



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2018/2019 ACADEMIC YEAR  
THIRD YEAR SECOND SEMESTER**

**SCHOOL OF TOURISM AND NATURAL  
RESOURCE MANAGEMENT  
BACHELOR OF SCIENCE (ENVIRONMENTAL  
BIOLOGY AND HEALTH)**

**COURSE CODE: EBH 3224**

**COURSE TITLE: FIELD TECHNIQUES IN  
ENVIRONMENTAL BIOLOGY AND HEALTH**

**DATE: 24<sup>TH</sup> APRIL, 2019**

**TIME: 08:30 - 10:30AM**

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**INSTRUCTIONS TO CANDIDATES**

**ATTEMPT ALL QUESTIONS IN SECTION A AND ANY 3 IN SECTION B**

Support your answers with relevant examples and illustrations and clearly show your calculations, where relevant.

*This paper consists of 2 printed pages. Please turn over*

## **SECTION A (25 MARKS)**

**Attempt ALL questions in this section.**

1. State 2 biotic and 3 abiotic factors that influence quality of drinking water  
(5 marks)
2. Outline 5 major challenges Kenya faces towards achieving health and sanitation related SDGs  
(5 marks)
3. Distinguish between,
  - i. Disease prevalence and disease incidence
  - ii. Alpha and beta species diversity
  - iii. Environmental survey and environmental monitoring (5marks).
4. Briefly outline the methodological approach to undertaking a qualitative analysis of a stream benthic macroinvertebrate community (5marks).
5. Outline 2 major ecological and 3 major public health concerns over open cast mining  
( 5 marks).

## **SECTION B (Attempt any THREE questions)**

6. Discuss the main challenges Kenya faces towards implementing the KIWASH (Kenya Integrated WASH ) Programme ( 15 marks).
7. Explain the process you would undertake to develop a field tool to enable you undertake a health needs assessment of Majengo informal settlement residents  
(15 marks).
8. Discuss solid waste management (SWM) methods that upcoming urban areas can adopt to sustainably manage the wastes ( 15 marks).
9. Give a detailed field and lab sampling and analysis process you would adopt to assess the bacteriological quality of shallow wells around Maasai Mara University  
(15 marks).

\*\*\*\*\* END OF EXAM QUESTIONS\*\*\*\*\*