

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCE**

**BMED 110: HUMAN MORPHOLOGY AND DEVELOPMENTAL ANATOMY**

**STREAMS: BSC (BMED)**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 5/07/2016**

**11.30 AM – 1.30 PM**

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**INSTRUCTIONS:**

- 1. Do not write anything on the question paper**
- 2. Mobile phones and any other reference materials are NOT allowed in the examination room**
- 3. The paper has five questions. Answer questions One and any other Two questions**
- 4. Number all your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.**

1. (a) Define the following embryologic terms
    - (i) Morula [1 mark]
    - (ii) Blastocyst [1 mark]
    - (iii) Conceptus [1 mark]
  - (b) State five major events that occur during the third week of embryonic development. [5 marks]
  - (c) With an aid of a diagram, explain the external anatomy of the heart. [6 marks]
  - (d) Explain the anatomical relationship of the heart and the lungs. [6 marks]
  - (e) Describe the major components of the blood. [6 marks]
  - (f) Explain the differences between pulmonary circulation and systemic circulation. [4 marks]
2. The urinary system filters blood removing waste products which leave the body as urine:

- (a) Describe the organs that comprise the urinary system. [8 marks]
- (b) With a well-labeled diagram, describe the anatomy of the nephron. [8 marks]
- (c) Explain the difference between the two types of nephrons in human body. [4 marks]
3. The male and female reproductive organs work together to produce offspring
- (a) State the organs that form the female reproductive system. [5 marks]
- (b) With a well-labeled diagram, explain the anatomy of the uterus. [7 marks]
- (c) Identify the ligaments that support the uterus in the pelvic cavity. [8 marks]
4. Explain five major events that occur during the second week of embryonic development. [20 marks]
5. Various organs are involved in the breakdown of food from the digestive system.
- (a) Describe the accessory organs of the digestive system. [8 marks]
- (b) State the three subdivisions of the small intestine. [3 marks]
- (c) Explain the structural features of the small intestine that facilitate the process of digestion and absorption of food. [9 marks]
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