R4639

Sub. Code
25MND2C1

M.Sc. DEGREE EXAMINATION, APRIL – 2026

Second Semester

Nutrition and Dietetics

FOOD MICROBIOLOGY

(CBCS – 2025 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

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

1. _____ is regarded as the father of microbiology (CO1, K1)

   (a) Robert Koch

   (b) Louis Pasteur

   (c) Alexander Fleming

   (d) Antonie van Leeuwenhoek

2. _____ microorganism is most commonly involved in alcoholic fermentation. (CO1, K2)

   (a) Bacteria

   (b) Mold

   (c) Yeast

   (d) Virus

3. The main objective of food preservation is to _____. (CO2, K2)

(a) Improve taste

(b) Increase moisture

(c) Prevent microbial spoilage

(d) Enhance color

4. _____ method of preservation involves destruction of microorganisms using heat (CO2, K1)

(a) Canning

(b) Freezing

(c) Drying

(d) Irradiation

5. _____ microorganism commonly contaminates stored cereals. (CO3, K1)

(a) Virus (b) Mold

(c) Algae (d) Protozoa

6. Pulse spoilage during storage is mainly due to _____. (CO3, K2)

(a) High fat content

(b) Insect infestation and molds

(c) Low protein content

(d) High acidity

7. _____ microorganism commonly causes fish spoilage (CO4, K1)

(a) Psychrotrophic bacteria

(b) Lactic acid bacteria

(c) Yeast

(d) Virus

8. Meat spoilage mainly occurs due to _____. (CO4, K2)

(a) High carbohydrate content

(b) Enzymatic and microbial activity

(c) Low water activity

(d) High fiber content

9. Food infection differs from food intoxication because food infection involves_____. (CO5, K2)

(a) Preformed toxins in food

(b) Chemical contamination

(c) Ingestion of live pathogenic microorganisms

(d) Naturally occurring enzymes

10. _____ organism commonly causes food poisoning due to heat-stable enterotoxin (CO5, K1)

(a) Salmonella

(b) Clostridium botulinum

(c) Escherichia coli

(d) Staphylococcus aureus

Part B (5 × 5 = 25)

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

11. (a) In what ways intrinsic factors influence microbial growth in foods. (CO1, K3)

Or

(b) Apply extrinsic factors to extend the shelf life of food products. (CO1, K3)

12. (a) Explain heat processing methods for food preservation with examples. (CO2, K4)

Or

(b) Describe chilling and freezing techniques for preserving perishable foods. (CO2, K4)

13. (a) Analyze microbial spoilage in milk and milk products. (CO3, K4)

Or

(b) Write about the health hazards associated with aflatoxin contamination. (CO3, K4)

14. (a) Differentiate fresh egg and spoiled egg and analyze the ways to control the microorganisms in egg. (CO4, K3)

Or

(b) Differentiate refrigeration and freezing. Justify which method is effective for long term preservation of meat products. (CO4, K3)

15. (a) Explain why Staphylococcus aureus food poisoning cannot always be prevented by reheating food. (CO5, K4)

Or

(b) State the role of poor personal hygiene in the spread of food-borne diseases, with suitable examples. (CO5, K4)

Part C (5 × 8 = 40)

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

16. (a) Describe the dual role of microorganisms in food systems from a food safety and food security perspective. (CO1, K4)

Or

(b) Analyze the role of food as a dynamic ecosystem for microorganisms rather than a passive substrate. (CO1, K5)

17. (a) Evaluate radiation as a food preservation method with respect to safety, effectiveness and consumer acceptance. (CO2, K5)

Or

(b) How anaerobic conditions influence microbial growth and spoilage in foods? Explain. (CO2, K4)

18. (a) Analyze the role of moisture and storage environment in mold growth of pulses and legumes. (CO3, K4)

Or

(b) Explain the importance of receiving raw materials and their role in maintaining food quality and cost control. (CO3, K4)

19. (a) Evaluate the differences in spoilage pattern between red meat and poultry meat. (CO4, K5)

Or

(b) Describe the biochemical and microbial factors contributing to spoilage of fresh meat. (CO4, K4)

20. (a) Explain food-borne diseases and classify them into food infection and food intoxication with suitable examples. (CO5, K4)

Or

(b) Describe bacterial food-borne diseases with reference to Salmonella, Staphylococcus, Clostridium, and Escherichia coli and mention their source, symptoms, and preventive measures. (CO5, K5)

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R4640

Sub. Code
25MND2C2

M.Sc. DEGREE EXAMINATION, APRIL – 2026

Second Semester

Nutrition and Dietetics

NUTRITIONAL BIOCHEMISTRY

(CBCS – 2025 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 reducing sugar _____. (CO1, K1)

   (a) Sucrose (b) Maltose
   (c) Starch (d) Cellulose

2. Which one of the following is a tricarboxylic acid? (CO1, K1)

   (a) Acetic acid (b) Succinic acid
   (c) Oxaloacetic acid (d) Citric acid

3. Which of the following is a simple protein? (CO2, K1)

   (a) Nucleoprotein (b) Histones
   (c) Keratin (d) Collagens

4. Polyunsaturated fatty acids help reduce cardiovascular risk primarily by (CO2, K1)

   (a) Increasing triglyceride synthesis
   (b) Increasing LDL levels
   (c) Reducing LDL cholesterol
   (d) Inhibiting bile secretion

5. Vitamin B12 deficiency leads to megaloblastic anaemia due to impaired _____. (CO3, K1)

(a) DNA methylation

(b) Purine and thymidylate synthesis

(c) RNA transcription

(d) Heme biosynthesis

6. Excess intake of calcium in our diet results in _____. (CO3, K1)

(a) Stroke (b) Diarrhoea

(c) Constipation (d) Kidney stones

7. RNA differs from DNA by the presence of _____. (CO4, K1)

(a) Deoxyribose sugar

(b) Thymine

(c) Uracil

(d) Double-stranded structure

8. The specific site on an enzyme where the substrate binds is called the _____. (CO4, K1)

(a) Allosteric site (b) Active site

(c) Binding site (d) Inhibitory site

9. Which of these hormones is made by the posterior pituitary? (CO5, K1)

(a) FSH (b) LH

(c) ACTH (d) ADH

10. Which of the following is the primary cation in the extracellular fluid? (CO5, K1)

(a) Potassium (b) Phosphate

(c) Sodium (d) Magnesium

Part B (5 × 5 = 25)

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

11. (a) Explain the nutritional aspects of carbohydrate. (CO1, K2)

Or

(b) Explain the process of glycogenolysis. (CO1, K4)

12. (a) Evaluate the biological functions of proteins and how biological value reflects quality. (CO2, K5)

Or

(b) Evaluate the nutritional aspects of lipids. (CO2, K5)

13. (a) Explain vitamin A deficiency. (CO3, K4)

Or

(b) Explain the effects of calcium deficiency and excess. (CO3, K2)

14. (a) Differentiate DNA and RNA. (CO4, K4)

Or

(b) Write a short note on enzyme specificity. (CO4, K4)

15. (a) Brief on hormone deficiency diseases. (CO5, K3)

Or

(b) Explain the diseases of electrolyte imbalance. (CO5, K4)

Part C (5 × 8 = 40)

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

16. (a) Illustrate the classification, physical and chemical properties of carbohydrate. (CO1, K5)

Or

(b) Describe Glycolysis and resulting energy generation. (CO1, K5)

17. (a) Elaborate on protein deficiency diseases. (CO2, K4)

Or

(b) Illustrate the classification, physical and chemical properties of lipids. (CO2, K4)

18. (a) Discuss the characteristics and role of water-soluble vitamins in metabolism. (CO3, K5)

Or

(b) Explain the absorption and role of micro minerals in metabolism. (CO3, K5)

19. (a) Describe the structure, functions and metabolism of DNA. (CO4, K4)

Or

(b) Detail on the factors affecting enzyme activity. (CO4, K4)

20. (a) Explain acid base balance and major source of acid production. (CO5, K5)

Or

(b) Illustrate the role of nutrients in maintaining of fluid and electrolyte balance during disease condition. (CO5, K5)

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R4641

Sub. Code
25MND2C3

M.Sc. DEGREE EXAMINATION, APRIL – 2026

Second Semester

Nutrition and Dietetics

DIETETICS IN LIFESTYLE DISEASES

(CBCS – 2025 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. Stress is best defined as: (CO1, K1)

   (a) A pleasant emotional response

   (b) A physiological and psychological response to perceived demands

   (c) A genetic disorder

   (d) A temporary mood fluctuation

2. Which dietary factor primarily aggravates stress by stimulating the nervous system? (CO1, K1)

   (a) Complex carbohydrates

   (b) Omega-3 fatty acids

   (c) Excess caffeine intake

   (d) Magnesium-rich foods

3. Regulation of body weight is mainly controlled by: (CO2, K1)

(a) Liver and pancreas

(b) Hypothalamus and adipose tissue signals

(c) Kidney and adrenal glands

(d) Skeletal muscles alone

4. _____ is the MOST appropriate dietary approach for sustainable weight reduction. (CO2, K1)

(a) Very-low-calorie crash diets

(b) High-protein, zero-carbohydrate diets

(c) Balanced hypocaloric diet with lifestyle modification

(d) Exclusive liquid diets

5. Gestational diabetes mellitus is best defined as: (CO3, K1)

(a) Diabetes occurring only in childhood

(b) Diabetes developing during pregnancy

(c) Permanent insulin-dependent diabetes

(d) Diabetes due to pancreatic cancer

6. The primary role of artificial sweeteners in diabetic diets is to: (CO3, K1)

(a) Increase insulin secretion

(b) Provide calories without glucose rise

(c) Improve taste without raising blood glucose

(d) Replace dietary fiber

7. Atherosclerosis primarily results from: (CO4, K1)

(a) Acute infection of arteries

(b) Fat deposition and plaque formation in arterial walls

(c) Vitamin deficiency

(d) Electrolyte imbalance

8. Which dietary modification is MOST effective in managing hypertension? (CO4, K1)

(a) High sodium intake

(b) Increased saturated fat intake

(c) DASH diet with reduced sodium

(d) High refined sugar intake

9. Cancer is caused by: (CO5, K1)

(a) Controlled cell growth

(b) Cell mutation

(c) Regulated cell differentiation

(d) Programmed cell death

10. Which nutritional strategy during cancer therapy helps to manage energy metabolism? (CO5, K1)

(a) Severe calorie restriction

(b) High-energy, high-protein diet with symptom-based modification

(c) Fasting during chemotherapy

(d) Exclusive fat-based diets

Part B (5 × 5 = 25)

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

11. (a) Explain psychosomatic disorders due to stress. (CO1, K2)

Or

(b) Discuss the effect of stress on non-vital organs. (CO1, K2)

12. (a) Explain the components of body weight and its regulation. (CO2, K2)

Or

(b) Discuss the complications of obesity. (CO2, K2)

13. (a) Evaluate the complications of gestational diabetes and diabetes insipidus. (CO3, K3)

Or

(b) Explain the role of artificial sweeteners in diabetic management. (CO3, K3)

14. (a) Explain the complications of hypertension.(CO4, K3)

Or

(b) Explain dyslipidemia and hypercholesterolemia. (CO4, K3)

15. (a) Discuss immune therapy in cancer. (CO5, K3)

Or

(b) Explain cachexia with reference to energy and substrate metabolism. (CO5, K3)

Part C (5 × 8 = 40)

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

16. (a) Analyze the impact of stress on brain and cardiovascular system. (CO1, K4)

Or

(b) Evaluate the role of stress-enhancing and anti-stress foods in stress-related disorders. (CO1, K4)

17. (a) Analyze underweight with respect to its causes and complications. (CO2, K5)

Or

(b) Critically evaluate weight reduction techniques – surgical and lifestyle modification approaches. (CO2, K5)

18. (a) Analyze prevalence and lifestyle management strategies for gestational diabetes. (CO3, K4)

Or

(b) Classify diabetes mellitus and explain its causes and symptoms. (CO3, K4)

19. (a) Explain the progression and clinical findings of atherosclerosis. (CO4, K5)

Or

(b) Describe the nutritional risk factors associated with cardiovascular diseases. (CO4, K5)

20. (a) Analyze the role of nutrition in cancer prevention and management. (CO5, K5)

Or

(b) Design a therapeutic diet for musculo-skeletal disorders and justify the dietary modifications. (CO5, K5)

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R4642

Sub. Code
25MND2C4

M.Sc. DEGREE EXAMINATION, APRIL – 2026

Second Semester

Nutrition and Dietetics

FOOD SAFETY AND QUALITY CONTROL

(CBCS – 2025 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 a fundamental principle of quality control. (CO1, K1)
   (a) Packaging products in attractive designs
   (b) Inspection at every stage of production
   (c) Using the cheapest raw materials
   (d) Marketing products aggressively

2. A recall is usually initiated when ———. (CO1, K1)
   (a) Contamination with pathogens or allergens is detected
   (b) Nutrients content is below standard
   (c) Packaging design changes
   (d) The company wants to improve brand image

3. ——— is the international organization responsible for food standards globally. (CO2, K1)

(a) FSSAI

(b) ISO

(c) APEDA

(d) Codex Alimentarius Commission

4. Food contamination that occurs due to improper handling is called as ———. (CO2, K2)

(a) Physical contamination

(b) Chemical contamination

(c) Cross contamination

(d) Biological Contamination

5. ——— ppm is the permissible limit of benzoic acid in jams and jellies. (CO3, K1)

(a) 1000

(b) 200

(c) 400

(d) 2000

6. ——— adulterant is commonly used in mustard oil. (CO3, K1)

(a) Argemone oil

(b) Castor oil

(c) Palm oil

(d) Coconut oil

7. ——— organization developed the HACCP system. (CO4, K1)

(a) WHO

(b) FAO

(c) NASA

(d) FSSAI

8. SSOP stands for ———. (CO4, K1)

(a) Standard sanitation operating policy

(b) Sanitary standard operating procedures

(c) Systematic safety operating practices

(d) Standard Sanitary operating procedures

9. ———— foods are regulated under the Essential Commodities Act. (CO5, K1)

(a) Spices

(b) Beverages

(c) Cosmetics

(d) Cereals & Pulses

10. ISO 22000 is related to ———— . (CO5, K1)

(a) Food safety management system

(b) Quality management of food products

(c) Nutritional labeling standards

(d) Preservation techniques

Part B (5 × 5 = 25)

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

11. (a) Write about the purpose and functions of food quality control. (CO1, K2)

Or

(b) Explain the components of food traceability. (CO1, K2)

12. (a) Summarize the important features of prevention of food adulteration act. (CO2, K4)

Or

(b) Write any five hazardous microorganisms and parasites with their commonly affected foods. (CO2,K4)

13. (a) Explain in detail about the adverse health effects of non-permitted colours. (CO3, K5)

Or

(b) Write about the needs for the detection of food adulteration. (CO3, K5)

14. (a) Summarize Codex Alimentarius in food safety. (CO4, K3)

Or

(b) Give a short note on sanitary and phyto-sanitary measures. (CO4, K3)

15. (a) Define essential commodities act and write its aim and objectives. (CO5, K6)

Or

(b) Discuss about good hygienic practices. (CO5, K6)

Part C (5 × 8 = 40)

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

16. (a) Describe the food quality control and quality assurance? (CO1, K2)

Or

(b) Write about food Safety and Standards Acts in food quality control. (CO1, K2)

17. (a) Explain the need and importance of food safety in food industries. (CO2, K3)

Or

(b) Write in detail about the allergen contamination in food safety. (CO2, K3)

18. (a) Elucidate the general principles for the use of food additives (CO3, K4)

Or

(b) Summarize the classification of food adulterants. (CO3, K4)

19. (a) Describe the principles and guidelines for applications of HACCP. (CO4, K5)

Or

(b) Write in detail about the main elements of sanitation standard operation procedure. (CO4, K5)

20. (a) Elaborate the functions of Bureau of Indian Standards. (CO5, K6)

Or

(b) Briefly discuss the world Health Organisation. (CO5, K6)

R4643

Sub. Code
25MND2E1

M.Sc. DEGREE EXAMINATION, APRIL – 2026

Second Semester

Nutrition and Dietetics

Elective : SPORTS NUTRITION

(CBCS – 2025 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. Health is defined as _____. (CO1, K1)

   (a) Absence of disease

   (b) Complete physical, mental and social well-being

   (c) Physical fitness only

   (d) Mental stability

2. Aerobic exercise primarily improves _____. (CO1, K2)

   (a) Muscle strength

   (b) Flexibility

   (c) Cardiovascular endurance

   (d) Reaction time

3. The largest component of total energy expenditure is _____. (CO2, K1)

(a) Resting metabolic rate

(b) Exercise energy expenditure

(c) Thermic effect of food

(d) NEAT

4. Increased training intensity mainly increases the utilization of _____. (CO2, K2)

(a) Fat

(b) Protein

(c) Carbohydrate

(d) Fiber

5. Protein is mainly required for _____. (CO3, K1)

(a) Energy storage

(b) Muscle repair and growth

(c) Hydration

(d) Fat oxidation

6. Dehydration primarily affects _____. (CO3, K2)

(a) Digestive system

(b) Cardiovascular system

(c) Skeletal system

(d) Nervous system

7. Vitamin B-complex mainly helps in _____. (CO4, K1)

(a) Energy metabolism

(b) Bone development

(c) Antioxidant activity

(d) Immune response

8. Exercise-induced oxidative stress is caused by _____. (CO4, K2)

(a) Protein deficiency

(b) Free radical formation

(c) Electrolyte loss

(d) Dehydration

9. The Female Athlete Triad includes _____. (CO5, K1)

(a) eating disorder, amenorrhea, osteoporosis

(b) Obesity, anaemia, osteoporosis

(c) Stress, fatigue, injury

(d) Dehydration, cramps, fractures

10. Keto diet is characterized by _____. (CO5, K2)

(a) High carbohydrate intake

(b) High fibre intake

(c) High protein intake

(d) High fat and low carbohydrate intake

Part B (5 × 5 = 25)

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

11. (a) Analyze the concept of health and describe its four dimensions with examples. (CO1, K4)

Or

(b) Differentiate aerobic and anaerobic exercises. (CO1, K3)

12. (a) Explain the contribution of resting metabolic rate towards energy expenditure. (CO2, K4)

Or

(b) Explain the effect of training intensity on carbohydrate utilization during exercise. (CO2, K3)

13. (a) Assess the role of protein in body building and sports performance. (CO3, K5)

Or

(b) Differentiate isotonic, hypotonic and hypertonic solutions. (CO3, K3)

14. (a) Analyze the role of minerals in exercise metabolism. (CO4, K4)

Or

(b) Outline exercise-induced oxidative stress and the role of antioxidants. (CO4, K3)

15. (a) Assess the importance of weight management in athletes. (CO5, K5)

Or

(b) Evaluate the impact of doping on athlete health and sports performance. (CO5, K5)

Part C (5 × 8 = 40)

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

16. (a) Evaluate the relationship between physical fitness, mental health and nutrition in achieving overall health. (CO1, K5)

Or

(b) Judge the impact of regular physical exercise on the prevention of lifestyle-related diseases. (CO1, K5)

17. (a) Breakdown the importance of carbohydrate timing and quantity in enhancing endurance sports performance. (CO2, K4)

Or

(b) Explain the components of total energy expenditure in athletes. (CO2, K4)

18. (a) Outline the importance of water and electrolyte balance during exercise. (CO3, K4)

Or

(b) Analyze the physiological effects of dehydration on cardiovascular function and muscle metabolism. (CO3, K4)

19. (a) Discuss the role of micronutrients in preventing exercise-induced fatigue and improving recovery. (CO4, K5)

Or

(b) Propose a micronutrient supplementation strategy to support training and recovery in athletes. (CO4, K5)

20. (a) Illustrate the role of nutrition and exercise in achieving optimal body composition in athletes. (CO5, K5)

Or

(b) Elaborate the concept of Female athlete Triad. (CO5, K5)

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R4644

Sub. Code
25MND2S1

M.Sc. DEGREE EXAMINATION, APRIL – 2026

Second Semester

Nutrition and Dietetics

COMPUTER APPLICATION IN NUTRITIONAL SCIENCE

(CBCS – 2025 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

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

1. Which of the following is an example of an operating system? (CO1, K1)

   (a) MS Word (b) Windows

   (c) HTML (d) Oracle

2. LAN stands for _____. (CO1, K2)

   (a) Large Area Network

   (b) Local Area Network

   (c) Long Area Network

   (d) Logical Area Network

3. Which feature is used to summarize large amounts of data? (CO2, K1)

(a) Chart (b) Table

(c) Pivot Table (d) Formula

4. The default file extension of MS Word is _____. (CO2, K2)

(a) .txt (b) .doc

(c) .docx (d) .pdf

5. Which shortcut key starts the slide show from the beginning? (CO3, K1)

(a) F2 (b) F5

(c) Shift+F5 (d) Ctrl+F5

6. The SQL command used to retrieve data is _____. (CO3, K2)

(a) INSERT

(b) UPDATE

(c) SELECT

(d) DELETE

7. Which device is used to store large multimedia files? (CO4, K1)

(a) RAM (b) Cache

(c) Hard disk (d) Register

8. Multimedia refers to the integration of _____.

(CO4, K2)

(a) Text only

(b) Audio only

(c) Video only

(d) Text, audio, images, animation and video

9. Which nutrient provides 9 kcal per gram? (CO5, K1)

(a) Protein (b) Carbohydrate

(c) Fat (d) Vitamin

10. Nutrition education primarily aims to _____.

(CO5, K2)

(a) Prescribe medicines

(b) Improve food habits and health

(c) Increase food production

(d) Diagnose diseases

Part B (5 × 5 = 25)

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

11. (a) Differentiate the functions of RAM, ROM and hard disk in a personal computer with examples.

(CO1, K3)

Or

(b) Describe the commonly used HTML tags with examples. (CO1, K3)

12. (a) How would you create a worksheet and enter data to maintain student marks in a spreadsheet? (CO2, K4)

Or

(b) Explain the process of formatting a document with respect to font, alignment, spacing and margins. (CO2, K4)

13. (a) Evaluate the importance of a primary key in avoiding patient data duplication or confusion in a clinical trial database. (CO3, K5)

Or

(b) Illustrate the Slide Master layout that includes a fixed "Confidential" watermark on every slide. (CO3, K5)

14. (a) Elaborate the usage of multimedia applications in the entertainment industry. (CO4, K5)

Or

(b) Describe the process of applying video clips, transitions and effects in video editing. (CO4, K5)

15. (a) Write about the methods to apply nutrition software for nutrient analysis to assess dietary intake of patients. (CO5, K6)

Or

(b) Explain the methods used to calculate nutrients for a 24 hours dietary recall with the help of food composition tables. (CO5, K6)

Part C (5 × 8 = 40)

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

16. (a) Examine how the ALU, Control Unit, and registers work together when a user performs arithmetic operations on a computer. (CO1, K4)

Or

(b) Explain how a computer network (LAN/WAN) can be designed to meet the requirements. (CO1, K4)

17. (a) Summarize the steps involved in formatting a resume using a word processor. Include text alignment, bullet lists, font styles, spacing and section headings. (CO2, K4)

Or

(b) Elaborate the process of creating a table, formatting it, and generating an appropriate chart to represent the data. (CO2, K4)

18. (a) Explain how reports can be designed to present structured and printable information. (CO3, K5)

Or

(b) Outline how queries are created and utilized to retrieve, update and aggregate data. (CO3, K5)

19. (a) Describe the different categories of multimedia authoring tools and illustrate the use of one tool in developing an interactive application. (CO4, K5)

Or

(b) Distinguish between the functions of the Central Processing Unit (CPU) and RAM in a multimedia system. (CO4, K5)

20. (a) Examine how statistical software is used to guide decision-making in food and nutrition research. (CO5, K6)

Or

(b) Discuss how nutrition education and counselling can be applied to encourage healthier eating patterns and lifestyle modifications. (CO5, K6)

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