

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**Online End Semester Examination, December 2020**

**Course: Nutrition Biochemistry and Metabolism**  
**Program: BSc FN&D**  
**Course Code: HSCC2001**

**Semester: III**  
**Time 03 hrs.**  
**Max. Marks: 100**

**SECTION A**

- 1. Each Question will carry 5 Marks**
- 2. Instruction: Complete the statement / Select the correct answer(s)**

S. No.	Question	CO
Q 1	A) The electron transport chain is a _____ that transfer electrons through a membrane within mitochondria B) The smallest monosaccharides, those with three carbon atoms, are _____	CO3
Q2	A) Hexoses and pentoses may each assume _____ or furanose forms. B) The fats and oils that occur in plants and animals consist largely of mixtures of _____	CO4
Q3	A) Lipids and proteins associate non covalently to form _____ which function in the blood plasma as transport Vehicles for triacylglycerols and cholesterol. B) _____ is most abundant in a subcutaneous layer and in the abdominal cavity.	CO3
Q4	A) _____ are chemically changed by the enzymatic reactions in which they participate initiate the reaction. B) The enzymatically inactive protein resulting from the removal of a holoenzyme's cofactor is referred to as an _____?	CO2
Q5	A) Male BMR Formula : $66.47 + (\text{___} \times \text{weight in kg}) + (5.003 \times \text{height in cm}) - (\times \text{age in years})$ B) The vitamins in the human diet that are coenzyme precursors are all _____?	CO4
Q6	A) The coenzyme forms of nicotinic acid are _____ B) Pantothenic acid (PA) is a _____ that is a component of coenzyme A	CO1

**SECTION B**

1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

Q 7	A) Brief about classification and structures of carbohydrate? B) Brief process of Electron transport chain ETC?	<b>CO1</b>
Q 8	A) Write down general characteristics of Nucleotides and Nucleosides? B) Factor affecting enzyme activity?	<b>CO3</b>
Q 9	A) Write biological oxidation reaction in brief? B) Illustrate classification of lipid?	<b>CO2</b>
Q 10	A) Classification of Enzymes? B) Role of Coenzymes in Enzymatic process?	<b>CO4</b>
Q 11	A) concept of SDA in energy production? B) Define phosphorylation and oxidation process in metabolism?	<b>CO1</b>

**Section C**

1. Each Question carries 20 Marks.
2. Instruction: Write long answer.

Q12	A) Illustrate metabolic process of Gluconeogenesis? B) flow diagram and structural process of Pentose phosphate pathway Or Analysis the step wise process of TCA cycle and ATP generation? Calculate total ATP production and draw step wise process of Glycolysis?	<b>CO2</b>
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