



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCE
2021_2 EXAMINATION

BIO 316 – BIOINFOMATICS

Time: 1½ Hours

Credit Unit: 1

Instruction: Answer 4 questions only. QUESTION 1 is compulsory.

1 a. Give a succinct definition of Bioinformatics (1 mark)

1b Outline 3 ways in which in Margaret Dayhoff brought Mordern Computing to Biology (3marks)

1c. Write briefly on the following

- i. MULTIPLE ALIGNMENT (8 marks)
- ii. OMIM (8 marks)
- iii. SEQUENCE ALIGNMENT (5 marks)

2a. i. Give the full meaning of the abbreviation NCBI? (1 mark)

2a. ii Write briefly on NCBI (5 marks)

2b.i. What is the difference between primary and secondary database (3marks)

2b. iii Highlight 4 characteristics of the primary database. (6 marks)

3. Write concise notes on the following

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

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

b. *Outline* the functions of ENTREZ (5 marks)

5a.Enumerate and explicate on two methods in Phylogenetic Analysis.(7marks)

5b. Enumerate 8 phylogenetic analysis software resources and their web addresses (8 marks)