

UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:–

B.Sc.

Health Sciences HSC36: Podiatric Anatomy and Biomechanics (II)

COURSE CODE : HESC0036

UNIT VALUE : 0.50

DATE : 03-MAY-05

TIME : 14.30

TIME ALLOWED : 2 Hours

HSC36 PODIATRIC ANATOMY AND BIOMECHANICS UNIT (II)
Second year examination (2 hours)
May 2005

Answer one question from each section.
Answer four questions in total.
Answer each question in a new answer booklet.

Section A Neuroanatomy

- 1 a) What are upper and lower motor neurones? Compare briefly the different effects that upper and lower motor neurone lesions have on motor function. (10)
- b) Describe in as much detail as possible, and with the aid of diagrams, the route taken by corticospinal tract axons that control the motor neurones of the left foot. Indicate the position of these axons as they pass through each of the major subdivisions of the central nervous system (forebrain, midbrain, pons, medulla and spinal cord). (10)
- 2 Identify areas of the central nervous system involved in the control of movement and explain how mobility would be affected by damage to these areas. (20)

Section B Pathomechanics

- 1 Rigid forefoot valgus is usually associated with severe chronic secondary pathologies.
 - a) Describe how compensatory mechanisms for forefoot valgus give rise to chronic secondary pathologies. (12)
 - b) Outline the management of a case of forefoot valgus in a 50 year old woman. (8)
- 2 Rearfoot varus is a term describing several different conditions.
 - a) Define rearfoot varus. (3)
 - b) Describe the clinical recognition of rearfoot varus and in your answer describe the different types of rearfoot varus. (7)
 - c) Describe the cause of one of the conditions which present as rearfoot varus. (3)
 - d) Describe the management of a case of rearfoot varus. (7)

TURN OVER

Section C Anatomy

- 1 a) Describe in detail and with the use of diagrams, the course of the sciatic nerve, its distal branches and the muscle groups it supplies. (14)
- b) What would be the consequences of lower motor neurone paralysis affecting the tibial nerve? (6)
- 2 a) Describe in detail the anatomy of the posterior heel and Achilles tendon. (14)
- b) Discuss the function and mode of action of the Achilles tendon. (6)
- 3 a) Describe in detail the anatomy of the medial longitudinal arch. (10)
- b) Discuss the function of the Medial longitudinal arch. (10)

Section D Functional Anatomy

- 1 a) Discuss the anatomy and function of the 1st ray and peroneus longus in achieving midfoot stability (8)
- b) Explain what is meant by the term "a medially deviated subtalar joint axis". (4)
- c) Why does a medially deviated subtalar joint decrease the stability of the midfoot? (8)
- 2 a) Describe the structures that contribute to the stability of the ankle. (12)
- b) Discuss the reasons why ankle inversion sprains are more common than eversion sprains. (8)

END OF PAPER