

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)