


Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course: Nutritional Biochemistry
Program: M.Sc. (N&D)
Course Code: HSND7001

Semester: I
Time: 03 hrs.
Max. Marks: 100

Instructions: Read question carefully.

SECTION A

S. No.	MCQ's /Fill in the blanks/ T&F (1.5 marks each)	30 Marks	CO
1	Maltose is formed by – A) 2 glucose units B) Fructose and galactose C) 2 Fructose units D) None of the above	1.5	CO1
2	Linolenic acid is – A) An essential amino acid B) An essential fatty acid C) An type of cholesterol D) None of the above	1.5	CO1
3	Recommended protein intake for adults is _____g/kg bodyweight/day	1.5	CO1
4	Active form of Vitamin D is known as _____	1.5	CO1
5	Nucleoproteins are made of _____ and _____	1.5	CO1
6	In stomach, nucleoproteins are denatured by – A) Proteolytic enzyme B) HCL C) Lipolytic enzymes D) None of the above	1.5	CO1
7	End products of nucleic acid digestion nitrogen base, _____ and _____	1.5	CO1
8	Oxidation of carbohydrate, protein and fat occurs in _____	1.5	CO1
9	Glucose stored in liver as – A) Saccharides B) Glycogen C) Starch D) Polyols	1.5	CO1

10	Example of a disaccharide is – A) Starch B) Glucose C) Galactose D) None of the above	1.5	CO3
11	Bioavailability of animal protein is – A) 90% and above B) 70% C) 70% to 80% D) None of the above	1.5	CO3
12	A hormone is a chemical messenger that enable communication between_____and_____ throughout the body	1.5	CO4
13	Insulin is a – A) Lipophobic hormone B) Lipophilic hormone	1.5	CO1
14	RDA of dietary fiber in adults ranges from 25 to _____g/day	1.5	CO4
15	Peptide hormones are water soluble – A) True B) False	1.5	CO3

16	Gland that connects endocrine system and nervous system – A) Pituitary B) Hypothalamus C) Pineal gland D) None of the above	1.5	CO3
17	The gland that makes white blood cells and T-lymphocytes is known as _____	1.5	CO2
18	The organ that secretes enzymes and hormones both is _____	1.5	CO2
19	Sometimes the pituitary gland makes too much growth hormone and your bones get bigger. It usually affects your hands, feet, and face. It usually starts in middle age. This condition is known as _____	1.5	CO4
20	When glands that control reproduction don't work properly, some kids start puberty abnormally early -- around 8 in girls and 9 in boys. This condition is known as _____	1.5	CO3
SECTION B (5 marks each question)			
Q	Short Answer Type Question (5 marks each) Scan and Upload 4 questions 5 marks. Word limit (100-120)	20 Marks	CO
1	What is rancidity? Explains briefly	5	CO4

2	Briefly explains the deficiency syndrome of Vitamin A	2+3	CO1
3	Write about dietary sources of niacin, riboflavin and thiamine	2+2+1	CO2
4	Explain briefly the metabolism of nucleic acid	1+4	CO3
SECTION C 30 marks			
Q	Two case studies 15 marks each subsections	30 Marks	CO
1	When glucose undergoes metabolism, it produces energy. What is this metabolism called? Write the mechanism in detail.	5+10	CO1
2	A) For hormones to work on the target cells, they have to be transported to the target cells via a signal pathway. How does this signaling work explain in detail? B) There are glands that secret hormone for various functions. What are these glands called? Does pancreas has such glands? If yes, write about the secretion from pancreas's endocrine glands.	7+2+6	CO2
SECTION D 20 marks			
Q	Long Answer type Questions Scan and Upload (10 marks each) Word limit 200-250	20 Marks	CO
1	Write the classification of enzymes. Explain mechanism of enzyme reaction briefly	4+6	CO1
2	Explains the steps of Krebs cycle. Write briefly about glycogenesis and glycogenolysis.	4+3+3	CO2