



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
University Village, NnamdiAzikwe Express Way, Plot 91, Cadastral  
Zone, Jabi, Abuja

**FACULTY OF AGRICULTURAL SCIENCES**

**FIRST SEMESTER EXAMINATION: June/July**

**COURSE CODE: CRP 305**

**COURSE TITLE: CROP GENETICS AND BREEDING**

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS**

**QUESTIONS**

- 1a. Differentiate between **Gametogenesis and Fertilization?**
- b. In a tabular form, differentiate between Mitosis and Meiosis
- 1c. State four (4) characteristics of gene
  
2. Explain the following terms:
  - i. Phenotype
  - ii. Genotype
  - iii. Homozygous
  - iv. Pure line
  - v. Heterozygous
  
- 3a. State five (5) differences between Qualitative and Quantitative traits
  
- 3b. Define the following terms:
  - i. Complete flowers
  - ii. Perfect flowers
  - iii. Imperfect flowers
  - iv. Monoecious
  - v. Dioecious
- 3c. List three (3) features that encourage cross pollination and two (2) features that encourage self pollination
  
- 4a. What are Apomitic crops?
- 4b. Briefly explain the following terms:
  - i. Cleistogamy
  - ii. Chasmogamy
  - iii. Homogamy
  - iv. Protandry
  - v. Protogeny
- 4c. Explain the term Incompatibility Systems
  
- 5a. Discuss extensively on male sterility