



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF SOCIAL SCIENCES

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ARTS (COUNSELLING PSYCHOLOGY)

APS 107: INTRODUCTION TO BIOLOGICAL PSYCHOLOGY

DATE:17/6/2021

TIME: 2:00 – 4:00 PM

INSTRUCTIONS:

Answer QUESTION ONE and any other TWO QUESTIONS.

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Define the following terms as used in biological psychology.
- i) Neurotransmitters (2 marks)
 - ii) Homeostasis (2 marks)
 - iii) Biological Psychology (2 marks)
- b) Mention three types of neurons. (3 marks)
- c) Distinguish between the following:
- i) Organizing and activating effects of sex hormones (2 marks)
 - ii) Osmotic and hypovolemic thirst (2 marks)
 - iii) Short-term and long-term memory (2 marks)
- d) State three functions of the peripheral nervous system. (3 marks)
- e) Identify the three major divisions of the brain and the function of each component. (6 marks)
- f) Discuss three components of emotion. (6 marks)

QUESTION TWO (20 MARKS)

- a) Discuss four general principles of sensory processing. (8 marks)
- b) Briefly outline the process of synaptic transmission. (6 marks)
- c) Explain three ways of dealing with stress. (6 marks)

QUESTION THREE (20 MARKS)

- a) List the structural components of the peripheral nervous system, and describe the function of each components (8 marks)
- b) Explain three biological explanations of behavior. (6 marks)
- c) Discuss the mechanism of abused drugs and their behavioral effects. (6 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss James-Lange theory of emotion and give relevant examples. (8 marks)
- b) Describe six distinctions between an axon and a dendrite. (6 marks)
- c) Describe the events that occur during an action potential (6 marks)

QUESTION FIVE (20 MARKS)

- a) Describe the structure and function of each component of the neuron (8 marks)
- b) Explain the three stages of general adaptation syndrome (6 marks)
- c) Discuss the roles of LH and FSH in the menstrual cycle, including the timing of their secretion during the cycle. (6 marks)