



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF AGRICULTURAL SCIENCES**  
KM 4 Kaduna - Zaria Expressway Riga Chikun Kaduna  
**DEPARTMENT OF CROP AND SOIL SCIENCES**  
**2020\_2 EXAMINATION**

**COURSE CODE: CRP 502**

**COURSE TITLE: PLANT GROWTH AND DEVELOPMENT**

**CREDIT UNIT: 2 CU**

**INSTRUCTIONS:** Answer four questions in all. Question one is compulsory and it carries 25 marks. Any three is 15 marks each.

**TIME ALLOWED:** 2.30 hours

- 1) (a) Briefly describe the content of the embryo of a seed with reference to what happens to it during germination. (10 marks)  
(b) State the environmental factors that affect flower induction and differentiation (10 marks)  
(c) Mention the four factors that influence the Photosynthesis-Respiratory Model of plants. (5 marks)
- 2) (a) State only the three types of solar radiation (5 marks)  
(b) List five instruments used to measure solar radiation. (10 marks)
- 3) (a) In what form is Nitrogen (N) available to plants. (5 marks)  
(b) Discuss the functions of Nitrogen in plants. (10 marks)
- 4) (a) Describe what happens at the plateau phase of the Sigmoid Growth Curve. (10 marks)  
(b) What is the importance of the Sigmoid Growth Curve (5 marks)
- 5) (a) Describe the process of measuring fresh weight of plants. (5 marks)  
(b) Describe the process of measuring dry weight of plants. (10 marks)
- 6) What are the roles of the under-listed plant organs
  - (a) Plant fruits (5 marks)
  - (b) Plant flower (5 marks)
  - (c) Plant stem (5 marks)