



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCE
Department of Pure and Applied Sciences
2022.1 EXAMINATION

COURSE CODE: BIO307

COURSE TITLE: Evolution

CREDIT: 2 UNITS

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER QUESTION ONE (1) AND ANY OTHER TWO (2)

- 1a. Describe mechanism of balancing selection (**4 marks**)
 - b. Briefly explain polymorphism. (**5 marks**)
 - c. Describe the fifth stage (The true cell) in the evolution of life (**5 marks**)
 - d. Cellular levels can be used in the discussion of variation in evolution. Discuss (**7 marks**)
 - e. Explain genetic recombination as an agent of evolution (**9 marks**)
- 2a. Highlight induced mutation as a cause of mutation. **8Marks**
- b. Community ecology plays a significant role in the understanding of evolution – Explain (**9marks**)
- 3a. List five (5) animals that exhibit polyploidy (**5marks**)
- b. The understanding of evolution dated back to some historical philosophies. Explain the principles of: Jean – Baptiste. Larmark, Erasmus Darwing and Carolus Linnaeus in the understanding of these evolution principles. (**15marks**)
- 4a. According to evolution hybrid sterility is possible. Explain (**10marks**)
- b. Briefly describe spontaneous mutation at its molecular level (**10 marks**)
- 5a. Explain the importance of point mutation in evolution of new traits (**10 marks**)
- b. Describe Natural selection as a process of population genetics (**10 marks**)