



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Sc.(FND)-Hons-2023

Course Name – Food Science

Course Code - BFD10101

(Semester I)

Library
Brainware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125

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 monosaccharide is a component of lactose (milk sugar) ?
- a) Glucose
b) Fructose
c) Galactose
d) Sucrose
- (ii) Which of the following conditions can result from a deficiency of Vitamin A ?
- a) Rickets
b) Scurvy
c) Pellagra
d) Night blindness
- (iii) Which carbohydrate is commonly found in milk and dairy products ?
- a) Fructose
b) Maltose
c) Lactose
d) Sucrose
- (iv) Determine the reagent used to create Oxime from glucose .
- a) Chromic Acid
b) Hydroxyl Amine
c) Sulphuric Acid
d) Tollen's reagent
- (v) Name the vitamin can help enhance the absorption of non-heme iron from plant-based foods.
- a) Vitamin A
b) Vitamin B12
c) Vitamin D
d) Vitamin C
- (vi) Select the statement for Amino Acid Score of a protein.
- a) A measure of the protein's taste and flavor
b) A measure of the protein's digestibility in the body
c) A measure of the protein's overall nutritional quality based on its essential amino acid profile
d) A measure of the protein's caloric content
- (vii) Select the role that antioxidants play in preventing rancidity?
- a) They neutralize free radicals and inhibit oxidation
b) They promote the breakdown of fats and oils

- c) They stimulate the growth of microorganisms
- d) They enhance enzymatic activity
- (viii) Select the organ that plays a central role in regulating water balance by adjusting the volume and concentration of urine .
- a) Liver
- b) Kidneys
- c) Heart
- d) Stomach
- (ix) Select the main function of dietary fiber in the digestive system .
- a) To provide energy
- b) To aid in protein digestion
- c) To support the absorption of vitamins
- d) To promote regular bowel movements
- (x) What is the condition caused by severe Vitamin D deficiency, characterized by soft and weakened bones?
- a) Rickets
- b) Scurvy
- c) Beriberi
- d) Xerophthalmia
- (xi) Which vitamin is synthesized in the skin upon exposure to sunlight?
- a) Vitamin C
- b) Vitamin D
- c) Vitamin B12
- d) Vitamin A
- (xii) Select the active coenzyme form of Vitamin B2 .
- a) Riboflavin triphosphate (FTP)
- b) Riboflavin tetraphosphate (FTPP)
- c) Riboflavin mononucleotide (FMN)
- d) Riboflavin monophosphate
- (xiii) Which condition is associated with a severe deficiency of vitamin D in children ?
- a) Scurvy
- b) Beriberi
- c) Rickets
- d) Anaemia
- (xiv) Select the active coenzyme form of Vitamin B1.
- a) Thiamine disulfide (TDS)
- b) Thiamine hydrochloride (THC)
- c) Thiamine pyrophosphate (TPP)
- d) Thiamine monophosphate (TMP)
- (xv) HDL is often referred to as: ?
- a) "Bad" Cholesterol
- b) "Good" Cholesterol
- c) Triglycerides
- d) VLDL

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define Saponification Value . (3)
3. Discuss "Hyponatremia" (3)
4. Explain "Zwitter-ion". (3)
5. Write down the WHO classification of Xerophthalmia. (3)
6. Explain the common sources of dietary fiber, and what is the basic composition of dietary fiber? (3)

OR

Illustrate why is drinking water essential for human health? What percentage of the human body is composed of water, on average? How does the body regulate water balance to prevent dehydration or overhydration? (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Illustrate the "Osazone reaction" of carbohydrate. (5)
8. Describe the bio-chemical role of Vitamin C. (5)
9. Explain the physiological relationship between calcium and vitamin D. (5)
10. Illustrate the bio-chemical role of thiamine. (5)
11. How is iron absorbed in our body? (5)

12. Distinguish the types and functions of dietary fiber.

(5)

OR

Justify the interrelationship between Calcium and parathormone.

(5)
