

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2020/2021**

**FOURTH YEAR FIRST SEMESTER SUPPLEMENTARY/SPECIAL EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURAL AND BIOSYSTEMS ENGINEERING**

**EBE 2406: APPLIED ENVIRONMENTAL MICROBIOLOGY AND ECOLOGY**

**DATE: FEBRUARY 2021 TIME: 2 HOURS**

INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

**QUESTION ONE: 30 MARKS**

a. Describe five economic importance of bacteria. (5 marks)

b. Delete bacteria and fungi to air pollution. (5 marks)

c. Differentiate between the following terms:-

 i. Autecology and synecology. (2 marks)

 ii. Commensalesin and symbiosis. (3 marks)

d. Outline factors that bring about plant succession. (5 marks)

e. Describe extractive industries that cause depletion of natural resources. (5 marks)

f. Describe excretory system in Fish. (5 marks)

**QUESTION TWO: 20 MARKS**

Discuss the economic important of fungi.

**QUESTION THREE: 20 MARKS**

Discuss organisms’ biotic environment.

**QUESTION FOUR: 20 MARK**

Describe the fish culture technique methods and systems.