Examination Period 3: 2016/17

SPO100317N

Module Title: Physiological Function and Response
Level: Four
Time Allowed: Two hours

Instructions to students:

- Enter your student number **not** your name on all answer books.
- Answer **two** out of **four** questions.
- All questions are equally weighted.
- Begin each question in a separate answer book; label each answer book clearly with the number of the question you are answering.
- The same material should not constitute a substantial part of more than one question.
- Neither books nor notes may be taken into the examination.
- Graph paper is provided.

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Answer **two** out of **four** questions.

1. Using the graph paper provided, draw the typical lactate threshold curve and onset blood lactate (OBLA) for untrained and trained individuals. Discuss the cause for the excessive rate of lactate release into the blood during intense exercise.

2. Describe the structure and function of the cardiovascular system and explain how the mechanical/neurological events during the cardiac cycle results in the movement of blood through the heart.

3. Describe the transportation of oxygen (O\(_2\)) and carbon dioxide (CO\(_2\)) in the blood and explain the factors that determine hemoglobin saturation using the oxygen-hemoglobin dissociation curve (you may use illustrations to support your answer).

4. Describe the characteristics of different muscular fibre types (type I, type IIa, type IIx) and explain how these characteristics influences force production.

End of Paper