MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR
FIRST YEAR FIRST SEMESTER

SCHOOL OF NATURAL RESOURCES, TOURISM AND HOSPITALITY
BACHELOR OF SCIENCE IN ANIMAL HEALTH AND PRODUCTION

COURSE CODE: AHP 1105-1

COURSE TITLE: ANIMAL PHYSIOLOGY I

DATE: 7TH DECEMBER, 2022 **TIME: 0830-1130**

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions

This paper consists of 3 printed pages. Please turn over

Answer all questions

ANIMAL PHYSIOLOGY I (120Marks)

1 a) Define Physiology. (2mks)
b) Name and define three (3) branches of Physiology? (9mks)
c) Giving three (3) examples, briefly describe how recent advancement in scientific techniques have enhanced the growth and understanding of mammalian Physiology (9mks)

2 a) Define the following terms (8mks)
i. Equilibrium
ii. Steady State
iii. Homeostasis
iv. Extracellular fluid
b) Name five (4) parameters that must be kept at a constantly narrow range for the optimal functioning of a cell (4mks)
c) Describe the two feedbacks in Homeostasis and give an example of a process in the body that falls in each of the two categories of feedbacks (8mks)

3 a) List and differentiate the body systems involved in co-ordination and response (6mks)
b) Describe the functions of the nervous system (6mks)
c) Draw and name the parts of a motor neuron (8mks)

4 a) What are the two main parts of a nervous system (2mks)
b) List the nerves that serve as the main components of the peripheral nervous system (3mks)
c) Describe the term "conditioned reflex" and give an example in which it has been applied (5mks)
d) Describe the processes involved in muscular contraction (10mks)

5 a) List and differentiate the three (3) types of muscles (9mks)
b) Define to differentiate between the following terms as used in muscle physiology (4mks)
i. Flexion
ii. Extension
c) Muscles work together antagonistically to enable movements in the body. Name two (2) muscles in the forearm that works antagonistically and how they achieve their function (7mks)

6 a) What is the importance of energy within an animal's body? (6mks)
b) Define the process of cellular respiration and demonstrate it in the form of an equation (4mks)
c) Define gas exchange as used in respiratory physiology and mention the sites for gaseous exchange in; (5mks)
i. Fish
ii. Terrestrial/land animals
iii. Tadpoles
d) List the parts of a respiratory system (5mks)

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