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**University Examinations 2015/2016**

SECOND YEAR, FIRST SEMESTER EXAMINATION FOR DIPLOMA IN AGRICULTURE

**BIO 0210 : AGRICULTURAL BIOCHEMISTRY**

**DATE: AUGUST, 2016 TIME: 1 ½ HOURS**

**INSTRUCTIONS:** *Answer question* ***one Compulsory*** *and any other* ***two*** *questions.*

**QUESTION ONE – (30 MARKS)**

1. Biochemistry is an important science in agriculture. Describe briefly the importance. (6 Marks)
2. Bimolecules are found in all living organisms. Briefly describe their characteristics.

(4 Marks)

1. Briefly describe two storage polysaccharides. Explain the synthesis of proteins in living organisms. (6 Marks)
2. Explain the synthesis of proteins in living organisms. (6 Marks)
3. Explain briefly the importance of nucleic acids in living organisms. (4 Marks)
4. State the factors that affect the reaction activity of enzymes. (4 Marks)

**QUESTION TWO (15 MARKS)**

1. Explain the functions and properties of water that make it very important in living things.

(8 Marks)

1. Describe briefly the application of amino acids and the importance of proteins.(7 Marks)

**QUESTION THREE (15 MARKS)**

1. Briefly describe the functions of cell wall, vacuole and plastids. (6 Marks)
2. State two disaccharides and give their properties. (6 Marks)
3. Describe briefly the characteristics of monosaccharides. (3 Marks)

**QUESTION FOUR (15 MARKS)**

1. Discuss the effect of heat and pH range on proteins. (6 Marks)
2. Write the general formula of amino acids. ( 5 Marks)
3. Explain two properties of lipids. (4 Marks)