

Uganda Martyrs University

FACULTY OF EDUCATION

BACHELOR OF EDUCATION (PRIMARY) YEAR THREE

SEMESTER ONE EXAMINATIONS, 2022/23

PHYSICAL EDUCATION AND SPORTS

PAPER ONE: PED3101 - ANATOMY, PHYSIOLOGY OF EXERCISE



DATE: Thur 12/01/2023 Time: 2.00-5.00 PM

Instructions:

- Do not write anything on this question paper.
- Attempt **FOUR** questions.
- Correctness in spelling, standard and comprehensive academic writing, grammar and aptness of expression will be taken into account when assessing the answers.
- Illustrate appropriately.
- Begin each selected question on a new page in the answer booklet.
- Follow instructions on this question paper and answer booklet carefully.
- Each question carries a total of 25 marks.

1. (a) Explain **five** (5) functions of the skeletal system in relation to the person participating in physical activities. (11 marks)
(b). Briefly explain **six** types of movements along the joints and give an example from each type of physical activity or sport. (14 marks)
2. The heart of the 10 KM marathon runner works tirelessly to pump oxygenated blood to the most exercising muscles.
(a) Describe how the heart functions during the above race. (11 Marks)
(b) Explain the **two** phases of pumping blood during the above race. (4 marks)
(c) Cite out **two** cycles of blood circulation within the body of the marathon runner. (4 marks)
(d) Expound on **three** components of blood and give function for each component. (6 marks)
3. (a) Describe the following processes of respiration during aerobics exercise.
 - i. Inspiration (4 marks)
 - ii. Expiration (4 marks)
(b) Describe how gaseous exchange takes place in alveoli. (8 marks)
(d) Elucidate **three** short effects of sprinting 100m to the runner. (3 marks)
(e) Briefly explain **three** the importance of respiration to an exercising person (6 marks)
4. Explain the characteristics of the following muscles
 - i. Smooth muscles (3marks)
 - ii. Cardiac muscle (3marks)

- iii. Skeletal muscles (3marks)
- (b) With examples, Differentiate slow twitch muscle fibre and first twitch muscle fibre (4 marks)
- (c) Explain **six** functions of muscular system to a weight lifter. (12 marks)
5. (a) Give **two** examples of the following bones (8 marks)
- i. The Skull
 - ii. Foot
 - iii. The Chest
 - iv. The Hand
- (b) Differentiate between muscular and cardiovascular system (4 marks)
- (c) Identify **four** valves within the heart and give their main function. (5 marks)
- (c) With relevant examples, explain any **four** types of joints and how they are used (8 marks)
6. (a) Cite out long term effects of physical exercise on the following systems:
- (a) Skeletal system (6 marks)
 - (b) Respiratory system (6 marks)
 - (c) Cardiovascular system (8 marks)
 - (d) Muscular system (5 marks)
7. (a) Explain **eight** importance of blood to the primary six pupils who is engaging in 5000m running. (15 marks)
- (c) Explain **five** special features that aid alveoli to perform its function during gaseous exchange (10 marks)

END