



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

INSTITUTE OF OPEN LEARNING

**EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE AND
BACHELOR OF EDUCATION**

HFN 101: GENERAL BIOLOGY

DATE: Tuesday 1st February 2011

TIME: 8.00a.m -10.00a.m

INSTRUCTIONS: *Answer ONE questions in Section B in the answer book provided and all questions in Section A in the spaces provided.*

SECTION A –SHORT ANSWER QUESTIONS (TOTAL 40 MARKS, 5 MARKS EACH)

1 List and explain briefly five main functions of cell vacuoles

2. Giving appropriate examples explain the meaning of the following terms:

Alleles:

Cross:

Carrier

Phenotype

Random mating

3. Below is a diagram of a typical animal cell. Label the following organelles: nucleus, mitochondrion, endoplasmic reticulum, golgi body and ribosome.



4. Differentiate prokaryotes from eukaryotes on the following:

Cell diameter

Cell volume

Genetic material

Cytoplasm

Cell wall

5. Discuss structure, and distribution of ribosomes.

6. Differentiate eccrine from apocrine sweat gland on the following:

	Apocrine sweat glands	Eccrine sweat glands
Location in the body		
Relative sizes		
Three characteristics of the sweat produced		

6. Differentiate prospective, retrospective and preventative genetic counseling.

7. Describe various ways substances move into and out of cells in bulk

8. Explain human sex determination and assignment as you justify that Y chromosome makes one male.

SECTION B: ESSAY AND ESSAY-TYPE QUESTIONS (TOTAL 30 MARKS)

Write an essay on one of the following:

1. The structure, functions and distribution of various cell membranes
 2. The structure and functions of the human skin.
 3. Structure, functions and distribution of mitochondria.
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