



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)
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- 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)
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- 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)
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- 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)
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5. Adaptation, speciation and hybrid vigor are very important in Evolution- Discuss with reference to their outcomes