



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCES
2021_2 EXAMINATION**

COURSE TITLE: CROP EVOLUTION AND ADAPTATION (2CU)

COURSE CODE: CRP512

TOTAL SCORE: 70 MARKS

TIME ALLOWED: 2hours

INSTRUCTION: Answer *THREE* Questions in All. Question 1 is compulsory (30marks) and any three questions (20 marks each)

1.
 - a. Define evolution with a brief explanation. (6 marks)
 - b. Discuss the concept of Evolution in relation the following statement: “Evolution stresses the relatedness of all life rather than its differences” (12 marks)
 - c. Define adaption and discuss the concept of adaptation with specific examples. (12 marks)
2.
 - a. State and discuss the theory of evolution by natural selection and its key takeaway. (12 marks)
 - b. Outline and briefly explain the four conditions required for natural selection. (8 marks)
3.
 - a. Define migration and describe the mathematical representation of the change in gene frequency per generation (q) due to migration. (7 marks)
 - b. Explain selection and briefly discuss the different types of selection. (6 marks)
 - c. Describe genetic drift and its role in the evolution of crop plants. (7 marks)
4.
 - a. Explain the Center of Origen of cultivated Crops. (6marks)
 - b. Describe the contribution of Nikolai Ivanovich Vavilov to the origin of cultivated crops. (8 marks)
 - c. What are the characteristics of centers of agricultural origin. (6 marks)