



*(Knowledge for Development)*

# **KIBABII UNIVERSITY**

## **UNIVERSITY EXAMINATIONS 2017/2018 ACADEMIC YEAR**

### **FIRST YEAR SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF SCIENCE AND BECHALOR OF  
BIO-RESOURCE CONSERVATION**

**COURSE CODE: SZL 121**

**COURSE TITLE: HIGHER INVERTEBRATES**

**DATE: 10<sup>th</sup> October, 2018**

**TIME: 8:00 -10:00 p.m.**

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#### **INSTRUCTIONS TO CANDIDATES**

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1. [i] Explain the processes of **embryogenesis** in uniramians. (3mks).  
[ii] Describe the generalized **copepodan** morphology. (3mks).  
[iii] State what you would regard as the **distinctive features** of pauropods. (3mks).  
[iv] How does **temperature** affect growth in arthropods? (3mks).  
[v] Distinguish between **holocrine** and **merocrine** release of enzymes. (3mks).  
[vi] Briefly describe **deposit feeding** in terrestrial arthropods. (3mks).  
[vii] Explain the **respiratory system** of insects. (3mks).  
[viii] With examples, distinguish between **monophasic** and **polyphasic** life history. (4mks).  
[ix] Illustrate how **evolution history** of arthropods has led to their present day abundance. (5mks).
2. [a] Explain **sclerotization** process of the integument in **acarines**. (5mks).  
[b] What is the role of the **cuticle** to the increased abundance of **arthropods**? (5mks)  
[c] Briefly describe the **mid-gut** of the **insects**. (5mks).  
[d] Outline **damaging effects** of arthropods human economics. (5mks).
3. [a] List **four components** of the insectan respiratory system. (4mks)  
[b] Explain the **ecdysis** process in cephalocarids (6mks)  
[c] Account for the abundance of **hexapods**(10mks)
4. Write a concise essay on the **subphylum chelicerata** with special emphasis on the diagnostic morphological features of the different arthropod groups. (20 mks)
5. Describe the structure and biology the **comparative digestive system** of crustaceans. (20mks)