



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2022

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 202: PLANT STRUCTURE AND FUNCTION

Date: APRIL 2022

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any TWO Questions

- Q1. a) In form of a table, contrast a fruit and a seed **(5 marks)**
- b) Differentiate the following terms:
- i) Vessels and tracheids **(1 mark)**
 - ii) Lenticel and pedicel **(1 mark)**
 - iii) Perfect and imperfect flowers **(1 mark)**
 - iv) Tuber and bulb **(1 mark)**
 - v) Testa and tegmen **(1 mark)**
- c) Enumerate five roles of light in plants **(5 marks)**
- d) Briefly describe the main features of Gymnosperms **(5 marks)**
- e) Briefly describe interactions of plant hormones **(5 marks)**
- f) State the functions of the following:-
- i) Carotenoids **(1 mark)**
 - ii) Companion cell **(1 mark)**

- iii) Sporangium (1 mark)
- iv) Cambium (1 mark)
- v) Collenchyma cell (1 mark)
- Q2. Discuss the differences between monocot and dicot roots (20 marks)
- Q3. a) Explain the essence of pruning in certain plants. Cite examples. (4 marks)
- b) Discuss the roles of auxins in plants (16 marks)
- Q4. Relate plants to ecological adaptations (20 marks)
- Q5. a) Draw, label, and describe parts of a dicot stem (T.S.) (10 marks)
- b) Describe pollen tube formation, and fertilization (10 marks)

END