

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2020/2021**

**FOURTH YEAR FIRST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY**

**SBT 2486: BIOMINING AND BIOREMEDIATION**

**DATE: MAY 2021 TIME: 2 HOURS**

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

**QUESTION ONE: 30 MARKS**

a. Briefly explain the commercial methods used in leaching. (6 marks)

b. Discuss the types and techniques of ex situ bioremediation. (6 marks)

c. Discuss the limitations of enhanced bioremediation. (6 marks)

d. Discuss the different groups of microorganisms that play a role in environmental clean up. (6 marks)

e. Briefly describe the advantages and disadvantages of bioremediation.

(6 marks)

**QUESTION TWO: 20 MARKS**

In details explain the factors affecting bioremediation.

**QUESTION THREE: 20 MARKS**

Discuss the techniques of soil bioremediation.

**QUESTION FOUR: 20 MARKS**

Discuss biodegradation of hydro carbons.