

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# **UNIVERSITY EXAMINATIONS 2014/2015**

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN MEDICAL MICROBIOLOGY**

**SZL 2130: HUMAN ANATOMY AND PHYSIOLOGY**

**DATE: DECEMBER 2014 TIME: 2 HOURS**

**INSTRUCTIONS:**

**ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

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**QUESTION ONE**

1. Describe briefly the conducting system of a human heart [6 marks]
2. Describe the mechanisms involved in the regulation of urine concentration and volume [6 marks]
3. Describe the structure and function of the pharynx in the respiratory process [6 marks]
4. Explain the main functions of the lymphatic system [6 marks]
5. Outline the differences between the following
6. Serous membranes and meninges
7. Capillaries and sinusoids
8. Coronary circulation and pulmonary circulation [6 marks]

**QUESTION TWO**

Describe the cellular components of blood [20 marks]

**QUESTION THREE**

Describe the anatomy and function of the following organs of the Human digestive system

1. Tongue
2. Stomach
3. Small intestine [20marks]

**QUESTION FOUR**

1. Using specific examples, explain the mechanisms involved in hormone synthesis, release and action [10 marks]
2. Explain in details the functions of the following hormones in a human body
3. Growth hormone
4. Oxytocin
5. Calcitonin [10 marks]

**QUESTION FIVE**

Describe the structure and function of the following lymphoid organs

1. Tonsils
2. Spleen
3. Lymph nodes [20 marks]