

**National Open University of Nigeria**

**Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja**

**Faculty of Science**

**DEPARTMENT OF PURE AND APPLIED SCIENCE**

**November/December 2018\_2 Examination**

**Course code: BIO 301Genetics II Units: 2**

**Time allowed: 2 Hours**

**INSTRUCTION: Answer question ONE (1) and any other THREE (3) questions**

**1**a. Explain what is variability and Allelic frequencies (4marks)

b. Give an example of a characteristic that probably has both an inherited and an environment

basis (2marks)

c. What are paracentric inversions? (4mark)

d. Define polymorphism (4marks)

e. Explain the term muscular dystrophy (8marks)

f. What is an autosome chromosome? (2marks)

g. Define karyotype (1mark)

2a. List any 5 polygenic traits in man (5marks)

b. Write briefly on Cystic fibrosis (10marks)

3a. List the types of Duplications or Repeats in cytogenetic (4marks)

b. What do you understand by Genetic drift? (11marks)

4. List and discuss the three stages involved in transcription (15marks)

5a. Write notes on sickle cell anemia (5marks)

b. Write short note on inborn errors of metabolism (10marks).