NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS

SCHOOL OF SCIENCE AND TECHNOLOGY
OCTOBER, 2013 EXAMINATION

COURSE CODE: BIO 307
COURSE TITLE: EVOLUTION
TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

1ai. Define Biological Evolution?
ii. Discuss mechanical isolation and hybrid gender.
bi. Enumerate the causes of spontaneous mutation.
ii. Classify mutation on the basis of their functional effects.

2ai. What do you understand by the term mutation?
ii. Outline the harmful mutations.
bi. Define adaptation.
ii. Write short notes on allopatric speciation and peripatric speciation.

3ai. Give 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.

4ai. 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.

5ai.What is genetic recombination?.
ii. Write short notes on the following
(i) the fate of mutant alleles (ii) deleterious alleles
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bi. List five probable stages involved in the origin of life.
ii. E5xplain the following evidences of evolution:
(i) Bio-geographical (ii) Bio-chemical (iii) Anatomical

6ai. Define classification
iiDistinguish 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?