TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied & Health Sciences

Department of Environment & Health Sciences

University Examination for the Degree of Bachelor of Science in Marine Resource Management

BSMR 14S/YEAR 2/SEMESTER 2

Code: AES 4211: RESOURCE ASSESSMENT AND MONITORING TOOLS PAPER 1

SEMESTER EXAMINATION

SERIES: MAY/2016

TIME: 2HRS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions

This paper consists of one printed page

QUESTION ONE (30 MARKS)

a) Define ecological resource monitoring (3 marks)
b) State the main reasons why resource monitoring is commonly conducted in the lagoons (4 mks)
c) Differentiate between management monitoring and scientific monitoring protocols (4 marks)
d) State the main reasons for replicating resource sampling stations or sites (2 mks)
e) Briefly state the applications of GIS in resource assessment (5 marks)
f) Briefly discuss the reef check method in Rapid Ecological Assessment (REA) of coral reefs (4 marks)
g) Briefly discuss the Medium Scale Approach (MSA) in Rapid Ecological Assessment (REA) of benthic resources (4 marks)
h) State the main reasons for monitoring coastal and marine resources (4 mks)

QUESTION TWO (20 MARKS)

As a fisheries biologist discuss the main methods used in fish population monitoring in a tropical lagoon fishery (20 marks).

QUESTION THREE (20 MARKS)

As a Marine Ecologist in-charge of providing advice to a Marine Protected Area (MPA) Manager, explain the main factors that determine the level of a monitoring programme for an MPA (20 marks)

QUESTION FOUR (20 MARKS)

Discuss the Belt Transect Method in invertebrate biodiversity monitoring in a Marine Protected Area (MPA) like the Kisite-Mpunguti National Marine Park and Reserve (20 marks)

QUESTION FIVE (20 MARKS)

a) Explain the typical questions that may be answered by a GIS as a resource monitoring tool (10 marks)
b) Briefly discuss the main sources of data or information in a research project (10 marks)