



150

(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

SECOND YEAR 1ST SEMESTER
MAIN EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE BIO,BAB

COURSE CODE: SZL 211

COURSE TITLE: FUNDAMENTALS OF CELL BIOLOGY

DATE: 19th January 2018 **TIME:** 2:00 -4:00 p.m.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1. Define and state the importance of the following in cell biology
 - i) Cell Theory (5 marks)
 - ii) Fluid Mosaic Model (5 marks)
 - iii) Central Dogma of Cell Biology (5 marks)
 - iv) Cell Cycle (5 marks)
 - v) Resolution (5 marks)
 - vi) Cell Communication (5 marks)

2. Discuss the biological importance of any **TWO** of the following organic compounds in relation to cellular structure and function in plants and animals. **(20 Marks)**
 - a) Carbohydrates
 - b) Proteins
 - c) Lipids
 - d) Nucleic acids

3. Discuss the role of the cell membrane in the movement of materials through it by named processes **(20 Marks)**

4. Describe the structure of a generalized eukaryotic plant cell and indicate the ways in which a nonphotosynthetic prokaryotic cell would differ in structure from this generalized eukaryotic plant cell **(20 Marks)**

5. Describe : **(20 Marks)**
 - i) Five cell organelles and their functions
 - ii) Cellular structure of phospholipids