



(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER

MAIN EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE (BIORESOURCE
CONSERVATION AND MANAGEMENT)**

COURSE CODE: SZL 121

COURSE TITLE: CELL BIOLOGY

DATE: Thursday 22nd July, 2021.

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.

- a) Give the three principles of the cell theory (3Marks)
- b) List three major functions of Golgi apparatus (3Marks)
- c) Distinguish between the structure of plant and animal cells (3 marks)
- d) Why is the plasma membrane described as a “fluid mosaic”? (2Marks)
- e) Describe the process of active transport (4Marks)
- f) Define the quiescent G_0 phase (2Marks)
- g) Describe the structure and function of mitochondrion (2Marks)
- h) Explain significance of meiosis (2Marks)
- i) Describe briefly the process of phagocytosis (3Marks)
- j) What are the functions of cyclic AMP? (2Marks)
- k) Differentiate microtubules and microfilaments (4Marks)

2. Describe the cell cycle and explain what happens during each phase (20 Marks)

3. Describe the structure and function of any ten cell organelles in animal cell (20 Marks)

4. Discuss the various mechanisms by which substances move across membranes? (20 Marks)

5 Explain apoptosis in terms of its importance, main pathways and how it is regulated (20 Marks)