



**National Open University Of Nigeria**  
**Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja**  
**Faculty of Sciences**  
**JANUARY/FEBRUARY, 2018 EXAMINATIONS**

**COURSE CODE: BIO 307**

**COURSE TITLE: EVOLUTION**

**CREDIT UNITS: 2**

**TIME ALLOWED: 2 Hours**

**INTRUCTION: Answer question ONE (1) and any other THREE (3) questions**

- 1a. List the **five** major reasons that led to extinctions. (5 marks)
  - b. Outline the key evolutionary innovations that can be used to trace evolution in the Plant kingdom. (4 marks)
  - c. Mutations can be classified on the basis of their functional effects. Discuss (6 marks)
  - d. Enumerate the various techniques that can be used to investigate polymorphism in the laboratories. (4 marks)
  - e. Give a detailed description of the mechanisms for balancing selection. (6 marks)
- 
- 2a. Differentiate between prokaryotes and Eukaryotes. (7 marks)
  - b. Write **short notes** on the following:
    - i. Genetic drift (4 marks)
    - ii. Mechanical isolation. (4 marks)
- 
- 3ai. What do you understand by the term mutation? (2 marks)
  - ii. Enumerate the causes of spontaneous mutation. (4 marks)
  - b. Outline the techniques that can be used to investigate polymorphism. (9 marks)
- 
- 4a. Classify mutations on the basis of Special class (3 marks)
  - b. Discuss the concept of mutation in relation to Molecular Biology and Genetics (12 marks)
- 
5. Adaptation, speciation and hybrid gender are very important in Evolution- Discuss with reference to their outcomes