



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN PUBLIC HEALTH

HPH202: HUMAN ANATOMY AND PHYSIOLOGY II

DATE: 7/12/2021

TIME: 8.30-10.30 AM

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## INSTRUCTIONS:

This paper consists of two sections A and B

### SECTION A

#### Specific Instructions

- This section has one question
- The question is compulsory
- The question is 30 marks

### QUESTION ONE (30 MARKS)

- Differentiate the types of muscle tissue in the human body (6 marks)
- Explain the requirements for muscle contraction (3 marks)
- The midwife advises Mrs. K to strengthen her pelvic floor muscles with exercises following normal delivery. State the reason for this advice specifying the targeted muscles (3 marks)
- Explain the cough reflex (3 marks)
- State the advantages of breathing through the nose as opposed to mouth breathing. (3 marks)
- Explain the mechanisms of regulation of respiration (4 marks)
- Explain the process of absorption of vitamin B12 (3 marks)
- State the functions of parathormone (3 marks)
- Explain the tendency to feel the urge to defecate as soon as feeding is initiated (3 marks)

## **SECTION B:**

### **Specific Instructions**

- **This section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

### **QUESTION TWO (20 MARKS)**

- a) Master X is a fitness expert working with a group of women to flatten their protuberant abdomen. Deduce the muscles that he will target against the type of movement that will be used to achieve his goal for his clients (12 marks)
- b) Explain endocrine control in the process of parturition (8 marks)

### **QUESTION THREE (20 MARKS)**

- a) Mr D starts work out for the first time panting heavily 10 minutes into his session, describe the lung volumes he will attain stating the muscles involved in each lung capacity identified (10 marks)
- b) You are addressing a community in Machakos Sub County where Mrs. G who has a renal problem, in the absence of a heart disease is a participant. Explain to her why she suffers from high blood pressure. (10 marks)

### **QUESTION FOUR (20 MARKS)**

The Liver plays major functions in the human body, is crucial for survival and its failure is fatal. Discuss.

### **QUESTION FIVE (20 MARKS)**

- a) With the aid of a well labelled diagram of the functional unit of the kidneys, describe the process of urine formation (15 marks)
- b) Explain the occurrence of masculine characteristics in females (5 marks)