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Department of Allied Health Sciences
Brainware University
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BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Sc.(OTT)-2023/B.Sc.(CCT)-2023/B.Sc.(CCT)-2024/B.Sc.
(OTT)-2024/B.Sc.(CCT)-2025/B.Sc.(OTT)-2025

Course Name – Human Body and Nutrition

Course Code - GEFN201

(Semester II)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

(i) Which of the following is a function of the pancreas in digestion?

- | | |
|----------------------------|------------------------------------|
| a) Production of bile | b) Production of digestive enzymes |
| c) Absorption of nutrients | d) Storage of food |

(ii) What is the main source of proteins in the diet?

- | | |
|--|---------------|
| a) Fruits | b) Vegetables |
| c) Meat, fish, poultry, dairy, and plant-based sources | d) Grains |

(iii) What is the general formula for carbohydrates?

- | | |
|----------------|-----------------------|
| a) $(CH_2O)_n$ | b) $NH_2(CH_2)_nCOOH$ |
| c) $R-COOH$ | d) No set formula |

(iv) Which vitamin helps in blood clotting?

- | | |
|--------------|---------------|
| a) Vitamin A | b) Vitamin B6 |
| c) Vitamin K | d) Vitamin E |

(v) Select vitamin deficiency from following that is likely the cause of rickets in children.

- | | |
|--------------|----------------|
| a) Vitamin C | b) Vitamin B12 |
| c) Vitamin D | d) Vitamin K |

(vi) What is the primary function of iodine in the body?

- | | |
|-------------------------------|--------------------|
| a) Bone formation | b) Muscle function |
| c) Thyroid hormone production | d) Immune response |

(vii) Long periods of parenteral nutrition is not recommended, Why? Select the correct option.

- | | |
|---|-----------------------------------|
| a) it increases the toxicity of blood | b) it puts pressure on the kidney |
| c) it causes the GI track to degenerate | d) it puts pressure on the heart |

(viii) Which of the following is a type of enteral feeding tube that is inserted through the nose and passed down the esophagus into the stomach?

- a) Gastrostomy tube
 - b) Jejunostomy tube
 - c) Nasogastric tube
 - d) Percutaneous endoscopic gastrostomy tube
- (ix) Someone drinks very little water throughout the day but consumes a lot of fruits and vegetables with high water content. Choose the effect in their water balance?
- a) They are likely dehydrated due to low water intake.
 - b) The water from fruits and vegetables may contribute to adequate hydration.
 - c) Water balance is solely dependent on drinking fluids.
 - d) Solid foods do not play a role in water balance.
- (x) Select the following is NOT typically considered a nutraceutical.
- a) Vitamins
 - b) Minerals
 - c) Prescription medications
 - d) Dietary fiber
- (xi) While nutraceuticals offer potential health benefits, they are not regulated as strictly as medications. Write a potential drawback of this.
- a) Nutraceuticals are always safe and have no side effects.
 - b) The quality and effectiveness of nutraceuticals may vary.
 - c) All nutraceuticals require a prescription for purchase.
 - d) They work just as quickly as medications.
- (xii) Select the correct statement demonstrating an understanding of the relationship between probiotics and gastrointestinal health.
- a) Probiotics have no impact on gastrointestinal health.
 - b) Probiotics can worsen gastrointestinal problems.
 - c) Probiotics support a healthy balance of bacteria in the gut, which is beneficial for digestion and overall gut health.
 - d) Probiotics only work in individuals with no pre-existing gastrointestinal issues.
- (xiii) What is the primary function of carbohydrates?
- a) Providing structure to cells
 - b) Providing quick energy to the body
 - c) Aiding in muscle growth
 - d) Aiding in the absorption of vitamins
- (xiv) Which enzyme is primarily responsible for breaking down fats in the small intestine?
- a) Pepsin
 - b) Amylase
 - c) Lipase
 - d) Trypsin
- (xv) Which monosaccharide is absorbed into the bloodstream via facilitated diffusion in the small intestine?
- a) Lactose
 - b) Fructose
 - c) Galactose
 - d) Maltose

Group-B

(Short Answer Type Questions)

 $3 \times 5 = 15$

2. Discuss the role of vitamin K in the human body. (3)
3. Define the melting point and solidification point of fats. (3)
4. Recall the smoking point and cracking of lipids. (3)
5. Differentiate the roles of PUFA and MUFA in terms of structure and promoting good health. (3)
6. Explain the role of the gallbladder in the digestion process. (3)

OR

Evaluate the contribution of the liver in maintaining blood sugar levels in human. (3)

Group-C

(Long Answer Type Questions)

$$5 \times 6 = 30$$

7. Explain "dietary fiber" and differentiate it from other dietary components like carbohydrates. (5)
8. Differentiate the digestive processes of soluble and insoluble fibre. (5)
9. Determine the functions and health benefits of magnesium in human body. (5)

10. Determine the role of sodium and effect of excess sodium intake in human body. (5)
11. Interpret the functions and deficiency symptoms of phosphorous. (5)
12. Evaluate the journey of a molecule of starch from a slice of bread through the digestive system and explain the specific enzymes involved in breaking down starch at each stage and the resulting products. (5)

OR

Discuss elaborately the digestion of proteins in the stomach and the small intestine. (5)

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