



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA**  
**FACULTY OF SCIENCE**  
**September 2020\_1 EXAMINATION**

**BIO 316 – BIOINFOMATICS**

**Time: 1½ Hours**

**Credit Unit: 1**

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

- 1a Define Bioinformatics (2mrks)
- 1b Mention the aim of Bioinformatic (3 mrks)
- 1c Describe the role of the following scientist in the historical development of Bioinformatics (12 mrks)
  - i. Zuckerkandl and Pauling
  - ii. Margaret O. Dayhoff
  - iii. Dayhoff and Coworkers
  - iv. Victor McKusick
- 1d Who established NCBI? (1mrk)
- 1e Write the full meaning of NCBI and identify its major features (7mrk)
  
- 2a List and explain the two (2) categories of Database analysis (7mrk)
- 2b Give two (2) examples of Primary and Secondary databases (2 mrk)
- 2c Mention two (2) database for reporting error and their websites. (6 mrks)
  
- 3a Define Accession Number (3 mrks)
- 3b Explain the following three (3) data base retrieval tools (12 mrks)
  - i. CLEVER
  - ii. LOOKUP
  - iii. FETCH
  
- 4a Describe the functions of *ENTREZ* and mention its information space (13mrks)
- 4b Enumerate the two ways by which ENTREZ is able to offer integrated information retrieval (2mrks)
  
- 5 Given the following databases/interface;NCBI's GenBank, EMBL, DDBJ, SWISS-PROT, OMIM. Correctly write their search sites and type of information they provide in a tabular form. (15mrks)