



# KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

## SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

### SZH 102: INTRODUCTION TO BIOCHEMISTRY

DATE: Tuesday, 3<sup>rd</sup> April, 2012

TIME: 8.00 a.m. – 10.00 a.m.

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#### **INSTRUCTIONS:**

Answer **ALL** questions from Section A and any **ONE** question from Section B. Within a Section **ALL** questions carry equal marks. Illustrate your answers with diagrams and give examples where appropriate.

#### **SECTION A – (40 Marks)**

1. Explain the structure and natural occurrence of lactose and sucrose.
2. Distinguish simple lipids from compound ones.
3. Describe the characteristics of triglycerides.
4. Describe the major features of the Watson and Crick model of DNA.
5. Explain the major properties of enzymes.
6. Describe the biological functions of vitamin A.
7. Explain the significance of blood glucose estimation.
8. Describe briefly the physiological importance of diffusion.

#### **SECTION B – (30 Marks)**

9.
  - a) Describe the history of biotechnology
  - b) Describe the application of embryo transfer with reference to the goat.
10. Discuss the characteristics of the various organelles and inclusions in a rat hepatocyte.
11. Discuss the determination of the following:-
  - a) Basal metabolism
  - b) Calorific value of foods.