SUMMER EXAMINATIONS 2015

SPO200515N

MODULE TITLE Biomechanical Basis of Sport & Exercise
LEVEL Five
TIME ALLOWED Two hours

Instructions to students:
- Enter your student number not your name on all answer booklets.
- Answer TWO of the four questions.
- All questions are equally weighted.
- Begin each answer in a separate booklet; label each booklet 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.
- You may not remove this examination paper from the examination room. For all purposes the examination paper remains the property of The University of Northampton.

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ANSWER TWO OF THE FOLLOWING QUESTIONS

1. Explain the principle of ‘orderly recruitment’ of motor units and discuss how the EMG signal can be used to determine the level of muscle activity during a contraction.

2. Explain the various parameters that dictate projectile motion using several sporting situations. Then demonstrate how technique and equipment can be manipulated to alter projectile motion to improve performance.

3. Compare and contrast the ground reaction forces during squat and countermovement jumps. Then discuss why jump performance is enhanced using the countermovement.

4. Explain the factors that dictate active force-length characteristics of skeletal muscle. Then discuss performance and injury prevention benefits of operating on the ascending limb of the force-length curve.

END OF PAPER