

**National Open University Of Nigeria**

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

**Faculty of Science**

**JANUARY/FEBRUARY 2018 EXAMINATION**

**COURSE CODE: BIO 301 CREDIT UNITS: 2**

**COURSE TITLE: GENETICS II**

**TIME ALLOWED: 2 Hours**

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

**1a**. List the three main goals of population genetics (6marks)

b. Name the four types of chromosomes abnormalities (4marks)

c. Define aneuploidy (2marks)

d. Name three inherited characteristics in man (3marks)

e. What is an inborn errors of metabolism? (3marks)

f. Define haemophilia (2marks)

g. Explain the term disjunction (2marks)

h. List the three ways by which polygenic traits can be identified (3marks)

2a. Explain the four factors that affect Hardyweinberg principles. (8marks)

b. Discuss the application ofaneuploidy. (7marks)

3a. Describe how genes determine sex in man (7marks)

b. Write explanatory notes on mRNA (8marks)

4a. Explain the first single gene polymorphisms (5marks)

b. Discuss the environment and gene expression (10marks)

5a. Describe polyploidy in animals (7marks)

b. With examples explain the different types of polyploidy you know (8marks)