



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**JULY, 2017 EXAMINATION**

**COURSE CODE: BIO 404 (3 CREDIT UNITS)**

**COURSE TITLE: SYSTEMATIC BIOLOGY**

**CREDIT: 3 units**

**TIME ALLOWED: 2 <sup>1</sup>/<sub>2</sub> Hours**

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

1. (a) i. What do you understand by the term Biosystematics? (3 marks)  
ii. Define a population. (3 marks)  
(b) Outline **six** functions of a herbarium (6 marks)  
(c) Discuss the Problems and challenges faced by Biosystematics. (10 marks)
2. (a) Enumerate the **any three** Phases of development in Plant Taxonomy. (3 marks)  
(b) Give a **detailed description** of any **three** of them. (3 x 3 = 9 marks)
3. (a) List **any three** steps of the method of analysis. (3 marks)  
(b) Account for the **three** of them. (3 x 3 = 9 marks)
4. (a) What is the importance of the study of evolutionary relationships? (2 marks)  
(b) Give reasons why Linnaeus is well known today (2 marks)  
(c) Outline the general instructions for herbarium users (8 marks)
5. (a) Distinguish between Classical taxonomy and experimental taxonomy (3 marks)  
(b) Describe the test of characters in taxonomy (3 marks)  
(c) Write **short notes** on the following:
  - i. National Herbaria (3 marks)
  - ii. International Herbaria (3 marks)
6. (a) What do you understand by the term Speciation (3 marks)  
(b) Write **short notes** on the following:
  - i. A Lectotype (3 marks)
  - ii. Palynology (3 marks)
  - iii. Paleobotany (3 marks)