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**University Examinations 2016/2017**

FOURTH YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES.

**SHC 3401: BIOINFORMATICS**

**DATE: DECEMBER, 2016 TIME: 2 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Explain three fold objectives contained in the definition of bioinformatics. (3 marks)
2. State two contributions of Margret Dayoff in Bioinformatics. (4 marks)
3. State three features of a SWISS-PROT database. (3 marks)
4. Explain two functions of a biological databases. (4 marks)
5. Explain three additional information on each entry in prints database. (6 marks)
6. Explain three secondary nucleotide sequence databases. (6 marks)
7. State and explain four databases housed by KEGG database. (4 marks)

**QUESTION TWO (20 MARKS)**

Compare and contrast pfam and prodom databases. (20 marks)

**QUESTION THREE (20 MARKS)**

Discuss five disadvantages of biological databases. (20 marks)

**QUESTION FOUR (20 MARKS)**

Describe four different types of database model. (20 marks)

**QUESTION FIVE (20 MARKS)**

Discuss four primary protein sequence database. (20 marks)