



NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF AGRICULTURAL SCIENCES

COURSE CODE: CRP 305

COURSE TITLE: CROP GENETICS AND BREEDING

INSTRUCTIONS: ANSWER FOUR (4) QUESTIONS. QUESTION 1 IS COMPULSORY AND ANY OTHER THREE (3) QUESTIONS

Time Allowed: 2 Hours

QUESTIONS

- 1a. Differentiate between **Gametogenesis and Fertilization**? (5marks)
- b. In a tabular form, differentiate between Mitosis and Meiosis (12marks)
- 1c. State four (4) characteristics of gene (8marks)

(TOTAL= 25MARKS)

- 2. Explain the following terms:

- | | |
|-----------------|-----------------|
| i. Phenotype | iv. Pure line |
| ii. Genotype | v. Heterozygous |
| iii. Homozygous | |

(TOTAL=15MARKS)

- 3a. State five (5) differences between Qualitative and Quantitative traits (10marks)

- 3b. Define the following terms:

- i. Complete flowers
- ii. Perfect flowers

- iii. Imperfect flowers
- iv. Monoecious
- v. Dioecious (5marks)

(TOTAL=15MARKS)

4a. What are Apomitic crops? (3marks)

4b. Briefly explain the following terms:

- i. Cleistogamy
- ii. Chasmogamy
- iii. Homogamy
- iv. Protandry
- v. Protogeny (10marks)

4c. Define Self Incompatibility (2marks)

TOTAL(15MARKS)

5a. Discuss extensively on male sterility (15marks)

6a. Write incisively on Emasculation as a procedure for hybridization (15marks)