

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

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE**

**DEGREE OF BACHELOR OF SCIENCE IN GENOMIC SCIENCE**

 **SZL 2113: CELL STRUCTURE AND DYNAMICS**

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

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

1. a) i) Describe briefly the cell theory. [3 marks]

 ii) Explain the exception of cell theory. [3 marks]

b) Discuss briefly the unique physical properties of

 water making it fit for its essential role in

 protoplasmic system. [6 marks]

c) State the functions of the Golgi apparatus in cells. [6 marks]

d) Outline the major enzymes of the cytoplasmic matrix

 and cellular organelles. [6 marks]

e) Describe briefly the structure of mitochondria. [6 marks]

1. Discuss the functions of the plasma membrane.
2. Describe the types, structures and functions of the

endoplasmic reticulum. [20 marks]

1. Discuss the physical and biological properties of the

cytoplasmic matrix. [20 marks]

1. Describe the origin, structure and functions of lysosomes. [20 marks]