



**TECHNICAL UNIVERSITY OF MOMBASA**

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIROMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR:**

DEGREE IN MARINE RESOURCE (BSMR 16S/YEAR1/SEMESTER 1)

**AES 4104: COASTAL GEOMORPHOLOGY**

SPECIAL / SUPPLEMENTARY EXAMINATION

**SERIES: AUGUST 2017**

**TIME: 2HOURS**

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **TWO**Section(s). Attemptquestion ONE (Compulsory) and any other TWO questions.

**Circle the correct answer in section A.**

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**Question One (Compulsory) (30 marks)**

a) Define the following terms:

- i. Coast **(2 marks)**
- ii. Coastal zone **(2 marks)**
- iii. Offshore zone **(2 marks)**
- iv. Littoral zone **(2 marks)**
- v. Beach **(2 marks)**
- vi. Shore **(2 marks)**
- vii. Continental shelf **(2 marks)**
- viii. Geomorphology **(2 marks)**

b) Describe these parts of a wave **(6 marks)**

- i. Crest
- ii. Trough
- iii. Height
- iv. Amplitude
- v. Length
- vi. Period

c) Processes at work in coastal waters provide the energy that shapes and modifies a coastline. State FOUR (4) of these processes. **(4 marks)**

d) Describe the difference between eustatic sea level rise and isostatic sea level rise? **(4 marks)**

### **Question Two**

- a) Explain the difference between emergent and submergent coastlines **(4 marks)**
- b) Discuss any TWO (2) features found along emergent coastlines and TWO (2) features found along submergent coastline. **(16 marks)**

### **Question Three**

Discuss the occurrence, formation, and ecological significance of each of these features occurring in littoral or sublittoral areas of the coast

- a) Mangroves **(5 marks)**
- b) Coral reefs **(5 marks)**
- c) Estuaries **(5 marks)**
- d) Lagoons **(5 marks)**

### **Question Four**

- a) Discuss the FIVE (5) main erosional processes **(10 marks)**
- b) Name and discuss how any FIVE (5) erosional coastal features are formed **(10 marks)**

### **Question Five**

Discuss the THREE (3) types of boundaries that will emerge as a result of this movements of lithospheric plates giving examples of features found in each. **(20 marks)**