

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

BMET 110: HUMAN MORPHOLOGY AND DEVELOPMENTAL ANATOMY

STREAMS: Y1S2

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 31/3/2021

8.30 AM – 10.30 AM

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. Answer questions ONE and two other 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.
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Question One

During fertilization the genetic material from the haploid gametes merges to form a single diploid cell, the zygote:

- a) Describe how the haploid gametes are produced during spermatogenesis. [6 Marks]
- b) Describe the events that lead to the formation of a zygote. [8 Marks]
- c) Describe the location and functions of the following organs in the female reproductive system.
 - i. Ovaries [2 Marks]
 - ii. Uterine tubes [2 Marks]
- e) Outline the messages you would give a pregnant mother to maintain the optimum health for herself and her baby. [6 Marks]

Question Two

The respiratory system contribute to homeostasis by bringing in oxygen from the atmosphere into close proximity with blood from the body for gaseous exchange:

- a) Outline the structures that are part of the conducting zone of the respiratory system. [4 Marks]
- b) With an aid of a diagram, describe the structure of the bronchial tree. [10 Marks]
- c) Describe the anatomy of the respiratory membrane. [6 Marks]

Question Three

Explain the structure, location and functions of the following glands/ducts in the male reproductive system:

- a) Seminar vesicles. [5 Marks]
- b) Prostate gland [5 Marks]
- c) Bulbourethral glands. [5 Marks]
- d) Epididymis. [5 Marks]

Question Four

The endocrine system contributes to homeostasis by producing specialized chemical substances (hormones) that mediate communication in the whole body:

- a) Explain the difference between endocrine and exocrine glands. [4 Marks]
 - b) Describe the location of endocrine glands and the hormones they secrete in the female. [16 Marks]
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