OLABISI ONABANJO UNIVERSITY

FACULTY OF BASIC MEDICAL SCIENCES

DEPARTMENT OF BIOCHEMISTRY

2012/2013 HARMATTAN SEMESTER EXAMINATION

COURSE CODE: BCH 201/MDB 202.1

COURSE TITLE: GENERAL BIOCHEMISTRY I

DATE: 10th January, 2014

TIME ALLOWED: 2 Hours 30mins

Theory (Paper II)

INSTRUCTION: ANSWER FIVE (5) QUESTIONS ONLY

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1 (a) Give a detailed description of the process of RNA synthesis.

(b) Describe the processing of the nascent RNA in the cytoplasm.

2. (a) Describe the following major classes of sugars giving at least two examples each

i. Anomers (ii) Epimers (iii) Enantiomers

(b) i. Draw the structure of ribose

ii. How many stereoisomers does this sugar possess? Explain

3a. Briefly classify lipids based on their structures.

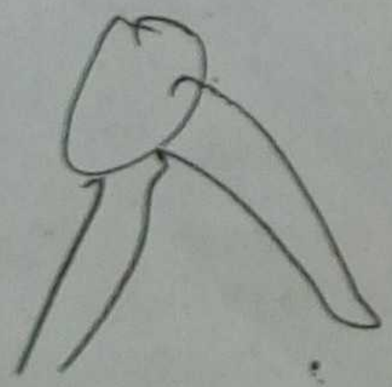
b. What are plasma proteins?

4.(a) Copy and Complete the table below

Coenzyme	Vitamin source	Type of reaction	Group transfer
NAD^+	Nicotinic acid / niacin		
FAD	Riboflavin (Vitamin B_2)		
Pyridoxal Phosphate			
Biotin			
Thiamine Pyrophosphate			

(b) Write short note on lactate dehydrogenase

(c) Transform the Michael's Menten equation into the Lineweaver-Burk



5(a) What do you understand by the term

(i) Buffer solution (ii) Buffering Capacity

(b) Describe(showing calculations) how you will prepare a 0.20M Sodium Acetate buffer of pka pH 4.74(Given Molar masses of CH_3COOH=60.04, CH_3COONa=80.05, density of CH_3COOH=1.11 and % purity = 80%)

6. Write short notes on the following

(i) Phosphodiester Bond (ii) Nucleoside (iii) RNA (iv) DNA