



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

EXAMINATION: 2021_1 POP EXAMINATION

COURSE CODE: CRP305

COURSE TITLE: CROP GENETICS AND BREEDING

INSTRUCTIONS: ANSWER FOUR (3) QUESTIONS. QUESTION 1 IS COMPULSORY AND ANY OTHER TWO (2) QUESTIONS

INSTRUCTIONS: ANSWER THREE (3) QUESTIONS. QUESTION 1 IS COMPULSORY (30 marks) AND ANY OTHER TWO (2) QUESTIONS (20 marks each)

TIME: 2HRS

QUESTIONS

- 1 Explain the following terms:
 - i. Male sterility ii. Cytoplasmic male sterility (10 marks)
 - b. How is male sterility maintained in crops? (7 marks)
 - c. List three crops that exhibit male sterility (3 marks)
 - d. Describe the process of Mitosis in cell division (10 marks)
- 2 Mention five (5) hybridization procedures and explain any three (3) (10 marks)
 - b. Highlight five (5) steps involved in Sourcing for breeding materials (5 marks)

Differentiate between Haploid and Diploid (5 marks)
- 3 Write incisively on the Ear-to-Row Selection method in cross pollinated crops (10 marks)
 - b. Discuss how Pure-line Selection is used to improve self-pollinated crops? (10 marks)
- 4 How can pedigree method of breeding, improve self pollinated crops? (10 marks)
 - b. Explain Bulk Method of Breeding in Self-pollinated Crops (5 marks)
 - c. Distinguish between Qualitative and Quantitative traits. (Give two examples each) (5 marks)