



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

SEPTEMBER –DECEMBER 2021

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 101: CYTOLOGY AND PHYSIOLOGY

Date: DECEMBER 2021	Duration: 2 Hours
INSTRUCTIONS: Answer Question ONE and any TWO Questions	

- Q1. a) Outline four advantages of being in multicellular state (4 marks)
- b) Describe the properties of a true cell (6 marks)
- c) Define the following terms:-
- i) Chemosynthesis (1 mark)
 - ii) Pectin (1 mark)
 - iii) Mycoplasma (1 mark)
 - iv) Gene theory (1 mark)
 - v) Amyloplast (1 mark)
- d) Contrast plant cell and bacterial one (6 marks)
- e) Briefly describe the following organisms:-
- i) Prions and their role in Alzheimer disease (2 marks)
 - ii) Mycoplasma (2 marks)
- f) Enumerate the functions of membrane proteins (5 marks)
- Q2. Using an illustration, discuss the cell cycle (20 marks)

- Q3. A male student taking Bio 101 decided to have a hair-cut. After a few weeks, the hair re-grew. Discuss scientifically how the student regained his hair (20 marks)
- Q4. Discuss the cytochemistry of Golgi body (20 marks)
- Q5. Discuss synthesis of organic compounds by green plants (20 marks)

DTE DEC 2021

END