

**MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITYEXAMINATIONS**

**2016/2017 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL RESOURCE MANAGEMENT**

**BACHELOR OF SCIENCE (ANIMAL HEALTH AND PRODUCTION)**

**COURSE CODE: AHP 1103**

**COURSE TITLE: BIOCHEMISTRY**

**DATE: 27TH JANUARY 2017 TIME: 0830 -1030HRS**

**INSTRUCTIONS TO CANDIDATES**

Answer **ALL** questions in section **A** and any other **THREE** in section **B.**

**BIOCHEMISTRY AHP 1103**

**SECTION A (25 MARKS)**

1. Differentiate between isomers and epimers giving structuralexamples. **(5 marks)**
2. Describe how modified bases (nucleotide analogue) are used as drug against viral infections. **(5 Marks)**
3. Describe, describe the effects of snake venom on phospholipids. **(5 marks**)
4. Briefly, describe the proposed models of enzyme action.**(5 marks)**
5. Outline the biological functions of lipids. **(5 marks)**

**SECTION B (45 MARKS) (ANSWER ANY 3 QUESTIONS)**

1. Discuss the classification of carbohydrates. (**15 marks)**
2. Describe Vitamin K deficiency and the recommended test to assess its levels in the body. **(15marks)**
3. Discuss the factors affecting enzyme catalyzed reaction. **(15 marks)**
4. Most compound lipids are found inbrain and cell membranes, discuss atleast two of theselipids. **(15 marks)**

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**BIOCHEMISTRY AHP 1104**

**SECTION A (25 MARKS)**

1. Define the following terms:

a)  pH **(1 mark)**

b)   Nucleosides **(1 mark)**

c)   Isomers **(1 mark)**

d)   Epimers **(1 mark)**

e)   Glycosidic bond **(1 mark)**

1. a. Define what is an amino acid. **(1 mark)**
2. Differentiate the following terms:Essential and non-essential amino acids. **(4marks)**
3. Describe the peptide bond formationbetween amino acids. **(5 marks)**
4. Describe briefly different classes of proteins giving examples. **(5 marks)**
5. Outline the effects of snake venom on mammalian phospholipids. **(5 marks)**

**SECTION B (45 MARKS) (ANSWER ANY 3 QUESTIONS)**

1. Discuss different types and functions of phospholipids found in mammalian cell membranes. **(15 marks)**
2. Discuss mechanisms involved in regulation of enzyme catalysed reactions. **(15 marks)**

1. Describe different types of ribonucleic acids in mammalian cells and discus their biological importance. **(15 marks)**
2. Discuss the functions of eicosanoids as local hormones, where they act on several organs and produce physiological aswell as pharmacological effects.**(15 marks)**

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