

C-0332

Sub. Code

96311A/96411A

B.Sc. (Nutrition and Dietetics) DEGREE

EXAMINATION, APRIL 2019

First Semester

PART - I ARABIC – BASIC GRAMMAR

(Common for B.Sc. (Comp. Sci.)/B.Sc. (Nutri. Diet.))

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is Tanween? Give examples.
2. What are long vowels? Give examples.
3. Write any two examples for **اسم**.
4. Write any two examples for **الصفة والموصوف**.
5. Define **المبتدأ والخبر**
6. Give any two examples for **المضاف والمضاف إليه**.

7. Make sentences of your own by using each one of the following prepositions : **على & في**
8. Write any two past tense verbs with their English equivalents.
9. What are the three moods of **الفعل المضارع**?
10. Give any two examples for **ليس**.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Define "Doubled consonants" with examples.

Or

- (b) What is definite article? give examples.

12. (a) Define "Masculine (**مذكر**)" with examples.

Or

- (b) Define "Dual (**المثنى**)" with examples.

13. (a) Define "Demonstrative Pronouns (أسماء الإشارة)" with examples.

Or

- (b) Make sentences of your own by using each one of the following interrogatives :

- (i) ما (ii) من
(iii) هل (iv) متى
(v) كم

14. (a) Define "The past tense (الفعل الماضي)" with suitable examples.

Or

- (b) Define "The imperfect tense (الفعل المضارع)" with examples.

15. (a) Define "Transitive verb (الفعل المتعدي)" with examples.

Or

- (b) Define "Active voice (المعلوم)" with examples.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Parts of speech.

Or

(b) Vowels.

17. (a) Personal pronouns.

Or

(b) The Verbal sentence.

18. (a) The Numbers.

Or

(b) Kana and its categories (كان وأخواتها).

C-0333

Sub. Code

96313

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Semester

Nutrition and Dietetics

FOOD SCIENCE

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Body building
2. Appetite
3. Parboiling
4. Fortification
5. Nutrient loss
6. Ethylene
7. Skim milk
8. Red meat
9. Smoking point
10. Condiments.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain malnutrition and under nutrition.

Or

- (b) What are the merits and demerits of steam cooking?

12. (a) What is the need for fortification of foods?

Or

- (b) Explain the advantages of germinated pulses.

13. (a) Write a note on colour code type of plant pigments.

Or

- (b) Explain how hormone increases the sugar content of ripened fruits.

14. (a) Write about different types of Milk.

Or

- (b) Write short notes on the nutritional composition of meat and fish.

15. (a) Differentiate between winterization and hydrogenation.

Or

- (b) Explain caramel preparation.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write in detail about body building foods, protective and energy giving foods.

Or

- (b) Write in detail the steps in malting process.

17. (a) Explain in detail the effect of heating on nutritional loss and pigments of vegetables.

Or

- (b) Write an account on composition and nutritive value of fish anti chicken.

18. (a) Describe hydrogenation and winterization process in oil refineries.

Or

- (b) Write notes on ten spices types and its medicinal applications.
-

C-0334

Sub. Code

96314

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Semester

Nutrition and Dietetics

FOOD MICROBIOLOGY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Microscopy
2. SCP
3. Continuous culture
4. Lag phase
5. Contamination
6. Canned foods
7. Non-perishable foods
8. Sucrose
9. Acetobacter
10. Lactobacillus.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Write short notes on structure of light microscope.

Or

- (b) Briefly explain the scope of beneficial bacteria and algae.

12. (a) Explain growth curve.

Or

- (b) Write about the nutritional requirement of bacteria.

13. (a) Give an account on canned foods.

Or

- (b) Write about the spoilage organisms of fruits.

14. (a) Write a short notes on spoilage and preservation of honey.

Or

- (b) Briefly explain the microbiological profile of sugarcane.

15. (a) Write an account on biochemical changes due to microorganism during curd making.

Or

- (b) Write short notes on microbial bio mass.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the morphological structure of yeast, type of reproduction and its industrial application beneficial algae and yeast.

Or

- (b) Explain how the extrinsic factors affecting microbial growth.
17. (a) Write about spoilage organisms of milk products and its preservation methods.

Or

- (b) Write about spoilage and preservation of cereals products.
18. (a) Explain how the beneficial microbes helps to develop value added products.

Or

- (b) Write in detail about any five spoilage organisms and home they affect the quality of foods.
-

C-0335

Sub. Code

96315

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Semester

Nutrition and Dietetics

FOOD CHEMISTRY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Moisture -content.
2. Emulsions.
3. Retrogradation
4. Milk sugar.
5. Fermentation.
6. Gluten,
7. Rancidity.
8. Triglycerides.
9. Pectin.
10. Volatile compounds.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write about determination of moisture content in food.

Or

- (b) Give an account on emulsifying agents.

12. (a) Briefly explain the effect of surface active agents on starch.

Or

- (b) What is Non enzymatic browning reaction?

13. (a) Write about properties of egg protein.

Or

- (b) Explain the effect of soaking on pulse proteins.

14. (a) Explain the decomposition of triglycerides.

Or

- (b) Give an -account on shortening power of fats.

15. (a) List out the volatile compounds from cooked vegetables.

Or

- (b) Discuss the principles of spices and condiments.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about gels foam, colloid and emulsion.

Or

- (b) What are the differences between a true solution, colloidal solution and suspension?

17. (a) Explain in detail about Maillard and Caramelization of fruits and vegetables.

Or

- (b) Describe the effect of fermentation and germination on pulse proteins.

18. (a) Discuss in detail about the factors affecting fat absorption in foods.

Or

- (b) Explain water soluble and fat soluble plant pigments.
-

C-0336

Sub. Code

96316

B.Sc. DEGREE EXAMINATION, APRIL 2019

First Semester

Nutrition and Dietetics

FUNDAMENTALS OF BIOCHEMISTRY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Non-covalent interaction.
2. Define Bases.
3. Oligosaccharides.
4. Lipoproteins.
5. Peptide bonds.
6. Define proteins.
7. Components of RNA.
8. Replication.
9. Enzymes.
10. Active sites.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Briefly describe Biomolecules.

Or

(b) Explain pH and buffers.

12. (a) Functions and properties of Carbohydrates.

Or

(b) Explain fatty acids and its function.

13. (a) Describe the structure of amino acids.

Or

(b) Explain the properties of proteins.

14. (a) Differentiate nucleotides and nucleosides.

Or

(b) Describe double helical structure of DNA.

15. (a) Write a note on characteristics of enzymes.

Or

(b) Explain the factors that affect enzymes activity.

Part C**(3 × 10 = 30)**Answer **all** questions.

16. (a) Discuss in detail about the properties of water.

Or

(b) Give a detailed account of acid bases.

17. (a) Explain in detail about lipids.

Or

(b) Explain in detail about the classification and functions of protein.

18. (a) Discuss in detail about the basic structure and functions of DNA and RNA.

Or

(b) Derive and discuss Lineweaver-Burk equation.

C-0337

Sub. Code

96321A/96421A

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Semester

Part I – ARABIC – PROSE

(Common for B.Sc. (Comp. Sci.)/B.Sc. (Nutri. Diet.))

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer all questions.

1. What is meant by **سوره مكية** (Makkan suras)?

2. Write the English equivalents of the following :

ذكر (b)

الإيمان (a)

إخوة (d)

أثنى (c)

3. Write the Arabic equivalents for the following :

(a) Lord

(b) World

(c) Guidance

(d) Mercy

4. What is the singular of **آيات**?

5. What is the opposite of الباطل?
6. Write the meaning of إِنَّ اللَّهَ عِنْدَهُ عِلْمُ السَّاعَةِ.
7. What is meant by إيتاء الزكاة?
8. Write the meaning of the following "إِنَّ الْحَالَ بَيْنَ".
9. What is the plural of رجل?
10. What is the meaning of غريب?

Part B

(5 × 5 = 25)

Answer all questions.

Explain the following with reference to the context :

11. (a) إِنَّمَا الْمُؤْمِنُونَ إِخْوَةٌ فَأَصْلِحُوا بَيْنَ أَخَوَيْكُمْ ۚ وَاتَّقُوا اللَّهَ لَعَلَّكُمْ تُرْحَمُونَ.

Or

(b) يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَقَدَّمُوا بَيْنَ يَدَيْ اللَّهِ وَرَسُولِهِ ۚ وَاتَّقُوا اللَّهَ ۚ إِنَّ اللَّهَ سَمِيعٌ عَلِيمٌ.

12. (a) أُوَلِّكَ عَلَىٰ هُدًى مِّن رَّبِّهِمْ ۖ وَأُوَلِّكَ
هُمُ الْمُفْلِحُونَ.

Or

(b) وَلَقَدْ آتَيْنَا لُقْمَانَ الْحِكْمَةَ أَنِ اشْكُرْ لِلَّهِ ۚ
وَمَن يَشْكُرْ فَإِنَّمَا يَشْكُرُ لِنَفْسِهِ ۖ صَلِّ
وَمَن كَفَرَ فَإِنَّ اللَّهَ غَنِيٌّ حَمِيدٌ.

13. (a) لِلَّهِ مَا فِي السَّمَاوَاتِ وَالْأَرْضِ ۚ إِنَّ اللَّهَ
هُوَ الْغَنِيُّ الْحَمِيدُ.

Or

(b) مَا خَلَقُكُمْ وَلَا بِعُكُكُمْ إِلَّا كَنَفْسٍ
وَاحِدَةٍ ۚ إِنَّ اللَّهَ سَمِيعٌ بَصِيرٌ.

14. (a) قَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ :
”لَا يُؤْمِنُ أَحَدُكُمْ حَتَّىٰ يُحِبَّ لِأَخِيهِ
مَا يُحِبُّ لِنَفْسِهِ“.

Or

عَنْ أَبِي هُرَيْرَةَ رَضِيَ اللَّهُ عَنْهُ أَنَّ رَجُلًا (b)

قَالَ لِلنَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ

أَوْ صِنِّي. قَالَ : لَا تَغْضَبْ، فَرَدَّدَ مَرَارًا،

قَالَ : لَا تَغْضَبْ“.

قَالَ رَسُولُ اللَّهِ (صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ) (a) .15

”ازْهَدْ فِي الدُّنْيَا يُحِبُّكَ اللَّهُ، وَازْهَدْ فِيمَا

عِنْدَ النَّاسِ يُحِبُّكَ النَّاسُ.

Or

عَنْ أَبِي سَعْدِ بْنِ مَالِكِ بْنِ سِنَانِ الْخُدْرِيِّ (b)

رَضِيَ اللَّهُ عَنْهُ أَنَّ رَسُولَ اللَّهِ صَلَّى اللَّهُ

عَلَيْهِ وَسَلَّمَ قَالَ : ”لَا ضَرَرَ وَلَا ضِرَارَ“.

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

Translate the following and explain in detail :

16. (a) يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَرْفَعُوا أَصْوَاتَكُمْ

فَوْقَ صَوْتِ النَّبِيِّ وَلَا تَجْهَرُوا لَهُ بِالْقَوْلِ

كَجَهْرِ بَعْضِكُمْ لِبَعْضٍ أَن تَحْبَطَ أَعْمَالِكُمْ

وَأَنْتُمْ لَا تَشْعُرُونَ.

Or

(b) خَلَقَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا ۚ

وَأَلْقَى فِي الْأَرْضِ رَوَاسِيَ أَن تَمِيدَ بِكُمْ

وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ ۚ وَأَنْزَلْنَا مِنْ

السَّمَاءِ مَاءً فَأَنْبَتْنَا فِيهَا مِنْ كُلِّ زَوْجٍ

كَرِيمٍ.

17. (a) يَا أَيُّهَا النَّاسُ اتَّقُوا رَبَّكُمْ وَاحْشُوا يَوْمًا

لَّا يَجْزِي وَالِدٌ عَن وَلَدِهِ وَلَا مَوْلُودٌ هُوَ

جَازٍ عَن وَالِدِهِ شَيْئًا ۚ إِنَّ وَعْدَ اللَّهِ حَقٌّ ۖ

فَلَا تَغُرَّنَّكُمُ الْحَيَاةُ الدُّنْيَا وَلَا يَغُرَّنَّكُم بِاللَّهِ

الْغُرُورُ.

Or

(b) عَن أَبِي هُرَيْرَةَ رَضِيَ اللَّهُ عَنْهُ قَالَ:

قَالَ رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ

”مَنْ حُسِنَ إِسْلَامُ الْمَرْءِ تَرَكُهُ مَا

لَا يَعْنِيهِ“.

18. (a) عَنْ أَبِي مَالِكٍ الْحَارِثِ بْنِ عَاصِمٍ
الْأَشْعَرِيِّ رَضِيَ اللَّهُ عَنْهُ قَالَ:
قَالَ رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ
”الطَّهْرُ شَطْرُ الْإِيمَانِ، وَالْحَمْدُ لِلَّهِ تَمْلَأُ
الْمِيزَانَ، وَسُبْحَانَ اللَّهِ وَالْحَمْدُ لِلَّهِ
تَمْلَأَانِ - أَوْ : تَمْلَأُ - مَا بَيْنَ السَّمَاءِ
وَالْأَرْضِ، وَالصَّلَاةُ نُورٌ، وَالصَّدَقَةُ
بُرْهَانٌ، وَالصَّبْرُ ضِيَاءٌ، وَالْقُرْآنُ حُجَّةٌ لَكَ
أَوْ عَلَيْكَ، كُلُّ النَّاسِ يَغْدُو، فَبَائِعٌ نَفْسَهُ
فَمُعْتِقُهَا أَوْ مُوْبِقُهَا“.

Or

(b) Write the summary of سورة الحجرات.

C-0338

Sub. Code

96323

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Semester

Nutrition and Dietetics

PRINCIPLES OF NUTRITION

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Blood sugar.
2. Dietary Fiber.
3. PER.
4. Chemical score.
5. Calorimetry.
6. Energy units.
7. Copper.
8. Zinc.
9. Niacin.
10. Vitamin D.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Give an account on Factors affecting RDA.

Or

- (b) Explain in detail about the role of fibre in preventing disease and sources.

12. (a) Write a short note on Evaluation of protein quality.

Or

- (b) Explain in briefly about the Essential fatty acids with suitable illustrations.

13. (a) Write short note on determination of energy value of foods.

Or

- (b) Give an account on Factors affecting the BMR.

14. (a) Comment on Microminerals.

Or

- (b) Give an account on effect of imbalance of sodium and potassium.

15. (a) Explain in briefly about fat soluble vitamins.

Or

- (b) Write a detailed note on Thiamine and Riboflavin.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Give a detailed note on Recommended dietary allowances with suitable examples.

Or

- (b) Give an account on sources and Requirements of proteins.
17. (a) Comment of Definitions, determinations and factors affecting BMR.

Or

- (b) Explain briefly about the classification and general functions of minerals.
18. (a) Give an account on sources and effects of deficiency of vitamin B6 and B12.

Or

- (b) Differentiate between fat soluble and water soluble vitamins with suitable examples.
-

C-0339

Sub. Code

96324

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Semester

Nutrition and Dietetics

NUTRITION FOR WOMEN

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by nutrition?
2. Define balanced diet?
3. What is meant by nutrition during pregnancy?
4. Define Nutritional requirement.
5. Explain about Lactation.
6. Define Follicle stimulating hormone.
7. Elaborate and explain BMR.
8. What is meant by weaning?
9. Explain about adolescents.
10. Define growth.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Give an account on principles of Nutrition.

Or

- (b) Write a detailed note on malnutrition.

12. (a) Give a brief note on physiological changes during pregnancy.

Or

- (b) Elaborate the food and nutritional requirements during pregnancy.

13. (a) Give an account on Nutrition during lactation.

Or

- (b) Illustrate about the nutritional requirements of a nursing mother.

14. (a) Write a detailed notes on Nutritional care of infants.

Or

- (b) Give a brief note on advantages of breast feeding.

15. (a) Give an account on Nutrition for adolescent.

Or

- (b) Write short note on nutritional problems for adolescents.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Give a detailed note on Balanced diet.

Or

- (b) Explain in detail about complications in pregnancy.

17. (a) Discuss in detail about hormonal control during lactation.

Or

- (b) Write an account on growth and development during infants.

18. (a) Give an account on nutritional problems during adolescents.

Or

- (b) Differentiate between Nutrition during pregnancy and Lactation.

C-0340

Sub. Code

96325

B.Sc. DEGREE EXAMINATION, APRIL 2019

Second Semester

Nutrition and Dietetics

NUTRITION THROUGH LIFE CYCLE

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is balanced diet?
2. Mention the discomforts that arise during pregnancy.
3. List out two advantages of breast feeding.
4. State the clinical signs of vitamin-A deficiency.
5. What is Toxemia?
6. Discuss low cost supplementary foods.
7. Differentiate weaning and complementary feeding.
8. Explain the concepts of psychological changes.
9. What is RDA?
10. Define geriatrics.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Discuss the physical and physiological changes occurring during pregnancy.

Or

- (b) Write in detail the nutritional requirements during infancy and comment on its significance.

12. (a) Why do nutritional requirements differ in the various stages of life?

Or

- (b) Explain in detail about breast milk and formulae milk.

13. (a) What is nutritional surveillance? Discuss its need and determinants.

Or

- (b) What are the various clinical and biochemical assessment used for assessment for various nutritional disorders among adults?

14. (a) Discuss the growth and development during child food and adolescence.

Or

- (b) Explain the dietary guidelines needed to be feed the pre-school children.

15. (a) Discuss the food habits of school children and their nutritional needs.

Or

- (b) Briefly explain about food habits and diet plan.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Give the RDA for lactating women and comment on his significance for the infant and mother.

Or

- (b) What is the composition of colostrums? Discuss in detail the advantages of breast feeding.
17. (a) Describe the nutrient needs from conceptions to birth.

Or

- (b) Explain in detail the dietary guidelines for old people.
18. (a) Comment on the daily nutritional requirements of an adult man.

Or

- (b) Explain in detail the structure of space nutrition.
-

C-0341

Sub. Code

96332

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Semester

Nutrition and Dietetics

HUMAN PHYSIOLOGY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Distinguish between RBC and WBC.
2. Define cardiac cycle.
3. What is absorption?
4. Distinguish between mucus and saliva.
5. What are respiratory gases?
6. Give the composition of urine.
7. Define parturition?
8. List the functions of testes.
9. What are phonoreceptors.
10. What are the functions of spinal cord?

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Discuss the functions of Haemoglobin.

Or

- (b) Distinguish between granulocytes and agranulocytes.

12. (a) Explain the enzymes involved in the digestion of protein.

Or

- (b) Role of liver in digestion – justify.

13. (a) Draw a neat labelled diagram of kidney.

Or

- (b) Distinguish between inspiration and expiration.

14. (a) Explain the structure and functions of islets of Langerhans.

Or

- (b) List out the hormones secreted by Adrenal gland and its functions.

15. (a) Distinguish between cerebrum and cerebellum.

Or

- (b) What are sense organs? Explain in Detail.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the origin and conduction of heart beat.

Or

- (b) Describe the structure and functions of human heart.

17. (a) Explain the physiology of respiration in man.

Or

- (b) Describe in detail about male reproductive system.

18. (a) Describe the various phases in the development of an embryo.

Or

- (b) Discuss the classification of nervous system.
-

C-0342

Sub. Code

96333

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Semester

Nutrition and Dietetics

BASIC FOOD PROCESSING AND PRESERVATION

(2016 – onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Properties of food.
2. Explain in detail about types of food spoilage.
3. What is meant whole wheat Atta?
4. Explain in detail about by-products of wheat.
5. Define Skim milk.
6. Explain in detail about different types of cheese.
7. What is meant by freeze drying?
8. Define dehydration.
9. How to make wine?
10. Define chemical preservatives.

Part B (5 × 5 = 25)Answer **all** questions.

11. (a) Give a brief note on Nature and Properties of food.
Or
(b) Define importance of food preservation with suitable illustrations.
12. (a) Differentiate between blended flour and fortified flour.
Or
(b) Give a brief note on value added products.
13. (a) Define milk and add a note on its uses in everyday life.
Or
(b) Explain in detail about the drying of whole milk.
14. (a) Write a detailed note on preservation by the use of low temperature.
Or
(b) Give a brief note on methods of freezing for preservation.
15. (a) What is meant by chemical preservatives?
Or
(b) Write a detailed note on types of fermentation with suitable examples.

Part C (3 × 10 = 30)Answer **all** questions.

16. (a) Write a detailed note on effects of nutritional properties of food with suitable Illustrations.
Or
(b) Give an account on millets with suitable examples and diagrams.

17. (a) Give a brief note on indigenous milk products with suitable examples.

Or

- (b) Write a detailed note on advantages of freezing with suitable illustrations.

18. (a) Explain in detail about the sugar concentrates for food preservation.

Or

- (b) Differentiate between preservatives and preservation for food with suitable Illustrations.
-

C-0343

Sub. Code

96334

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Semester

Nutrition and Dietetics

NUTRITION FOR HEALTH AND FITNESS

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Explain-PA
2. What is anaerobic training?
3. Define neural control.
4. List out the key role of stretch trainer.
5. Write short note on Utilization of Fats in physical activity.
6. Define term obesity.
7. Define Diabetics.
8. List out the role of optimum nutrition in health
9. Define Relaxation
10. How does medium altitude affect exercise?

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Explain in detail on role of meditation in stress relieving.

Or

- (b) Write a brief note on the clinical exercise for cancer patients.

12. (a) List out the importance of health and fitness.

Or

- (b) Write a note on the different types of exercise.

13. (a) Discuss on multi gym for different muscle groups.

Or

- (b) Give a brief account on anaerobic exercise.

14. (a) Highlight the diseases due to physical inactivity.

Or

- (b) Write a brief note on causes, symptoms and preventive measures for diabetes mellitus.

15. (a) Write short note on carbohydrates in the diet of healthy person.

Or

- (b) Explain in detail on importance of meditation for health.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe in detail on exercise at medium and high altitudes for stress management.

Or

- (b) Elaborate in detail the relationship between health and physical activity.

17. (a) Discuss in detail about the skeletal and neural control during exercise.

Or

- (b) Explain in brief on sources of fats, vitamin D, calcium and iron in nutrition for physical activity.

18. (a) Enumerate the working principle of elliptical bicycle and bicycle ergometer.

Or

- (b) Discuss in detail about the Furnish an imprecise on cardiovascular disease.

C-0344

Sub. Code

96335

B.Sc. DEGREE EXAMINATION, APRIL 2019

Third Semester

Nutrition and Dietetics

FOOD STANDARDS AND QUALITY CONTROL

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List out the preservatives of fruits
2. Give a simple test to find out chemically preserved fish.
3. Write note on raw material
4. What is Quality deterioration?
5. Advantages of quality control.
6. List out the properties of protein.
7. Explain browning reaction.
8. How will you check adulterated milk?
9. Explain triangle sensory analysis.
10. List out the viscoelastic behaviour of food.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Briefly explain about the various stages of quality control.

Or

- (b) List out the simple techniques of quality checking of raw food materials.

12. (a) Give a brief account on classification of food additives.

Or

- (b) Write a note on objectives and advantages of food specification.

13. (a) Discuss the importance of color, texture and flavour of food products.

Or

- (b) Describe in detail about toxins naturally occurring in foods.

14. (a) Write brief account on food adulteration act.

Or

- (b) Explain in detail about agmark.

15. (a) Food specification as quality control measures for oils and fat – justify.

Or

- (b) Illustrate the international standards for food quality control.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail about the goitrogens and haemagglutinins.

Or

- (b) Give a detailed account on physio — chemical changes in foods.

17. (a) Discuss in detail about principles of quality control.

Or

- (b) Write an essay on quality evaluation of food.

18. (a) Enumerate the popular centres for sensory evaluation in India and their role.

Or

- (b) Give a detailed account on common food adulterants.
-

C-0345

Sub. Code

96342

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Nutrition and Dietetics

DIETETICS — I

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define dietitian.
2. What are the symptoms of cholera?
3. Give a note on pernicious anaemia.
4. Define pyrexia.
5. Discuss the causative agent of peptic ulcer.
6. What is BMI?
7. Discuss the role of gall bladder.
8. What is hepatic coma?
9. Discuss signs of autism.
10. "21-Trisomy" justify.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Highlight the role and responsibilities of dietitians.
Or
(b) Out line the types of routine hospital diets.
12. (a) List out the diet planning for febrile conditions.
Or
(b) Write a note on the different types of infusion.
13. (a) Discuss the risk factors and diet planning for people who are overweight.
Or
(b) Give a brief account on hemorrhoids.
14. (a) Highlight the diseases related to exocrine part of pancreas.
Or
(b) Write a brief note on Hepatitis.
15. (a) List out the nutritional chart of the children.
Or
(b) "A congenital disorder of movement, posture"- justify with this statement.

Part C**(3 × 10 = 30)**Answer **all** questions.

16. (a) Discuss in detail about the qualifications, qualities and professional ethics of dietitian.
Or
(b) Give a detailed account on special feeding methods.

17. (a) Discuss in detail about the causative agent, dietary modification and diet planning for Gastritis and Dysentery.

Or

- (b) Write an essay on phenylketonuria and galactosemia.

18. (a) Enumerate the various types of disease with reference to liver.

Or

- (b) Give a detailed account on Attention deficit hyperactivity disorder.

C-0346

Sub. Code

96343

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Nutrition and Dietetics

FOOD SERVICE MANAGEMENT — I

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Mention different types of institutional food service in operation.
2. Define management.
3. What is personnel management?
4. Classify various types of fuels.
5. What is pest control?
6. Define sanitation.
7. List out different types of organisation.
8. What is art of delegation?
9. Differentiae between organisation and orientation.
10. What do you mean by personal hygiene?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain profit oriented and service oriented food service.

Or

- (b) Qualities of good leadership. Describe.

12. (a) Write short notes on :

- (i) Training
- (ii) Supervision
- (iii) Inventory budgetary control
- (iv) Performance appraisal
- (v) Cost concepts.

Or

- (b) Explain labour policies and legislation.

13. (a) Write about advantages of fuel in relation to economy in quantity cookery.

Or

- (b) What are the criteria for selecting personnel orientation?

14. (a) Classify different types of fuel used in kitchen and write about its advantages.

Or

- (b) Importance of environmental hygiene. Explain.

15. (a) Briefly explain about safety of left our foods and disposal of food waste.

Or

- (b) Write about importance of pest and rodent control in food services.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Mention various types of institutional food service in operations.

Or

- (b) Explain principles and techniques of management, tools of management.

17. (a) Statement on selecting personnel orientation and training for good human relations.

Or

- (b) What are the major procedures followed during food handling?

18. (a) Write about role of sanitation and hygiene in food service institutions.

Or

- (b) Briefly explain about ; safety in food procurement storage, handling and preparations, control of spoilage.

C-0347

Sub. Code

96344

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Nutrition and Dietetics

BAKERY AND CONFECTIONARY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the major ingredients used in bakery industry?
2. Name some bakery products which are available in market.
3. Define wheat.
4. Mention various equipments and tools used in bakery and confectionary.
5. List out different kind of cake making method.
6. What is leavening agent?
7. Define cookies/biscuit.
8. What is proofing?
9. What do you mean by knock back?
10. Give some examples of Indian breads.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Draw the structure of Wheat Kernel and label the composition.

Or

- (b) Explain steps and by products of wheat milling.
12. (a) Write short notes on flour and yeast.

Or

- (b) Write about the functions of ingredients involved in cake making methods.
13. (a) Explain various types of ovens available in markets for bakery industry.

Or

- (b) Distinguish between biscuit and cookies, mention various types of cookies making methods.
14. (a) Briefly explain baked products storage.

Or

- (b) Classify different types of candies prepared in confectionary.
15. (a) Detailed about faults and remedies of biscuit making.

Or

- (b) Write about the yeast and explain the availability of yeast in the bakery industry.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write about various bread making methods in bakery industry.

Or

- (b) Explain in detail about role of ingredients in bakery products.

17. (a) List out major and minor equipments, types and materials used in bakery units.

Or

- (b) Explain the factors to be considered while setting up of a bakery unit.

18. (a) Describe different types of Icing and its preparation techniques.

Or

- (b) Explain cake faults and its causes.

C-0348

Sub. Code

96346

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Nutrition and Dietetics

**FOOD PRODUCT DEVELOPMENT AND MARKETING
STRATEGY**

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is food habit alternation?
2. What is Marketing Strategy?
3. Define – Marketing demand.
4. What is Portion Control?
5. What is Standization?
6. Who is called Adolescents?
7. What is Data Analysis?
8. Define – Market integration.
9. Define – Global Market Status.
10. What is economic feasibility?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write short notes on culture approach to development of various group.

Or

- (b) Briefly explain about development of departments in food production industry.

12. (a) What are all the methods involves in product development?

Or

- (b) Briefly explain shelf life storage stability evaluation producer of development food products.

13. (a) Answer in detail about formulation of new food products for intants, pre school children and adolescents, peoples.

Or

- (b) Briefly explain about development of score card and analysis of data.

14. (a) Write short notes on approached of study marketing functions.

Or

- (b) Answer the following :

- (i) market structure
- (ii) market efficiency.

15. (a) Explain – role of Government in promoting agriculture marketing.

Or

- (b) Explain – role of export promoting agencies.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the calculation of nutritive value of food products.

Or

- (b) Explain the role of advertisement and technology in promotion of new products.

17. (a) Briefly explain about uses of therapeutic diet.

Or

- (b) Brief notes on storage and sanitation.

18. (a) List out the steps involved in selection and training of Judgest.

Or

- (b) Discuss about conditions for sale, litenses and indention and quality processing.

C-0349

Sub. Code

96351

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Nutrition and Dietetics

DIETETICS — II

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is high blood pressure?
2. IDDM.
3. What is the first sign of lupus?
4. What are the early signs of kidney failure?
5. Osteopenia.
6. Gout.
7. Lymphoma.
8. Sarcoma.
9. Dietary counseling.
10. Obesity.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Write the pathogenesis and symptoms of Atherosclerosis.

Or

- (b) Describe briefly about hyperlipidemia.

12. (a) Mention briefly about Renal diseases.

Or

- (b) Describe about Urinary Calculi.

13. (a) Discuss about the nutritional care in Osteoporosis.

Or

- (b) Discuss about food allergy and intolerance.

14. (a) Mention briefly about the Risk Factors and Treatment of cancer.

Or

- (b) What is the difference between cancerous cells and normal cells?

15. (a) How does cardiovascular disease affect the body?

Or

- (b) Write the steps involved in dietary counseling process.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about the various forms Diabetes Mellitus.

Or

- (b) Write the symptoms, causes, nutritional modification, diet planning and dialysis of Nephrosis.

17. (a) Describe about dental caries.

Or

- (b) Discuss about the nutritional requirements and problems of cancer therapy.

18. (a) Write the types and use of nutraceuticals in the prevention and treatment of Diabetes Mellitus.

Or

- (b) How Nutraceuticals helps in prevention of cancer.
-

C-0350

Sub. Code

96352

B.Sc DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Nutrition And Dietetics

FOOD SERVICE MANAGEMENT — II

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **ALL** questions.

1. What is conventional system?
2. Define – Menu.
3. What you mean by portion control?
4. Define – purchase procedure.
5. What you mean overhead Expenses?
6. What is food cost?
7. What are the material used in dinning room furnishes.
8. Brief – care and maintance of equipments
9. What is optimum working height?
10. Brief – arrangements of equipments in work center.

Part B

(5 × 5= 25)

Answer **ALL** questions.

11. (a) Briefly explain about method of processing.

Or

- (b) List out different style of service in hotel industry.

12. (a) Explain the following

(i) Purchasing procedure

(ii) Selection of supplies

Or

- (b) Explain in detail types of store records and stores issues.

13. (a) What are the factors responsible for losses in a food service industry

Or

- (b) Briefly explain about elements of cost – Food cost.

14. (a) Write in detail about classification of equipments.

Or

- (b) Write about care and maintainance of equipments.

15. (a) Draw a layout of food plants – space allocation in hotel industry.

Or

- (b) Write detailed notes on arrangements of equipments in work centers.

Part C**(3 × 10 = 30)**

Answer ALL questions.

16. (a) Answer in Briefly types of food service systems.

Or

- (b) Write detailed notes on style of service.

17. (a) Describe the role of informal and formal service styles.

Or

- (b) Answer in brief quantity food production and services.

18. (a) Answer in detail bage materials used in the manufacture of equipment.

Or

- (b) Answer the following
- (i) Standardisation of receipes
 - (ii) Portion control
 - (iii) Utilization of left over foods.

C-0351

Sub. Code

96353

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Nutrition and Dietetics

COMMUNITY NUTRITION

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Write the functions of Vitamin A.
2. Write the Iodine Deficiency Disorders.
3. What is Food technology?
4. Write the significance of nutrition education.
5. Write any four Nutrition intervention programmes.
6. Mention the beneficiaries of Anaemia Prophylaxis programme.
7. How to improve the nutritional status of the family?
8. Write the objectives of UNICEF.
9. Write any four International and National Organisations concerned with food and nutrition.
10. List out the methods of education.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on Common Nutritional Problems.

Or

- (b) Explain the synergism between malnutrition and infection.

12. (a) Write a short note on agricultural production.

Or

- (b) Explain the environmental sanitation and health.

13. (a) Describe the objectives and operations of Nutrition Intervention Programmes in India.

Or

- (b) Write short notes on National Food Security.

14. (a) Describe the objectives and functions of CFTRI.

Or

- (b) Briefly explain the functions of World Bank.

15. (a) Explain the Principles of Planning for Nutrition Education Programme.

Or

- (b) Explain the usage of computers to impart Nutrition Education.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Briefly explain the prevalence of Malnutrition and Anaemia.

Or

- (b) Discuss about empowering women towards improving the nutritional status of the family.

17. (a) Discuss about the impact of National Nutrition Policy.

Or

- (b) Explain the role and importance of WHO and FAO for promoting community nutrition.

18. (a) Discuss about the importance of executing and evaluating Nutrition Education Programme.

Or

- (b) Discuss about the problems of nutrition education programmes.
-

C-0352

Sub. Code

96354

B.Sc. DEGREE EXAMINATION, APRIL 2019

Fifth Semester

Nutrition and Dietetics

TRADITIONAL HERBS IN FOOD SCIENCE

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the types of Traditional medicines?
2. Define Herbal nutraceuticals.
3. Write down any four-exomorphic characters of herbal plants.
4. Define cytological.
5. Expand the acronym of SDE and HS-SPME in extraction of volatile oils.
6. Mention the detection techniques in TLC.
7. What is Kombucha?
8. Mention the name of herbs used in flavouring of foods.
9. Mention the advantages in preserving the herbal plants.
10. Write down the names of herbs and grains used in brewery industries.

Part B**(5 × 5 = 25)**Answer **all** questions

11. (a) Explain the importance of Herbal plants.

Or

- (b) Describe the traditional herbs in healing the various diseases.

12. (a) Elucidate the endomorphic characters of herbal plants.

Or

- (b) Mention the identification process of herbal plants.

13. (a) Explain the detection methods of tannins and volatile oils.

Or

- (b) Explain the Reproductive methods in cultivation of herbs.

14. (a) Write the role of Herbal nutraceuticals in health care.

Or

- (b) Describe the role of chromatography in identification of herbal plants.

15. (a) Explain the advantages and disadvantages of reproductive methods in cultivation of herbal plants.

Or

- (b) Explain the advantages and disadvantages of vegetative methods in cultivation of herbal plants.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Illustrate the significance of traditional herbs in food science.

Or

- (b) Describe the uses of herbs and grains in brewery industries with examples.

17. (a) Explain the detection techniques in gums and phytochemicals of herbal plants.

Or

- (b) Elucidate the classification of traditional herbs and its role in health care

18. (a) Describe the difficulties in the process of herbal extraction.

Or

- (b) Describe about herbs and spices used to colour and flavor the food and beverages.

C-0353

Sub. Code

96361

B.Sc. DEGREE EXAMINATION, APRIL 2019

Sixth Semester

Nutrition and Dietetics

BIO-PROCESS TECHNOLOGY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define upstream processing.
2. Name any two anionic and cationic detergents used for cell disruption.
3. Define anaerobic fermentation.
4. List out the type of fermentors used for animal cell culture.
5. What are the major carbon and nitrogen sources used in industrial fermentation?
6. Give the significance of Nabla factor in sterilisation.
7. Give the kinetic equation relating substrate utilisation and product formation.
8. Define yield coefficient.
9. Differentiate between yoghurt and butter production.
10. What are the requirements for mushroom cultivation?

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) How solid state fermentation is different from submerged fermentation?

Or

- (b) Briefly explain the various mechanical and chemical methods used for cell disruption in downstream process.
12. (a) Explain in detail the working principle of plug flow reactor and its application.

Or

- (b) Discuss in detail on-line sensors.
13. (a) Explain the basic mechanism of filter sterilization.

Or

- (b) Explain how chemostat can be used as a tool in designing the medium.
14. (a) Discuss the concept of elemental balances with example using simplified biological conversion.

Or

- (b) Give short notes on simple unstructured kinetic models for microbial growth.
15. (a) Schematically represent the production of hard cheese.

Or

- (b) Give brief outline the microbial production of alcohol.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Elaborate the steps involved in the downstream processing method for the purification of enzyme with suitable example.

Or

- (b) Explain the design and operation of continuous culture and discuss the importance of recycle of biomass in bioreactor.
17. (a) Discuss in detail about the design of bio reactor and uses of Computers in control of fermentation process.

Or

- (b) Describe in detail the parameters involved in scale up and scale down process in bioreactors.
18. (a) Briefly discuss the structured models for growth and product formation with relevant examples.

Or

- (b) Outline in detail the steps involved in mushroom cultivation. Explain the nutritional significance of mushroom.
-

C-0354

Sub. Code

96362

B.Sc. DEGREE EXAMINATION, APRIL 2019

Sixth Semester

Nutrition and Dietetics

FOOD SAFETY, SECURITY AND ETHICS

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Write any two objective of quality control.
2. Differentiate between raw and cooked food.
3. Define the term food poisoning.
4. List out the microorganism that causes food spoilage.
5. What is sensory testing in food technology?
6. What is risk management in food safety?
7. Expand FSASAI.
8. Integrated farm to table concept- Explain.
9. Define adulteration.
10. Give the best five methods of food preservation.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Briefly explain the importance of food quality assurance.

Or

- (b) What is the principle objective of food hygiene and why it is important for public health?
12. (a) Discuss the chemical methods for the control and destruction of microorganism.

Or

- (b) Differentiate between food borne infection and food borne intoxication with suitable example.
13. (a) Give an account on health risk assessment model.

Or

- (b) Explain in detail the components of risk analysis for food safety.
14. (a) Write short notes on AGMARK rules for the assessment of food quality.

Or

- (b) Discuss on food safety and standard act 2006.
15. (a) Explain the basic principle involved in the preservation by drying or dehydration.

Or

- (b) Elucidate the steps involved in canning.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Enumerate the principle for safe food preparation and food control.

Or

- (b) Discuss in detail the causative agents and methods to control food borne toxic infections.

17. (a) Discuss on managing quality in marketing of food products.

Or

- (b) Elaborate in detail about the rules and regulation of ISI and ISO.

18. (a) Describe in detail the effects of food adulteration and the possible control measures.

Or

- (b) Discuss on the various methods and principle of food preservation at low and high temperature.

C-0355

Sub. Code

96363

B.Sc. DEGREE EXAMINATION, APRIL 2019

Sixth Semester

Nutrition and Dietetics

GENDER STUDIES

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define sex.
2. Define Gender.
3. Define Gender Ideology.
4. Define Gender role.
5. What is gender discrimination?
6. Mention the approaches in WID.
7. Mention the name of the feminist involved in Narmada and Chipko movements.
8. What is Green Belt movement?
9. Point out the any five National organizations that works for the development of women.
10. What is Gender studies?

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Discuss about Gender and Socialization.

Or

- (b) What is difference between women studies and gender studies?

12. (a) Explain the characteristics of Gender Division of Labour.

Or

- (b) Write the Scope and significance of gender studies.

13. (a) Briefly explain — Gender based violence, Gender blind, Gender disparity and gender bias.

Or

- (b) How does gender discrimination affect the girl child?

14. (a) What is difference between gender equality and equity?

Or

- (b) Discuss about Gender Discrimination in Politics.

15. (a) Discuss about the women's participation in post independent era.

Or

- (b) Explain the significance of Green belt movement.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Elaborate the evolution of gender studies in India.

Or

- (b) Write the importance of UGC's guidelines of Women's Studies in XII Plan.

17. (a) Discuss about Domestic Violence against Women in India.

Or

- (b) Explain the safeguarding mechanisms for women in India.

18. (a) Discuss the role of women movements in India.

Or

- (b) Education is a tool for women empowerment – Discuss.
-