



MURANG'A UNIVERSITY COLLEGE

(A constituent college of Jomo Kenyatta University of Agriculture and Technology)

SCHOOL OF PURE AND APPLIED SCIENCE

CLASS: AS/BIO/14D

UNIT CODE: ASB 1110

UNIT TITLE: ANATOMY & PHYSIOLOGY

DURATION: 3 HOURS

DATE: 5TH AUGUST 2015

SUPPLEMENTARY/SPECIAL EXAMINATION

INSTRUCTIONS

This paper consists of two sections A and B

Attempt all questions in section A and ANY TWO in section B

SECTION A (40 MARKS)

1. State four functions of Lipids in the human body. (4 marks)
2. List four products of the dark process of photosynthesis (4 marks)
3. Draw a well labeled diagram of the structure of the chloroplast (4 marks).
4. Name the salivary glands found in the mammalian digestive system (4 marks)
5. Briefly describe the structure of the mammalian digestive system (4marks)
6. Illustrate the electron transfer system in the process of photosynthesis (4marks)
7. Explain the point at which fats are made in the process of photosynthesis (4 marks)
8. Briefly explain how the mammalian stomach is adapted to its function. (4 marks)
9. List eight functions of the mammalian liver. (4 marks)
10. State two sources and two functions of vitamin A (4 marks)

SECTION B (60 MARKS)

11. Describe the process of photosynthesis by illustrating cyclic and non cyclic Photophosphorylation (20 marks)
12. Describe the process of digestion in the mammal (20 marks)
13. a) Discuss how the leaf is adapted to the process of photosynthesis (10 marks)
- b) With the aid of a diagram , describe the gastric glands. (10 marks)
14. Explain how the following factors affect the rate of photosynthesis
- a)Temperature
 - b)Light intensity
 - c) Carbon dioxide
 - d) Chlorophyll (20 marks)
15. Describe the basic digestive processes (10 Marks)
- b) List the three categories of energy rich food stuffs and the absorbable units of each (3 marks)
 - c) Indicate the source and functions of each of the following digestive enzymes
 - i. Gastrin
 - ii. Secretin
 - iii. Cholecystokinin (7 marks)