

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER 2014/15

TITLE OF PAPER: MICROBES AS A RESOURCE

COURSE CODE: ERM613

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:

1. THE EXAMINATION HAS FOUR (4) QUESTIONS. ANSWER ANY THREE (3).
2. EACH QUESTION CARRIES 30 MARKS.
3. ILLUSTRATE YOUR ANSWERS WITH LARGE AND CLEARLY LABELLED DIAGRAMS WHERE APPROPRIATE.

SPECIAL REQUIREMENTS: NONE

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS ~~BEEN~~  
GRANTED BY THE INVIGILATORS**

**QUESTION 1**

(a) Write an essay on the significance of microbes-metal interaction for the environmental health. **[15 Marks]**

(b) What is the role of microorganisms in the generation of renewable energy?. **[15 Marks]**

**QUESTION 2**

Mitigating environmental challenges by enhancing natural processes of microorganisms. Discuss. **[30 Marks]**

**QUESTION 3**

Provide your own arguments as to why it is advisable to take pH and moisture content measurements when sampling for microbiological analysis. **[30 Marks]**

**QUESTION 4**

Discuss the present and future contributions of microbes in stabilizing ecosystems. **[30 Marks]**