



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2017 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 104: HISTOLOGY

Date: April 2017

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Name **THREE** layers of tissue that form the heart wall **(3marks)**
- b) What is the importance of using stains in histological techniques **(2marks)**
- c) Explain the **THREE** common types of cells in connective tissue **(3marks)**
- d) Outline at least **THREE** advantages of paraffin method over alternative methods **(3marks)**
- e) Define the following terms **(1mark each)**
- i) Differentiation
 - ii) Tissue
 - iii) Autopsy
 - iv) Biopsy
- f) The heart works as two pumps. Explain **(3marks)**
- g) Differentiate between the following bones / bone **(1 mark each)**
- i) Fibula and tibia
 - ii) Femur and humerus
 - iii) Cranium and pelvic bones
 - iv) Osteoblasts and osteoclasts
- h) State at least two roles played by lymphatic system **(2 marks)**

- i) Give any THREE characteristics exhibited by epithelium tissue **(3marks)**
- j) Name major parts of the respiratory system **(3marks)**
- Q2. Describe;
- a) The basic structure of a skeletal muscle **(10marks)**
 - b) Factors considered when naming skeletal muscles **(10marks)**
- Q3. Describe the paraffin method as a way of preserving the structural integrity of a specimen for future study **(20marks)**
- Q4. Briefly explain;
- a) Types of muscle tissue in human body **(4.5marks)**
 - b) Valves of the heart **(6.5marks)**
 - c) The act of breathing in humans **(9marks)**
- Q5. Discuss major circulatory loops and blood vessels in the body of a named organism **(20marks)**

END