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**PHYSICAL EDUCATION STUDIES**

**YEAR 12 GENERAL**

**Exercise Physiology Test**

**2019**

**Question/Answer Booklet**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Time allowed for this paper***

Reading/planning time before commencing work: Five minutes

Working time for paper: Fifty minutes

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| --- | --- |
| ***Material required/recommended for this paper***  **To be provided by the supervisor**  This Question/Answer booklet  Sections One and Two: Write your answers in this Question/Answer booklet.  Spare lined paper  **To be provided by the candidate**  Standard items:Pens, pencil, eraser, correction fluid, highlighter, ruler, |  |

***Important note to candidates***

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

**Question 1 (14 marks)**

**(a)** Complete the table below in relation to the energy systems and their variables

**(8 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Energy System** | | |
| **Variables** | **Anaerobic alactacid (ATP-CP)** | **Lactic Acid** | **Aerobic** |
| **Intensity in effort** | Very High intensity (95%-100% of max effort) |  |  |
| **Duration** |  |  | Greater than 3 minutes |
| **Fuel** |  | Carbohydrate (muscle glycogen and blood glucose) |  |
| **Waste Products** | None |  |  |

**(b)** The three energy systems often combine to supply our muscles with the energy (ATP) they use during exercise. Each energy system is stimulated by the changes in the intensity and duration of a particular exercise/activity. Select a sport as your example and explain how the aerobic and anaerobic energy systems are used during the game to supply the player’s body with energy. **(6 marks)**

**Sport:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Aerobic Pathway:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Anaerobic Pathway:**

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**Question 2 (23 marks)**

After years of being the dominant force in women’s world hockey, the Hockeyroos have dropped to a world ranking of forth. The current coaching staff are planning a whole new program to take them back to the top of the world rankings.

**(a)** The coaching staff first want to improve their selection process so they have the fittest players possible. Identify one test the coaching staff could use to measure each of the following energy systems. **(2 marks)**

**Aerobic:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Anaerobic:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(b)** Prevention of injury in the lead-up to major tournaments is crucial. Explain two strategies the coaching staff could utilise to protect and ensure the players don’t get injured in the lead-up to the 2018 Hocket World Cup. **(6 marks)**

**One:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Two:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**(c)** Young Hockeyroos player Georgia Wilson is an up-and-coming star. She had an injury setback recently in which she tore her hamstring in the lead-up to the Junior Hockey World Cup. Identify and explain the five main goals for rehabilitation that Georgia should be able to demonstrate before she can return to sport. **(10 marks)**

**One:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Two:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Three:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Four:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Five:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 3 (18 marks)**

You are the first aid officer on duty at the local interschool football carnival. One of the players has a bad fall. Upon your approach to the injured athlete, you observe them clutching their shoulder. Describe how you would assess the extent of the injury. Describe what treatment you would immediately administer to the athlete. Identify the things that the injured athlete would need to avoid in the next 72 hours.

**Assessment:**

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**Treatment:**

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**What to avoid:**

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