OLABISI ONABANJO UNIVERSITY

FACULTY OF BASIC MEDICAL SCIENCES

DEPARTMENT OF BIOCHEMISTRY

REMO CAMPUS, IKENNE

2010/2011 HARMATTAN SEMESTER EXAMINATION

COURSE TITLE: GENERAL BIOCHEMISTRY 1 **TIME:** $2^1/_2$ Hours

COURSE CODE: BCH 201 **DATE:** 1st July, 2011

INSTRUCTIONS: ANSWER ALL QUESTIONS

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1 (a) Calculate the pH of the following solutions:

i. 500ml of 0.0001M solution of a weak base B, given that its $K_b = 3.2 \times 10^{-5}$.
ii. A mixture of 100ml of 0.01M Hcl and 80ml of 0.01M KOH.

(b) In tabular form, list the differences between β(+) – L – Glucose and α(-) – D – Glucose.

2 (a) Structurally differentiate between 5 carbon ketose and aldose sugar

(b) Write short notes on the following:

i. Monosaccharide

ii. Disaccharide

iii. Oligosaccharide

a) Describe in detail the synthesis of RNA (transcription) in a living cells.

(b) State the function of the following:

i. Rho factor

ii. SSB protein *(single stranded binding protein)*

4 (a) Differentiate between amino acids with **polar non-ionic side chain,** and amino acids with **non pola chain** giving examples.

(b) Write short note on any **three** of the following:

i. Hemoproteins

ii. Unsaturated fatty acids

iv. Plasma proteins

v. Functions of lipids

v) Enzymes are the agents of metabolic functions. Discuss

Derive the michaelis-menten equation