



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF AGRICULTURAL SCIENCES  
DEPARTMENT OF CROP AND SOIL SCIENCES**

**EXAMINATION: 2021\_2 POP EXAMINATION**<sup>786</sup>

**COURSE TITLE: PLANT GROWTH AND DEVELOPMENT (2CU)**

**COURSE CODE: CRP 502**

**TOTAL SCORE: 70 MARKS**

**2021 EXAMINATION**

**INSTRUCTION: Answer THREE Questions in all.**

*Question 1 is compulsory (30marks) and any TWO Questions (20 marks each)*

**TIME ALLOWED: 2hours**

**Q1**

(a) Explain in detail the advantages of seed dormancy (10 marks)

(b)(i) In what form is Iron available for plant use (4 marks)

(ii) Mention the functions of iron in plants (6 marks)

(c) (i) Plants require a balance of six critical factors in order to optimize growth. Mention these factor (5 marks)

(ii) Discuss the role of rainfall water as a critical factor in plant growth (5 marks)

**Q2**

Discuss in detail the effects of water stress in plants (20 marks)

**Q3**

(a) What do you understand by Sigmoid Growth Curve (5 marks)

(b) Explain in detail the three phases of the sigmoid curve (15 marks)

**Q4**

State the formula for calculating these simple plant growth analysis

(a) Relative Growth Rate (RGR) (5 marks)

(b) Leaf Area Index (LAI) (5 marks)

(c) Net Assimilation Ratio (NAR) (5 MARKS)

(d) Net Assimilation Ratio (NAR) (5 marks)