

TEACHERS COLLEGES OF JAMAICA

BACHELOR OF EDUCATION

DECEMBER 2018-EXAMINATIONS

COMMON PAPER

PHYSICAL EDUCATION

EXERCISE PHYSIOLOGY

PE204SEB

**Year: Three
SECONDARY**

Time: 2 ½ Hours

INSTRUCTIONS: Answer ALL questions from Section A and THREE questions from Section B.

DO NOT TURN THIS PAGE UNTIL TOLD TO DO SO.

Section A- 40 Marks.
Answer ALL questions in this section.

1. a) List FOUR conditions that can be classified as cardiovascular diseases. (2 marks)
- b) Explain any TWO of the conditions listed in (a). (4 marks)
- c) Propose TWO actions that can be used to improve the health of a person with the conditions. (2 marks)

2. Diabetes mellitus is a chronic lifestyle disease that affects people of all ages.
 - a) Briefly explain the causes of this disease. (2 marks)
 - b) Differentiate between the TWO main types of diabetes. (4 marks)
 - c) List FOUR factors that may predispose a person to diabetes mellitus. (2 marks)

3. a) Calculate the Body Mass Index for the following subjects: (4 marks)

Name	Mass	Height (m)	BMI
Alex	70kg	1.80	
Peter	95kg	1.87	
Francine	65kg	1.45	
Joshua	40kg	1.50	

- b) Using the following information, identify the students in (a) classified as: (2 marks)

	BMI
Underweight	<18.5
Normal weight	18.5-24.9
Overweight	25-29.9
Obesity	30 or greater

- i) Normal weight
- ii) Overweight

4. a) Differentiate between *exercise* and *physical activity*. (4 marks)

- b) Briefly explain how the frequent exposure to speed training contributes to the improvement of speed with regards to the principles of overload and adaptation. (4 marks)

5. a) Magnesium is considered as a micronutrient. State TWO reasons why it should be included in the diet of an athlete. (2 marks)
- b) Macronutrients are required in large quantities and are used as substrates for energy metabolism. State FOUR important roles of macronutrients before, during and after exercise. (4 marks)
6. a) Oshane Archibald, Jamaica's top 5k runner completes a 5k road race. Identify the dominant energy system that was employed to complete the event. (1 mark)
- b) Justify your answer in (a). (3 marks)

Section B-60 Marks

Answer any THREE questions in this section.

7. Discuss FIVE effects of speed and power training on the musculoskeletal system of a pace bowler that will enhance his/her performance outcomes. (20 marks)
8. Discuss any FIVE physiological adaptations that are realized in the cardiovascular system due to prolonged exposure to aerobic training. (20 marks)
9. Explain any FIVE effects of physical and mental activity on the brain and nervous system functions. (20 marks)
10. Advise a group of senior citizens on the effects of regular exercise on any FOUR systems of the body regarding the aging process. (20 marks)
11. As a coach you are seeking to expose your athletes to training in different environments to improve their performance. Advise them on FIVE short- and long-term effects of training at 5000-8000 feet above sea level. (20 marks)

END OF EXAMINATION

