Examination Period 3: 2017/18

SPO100318NA

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.

No. of Pages: 2
No. of Questions: 4
Answer **two** out of **four** questions.

1. Define cardiac output and describe how it is determined, using calculations to support your response. Explain the physiological mechanisms which regulate cardiac output during exercise.

2. Describe the structure and breakdown of an ATP molecule and then explain the breakdown of a glucose molecule using the two anaerobic systems to resynthesize ATP.

3. Describe the transport of O₂ in the blood and explain the processes involved in gaseous exchange at the lungs and the muscles.

4. Describe Boyle’s, Dalton’s and Henry’s laws and explain in relation to these laws the ventilation of the lungs and respiration of gasses between the air and blood.