**King Saud University**

**20**

**Scientific & Medical Female Colleges**

**Zoology Department**

**531 Zoo Advance physiology Course**

**Final Exam - first Semester 1432-1433 H**

**Student Name: Academic Number:  
  
1) Complete a sentence by writing in a blank :**

* There are three Types of Amino Acid Analyzer …Screening tests…… 2-……Quantitative tests ………… and ……Specific tests.………The Amino Acid Analyzer perform the……Quantitative tes ………(2 marks)
* Reflotron is machine easy-to-use to measurement of substance quantities depend on analyzer for quantitative determination of clinical chemistry parameters directly from ………whole blood, serum and plasma..(1marks)
* The principle of Sahli Hemometer depend on Compare the color of acid hematin solution obtained using the collected blood sample with the standard solution color of the Sahli hemometer (2 marks)
* SDS-PAGE is abbreviation for Sodium Dodecyl Sulfate Polyacrylamide Gel Electrophoresis and is a method used to ………………………..……...…………….................................. (2 marks)
* There are four types of protein structures: (4 marks)

Primary structure, amino acid sequence of the polypeptide chain Secondary , highly regular local sub-structures. Two main types of secondary structure, the [alpha helix](http://en.wikipedia.org/wiki/Alpha_helix) and the [beta strand](http://en.wikipedia.org/wiki/Beta_strand),  
Tertiary, three-dimensional structure of a single protein molecule. The alpha-helices and beta-sheets are folded into a compact globule  
Quaternary structure is a larger assembly of several protein molecules or polypeptide chains, usually called [subunits](http://en.wikipedia.org/wiki/Protein_subunit) in this context

**2) What is the purpose from using the flowing techniques:** (4 marks)

* Kymograph

…………………………………………………………………………...………………………………………………………………………………...………………………………………………………………………………...………………………………………..……...…...………….

* Hematocrit

………………… **a measure of the relative percentage of blood cells (mainly erythrocytes) in a given volume of whole blood** …………………………………...………………………………………

**3) Identify the blood group:** (2 marks)

a- The phenotype is ………………………………………….……………………

b- The genotype is ……………………………………………………………….

1. **Identify the slides with brief explanation**: (3 marks)
2. ………………………………………………………....……………………...………….……………………………..…………….
3. ………………………………………………………............……………………………….……………………………..…………