



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

BCH 310: COMPARATIVE ANIMAL BIOCHEMISTRY

7TH DECEMBER, 2016

TIME: 10.30-12.30 P.M

INSTRUCTIONS TO CANDIDATES

(a) Answer ALL the Questions in Section A

(b) Answer ANY TWO Questions in Section B

(c) Illustrate your answers with well labeled diagrams where appropriate

Section A (30 Marks)

1. Describe the carbohydrate requirements in fish. **(5 Marks)**
2. Discuss briefly steatorrhoea disease. **(5 Marks)**
3. Discuss briefly nitrogen metabolism in birds. **(5 Marks)**
4. Describe the utilization of carbohydrate reserves during flight in insects. **(5 Marks)**
5. List the factors that determine the nutrient requirements in fish. **(5 Marks)**
6. Describe the carbohydrate content in the haemolymph of insects. **(5 Marks)**

Section B (40 Marks)

7. Discuss in detail lipid digestion in humans. **(20 Marks)**
8. Discuss the tissue contents of lipids in insects. **(20 Marks)**
9. Discuss ketone body formation and utilization. **(20 Marks)**
10. a) Discuss minerals and their requirements in fish. **(10 Marks)**
b) Discuss the vitamin requirements in fish. **(10 Marks)**