



NATIONAL OPEN UNIVERSITY OF NIGERIA

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

DEPARTMENT OF BIOLOGICAL SCIENCES

2024_2 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. Define the term systematics. 2 Marks
 - b. State the methods that characterised the methods used by ancient naturalists in classifying plants. 4 Marks
 - c. Who was Theophrastus? 5 Marks
 - d. Why do botanists use botanical names over common names of plants? 6 Marks
 - e. Physiological and biochemical evidence are indispensable knowledge towards understanding biosystematics. Discuss! 8 Marks
2.
 - a. Highlight any three (3) problems associated with these names: i. quercus alba ii. Acacia Albida 3 Marks
 - b. State the source of data in classical taxonomy. 7 Marks
 - c. List any ten (10) shapes of pollen that are used in pollen study. 5 Marks
3.
 - a. Write the botanical name for rice 1 Mark
 - b. Differentiate between Syntype and Lectotype 2 Marks
 - c. What is a cultivar in botany 2 Marks
 - d. List six (6) suggestions that botanists who are forming generic names and/or specific epithets should comply with 6 Marks
 - e. Explain what you know about the herbalist period of taxonomic history 4Marks
4.
 - a. The following are some terms for naming specific epithet; what are the meanings of the terms?
i. xantha ii. alba iii. anglicus iv. Pendulus v. vulgaris vi. Rara 3 Marks
 - b. What is an effective publication 2 Marks
 - c. Write out the standardized ending for the following taxa: i. family ii. Order 2 Marks
 - d. Mention the contributions of Andrea Caesalpino towards the development of modern taxonomy. 5 Marks
 - e. What is a character state? 3 Marks
5.
 - a. Enumerate any three (3) problems the problems associated with common names 3 Marks
 - b. Chromosome morphology serves as good taxonomic character, describe the design of chromosomes according to the position of their centromere. 6 Marks
 - c. Describe pollen polarity as a unique taxonomic trait. 6 Marks
6.
 - a. State the contribution of Pedanois Dioscorides towards the development of Taxonomy. 5Marks
 - b. Succinctly, describe the nature and derivation of generic name. 10 Marks