**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATION 2017/2018**

**YEAR 1 EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL HEALTH, PRODUCTION AND PROCESSING**

**AAP 2104: HISTOLOGY AND CELL BIOLOGY**

**DATE: JANUARY 2018 TIME: 2 HOURS**

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

**QUESTION ONE- 30 MARKS**

1. Compare and contrast the structure and functions of smooth and skeletal muscle tissues [5marks]
2. Describe the morphology and functions of the various cells found in bones [5 marks]
3. Describe the structure and functions of two major classes of cells found in the central nervous system [5 marks]
4. Under lymphatic tissues describe the following:
5. Functions of the lymphatic system [2 marks]
6. Histology of lymph nodes [3 marks]
7. Giving examples, describe the differences between the following:
8. White and brown adipose tissue [3 marks]
9. Mucous and serous membranes [2 marks]
10. Describe the general histological structure of hair and associated structures [5 marks]

**QUESTION TWO**

1. Discuss the morphological classification of the various types of epithelia found in animals [15 marks]
2. Describe how exocrine glands can be classified based on their mode of secretion [5 marks]

**QUESTION THREE**

Describe the histological structure and functions of the following parts of the urinary system [20 marks]

1. Glomerulus [6 marks]
2. Tubules [5 marks]
3. Bladder [6 marks]
4. Urethra [3 marks]

**QUESTION FOUR**

Describe the histological structure and functions of the following:

1. Papillae found in the tongues of domestic animals [10 marks]
2. Wall of the small intestine of domestic animals [10 marks]