



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCE
Department of Pure and Applied Sciences
2023_1 POP 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. **10 Marks**
- b. Community ecology plays a significant role in the understanding of evolution – Explain **(10marks)**
- 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)**