

PARUL UNIVERSITY
PARUL INSTITUTE OF APPLIED SCIENCES
MID SEMESTER INTERNAL EXAMINATION, MARCH 2020
B. Sc. Microbiology Semester II

Paper Name: Biochemistry-II

Date: 06/03/20

Paper Code: 11103151

Time: 1hr 30min

Max. Marks: 40

Instructions:

1. All questions are compulsory and options are given in first and second question only.
2. Numbers to the right of question indicate the marks of respective question.

- Q. 1** Attempt any one question of the following. **(08)**
 (i) Explain the glycolysis pathway and its net reaction.
 (ii) Explain the biochemical functions of water soluble vitamins.
- Q. 2** Attempt any three questions of the following. **(12)**
 (i) Write the classification of enzyme with examples.
 (ii) Write the function of Vitamin B5 (pantothenic acid)
 (iii) Explain the oxidative phase of HMP pathway
 (iv) Write the deficiency symptoms of Vitamin K
 (v) Write a short note on triacylglycerols
- Q. 3** Do as directed. Attempt all five questions. **(05)**
 (i) Which vitamin is known as Sunshine vitamin?
 (ii) Define the term coenzyme.
 (iii) Write the difference between co-substrate and prosthetic group.
 (iv) Which multienzyme complex is responsible for the conversion of pyruvate to acetyl CoA?
 (v) Write the structure of Vitamin A.
- Q. 4** Write correct option in your answer sheet for following 15 multiple **(15)**
 choice questions.

MCQ 1	Red colored light sensitive pigments present in cones is:			
	(A)	Cyanopsin	(B)	Porphyropsin
	(C)	Iodopsin	(D)	None of them
MCQ 2	Which enzyme converts ribulose-5-phosphate into ribose-5-phosphate?			
	(A)	Epimerase	(B)	Transketolase
	(C)	Isomerase	(D)	Transaldolase
MCQ 3	Which vitamin is also known as quinones			
	(A)	Vitamin D	(B)	Vitamin K
	(C)	Vitamin C	(D)	Vitamin A
MCQ 4	The chemical inhibitor of TCA cycle is:			
	(A)	Fluocitrate	(B)	Oxaloacetate
	(C)	Acetyl CoA	(D)	Pyruvate
MCQ 5	Milk fat contains which type of fatty acids?			
	(A)	Short chain saturated fatty acids	(B)	Long chain Saturated Fatty acids
	(C)	Short chain unsaturated fatty acids	(D)	Long chain unaturated Fatty acids

MCQ 6	Which enzyme is responsible for the formation of Pyruvate from Phosphoenol Pyruvate?			
	(A)	Fumrase	(B)	Hexokinase
	(C)	Pyruvate kinase	(D)	Pyruvate Synthase
MCQ 7	Which vitamin is known as anti beri beri factor?			
	(A)	Niacin	(B)	Thiamin
	(C)	Riboflavin	(D)	Pentathonic acid
MCQ 8	Allosteric regulation of glycolysis is carried out by which of the following enzymes?			
	(A)	Phosphofructokinase	(B)	Carboxylase dehydrogenase
	(C)	Xylulose phosphatase	(D)	Pyruvate dehydrogenase
MCQ 9	Which diseases is associated with vitamin C among the options given below?			
	(A)	Anemia	(B)	Beri Beri
	(C)	Scurvy	(D)	Angluar stomitis
MCQ 10	Which chemical has capability to precipitate protein?			
	(A)	Ammonium sulphate	(B)	Sodium chloride
	(C)	Sodium hydroxide	(D)	Ammonium chloride
MCQ 11	What is an apoenzyme?			
	(A)	It is a protein portion of an enzyme but inactive in nature	(B)	It is a non-protein group
	(C)	It is a complete, biologically active conjugated enzyme	(D)	It is a prosthetic group
MCQ 12	Name the coenzyme of riboflavin (B2)			
	(A)	NAD or NADP	(B)	FAD and FMN
	(C)	Coenzyme A	(D)	Thiamine pyrophosphate
MCQ 13	β -ionine ring (methyl substituted cyclohexenyl ring) is present in which vitamin?			
	(A)	Vitamin K	(B)	Vitamin C
	(C)	Vitamin A	(D)	Vitamin D
MCQ 14	In fatty acids, the carbon chains with a methyl group at one end of the molecule, is designated as:			
	(A)	Omega (ω)	(B)	Alpha (α)
	(C)	Beta (β)	(D)	Gama (γ)
MCQ 15	Synthesis of Mucopolysaccharides requires:			
	(A)	Retinol	(B)	Retinoic acid
	(C)	Retinal	(D)	All of them

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