

**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 ledto extinctions. (5 marks)

b. Outline the key evolutionary innovations that can be used to trace evolution in the

Plantkingdom. (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 bythe 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