



GARISSA UNIVERSITY

UNIVERSITY EXAMINATION **2017/2018** ACADEMIC YEAR **ONE**
FIRST SEMESTER EXAMINATION

SCHOOL OF EDUCATION, ARTS AND SOCIAL SCIENCES

FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS)

COURSE CODE: ZOO 102E

COURSE TITLE: INVERTEBRATE ZOOLOGY

EXAMINATION DURATION: 3 HOURS

DATE: 11/12/17

TIME: 2.00-5.00 PM

INSTRUCTION TO CANDIDATES

- The examination has **SIX (6)** questions
- Question **ONE (1)** is **COMPULSORY**
- Choose any other **THREE (3)** questions from the remaining **FIVE (5)** questions
- Use sketch diagrams to illustrate your answer whenever necessary
- Do not carry mobile phones or any other written materials in examination room
- Do not write on this paper

This paper consists of **TWO (2)** printed pages

please turn over



QUESTION ONE (COMPULSORY)

- (a) Distinguish between prokaryotic and eukaryotic cell [2 marks]
- (b) i) Characterize the general mode of reproduction by protozoans [2 marks]
- ii) Provide one phylum of invertebrates for each of the following: acoelomates, pseudo-coelomates and coelomates [3 marks]
- (c) Outline the difference between the mode of feeding in the phyla Cnidaria and Porifera [2 marks]
- (d) Name the phylum in which trematodes are placed and indicate their adaptations that enhance parasitism in trematodes [5 marks]
- (e) Briefly describe the residence of free-living nematodes [3 marks]
- (f) State the three domains of life and the differences between them [4 marks]
- (g) Protista is a group of single-celled organisms. How is this group different from the multicellular organisms? [4 marks]
- (h) Briefly describe the significance of metamerism in annelids [4 marks]

QUESTION TWO

Discuss how cladistics is used by scientists to construct phylogenetic trees and how this has been used to explain adaptive ~~adaptive~~ radiation [15 marks]

QUESTION THREE

Write short notes on any two of the major coelomic groups of invertebrates showing the body morphological structural components and their functional significance [15 marks]

QUESTION FOUR

Write a short essay on the diversified molluscan body plan, showing structural components and their significance [15 marks]

QUESTION FIVE

- (a) State the main characteristics of echinoderms [3 marks]
- (b) State the principle characteristics of the two basic lifestyles of polychaetes [3 marks]
- (c) State the perceived medical importance of leeches [3 marks]
- (d) State the economic importance of earthworms [3 marks]
- (e) Show why crustaceans are different from other arthropods [3 marks]

QUESTION SIX

Provide a brief description of the environment and developmental stages of insects [15 marks]

