

**National Open University of Nigeria**

**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**

**Faculty of Science**

**April/May 2019\_1 Examination**

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

**Time allowed: 2 Hours**

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

1a.What is genetic drift? **(2marks)**

b. Why do we study populations and gene frequencies? **(3marks)**

c. List the two methods by which polyploidy can be induced. **(2marks**)

d. What are the characteristic features of haploid plants **(5 marks)**

e. Name 4 allopolyloid crops you know **(4marks)**

f. Name one acquired characteristic that may have both an inherited and environmental basis **(1mark)**

g. Name three basic mutagens known to you **(3marks)**

h. Enumerate the general steps involved in the lytic cycle **(5marks)**

2a.What is translation of genetic materials? **(2marks)**

b. Discuss the components of translation**. (13marks)**

3a. Name five examples of triploid crops you know. **(5marks)**

b. Write notes on collagen. (**10marks)**

4a. Define genetic polymorphism **(2marks)**

b. Discuss the muscular dystrophy **(8marks)**

c. Write short note on homologous **(5marks)**

5a.What are the three types of barriers that can cause habitat isolation **(3marks)**

b. How can you tell if there are mutant colonies in a culture? **(2marks)**

c. Discuss the characteristics of x-linked traits **(10marks)**