

Answer **all** questions

11. (a) Basic principles of food product development.

Or

- (b) Elaborate the importance of research and development departments in food production industry.

12. (a) Write about the Steps involve in product development.

Or

- (b) How to calculate nutritive value of foods.

13. (a) Write the steps involved in formulation of new food products for infants.

Or

- (b) Explain the importance of Selection and training of judges for food analysis.

14. (a) Write about the approaches of study marketing.

Or

- (b) Elaborate on market structure.

15. (a) Explain the licensing process involved in product development.

Or

- (b) Illustrate the conditions for distribution of products.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Illustrate the cultural approach to the development of dietary pattern of various food groups.

Or

- (b) Explain the standardization methods involved in product development.

17. (a) Elaborate the shelf life and storage stability evaluation procedure of developed food Products.

Or

- (b) Write the steps involved in formulation of new food products for pregnant and lactating women.

18. (a) Explain the role of Government in promoting agricultural marketing.

Or

- (b) How effectively storage and sanitation carried out in food product development.
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C-8345

Sub. Code

96353

B.Sc. DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Nutrition and Dietetics

COMMUNITY NUTRITION

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. How nutrition is related to national development?
2. Write the different types of malnutrition.
3. What is the impact of malnutrition during pregnancy?
4. Explain IMR.
5. List out the importance of environment sanitation?
6. What are the different ways to overcome malnutrition?
7. Define : CMNMP.
8. Define: Iron deficiency syndrome.
9. What factors influence national nutrition policy?
10. Define: non-communicable diseases.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) List out the main consequences of malnutrition.

Or

- (b) Mention briefly the components of a storm drain system.

12. (a) Explain the different factors that influence our dietary patterns.

Or

- (b) Write the important methods of food fortification.

13. (a) Illustrate the components of nutrition education.

Or

- (b) How can we prevent and control malnutrition and micronutrient deficiencies?

14. (a) What are the factors affecting food and nutrition?

Or

- (b) Illustrate the scope of nutrition education.

15. (a) Write the use of computers to impart nutrition education.

Or

- (b) Mention briefly about Biological value of proteins.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe in detail about the vitamin A deficiency diseases.

Or

- (b) Illustrate about the three methods for the disposal of solid waste.

17. (a) Explain in detail about functions and biochemical role of Vitamins A.

Or

- (b) What are two classifications of protein-energy malnutrition?

18. (a) Mention briefly about the features of national nutrition policy.

Or

- (b) Summarize about the National Iodine Deficiency Disorders Control Programme (NIDDCP).

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Sub. Code

96354

B.Sc. DEGREE EXAMINATION, APRIL 2023

Fifth Semester

Nutrition and Dietetics

TRADITIONAL HERBS IN FOOD SCIENCE

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are herbal nutraceuticals?
2. What is pharmacognosy?
3. How will you identify an herb?
4. What do you mean by cytological study in herbal medicine?
5. Define the extraction techniques of herbal plants.
6. What are the different extraction techniques involved in the detection of alkaloids?
7. What is a stability test?
8. What are the good agricultural practices for the cultivation of herbal drugs?
9. What are the roles of herbs as flavouring agents?
10. What is the most healing plant?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the history of herbal medicine.

Or

- (b) What are herbal nutraceuticals?

12. (a) What are the exomorphic characteristics of herbal plants?

Or

- (b) Describe the palynological evidence of medicinal herbs.

13. (a) Describe the extraction method of Glycosides.

Or

- (b) Explain the phytochemical screening by colour detection method.

14. (a) Explain the reproductive method of cultivation of herbs.

Or

- (b) What are the points to be considered in preserving the herbs?

15. (a) What is Kombucha? How is it produced?

Or

- (b) Explain the process of herbal extraction.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) What are the different forms of herbal medicine?

Or

- (b) Explain the cytological study of medicinal herbs.

17. (a) Write the principle, procedure and applications of TLC.

Or

- (b) Describe collection, stabilization and drying of herbs.

18. (a) How are herbs and grains used in the brewing industry?

Or

- (b) Write the role of spices as herbal medicine.

C-8347

Sub. Code

96361

B.Sc. DEGREE EXAMINATION, APRIL 2023

Sixth Semester

Nutrition and Dietetics

BIOPROCESS TECHNOLOGY

(2016 onwards)

Duration: 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by bioprocess?
2. Define - Cell disruption.
3. What are the steps of food processing?
4. How is cell therapy done?
5. Which gas is produced in fermentation?
6. Define bioenergetics.
7. Why sterilization is important in fermentation?
8. What are the main ingredients in milk?
9. What enzymes are used in fermentation?
10. Define yield coefficient.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain about the types of bioprocess.

Or

(b) List out the applications of fermentation.

12. (a) What are the advantages and disadvantages of aerobic fermentation?

Or

(b) Explain in detail about Plug flow reactor.

13. (a) Describe about Bioconversion.

Or

(b) Outline the different Types of Sterilization Process.

14. (a) Mention briefly about Enzyme kinetics.

Or

(b) Write the classification of enzymes.

15. (a) Discuss about the Types of dairy product.

Or

(b) Mention in brief about Metabolic Stoichiometric Energetics.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Illustrate in detail about upstream and downstream units involved in bioprocess.

Or

- (b) Explain in detail about the Structure and processes of Bioreactor.

17. (a) What are the general requirements of a fermentation process?

Or

- (b) Explain in detail about single cell protein production.

18. (a) Elaborate about production of fermented beverages.

Or

- (b) Discuss about vinegar production.

C-8348

Sub. Code

96362

B.Sc. DEGREE EXAMINATION, APRIL 2023

Sixth Semester

Nutrition and Dietetics

FOOD SAFETY, SECURITY AND ETHICS

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define- Food safety.
2. What do you mean optimal temperature?
3. How can we prevent food hazards?
4. Why is it important to identify food safety hazards?
5. What are food quality standards?
6. Mention the objective of the Food Safety standards.
7. Importance objectives of Food Safety and Standard Act 2006.
8. Expand of FSASAI and ISI.
9. Define HACCP.
10. Why is food adulterated?

Part B

(5 × 5 = 25)

Answer **all** questions

11. (a) Describe the nature of food items.

Or

(b) Write a note on the importance of food safety and hygiene.

12. (a) Brief out the characteristics of food hazards.

Or

(b) Outline on adverse health effects of food hazards.

13. (a) Give an account on actual and perceived food safety risks.

Or

(b) Explain the assessment of food safety risks.

14. (a) Write a note on food safety standards.

Or

(b) Demonstrate the factors to be considered while preparing food.

15. (a) Summarize the importance of food adulteration.

Or

(b) Highlight the importance of ethics in food preparation.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about importance of optimal temperature control for food safety.

Or

- (b) Discuss in detail about food hygiene.

17. (a) Write in detail about types of food hazards.

Or

- (b) Construct in detail about objectives and functions of FSASAI.

18. (a) Interpret in detail on food safety standards.

Or

- (b) Explain in detail on objectives and functions of food ethics.
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C-8349

Sub. Code

96363

B.Sc. DEGREE EXAMINATION, APRIL 2023

Sixth Semester

Nutrition and Dietetics

GENDER STUDIES

(2016 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define – Gender Studies.
2. Who introduced concept of gender?
3. Mention the initiatives steps for female development.
4. What are women's empowerment programs?
5. Name the types of discrimination in gender studies.
6. List out the two examples of gender inequality.
7. What can we do for women development?
8. Find the women's role in society.
9. List out the feminist movement in India.
10. What did the women's movement accomplish?

Part B

(5 × 5 = 25)

Answer **all** questions

11. (a) Write a short note on theories of gender development.

Or

- (b) Highlight the importance of Psychoanalytic theory.

12. (a) What can we do to promote gender equality in detail?

Or

- (b) Opinion on national policy for Women empowerment.

13. (a) Identify the importance of gender equality.

Or

- (b) Elucidate the challenges of gender equality.

14. (a) Examine the challenges faced by women's today.

Or

- (b) Interpret the importance of women's political empowerment.

15. (a) Explain the current women's issues in detail.

Or

- (b) Theme on feminism in India.

Part C

(3 × 10 = 30)

Answer **all** questions

16. (a) Explain in detail about concept of gender studies.

Or

(b) Importance about history and scope of gender studies.

17. (a) Discuss in detail on women's empowerment programs.

Or

(b) Construct in detail on gender discrimination in society.

18. (a) Propose on importance women's liberation movement.

Or

(b) What are the six approaches of gender and development in detail?
