FACULTY OF SCIENCE

DEPARTMENT OF ZOOLOGY

MODULE	**ZOO 1B10/ ZOO 11B1**
	ANIMAL DIVERSITY
CAMPUS	**APK**

NOVEMBER EXAMINATION

DATE: 25 NOVEMBER 2019 **SESSION 12.30 – 15.30**

ASSESSOR: **DR L MOKAE**

INTERNAL MODERATOR: **DR G PAHAD**

DURATION: 3 HOURS **MARKS: 100**

NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS: 1. ANSWER ALL THE QUESTIONS
2. KEEP PARTS OF THE SAME QUESTION TOGETHER (IN ONE PAGE)
3. HAND IN BOTH THE EXAM PAPER AND ANSWER SHEET

QUESTION 1 **[10]**

Define the following terms:

1.1 Phylogeny
1.2 Ctenidia
1.3 Sclerite
1.4 Zygotic meiosis
1.5 Monoecious
1.6 Neotenine
1.7 Parthenogenesis
1.8 Phylogenetic Systematics
1.9 Polian vesicle
1.10 Ametabolous

QUESTION 2 **[15]**

The fate of the blastocoel during ontogeny gives rise to three (3) groups of the Bilateria grade. Write down the names of the three groups and use illustrations with correct colour codes to indicate **the longitudinal and cross sectional view** from the gastrula stage to adult development in each specific group.

QUESTION 3 **[15]**

The protozoa may reproduce sexually and or asexually. Use a labeled illustration to discuss this statement by referring to the reproductive phases in the life cycle of Plasmodium. Indicate all the stages as well as the relevant processes occurring in each stage. Write down the causative agent, vector and disease caused by this protozoan.

QUESTION 4 **[20]**

4.1 Use labelled illustration to indicate the comparison between the cross section of a **flat worm** and **a roundworm.** Use the correct colour codes to indicate the various parts of the organisms.

(30 X ½ = 15)

4.2 Write down **five (5) unique** features of the Ascaris as seen in its cross section. (5)

QUESTION 5 **[15]**

In contrast to the Annelida which have a closed blood vascular system, the arthropods have an open blood vascular system. Using labelled illustrations, discuss the development of a closed and open blood vascular system and indicate which animals have an open and/or closed blood vascular system.

QUESTION 6 **[15]**

The segmental appendages of a crustacean can all be derived from a basic biramous appendage called a stenopodium. Discuss this statement and include a labelled illustration of this typical biramous appendage through the Maxiliped III region.

QUESTION 7 **[10]**

7.1 Discuss the features commonly found in both the echinoderms and chordates that point towards most recent common ancestry. (5)

7.2 List and discuss in detail, the **five (5**) unique characteristics of the chordates. (5)

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