



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE**  
**OF BACHELOR OF EDUCATION SCIENCE**  
**FIRST SEMESTER 2021/2022**  
**(FEBRUARY-JUNE, 2022)**

**ZOOL 232: CELL BIOLOGY**

**STREAM: Y2 S1**

**TIME: 2 HOURS**

**DAY: MONDAY, 3:00 PM – 5:00 PM**

**DATE: 16/05/2022**

**INSTRUCTIONS:**

- 1. Do not write anything on this question paper.***
- 2. Answer Section A (Compulsory) and any other TWO Questions in section B.***

**SECTION A:**

**ATTEMPT ALL THE QUESTIONS. 40 MARKS**

1. Identify **four(4)** differences between the two types of cells in living organisms (4Marks)
2. Explain the stages of cell cycle (4Marks)
3. State the **FOUR (4)** components of the cytoplasm (4Marks)
4. Explain the fates of molecules in the golgi apparatus (4 Marks)
5. Using examples, explain the role of cyclins in a cell (4 Marks)
6. Briefly discuss the membrane lipids (6 Marks)

7. Briefly explain the process of meiosis II (4 Marks)
8. Discuss the process of endocytosis (5Marks)
9. Elaborate on the Fluid Mosaic Model of the cell membrane (5Marks)

**SECTION B:**

**ATTEMPT ONLY TWO QUESTIONS: 30 MARKS**

- 12(a) Describe the discovery of cells (8 Marks)
- (b) Discuss the interphase stage of cell division (7 Marks)
- 13 Illustrate the checkpoints of the cycle during regulation of the cell cycle. (15 Marks)
- 14 Discuss the stages of prophase 1 (15 Marks)