22NDP102N/ 22NDP102

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(First Semester)

Branch – **FOODS & NUTRITION**

ADVANCED NUTRITION - I

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is a unit of energy? a) Joule b) Newton c) Watt d) Volt	K1	CO1
	2	How do the kidneys primarily regulate pH? a) By releasing bicarbonate ions into the bloodstream b) By secreting excess potassium ions c) By increasing blood glucose levels d) By inhibiting the release of aldosterone	K2	CO2
2	3	What is the primary purpose of glycogenolysis? a) Synthesis of glycogen b) Storage of glucose c) Breakdown of glycogen into glucose d) Formation of amino acids	K1	CO1
	4	How is the maintenance of blood glucose levels primarily achieved in the body? a) Through the release of insulin by the pancreas b) By the secretion of glucagon by the liver c) By increasing dietary fiber intake d) Through the production of red blood cells in the bone marrow	K2	CO2
3	5	Which of the following molecules is primarily responsible for the formation of ketone bodies in the body? a) Glucose b) Fatty acids c) Amino acids d) Insulin	K1	CO1
	6	Which organ primarily regulates lipid metabolism in the body? a) Heart b) Lungs c) Kidneys d) Liver	K2	CO2
4	7	What is the role of glutamine in the human body? a) Energy storage b) Blood clotting c) Immune system support d) Muscle contraction	K1	CO1
	8	Which organ in the human body plays a crucial role in fluid balance and electrolyte regulation? a) Liver b) Kidney c) Heart d) Lungs	K2	CO2
5	9	During the fasting state, which molecule becomes the primary source of energy for the body? a) Glucose b) Amino acids c) Triglycerides d) Glycogen	K1	CO1
	10	How does the body primarily regulate its temperature to maintain homeostasis? a) Through the release of insulin b) By increasing blood pressure c) By constricting blood vessels d) Through sweating and vasodilation	K2	CO2

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	List the proteins and its functions at cellular level.	K2	CO1
		(OR)		
	11.b.	Explain reduction potentials in biological energy.		
2	12.a.	Define Functional Fiber and give example.	K2	CO2
		(OR)		
	12.b.	Determine the role of fiber in disease prevention and management.		
3	13.a.	Demonstrate the biological importance of lipid.	K2	CO1
		(OR)		
	13.b.	Classify the types of Lipoproteins and explain them.		
4	14.a.	Give a note on Immunoprotects.	K2	CO2
		(OR)		
	14.b.	Classify amino acids with examples.		
5	15.a.	What is thermic effect of food and explain them?	K2	CO1
		(OR)		
	15.b.	Explain the factors influencing resting rate expenditure.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Explain in detail about the role of high-energy phosphate in energy storage.	K5	CO4
2	17	Discuss about the regulatory effects of NADH:NAD Ratio.	K6	CO5
3	18	Elaborate the steps involved in the synthesis of triacylglycerols.	K6	CO3
4	19	Elucidate on the structure of protein.	K4	CO2
5	20	Elaborate on the regulation of body composition.	K5	CO5

Z-Z-Z END