



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**  
**MARCH/APRIL 2016 EXAMINATION**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**COURSE CODE:** BIO404  
**COURSE TITLE:** SYSTEMATIC BIOLOGY

**TIME ALLOWED:** 2 Hours

**INSTRUCTION: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER THREE QUESTIONS**

1. (a) Define the term Biosystematics. (3 marks)  
(b) Account for the Problems and challenges of Biosystematics. (10 marks)  
(c) Describe the phases of development in Plant Taxonomy. (12 marks)
2. (a) What do you understand by the term nomenclature. (2 marks)  
(b) Give reasons why Linnaeus is most known today. (3 marks)  
(c) Discuss classification according to the following:
  - i. Albert Magnus (5 marks)
  - ii. Pedanius Dioscorides. (5 marks)
3. (a) Distinguish between Classical taxonomy and experimental taxonomy. (3 marks)  
(b) Write **short notes** on the following:
  - i. A Lectotype (4 marks)
  - ii. Palynology (4 marks)
  - iii. paleobotany (4 marks)
4. (ai) Outline the three major rules adopted by the International Botanical Congress of 1866. (3 marks)  
(aii) Account for the test of characters in taxonomy. (4 marks)  
(b) Write **short notes** on the following:
  - i. International Herbaria (4 marks)
  - ii. National Herbaria (4 marks)
5. (ai) What is the importance of the study of evolutionary relationships (2 marks)  
(aii) What do you understand by the term Speciation. (3 marks)  
(b) Outline the general instructions for herbarium users. (10 marks)

6. (a) List **five** functions of a herbarium. (5 marks)
- (b) Give a detailed description of the following methods of analysis steps in phytochemical procedures:
- i. Separation (5 marks)
  - ii. Identification (5 marks)