

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**YEAR I SEMESTER I EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN MICROBIOLOGY**

**SBT 3113: ADVANCED MICROBIAL PHYSIOLOGY**

**DATE:DECEMBER 2015 TIME: 2 HOURS**

**SECTION A : Answer all questions (30 MARKS)**

**QUESTION ONE**

a. Describe the various phases of growth with the aid of a diagram. (5 marks)

b. Explain the various agents that are used in deviation of proteins. (5 marks)

c. Describe the diversity of metabolism in prokaryotes. (5 marks)

d. Describe the sporulation of bacteria. (5 marks)

e. Explain the aerobic and anaerobic respiration in microorganisms. (5 marks)

f. Explain the mechanisms of transport in microorganisms. (5 marks)

SECTION B ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO

Discuss the biosynthesis of various macromolecules. (20 marks)

QUESTION THREE

Discuss the various environments conditions that microorganisms can grow and kind of organisms can grow and kind of organisms that grow in those environments. (20 marks)

QUESTION FOUR

Discuss the various energy sources for microorganisms. (20 marks)