

 **National Open University of Nigeria**

**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**

 **Faculty of Sciences**

 **Department of Pure and Applied Sciences**

 **NOVEMBER, 2018 EXAMINATIONS**

**COURSE CODE: BIO307**

**COURSE TITLE: EVOLUTION**

**CREDIT: 2 Units**

**TIME ALLOWED: 2 Hours**

**INTRUCTION: Answer Question ONE (1) and any other THREE (3) Questions**

1a. Enumerate the five major causes of extinction. (5 marks)

 b. Classify mutations on the basis of their functional effects (6 marks)

 c. Give a brief description of the mechanisms for balancing selection. (6 marks)

 d. Write **short notes** on the following:

 (i) allopatric speciation (4 marks)

 (ii) peripatric speciation. (4 marks)

2a. Define the term classification (2 marks)

 b. List any **four** probable stages involved in the origin of life. (4 marks)

 c. Outline the techniques that can be used to investigate polymorphism. (9 marks)

3. Adaptation, speciation and hybrid gender are very important in Evolution- Discuss

 with reference to their outcomes (15 marks; 5 for each)

4a. Outline the harmful mutations. (7 marks)

 b. Write short notes on the following evidences of evolution:

 i. Biochemical (4 marks)

 ii. Anatomical (4 marks)

5a. Outline the key evolutionary innovations that can be used to trace evolution in the

 Plant kingdom. (3 marks)

 b. Analyze the concept of mutation in relation to Molecular Biology and Genetics

 (12 marks)