FACULTY OF SCIENCE

DEPARTMENT OF ZOOLOGY

MODULE ZOO 1B10
ANIMAL DIVERSITY
CAMPUS APK
SUPPLEMENTARY EXAMINATION

DATE: 9 JANUARY 2017	**SESSION 11:30**
ASSESSOR(S)	**DR L MOKAE** **DR A. NEL**
INTERNAL MODERATOR	**DR F DURAND**
DURATION: 3HOURS	**MARKS: 100**

NUMBER OF PAGES: THREE (2) PAGES

INSTRUCTIONS:

1. **ANSWER ALL THE QUESTIONS**
2. **KEEP PARTS OF THE SAME QUESTION TOGETHER (in one page)**
3. **HAND IN BOTH EXAM PAPER AND ANSWER SHEET**

QUESTION 1 **[5]**

Define the following terms:

1.1 Theory
1.2 Sclerite
1.3 Zygotic meiosis
1.4 Sporozoite
1.5 Phylogenetic Systematics

QUESTION 2 **[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.

QUESTION 3 **[10]**

3.2 Use a two-column table to compare the lifecycle of Obelia and Aurelia. State what occurs in the different stages of the lifecycle. Mention the dominant stages, stages where reproduction occurs as well as adult or juvenile stages etc. (10)

QUESTION 4 **[20]**

4.1 Use labeled illustrations to compare the cross sections of a **flat worm** and **a roundworm.** Include the correct colour codes of the various structures seen in the cross sections (30X½=15)
4.2 Write down **five (5) unique** features of the *Ascaris* as seen in its cross section. (5)

QUESTION 5 **[10]**

In contrast to the Annelida which have a closed vascular system, the arthropods have an open vascular system. Using labeled illustrations to discuss the development of a closed and open blood vascular system and indicate which animals have an open and/or closed 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 labeled illustration (through the Maxilliped III region) of a typical biramous appendage.

QUESTION 7 **[15]**

Torsion and coiling (spiral winding) of the shell and visceral mass are phenomena peculiar to the 'gastropod mollusca'. Critically discuss this phenomenon.

QUESTION 8 **[10]**

8.1 Discuss the features commonly found in both the echinoderms and chordates that point towards most recent common ancestry. (5)
8.2 List and discuss in detail, the **five (5**) unique characteristics of the chordates. (5)

TOTAL 100