

TEACHER COLLEGES OF JAMAICA

BACHELOR OF EDUCATION

JANUARY 2021 EXAMINATIONS

COMMON PAPER

PHYSICAL EDUCATION

EXERCISE PHYSIOLOGY

[PE204SEB]

**YEAR 2
SECONDARY**

TIME: 2 ½ HOURS

**Instructions: Candidates are required to answer ALL questions in SECTION A and
THREE questions in SECTION B.**

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

SECTION A (40 marks)
Answer ALL questions in this section.

1. a) Differentiate between health related and skill related components of physical fitness. (4 marks)

b) Briefly explain the principle of reversibility and give an example of a situation that could lead to it. (5 marks)
2. The Physiological adaptations gained from chronic exposure to exercise can improve both the capacity and efficiency of an individual to perform. Thus, an athlete who is preparing for competition must follow the principles of training to achieve optimal performance.

a) Explain to the athletes what overload and progressive overload principle of training is. (4 marks)
b) State why athletes should follow the specificity principle of training. (2 marks)
c) Say why is it necessary for the recovery principle to be involved in training. (2 marks)
3. a) Calculate the Body Mass Index for the following subjects: (2 marks)
 i) Annmarie 65 kg & 1.90 m
 ii) Charles 85 kg & 1.90 m
4. a) List FOUR conditions that can be classified as a heart disease. (2 marks)

b) Explain any TWO of the conditions mentioned in (a). (4 marks)

c) Use the FITT principle to plan a simple exercise routine that can be used to prevent a person from developing heart disease. (8 marks)
5. Morris is 40 years old and plays cricket for the college team. He performs the same tasks as younger members of the team takes more time. He complains often that training is harder and he is considering retiring. (2 marks)
a) Define the term *aging*. (2 marks)
b) State ONE physical change Morris would experience as a result of the aging process. (1 marks)
6. a) Which energy system is predominantly employed in the completion of a marathon? (1 mark)
b) Justify your answer at (a). (3 marks)

SECTION B

Answer **THREE** questions in this section.

1. Discuss FIVE adaptations that are realized in the respiratory system due to prolonged exposure to aerobic training. (20 marks)

2. A planned approach to training and exercise is needed to optimize performance.
 - a) What is *training*? (2 marks)
 - b) Why is the training process planned? (3 marks)
 - c) List the THREE most important principles of training. (3 marks)
 - d) Explain how ONE of the listed principles works, when applied to training. (12 marks)Total 20 marks

3. Discuss FIVE chronic effects of resistance training on the musculoskeletal system of an athlete that will enhance his/her sports performance. (20 marks)

4. Assess FIVE effects of physical and mental activity on the brain and nervous system function. (20 marks)

5. Ageing is a normal biological process that occurs in all living things. Give an overview of the effects of exercise on the ageing process. (20 marks)

END OF EXAMINATION

