



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF HEALTH SCIENCES**  
**UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN COMMUNITY**  
**HEALTH AND DEVELOPMENT**  
**1<sup>st</sup> YEAR 2<sup>nd</sup> SEMESTER 2018/2019 ACADEMIC YEAR**  
**E-LEARNING**

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**UNIT CODE: SCH 3121**

**UNIT COURSE: ORGANIC CHEMISTRY**

**STREAM: Bsc. CHD & PH**

**DATE: 13th /08/2019**

**TIME: 2pm -4pm**

**EXAM SESSION:**

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**INSTRUCTIONS**

1. Answer question ONE (Compulsory) and ANY other Two questions
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination

### **SECTION A: Answer ALL Questions**

1. Briefly define the following terms: (5 Marks)
  - a. Protein
  - b. Amino acid
  - c. Peptide bond
  - d. Lipids
  - e. Fatty acid
2. List four main functions of collagen (4 marks)
3. Distinguish between haemoglobin and collagen (10 marks)
4. Name the main bonds that make up the tertiary structure of a protein (4 marks)
5. Draw the basic structure of an amino acid (5 marks)
6. List any two properties of fatty acids (2 marks)

### **SECTION B: Answer ANY TWO questions**

1. Describe primary, secondary, tertiary, and quaternary protein structure. Name the non-covalent interactions that are responsible for each level of structure. (20 marks)
2. Explain the process of protein denaturation (20 marks)
3.
  - a. What are the main properties of steroids (5 marks)
  - b. Describe the characteristics of cholesterol (15 marks)
4. Distinguish between the chemistry of plant cell walls and bacterial cell walls (20 marks)