



National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
Department of Pure and Applied Sciences
October/November, 2019 Examination
Course code: BIO 301. Course title: Genetics II
Units: 2 Time allowed: 2 Hours

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

Question 1

- 1a. What is Epistasis? (2marks)
1b. Explain post copulation or fertilization isolation mechanisms in plants (8marks)
1c. What do you understand by endopolyploidy? (5marks)
1d. A polymorphic population does not initiate speciation nor does it prevent speciation. Discuss (8marks)
1e. Explain what is hybrid sterility? (2marks)

Question 2

- 2a. Write briefly on codominant alleles (6marks)
2b. Explain the Temporal or habitat isolation in Genetics (5marks)
2c. Discuss how genes determine sex in man (4marks)

Question 3

3. Discuss polygenic inheritance in genetics (15marks)

Question 4

- 4a. Explain muscular dystrophy (8marks)
4b. Discuss the application of aneuploidy in plants (7marks)

Question 5

- 5a. Discuss the origin of variations in Chromosome number (8marks)
5b. Using bacteria as an example, explain gene transfer in organisms (7marks)