**ST MARY’S UNIVERSITY**

**TWICKENHAM, LONDON**

BSc Health & Exercise Science Degree Examination

students registered for Level **FIVE**

Title**: Exercise Physiology and Activity across the Lifespan**

Code: **HEP5014**

Semester: **July Resits**

Date: **2nd** **July 2019**

Time: **09:30 – 11:30 AM**

TIME ALLOWED: **TWO** HOURS

Please answer any **FIVE** questions in the answer booklet provided:

1. According to previous research, who would be more at risk of cardiovascular disease and why: a train driver or ticket inspector (person that checks tickets along the train)? (20 marks)
2. Discuss why physical activity is recommended for individuals at risk (pre-diabetic) of developing type 2 diabetes. (20 marks)
3. Name four age-related physiological/structural changes that may reduce the functional ability of an elderly person. Explain how each adaptation would affect function. (20 marks)
4. Name four chronic cardiorespiratory adaptations that occur following regular endurance exercise. Evaluate the purpose and importance of each adaptation. (20 marks)
5. Provide a physiological explanation why women above 50 years of age are more likely to experience bone fractures. (20 marks)
6. According to research, explain why physical activity is recommended for the maintenance of skeletal muscle health. (20 marks)
7. How effective is exercise at decreasing the incidence and progression of diabetes? Rationalise your answer by explaining the most important adaptations to exercise for a diabetic. (20 marks)
8. Describe the size principle of motor unit recruitment. Discuss how this principle can be applied to improve strength when using a light (50% 1RM) load during resistance training. (20 marks)

**END OF EXAMINATION**