Total No. of Questions: 6 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Agriculture

End Sem Examination May-2024S

AG3CO52 Principles of Food Science & Nutrition

Programme: B.Sc. (Hons.) Branch/Specialisation: Agriculture

Duration: 3 Hrs. **Maximum Marks: 50**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. A substance needed by the body for growth, energy, repair and maintenance- **1**

(a) Nutrient (b) Carbohydrate
(c) Fat (d) Calorie

ii. Which of the following nutrient comes in category of protective nutrients? **1**

(a) Carbohydrates (b) Fats
(c) Proteins (d) Vitamins & minerals

iii. The USDA daily food guide calls for eating _____ servings of Meat, Fish and Poultry group. **1**

(a) 0-1 Servings in a day (b) 2-3 Servings in a day
(c) 3-4 Servings in a week (d) 1-2 Servings in a week

iv. How many shelves are there in food pyramid? **1**

(a) 2 (b) 3 (c) 5 (d) 10

v. Recently a compound Sulforaphane has been discovered to offer protection against cancer. In which of the following it is found? **1**

(a) Milk (b) Fish (c) Tea (d) Broccoli

vi. On the body weight basis the protein requirement is higher for- **1**

(a) Women (b) Man (c) Children (d) Adult

vii. Which of the following are the examples of Monosaccharides? **1**

(a) Glucose, galactose, and fructose
(b) Galactose, maltose
(c) Cellulose, starch, and glycogen
(d) Glucose and cellulose

viii. Which of the following contains lauric acid which is used to treat certain infections and also in the manufacturing of soaps? **1**

(a) Coconut oil (b) Olive oil
(c) Mustard oil (d) Butter

ix. Starch($(C_6H_{10}O_5)_n$) is broken down to form glucose($C_6H_{12}O_6$) units when hydrolysed by- **1**

(a) Alkaline base (b) Acidic base
(c) Neutral base (d) Salty base

x. This vitamin is needed to prevent a birth defect called Spina Bifida. **1**

(a) Folate (b) Vitamin A (c) Vitamin D (d) Vitamin C

Q.2 i. Define food science. **1**

ii. What are the physical properties of food? **2**

iii. Write different functions of food. **5**

OR iv. Explain food group system. **5**

Q.3 i. Define macro & micro nutrients. **1**

ii. Discuss about the chemical properties of food. **3**

iii. Explain importance of water in human body. **4**

OR iv. Write down the classification and important function of carbohydrate. **4**

Q.4 i. Write definition of food microbiology. **2**

ii. Explain the two most common micro-organisms found in food. Also enlist the causing agents to spoil the fresh food. **6**

OR iii. Define fermented food with examples. Write down the method of processing of any fermented food. **6**

Q.5 i. Explain food processing. **2**

ii. Define food preservatives using suitable examples. **2**

iii. What do you understand by malnutrition (over and under)? **4**

OR iv. Write principles and methods of food processing and preservation. **4**

Q.6 Attempt any two:

i. Write in brief about food pyramid and food plate (USDA). **4**

ii. Define balanced diet. Write the dietary guidelines of ICMR to ensure a balance diet. **4**

iii. Highlight the new trends in food science and nutrition. **4**

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Marking Scheme
AG3CO52- Principles of Food Science and Nutrition

1	i)	a) Nutrient	1
	ii)	b) Vitamins & minerals	1
	iii)	b) 2-3 Servings in a day	1
	iv)	c) 5	1
	v)	d) Broccoli	1
	vi)	c) children	1
	vii)	a) coconut	1
	viii)	a) Glucose, galactose, and fructose	1
	ix)	b) acidic base	1
	x)	a) Folate	1

Q.2	i.	Definition	1 Mark	1
	ii.	Physical properties	2 Marks	2
	iii.	Different functions of food	5 Marks	5
OR	iv.	Food group system	5 Marks	5
Q.3	i.	Macro Micro	0.5 Mark 0.5 Mark	1
	ii.	Chemical properties of food	3 Marks	3
	iii.	Importance of water in human body	4 Marks	4
OR	iv.	Classification Important function	2 Marks 2 Marks	4

Q.4	i.	Definition	2 Marks	2
	ii.	Micro-organism Spoil agent	2 Marks 4 Marks	6
OR	iii.	Definition Example Method of processing	1 Mark 1 Mark 4 Marks	6
Q.5	i.	Definition	2 Marks	2
	ii.	Definition Example	1 Mark 1 Mark	2
	iii.	Over nutrition Under nutrition	2 Marks 2 Marks	4
OR	iv.	Principles Methods	1 Mark 3 Marks	4
Q.6				
	i.	Food pyramid Food plate	2 Marks 2 Marks	4
	ii.	Definition Guidelines	1 Mark 3 Marks	4
	iii.	New methods of food science	4 Marks	4