NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
JUNE/JULY EXAMINATION

COURSE CODE: BIO307
COURSE TITLE: EVOLUTION (2 units)
TIME ALLOWED:2 HOURS
INSTRUCTION: ANSWER ANY FOUR QUESTIONS

1ai. Define classification
ii. Distinguish between prokaryotes and Eukaryotes.
bi. List the key evolutionary innovations that can be used to trace the evolution of the plant kingdom.
ii. How have seeds improved the adaptations of plants to living on land?

2ai. Define mutation?
ii. Outline the harmful mutations.
bi. Define adaptation.
ii. Write short notes on allopatric speciation and peripatric speciation.

3ai. Define the term Ecosystem.
ii. Ecology and Evolution are considered sister disciplines of the life science. Discuss.
bi. List the various techniques' that can be used to investigate polymorphism in the laboratories.
ii. Discuss the mechanisms for balancing selection.

4ai. Define Biological Evolution?
ii. Describe mechanical isolation and hybrid gender.
bi. Enumerate the causes of spontaneous mutation.
ii. Classify mutations on the basis of their functional effects.

5ai.What are the major reasons for extinction?
ii. Write short notes on genetic structure and horizontal gene transfer.
bi. Define population genetics.
ii. Discuss the importance of linkage in population genetics.

6ai.What is genetic recombination?.
ii. Write short notes on the following
(i) the fate of mutant alleles (ii) delaterious alleles

bi. List five probable stages involved in the origin of life.
ii. Explain the following evidences of evolution:
(i) Bio-geographical (ii) Bio-chemical (iii) Anatomical