

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2023-24)

M.A./ M.Com./ M.Sc. DEGREE EXAMINATION, NOVEMBER 2024
THIRD SEMESTER

COURSE : ELECTIVE

PAPER : FOOD CHEMISTRY AND NUTRITION

SUBJECT CODE : 23CH/PE/FN23

TIME : 3 HOURS

MAX.MARKS :100

Q. No.	SECTION A (10 x 1 =10 mark) Answer ALL the questions	CO	KL
1.	The Vitamin which fights against infections is _____ (a) Vitamin A (b) Vitamin C (c) Vitamin D (d) Vitamin B ₁₂	1	1
2.	Essential fatty acids are important because the body: (a) Can synthesize them from carbohydrates (b) Cannot synthesize them and must obtain them from the diet (c) Can produce them in response to exercise (d) Uses them exclusively for digestion	1	1
3.	The element with 0 calories is _____ (a) Sugar (b) carbohydrate (c) fat (d) water	1	1
4.	Arrange the given food items based on the serving quantity in a food pyramid i) Broccoli ii) Cheese iii) Chips iv) Pasta (a) i > ii > iii > iv (b) ii > iv > i > iii (c) iv > i > ii > iii (d) iii > ii > i > iv		1
5.	Lactose is a _____ (a) Monosaccharide (b) Disaccharide (c) Oligosaccharide (d) Polysaccharide	1	1
6.	Which of the following is a fat-soluble vitamin? (a) Vitamin D (b) Vitamin B ₁₂ (c) Vitamin C (d) Vitamin B ₆	1	1
7.	Among the following which food item produces high calories (a) idli (b) rice (c) burger (d) water	1	1
8.	The BMI value of 26.8 Kg/m ² is considered as (a) Underweight (b) Normal weight (c) Overweight (d) Obese	1	1
9.	Which vitamin is crucial for the absorption of calcium and phosphorus in the body? (a) Vitamin B ₁₂ (b) Vitamin D (c) Vitamin A (d) Vitamin K	1	1
10.	High Sodium intake leads to (a) Scurvy (b) Anemia (c) Low Blood pressure (d) High Blood pressure	1	1

Q. No.	SECTION B (10 x 1=10 mark) Answer ALL the questions	CO	KL
11.	The chemical process by which the body breaks down food to release energy is _____	2	2
12.	The macronutrient which can digest easily is _____.	2	2
13.	The simple protein responsible for hair growth is _____.	2	2

14.	Deficiency of _____ leads to anaemia.	2	2
15	Fibers have _____ glycemic index.	2	2
16.	BMR is usually _____ during fever.	2	2
17.	Unit for the amount of energy released when nutrients are broken down is _____.	2	2
18.	Histidine is a _____ amino acid.	2	2
19.	The monosaccharide which occurs naturally in fruits is _____.	2	2
20.	Saccharin is _____ times sweeter than normal sugar.	2	2

Q. No.	SECTION C (4 x 6 = 24 marks) Answer any FOUR questions	CO	KL
21.	Illustrate the role of Vitamin A and Vitamin C in our body.	3	3
22.	Apply the concept of the food pyramid and give some recommendations for weight management.	3	3
23.	Highlight the importance of water in a diet	3	3
24.	Explain how iodine and calcium are important for the body and give their sources from daily diet	3	3
25.	Explain how food additives like preservatives and colouring agents are used in foods, and provide examples of common foods that contain these additives.	3	3

Q. No.	SECTION D (4 x 8 = 32 marks) Answer any FOUR questions	CO	KL
26.	Distinguish macronutrients and micronutrients with suitable examples.	4	4
27.	Compare different cooking methods concerning loss of vitamins and minerals.	4	4
28.	List out the health risks of obesity	4	4
29.	Differentiate Marasmus and Kwashiorkor.	4	4
30.	How is BMR calculated? Give a brief description of the significance of BMR.	4	4

Q. No.	SECTION E (2 x 12 = 24 marks) Answer any ONE subdivision from each question	CO	KL
31.	a) Examine the role of global agencies such as WHO and FAO in combating Malnutrition.	5	5
	(or)		
	b) Evaluate the impact of fat-soluble vitamin deficiencies on health and compare the effectiveness of different dietary sources in preventing these deficiencies.	5	5
32.	a) Outline the classification of carbohydrates and discuss their storage.	5	5
	(or)		
	b) Enumerate the nutritional classification and recommended Dietary allowance of proteins	5	5