PARUL UNIVERSITY FACULTY OF PHARMACY

B. Pharm. Winter 2019 - 20 Examination Semester: 2 Date: 26/11/2019 Subject Code: BP203T Time: 2:00 pm to 5:00 pm **Subject Name: Biochemistry Total Marks: 75 Instructions:** 1. Figures to the right indicate maximum marks. 2. Make suitable assumptions wherever necessary. **Q.1 Multiple Choice Questions (MCQs)** (1 Mark Each) 1. A carbohydrate found in DNA is a) Ribose b) Deoxyribose c) Ribulose d) All of these 2. Example of an extracellular enzyme is a) Pancreatic lipase b) Cytochrome oxidase c) Hexokinase d) Lactate dehydrogenase 3. Two sugars which differ from one another only in configuration around a single carbon atom are termed as b) Anomers a) Stereoisomers d) Epimers c) Optical isomers 4. The most abundant free nucleotide in mammalian cells is a) ATP b) FAD c) NAD d) GTP 5. All the following are true about phenylketonuria except a) Deficiency of phenylalanine hydroxylase b) Decrease serotonin formation c) Increased urinary excretion of p-hydroxyphenyl d) Mental retardation pyruvic acid 6. Oxidation of which substance in the body yields the most calories? a) Glucose b) Lipids d) Vitamins c) Protein 7. Coenzyme A contains a vitamin which is a) Ascorbic acid b) Pantothenic acid c) Niacinamide d) Thiamin 8. Proteins which are responsible for defence mechanism are called a) Antibodies b) Antimycins d) Apoproteins c) Antimetabolites 9. How many ATPs are generated from metabolism of one glucose molecule under aerobic condition? a) 8 b) 38 d) 132 c) 1 10. Double helical structure model of the DNA was proposed by a) King and Wooten b) Pauling and Corey c) Peter Mitchell d) Watson and Crick 11. Fluoride contained in anticaries toothpaste acts by inhibiting ______ enzyme in glycolysis. a)Enolase b) Isomerase c) Pyruvate Kinase d) Phosohofructokinase 12. Essential fatty acid: a) Linoleic acid b) Linolenic acid c) Arachidonic acid d) All these 13. Side chains of all following amino acids contain aromatic rings except a) Tyrosine b) Tryptophan c) Alanine d) Phenyl alanine 14. The surface tension in intestinal lumen between fat droplets and aqueous medium is decreased by a) Acetic acid b) Bile Salts

(20)

	c) Conc. H_2SO_4	d) Bile pigment	
15.	The two nitrogen of the purine ring are contributed by		
	a) Ammonia	b) Aspartate	
	c) Glutamine	d) Carbamoyl phosphate	
16.	Non essential amino acids		
	a) Are not components of tissue proteins	b) Have no role in the metabolism	
	c) May be synthesized in the body from essential	d) May be synthesized in the body in diseased	
	amino acids	states	
17.	Enzymes catalyzing electron transport are present mainly in the		
	a) Lysosomes	b)) Ribosomes	
	c) Mitochondria	d) Endoplasmic reticulum	
18.	Gout is characterized by increased plasma levels of		
	a) Creatinine	b) Urea	
	c) Creatine	d) Uric acid	
19.	A pentose sugar is		
	a) Ribulose	b) Dihydroxyacetone	
	c) Glucose	d) Erythrose	
20.	α -D-glucose + 112° \rightarrow + 52.5° \leftarrow + 19° β -D-glucose for glucose above represents		
	a) Optical isomerism	b) Epimerisation	
	c) Mutarotation	d) D and L isomerism	
Q.2	.2 Long Answers (any 2 out of 3) (10 Mark Each)		
1.	What are carbohydrates? Explain the process required to convert Pyruvic acid to CO ₂ with enegetics.		
2.	What is genetic code? What are the steps involved in protein synthesis? Explain all the steps in detail.		
3.	Write steps involved in oxidation of fatty acid. Explain palmitic acid oxidation with energetics.		
Q.3	3 Short Answers (any 7 out of 9) (5 Mark Each)		
1.	Which pathway is essential for removal Nitrogen obtained from protein in the form of ammonia?		

- 2. Explain biological oxidation through electrone transport chain and it's inhibitors.
- 3. What are different high energy compounds? Explain.
- 4. Explain HMP shunt and its significance.

Explain.

- 5. How substrate concentration affects an enzyme catalysed reaction? Explain using Michaelis-Menten constant.
- 6. Differentiate between starch, cellulose and glycogen.
- 7. What is Hyperbilirubinemia? Write a note on jaundice
- 8. Explain IUB classification of Enzyme.
- 9. Classify RNA and explain any two in detail.