R2869

Sub. Code
558201

M.Sc. DEGREE EXAMINATION, APRIL – 2025

Second Semester

Nutrition and Dietetics

NUTRITIONAL BIOCHEMISTRY

(CBCS – 2023 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. Starch degradation products that escape digestion in small intestine are _____. (CO1, K1)

   (a) Resistant Starch

   (b) Maltose

   (c) Dextrins

   (d) Non-starch Polysaccharides

2. _____ is the rotation of plane-polarized light forming (+) glucose and (–) glucose. (CO1, K2)

   (a) Isomerism (b) Annomerism

   (c) Stereoisomerism (d) Optical activity

3. Nucleoproteins are _____ proteins. (CO2, K1)

   (a) Simple (b) Conjugated

   (c) Derived (d) Secondary derived

4. The enzymes for β-oxidation are present in _____. (CO2, K2)

(a) Nucleus (b) Cytosol

(c) Mitochondria (d) Golgi apparatus

5. _____ deficiency results in insulin resistance. (CO3, K1)

(a) Chromium (b) Calcium

(c) Phosphorus (d) Zinc

6. The deficiency of _____ causes Pellagra. (CO3, K1)

(a) Thiamine (b) Riboflavin

(c) Niacin (d) Folate

7. The nitrogen base not found in DNA is _____. (CO4, K2)

(a) Guanine (b) Cytosine

(c) Thymine (d) Uracil

8. Enzymes are _____. (CO4, K1)

(a) Proteins (b) Fats

(c) Nucleic acids (d) Vitamins

9. _____ is the chief cation of intracellular fluid. (CO5, K1)

(a) Sodium (b) Potassium

(c) Phosphorus (d) Magnesium

10. _____ hormone regulates calcium level in blood. (CO5, K1)

(a) Parathormone (b) Adrenaline

(c) Insulin (d) Glucagon

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Classify carbohydrates. (CO1, K1)

Or

(b) Compare glycogenesis and glycogenolysis. (CO1, K2)

12. (a) Interpret urea cycle. (CO2, K2)

Or

(b) Examine the biological role of lipids. (CO2, K2)

13. (a) Simplify the effects of Vitamin C deficiency. (CO3, K3)

Or

(b) Interpret the deficiency conditions of iron. (CO3, K3)

14. (a) Summarize the functions of DNA. (CO4, K3)

Or

(b) Outline the role of co-enzymes. (CO4, K3)

15. (a) Explain the physiological role of buffer system. (CO5, K4)

Or

(b) Assess the relation between hormones and nutrients. (CO5, K4)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Summarize the sources, biological role and nutritional aspects of carbohydrates. (CO1, K3)

Or

(b) Illustrate the steps in aerobic glycolytic pathway with ATP generation. (CO1, K3)

17. (a) Classify lipids. Discuss the sources and nutritional aspects of lipids. (CO2, K3)

Or

(b) Explain in detail the in-born errors of protein metabolism. (CO2, K3)

18. (a) Examine the impact of Vitamin D deficiency and excess in humans. (CO3, K4)

Or

(b) Examine the impact of microminerals deficiency in humans. (CO3, K4)

19. (a) Summarize the mechanism of enzyme action and application of enzymes. (CO4, K4)

Or

(b) Outline the structure and functions of RNA. (CO4, K4)

20. (a) Explain hormone deficiency diseases. (CO5, K5)

Or

(b) Explain the diseases of electrolytes imbalance. (CO5, K5)

R2870

Sub. Code
558202

M.Sc. DEGREE EXAMINATION, APRIL – 2025

Second Semester

Nutrition and Dietetics

COMMUNITY NUTRITION

(CBCS – 2023 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. _____ is an indirect method of assessing nutritional status. (CO1, KI)

   (a) Anthropometry

   (b) Dietary Assessment

   (c) Clinical examination

   (d) Lab estimation

2. Prothrombin time determines the functional index of _____. (CO1, K1)

   (a) Vitamin A

   (b) Vitamin D

   (c) Vitamin E

   (d) Vitamin K

3. Softening and dissolution of cornea occurs in _____. (CO2, K1)

(a) Conjunctival xerosis

(b) Bitot spots

(c) Keratomalacia

(d) Corneal xerosis

4. Koilonychia is seen in _____ deficiency.(CO2, K1)

(a) Iron

(b) Folic acid

(c) Vitamin B6

(d) Vitamin B12

5. _____ scheme aims at providing food security to meet the requirement of senior citizens. (CO3, K1)

(a) Mid Day Meal

(b) Special Nutrition Programme

(c) Annapurna

(d) MISP

6. TINP stands for _____ (CO3, K1)

(a) Tamilnadu Integrated Nutrition Project

(b) Tamilnadu Inter Nutrition Project

(c) Tamilnadu Integrated Nutrition Process

(d) Tamilnadu Integrated Nutrient Project

7. FIAT PANIS is the motto of _____ (CO4, K1)

(a) WHO

(b) FAO

(c) CARE

(d) UNICEF

8. The objective of world bank is _____. (CO4, K2)

(a) Working for poverty free world

(b) Working for literacy

(c) Provide nutrition education

(d) Let there be bread.

9. _____ revolution introduced farmers to hybrid strains of wheat, rice and corn. (CO5, K1)

(a) Blue (b) White

(c) Yellow (d) Green

10. _____ is not an individual method of nutrition education. (CO5, K1)

(a) Symposium

(b) Personal conversation

(c) Home visit

(d) Personal letter

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Predict the different mortality rates involved in indirect methods of nutritional assessment. (CO1, K3)

Or

(b) Identify and explain the role of biochemical methods in examining the nutritional status. (CO1, K3)

12. (a) Explain the symptoms of PEM. (CO2, K2)

Or

(b) Interpret the strategies to overcome malnutrition. (CO2, K2)

13. (a) Generate the objectives and operation of nutrition intervention programmes. (CO3, K3)

Or

(b) Simplify the role of health status in nutrition intervention. (CO3, K3)

14. (a) Summarize the importance of nutrition education. (CO4, K3)

Or

(b) Summarize on training the workers to promote nutrition education. (CO4, K3)

15. (a) Compile how to execute nutrition education programmes. (CO5, K4)

Or

(b) Elaborate on post harvest food loss. (CO5, K4)

Part C ($5 \times 8 = 40$)

Answer **all** questions not more than 1000 words each.

16. (a) Predict the nutritional anthropometric methods used to assess the nutritional status of the community. (CO1, K3)

Or

(b) Discover the significance of clinical examination and dietary survey methods in assessment of nutritional status. (CO1, K3)

17. (a) Explain the symptoms of PEM and measures adopted for PEM prevention. (CO2, K3)

Or

(b) Summarize the common nutritional problems prevalent in India. (CO2, K3)

18. (a) Examine the nutrition intervention programmes organized by governmental agencies. (CO3, K4)

Or

(b) Examine nutrition intervention programmes organized by non-governmental agencies. (CO3, K4)

19. (a) Summarize the role of international organizations concerned with food and nutrition. (CO4, K5)

Or

(b) Outline the role of national organizations concerned with food and nutrition. (CO4, K5)

20. (a) Elaborate on recent advances and research in the field of community nutrition. (CO5, K5)

Or

(b) Discuss green revolution and white revolution in detail. (CO5, K5)

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R2871

Sub. Code
558203

M.Sc. DEGREE EXAMINATION, APRIL – 2025

Second Semester

Nutrition and Dietetics

SPORTS NUTRITION

(CBCS – 2023 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. A respiratory adaptation to aerobic endurance training is _____. (CO1, K3)

   (a) Reduced stroke volume

   (b) Reduced cardiac output

   (c) Increased lung size

   (d) Increased gaseous exchange

2. Regular physical exercise may lower the chance of developing _____. (CO1, K3)

   (a) Atherosclerosis

   (b) Muscle injury

   (c) Joint wear and tear

   (d) Rheumatoid arthritis

3. Endomorphs have a stocky build and a tendency to gain body fat easily, especially in the _____. (CO2, K2)

   (a) Thigh (b) Subscapula

   (c) Triceps (d) Abdomen

4. The pulse rate is measured _____ times to determine the level of fitness. (C02, K2)

(a) 1 (b) 3

(c) 5 (d) 7

5. _____ is the most important source of energy for athletes. (CO3, K2)

(a) Carbohydrate (b) Protein

(c) Fat (d) Vitamins

6. During-event hydration, the athletes should drink 150 ml to 250 ml every _____ minutes to maintain fluid balance. (CO3, K2)

(a) 5-10 (b) 10-15

(c) 15-25 (d) 20-30

7. Increased protein intake might be beneficial for _____ athletes. (CO4, K2)

(a) Strength (b) Power

(c) Endurance (d) All the above

8. There is gain in weight with carbohydrate loading as _____ of water is stored with every gram of glycogen. (CO4, K2)

(a) 1 gram (b) 3 gram

(c) 5 gram (d) 7 gram

9. _____ is a nitrogen containing compound that combines with phosphate to burn a high energy compound stored in muscle. (CO5, K4)

(a) Amines (b) Tetrazole

(c) Creatinine (d) Cysteine

10. Ephedrine is a drug has been used for _____. (CO5, K4)

(a) Weight loss

(b) Weight gain

(c) Electrolyte balance

(d) Reduce work performance

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Write a note on the role of nutrition in stress of athletes. (CO1, K3)

Or

(b) Summarize the endurance exercise and its benefits. (CO1, K3)

12. (a) Write about the levels of body composition of athletes. (CO2, K2)

Or

(b) Discuss the indirect method to measure body composition of an athlete. (CO2, K2)

13. (a) Give a short note on energy expenditure during physical activity. (CO3, K2)

Or

(b) Write about the important minerals needed for female athlete. (CO3, K2)

14. (a) Summarize the role of nutrition in team sports. (CO4, K2)

Or

(b) Explain the nutritional requirements for post-game regime sports persons. (CO4, K2)

15. (a) How to evaluate the physical capacity tests of an athlete? (CO5, K4)

Or

(b) Discuss about the importance of physical fitness in sports person. (CO5, K4)

Part C (5 × 8 = 40)

Answer **all** questions not more than 1000 words each.

16. (a) Elaborate the hormonal adaptations during endurance exercise. (CO1, K3)

Or

(b) Write in detail about the role of nutrition in sports physiology. (CO1, K3)

17. (a) Construct the significance of body composition measures for athletes. (CO2, K2)

Or

(b) Describe the effective weight loss of athletes in sports. (CO2, K2)

18. (a) Express the factors affecting protein requirements of athletes. (CO3, K2)

Or

(b) Write in detail on the fluid balance and fluid requirement of endurance athlete. (CO3, K2)

19. (a) Explain the nutritional requirements for athletes of endurance events in sports. (CO4, K2)

Or

(b) Determine the effects of carbohydrate loading in sports person. (CO4, K2)

20. (a) Describe the potential and concerns of ergogenic aids for athletes. (CO5, K4)

Or

(b) Examine the different parameters of physical fitness for sports person. (CO5, K4)

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R2872

Sub. Code
558503

M.Sc. DEGREE EXAMINATION, APRIL – 2025

Second Semester

Nutrition and Dietetics

Elective – FOOD MICROBIOLOGY AND SANITATION

(CBCS – 2023 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** the following objective type questions by choosing the correct option.

1. Which of the following is a type of fungal microorganism? (CO1, K1)

   (a) Bacteria

   (b) Yeast

   (c) Protozoa

   (d) Viruses

2. Bacteria can be identified through _____ (CO1, K1)

   (a) Biochemical test

   (b) DNA/RNA analysis

   (c) Serological testing methods

   (d) All of these

3. Which one is NOT a physical hazard? (CO2, K2)

(a) Dirt

(b) Dust

(c) Metal

(d) Pesticides

4. Which conditions can be established by removing or expelling air or oxygen from the given package? (CO2, K2)

(a) Asepsis

(b) Aerobic

(c) Anaerobic

(d) Radiation

5. Rancidity is the deterioration of _____ (CO3, K1)

(a) Cereals and pulses

(b) Fruits and vegetables

(c) Fats and oils

(d) Milk and milk products

6. Cider vinegar is mostly made from _____.
(CO3, K1)

(a) Apple

(b) Potatoes

(c) Pineapple

(d) Sweet potatoes

7. Thermophilic organisms commonly associated with spoilage of _____ acid canned foods. (CO4, K1)

(a) Normal

(b) Low

(c) Medium

(d) High

8. Which of the following food-borne diseases is caused by a protozoa? (CO4, K1)

(a) Typhoid fever

(b) Shigellosis

(c) Amoebiasis

(d) Cholera

9. Distribution pack or transport pack is called as _____ pack. (CO5, K2)

(a) Unit

(b) Intermediate

(c) Bulk

(d) External

10. The Food Safety and Standards Authority of India (FSSAI) has been established under _____ (CO5,K2)

(a) Consumer Protection Act, 1986

(b) Consumer Protection Act, 1989

(c) Food Safety and Standards Act, 2006

(d) Food Safety and Standards Act, 2009

Part B (5 × 5 = 25)

Answer **all** questions not more than 500 words each.

11. (a) Describe in detail on the characteristics of bacteria. (CO1, K3)

Or

(b) List out the significance of molds and common household molds in relation to food science. (CO1 K3)

12. (a) Identify how to contamination of foods from external sources. (CO2, K4)

Or

(b) Write a detail note on food preservation by using high temperatures. (CO2, K4)

13. (a) Give a brief note on contamination and spoilage of the pulses by using preservation. (CO3, K3)

Or

(b) Explain the contamination and spoilage of milk and milk products and their prevention methods. (CO3, K3)

14. (a) Write a short note on poultry contamination, spoilage, preservation and control. (CO4, K5)

Or

(b) Discuss the types of biological spoilage of canned foods. (CO4, K5)

15. (a) Explain the moisture absorption properties of foods and selection of packaging materials. (C05, K2)

Or

(b) Discuss about the bar coding nutrition labelling and nutrition claims and coding of food products. (CO5, K2)

Part C $(5 \times 8 = 40)$

Answer **all** questions not more than 1000 words each.

16. (a) Give an account on the industrial importance of yeast. (CO1, K4)

Or

(b) Summarize morphology, physiology and multiplication, significance of molds. (CO1, K4)

17. (a) Explain about the fruits contamination, spoilage, preservation and control of microorganisms. (CO2, K3)

Or

(b) Clarify the vegetables contamination, spoilage, preservation, and control of microorganisms. (CO2, K3)

18. (a) Describe the contamination and spoilage of microbes in cereals and cereals products and explain how to prevent it. (CO3, K3)

Or

(b) Elucidate the nuts and oil seeds contamination, spoilage, prevention and control of microorganisms. (CO3, K3)

19. (a) Explain in detail about the spoilage of canned foods causes and appearance of the unopened container. (CO4, K5)

Or

(b) Clarify the following food borne diseases: Food infection and Food intoxication. (CO4, K5)

20. (a) Categorize the food packaging methods and its role in food industry. (CO5, K2)

Or

(b) Give an account of the following international standards: FAO and HACCP. (CO5, K2)

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