



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATION  
2022/2023 ACADEMIC YEAR  
THIRD YEAR SECOND SEMESTER**

**SCHOOL OF SCIENCE AND INFORMATION  
SCIENCES  
BACHELOR OF SCIENCE IN EDUCATION**

**COURSE: ZOO 3233  
COURSE TITLE: ENTOMOLOGY**

**DATE:18/4/2023**

**TIME: 0830-1030 HRS**

## **INSTRUCTIONS TO CANDIDATES**

- a) Answer **ALL** questions in section **A** and **any two** questions in section **B**
- b) Illustrate your answers with suitable diagrams and give examples wherever appropriate.

**SECTION A: Answer ALL questions in this section. Each question carries 3marks**

1. Describe the distinguishing characteristics of class insecta. (3 marks)
2. Classify insects basing on wing type and give examples in each. (3 marks)
3. Identify the functions of insect integument. (3 marks)
4. Classify insect respiratory system on the basis of the number and distribution of the functional spiracles (3marks)
5. State the functions of insect hemolymph. (3 marks)
6. Explain the causes of insect migration. (3 marks)
7. Explain caste system in termites. (3 marks)
8. Give reasons why bees are preferred pollinators. (3 marks)
9. Describe the structure and location of tympanum in insects . (3 marks)
10. Explain the functions of insect Malpighian tubules. (3marks)

**SECTION B: Answer Any Two Questions. Each question carries 20 marks**

11. Insects are known to be of economic importance to man. Justify.  
(20marks)
12. Explain the role of pheromones in insects. (20 marks)
13. Discuss metamorphosis in holometabolous insects and the significance. (20 marks)
14. Discuss diapause in insects. (20 marks)

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