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**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

**MAIN CAMPUS
MAIN EXAMINATIONS**

**UNIVERSITY EXAMINATIONS (REGULAR)
2021/2022 ACADEMIC YEAR**

**SECOND YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF B.Sc. IN: FISHERIES AND AQUACULTURE, AND ANIMAL
PRODUCTION**

COURSE CODE: AAH 103

COURSE TITLE: ANIMAL PHYSIOLOGY

DATE: 22ND APRIL, 2022

TIME: 8-10AM

INSTRUCTIONS TO CANDIDATES

Answer ALL questions in section A and ANY TWO questions in section B

TIME: 2 Hours

Total marks=70

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

SECTION A (answer ALL questions in this section)40marks

- Q1. Explain how glucose is produced in the body of a ruminant (4mks)
- Q2. Describe the three processes involved in formation of urine in animals (4mks)
- Q3. Briefly explain the role vertebrate skeleton in locomotion (4mks)
- Q4. Outline the role of each of the following hormones in the animal's body
- i) Testosterone (1mk)
 - ii) Progesterone (1mk)
 - iii) Estrogen (1mk)
 - iv) Prolactin (1mk)
- Q5. Explain how a sheep cools its brain (4mks)
- Q6. Write a note on the type and functions of muscles (4mks)
- Q7. Highlight the functions of minerals in the animal's body (4mks)
- Q8. Describe the process of gaseous exchange between alveoli and blood (4mks)
- Q9. List the formed elements of blood (4mks)
- Q10. State the functions of ANY four parts of the brain (4mks)

SECTION B (answer any TWO questions in this sections)30marks.

- Q11. Summarize the basic organization of the bovine gastrointestinal tract and give the function of each compartment? (15mks)
- Q12. a) Describe the roles of T-tubules and sarcoplasmic reticuli in muscle contraction in animals (8mks)
- b) The interaction between myosin, ATP, actin and calcium is responsible for muscle contraction. Describe in details the processes involved in muscle contraction. (7mks)
- Q13. Describe the various components of mammalian circulatory system. State the function of each component. (15mks)
- Q14. a) Describe the formation, composition and flow of lymph (7mks)
- b) Outline the main functions of lymphatic system (8mks)