

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2016/2017**

**YEAR II SEMESTER II EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN WATER AND ENVIRONMENTAL MANAGEMENT/FISHERIES**

**SZL 2209/SZL 2231: AQUATIC ECOLOGY**

**DATE: JUNE 2017 TIME: 2 HOURS**

INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS. USE ILLUSTRATIONS WHERE NECESSARY.

QUESTION ONE

a) Discuss how upwelling helps to stimulate primary production, during the summer period of strong stratification (6 marks)

b) Describe briefly the following;

i) Phyto planktons (3 marks)

ii) Zooplanktons (3 marks)

c) Describe the following as applied in aquatic ecology;

i) Primary productivity (3 marks)

ii) Secondary productivity (3 marks)

d) Explain factors affecting aquatic productivity (6 marks)

e) Describe the role of bacteria in aquatic ecosystem (6 marks)

QUESTION TWO

Describe the main impacts of fishing on the environment and how they can be managed for (to ensure) sustainable fishing (20 marks)

QUESTION THREE

a) Discuss the main problems faced by mangroves in their environment.

(10 marks)

b) Discuss the adaptations of mangroves to their environment. (10 marks)

QUESTION FOUR

Explain the changes that occur in lentic ecosystems during the four seasons of the year in temperate regions (20 marks)

QUESTION FIVE

a) Explain risks that threaten coral today (10 marks)

b) Explain coral reefs association with other organisms (10 marks)