

**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 BACHELOR OF SCIENCE IN MICROBIOLOGY AND BIOTECHNOLOGY**

**SBT 2172: CELL BIOLOGY**

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

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS.**

QUESTION ONE (30 MARKS)

Differentiate between

i. Plasmids and prions. (1 mark)

ii. Condenser and eyepiece lenses. (1 mark)

iii. Ribosomes and endoplasmic reticulum. (1 mark)

iv. Active transport and osmosis. (1 mark)

v. Desmosomes and plasmadesmata. (1 mark)

b. Briefly discuss cell fractionation. (5 marks)

c. Outline the different junctions in a cell. (5 marks)

d. State the differences between epigenesis and pangenesis. (5 marks)

e. State the salient difference between meiosis and mitosis. (5marks)

f. Briefly discuss why DNA is considered as responsible for transfer of inheritable traits.

(5 marks)

QUESTION TWO (20 MARKS)

Discuss causes, theories and effects of cell aging and senescence.

QUESTION THREE (20 MARKS)

Discuss cell motility.

QUESTION FOUR (20 MARKS)

Discuss the architexture and importance of Gram negative bacterial cell wall.