



NATIONAL OPEN UNIVERSITY OF NIGERIA

Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja  
Faculty of Science

DEPARTMENT OF BIOLOGICAL SCIENCES

2024 I EXAMINATION-

**COURSE CODE: BIO 404**

**COURSE TITLE: SYSTEMATIC BIOLOGY**

**CREDIT UNIT: 3 Units**

**TIME ALLOWED: 3 Hours**

**INSTRUCTION: Answer Question ONE (1) and any other THREE (3) Questions**

1. a. Mention the contributions of John Ray towards the development of modern taxonomy. 4 Marks  
b. List seven (7) suggestions that Botanists who are forming genus and/or species names should comply with. 7 Marks  
c. Discuss the features of Palaeobotany in relation to taxonomy. 9 Marks  
d. Describe the various pollen sizes that are used in plant taxonomy 5 Marks
2. a. Discuss classification according to Albert Magnus 4 Marks  
b. How did the Muslims, during the middle ages, contribute towards systematics? 4 Marks  
c. What are the reproductive traits used as source of taxonomic data? 7 Marks
3. a. Examine the anatomical features of the stem of a woody plant that could be used in taxonomic study. 6 Marks  
b. Enumerate the general instructions for herbarium users. 9 Marks
4. a. Write the generic names of coconut and mango 1 Mark  
b. In a tabular form, give the new names for the following old family names: 4 Marks  
i. Labiatae ii. Compositae iii. Caesalpinaceae iv. Palmae  
c. List phases of development in plant taxonomy. 4 Marks  
d. State the principles of International Code of Nomenclature for Algae, Fungi and Plants. 6 Marks
5. a. State the difference between natural and artificial classification 6 Marks  
b. What are good and bad characters 4 Marks  
c. Highlight the advantages of using botanical names over common names. 5 Marks
6. a. What is a biological species? 2 Marks  
b. State the source of data in classical taxonomy. 7 Marks  
c. Describe the design of chromosomes according to the position of their centromere. 6 Marks