

# **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 15S/YEAR 1/SEMESTER 2**

Code: AES 4109: SURVEY OF PLANT KINGDOM 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 pages**

### **QUESTION ONE (30 MARKS)**

- a) (i) What is respiration? (1 mark)  
(ii) Differentiate between aerobic and anaerobic processes of respiration (4 marks)
- b) (i) State the characteristics of non-flowering plants (2 marks)  
(ii) Name the 3 groups of non-flowering plant (3 marks)
- c) (i) Algae is the dominant plant group in the marine environment. Name the two largest marine algal taxa (2 marks).  
(ii) State the main characteristics of algae (3 marks)
- d) (i) State the characteristics of flowering plants (3 marks)  
(ii) Name the 2 groups of flowering plants (2 marks)
- e) (i) Name the 4 divisions of the Plant Kingdom that are characterized by naked seeds (4 marks)  
(ii) Which group represents the Angiosperms or flowering plants in the marine environment (1 mark)
- f) (i) What is photosynthesis? (1 mark)  
(ii) Briefly explain how the products of photosynthesis are formed (4 marks)

### **QUESTION TWO (20 MARKS)**

Describe the different types of asexual reproduction in plants (20 marks)

### **QUESTION THREE (20 MARKS)**

Explain the process of photosynthesis in the following phases:

- a) Light reaction phase (10 marks)
- b) Dark reaction phase (10 marks)

### **QUESTION FOUR (20 MARKS)**

The Amazon Basin is a good example of tropical rain forest in which flowering plants or Angiosperms dominate. Discuss the composition of this plant group with appropriate examples (20 marks)

### **QUESTION FIVE (20 MARKS)**

Explain the origin of photosynthetic organisms like land plants (20 marks)