CRAWFORD UNIVERSITY

FAITH CITY IGBESA, OGUN STATE

2023/2024 ~~RAIN~~ Harmattan SEMESTER EXAMINATION

COLLEGE: NATURAL AND APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

PROGRAMME: BIOCHEMISTRY

COURSE CODE: BCH 415

COURSE TITLE: INTRODUCTION TO BIOINFORMATICS

UNIT: 2 **STATUS: ELECTIVE** **TIME: 2HRS**

INSTRUCTIONS: ANSWER FOUR QUESTIONS ONLY

1.(a) Define the following (i) Bioinformatics (ii)Biotechnology (ii) Computational Biology **(6 marks)**

(b) Describe Sanger's method or 'short –gun' method in the process of DNA sequencing. **(9 marks)**

2.(a) Explain (i) Objectives of Human Genome Project (HGP) and (ii) Benefits of **HGP (10 mark)**

Enumerate five different databases used to assess biological information **(5 marks)**

3.(a) Explain how you would interpret a data obtained after sequencing DNA from a biopsy. **(7.5 marks)**

(b) Discuss the following (i) Replication and (ii) Transcription . **(7.5 marks)**

4.If you are given a sequence without a direction, how would you determine If the sequence is DNA , RNA or protein **(15 marks).**

5. Describe in detail the process of "Abinitio" gene finding. **(15marks)**

6.What are the (i) Ethical (ii) Social (iii) Legal issues that could emanate from Human Genome Project (HGP)? .(Supply three points each). **(15 marks)**