



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCE
2024_2 EXAMINATION**

COURSE TITLE: INTRODUCTION TO CROP BIOTECHNOLOGY (2 CU)

COURSE CODE: CRP511

TOTAL SCORE: 70 MARKS

INSTRUCTION: Answer 3 questions in all

Question 1 is compulsory (30 marks) and any other TWO questions (20 marks each)

TIME ALLOWED: 2 ½ Hours

1. a. Describe chromosome counting, pointing out the stains used. 20mks
b. Summarize flow cytometry buttressing its advantages 10mks
2. a. Discuss advantages of in - vitro preservation by tissue culture over seed preservation.
12mks
b. Explain these terms: Cytology, Microscopy, Cell sorting, plant histology. 8 marks
3. a. Staining is one of the stages in the preparation of histological slides and some areas are stained. Discuss 12mks
b. Describe the stages of Griffith's experiment in discovering the "transforming principle" in Pneumococcus bacteria. 8mks
4. a. Briefly discuss these terms: Haploid and diploidization 10 marks
b. Discuss the production of shorter and longer chain fatty acids 10mks