



UNIVERSITY OF EMBU

2017/2018 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(COMMUNITY HEALTH)**

HCS 121: ANATOMY II

DATE: APRIL 4, 2018

TIME: 2:00 – 4:00 PM

INSTRUCTIONS:

Answer Question ONE and ANY other TWO questions.

QUESTION ONE (30 MARKS)

The circulatory system is responsible for transporting oxygen, nutrients and carrying waste for excretion.

- a) Trace the flow of blood through the heart (6 marks)
- b) Describe the components of blood (12 marks)
- c) State the 4 components of the cardiac conduction system (4 marks)
- d) Explain the lymphatic pathway (8 marks)

QUESTION TWO (20 MARKS)

Gaseous exchange in the body is performed by the respiratory system

- a) Define the following terms
 - i) Tidal volume (2 marks)
 - ii) Inspiratory reserve volume (2 marks)
 - iii) Vital capacity (2 marks)
- b) Discuss five organs of the respiratory system giving their functions (10 marks)
- c) Differentiate between internal and external respiration (4 marks)

QUESTION THREE (20 MARKS)

Elimination of waste is important for normal functioning of the body. The kidneys play a major role in eliminating waste.

- a) Explain the structure and location of the kidneys (2 marks)
- b) Describe the structure of a nephron (12 marks)
- c) Explain factors that affect glomerular filtration (6 marks)

QUESTION FOUR (20 MARKS)

The male and female reproductive systems work together to produce offspring.

- a) Describe the internal accessory organs of the male reproductive system and their functions (10 marks)
- b) Draw the sagittal view the mammary gland (6 marks)
- c) Explain the hormones released by the anterior pituitary gland that are responsible for stimulating the ovaries to release their hormones (4 marks)

QUESTION FIVE (20 MARKS)

The alimentary canal is responsible for digestion and absorption of nutrients;

- a) Describe the layers of the alimentary canal wall (8 marks)
- b) Explain the location and function of 6 organs of the alimentary canal (12 marks)

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