



National Open University Of Nigeria
Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja
Faculty of Science

BIO 316 – BIOINFOMATICS (2 Credit Units)

Time 2hours

Question 1 is compulsory. Answer FOUR questions only

1 a. Define Bioinformatics (1 mark)

1b List 3 applications of the development of computer methods pioneered by Dayhoff and her research group (3marks)

1c. Explain the following terms

- i. MULTIPLE ALIGNMENT (8marks)
- ii. OMIM(8marks)

1d. Fill the following table (5marks)

Amino Acid	3 letter code	1 letter code
Arginine		
Glutamine		
Leucine		
Phenylalanine		
Lysine		

2.a i. What are databases? (3marks)

2a.ii. Differentiate between the primary and the secondary database (3marks)

2b. i. What is the full meaning of abbreviation NCBI? (1 mark)

2b. ii. Enumerate 4 features of the primary database. (6 marks)

3. Explain the following terms

- a. BLAST (5marks)
- b. BOOTSTRAP (5marks)
- c. RESTRICTION MAP CONSTRUCTION (5marks)

4a. List 10 search sites of use in bioinformatics (10 marks)

b. What are the functions of *ENTREZ*? (5marks)

5a. List and explain two methods in Phylogenetic Analysis. (7marks)

5b. List 8 phylogenetic analysis software resources and their webaddresses (8marks)