



<b><u>PROGRAM</u></b>	<b>: BACCALAUREUS TECHNOLOGIAE PODIATRY</b>
<b><u>SUBJECT</u></b>	<b>: PODIATRIC SPORTS MEDICINE IV</b>
<b><u>CODE</u></b>	<b>: HPMA 411</b>
<b><u>DATE</u></b>	<b>: NOVEMBER 2016</b>
<b><u>DURATION</u></b>	<b>: 180</b>
<b><u>WEIGHT</u></b>	<b>: 50: 50</b>
<b><u>TOTAL MARKS</u></b>	<b>: 150</b>

---

<b><u>EXAMINER</u></b>	<b>: MR HE ALEXANDER</b>
<b><u>MODERATOR</u></b>	<b>: MR D. REHBOCK</b>
<b><u>NUMBER OF PAGES</u></b>	<b>: 6 PAGES</b>

**INSTRUCTIONS**

1. THIS QUESTION PAPER CONSISTS OF THREE SECTIONS  
  
SECTION A: MULTIPLE CHOICE QUESTIONS  
SECTION B: CASE HISTORY  
SECTION C: ESSAY-TYPE QUESTIONS
2. SECTION A, SECTION B AND SECTION C MUST BE ANSWERED IN  
THE EXAMINATION BOOKS
3. ANSWER ALL QUESTIONS
4. MARKS WILL BE AWARDED FOR NEAT AND LOGICAL EXPOSITION  
OF ANSWERS AND CORRECT USE OF TERMINOLOGY

**SECTION A:                      MULTIPLE CHOICE QUESTIONS**

1.     A soccer player presents 3 months after treatment for an ankle sprain, complaining of constant, debilitating pain about the foot and ankle. Physical examination reveals a swollen, warm and tender foot and ankle. Which of the following is the most likely diagnosis?
  - A. Septic arthritis
  - B. Reflex sympathetic dystrophy
  - C. Neuroma formation with afferent sympathetic pain
  - D. Osteomyelitis
  
2.     Which of the following conditions would most likely lead to the development of sesamoiditis in a long distance runner?
  - A. Partially compensated rearfoot varus
  - B. Uncompensated talipes equinus
  - C. Uncompensated rearfoot varus
  - D. Plantar flexed first ray
  - E. Partially compensated talipes equinus
  
3.     A 34-year-old cyclist presents with pain and edema about the forefoot, proximal to the third and fourth metatarsal heads. Pain on palpation to the third and fourth metatarsal neck area is noted. Which of the following is the most likely diagnosis?
  - A. Ganglion
  - B. Morton's neuroma
  - C. Phlebitis
  - D. Stress fracture
  - E. Periarticular fibrosis
  
4.     Which of the following statements least likely describes the relationship between the soleus and peroneus longus muscles?
  - A. In normal gait the peroneus longus fires first and the soleus relaxes last
  - B. The soleus stabilizes the cuboid against ground reactive force, while the peroneus longus assists in lifting the cuboid
  - C. In open kinetic chain, the soleus is a STJ supinator, while the peroneus longus is a STJ pronator
  - D. The soleus stabilizes the lateral column of the foot, while the peroneus longus stabilizes the medial column

5. Radiographic evaluation of the fifth metatarsal reveals a transverse diaphyseal fracture approximately 1.5 cm distal to the base. Which of the following is the best management option?
- A. Weight bearing in a fracture shoe
  - B. Non-weight bearing short leg cast
  - C. Weight bearing short leg cast
  - D. Non-weight bearing in a below knee walker boot
  - E. weight bearing cast
6. The primary muscle or muscle group responsible for extension of the hip joint is the:
- A. Sartorius.
  - B. Gluteus Maximus.
  - C. Gluteus Medius.
  - D. Iliopsoas.
7. A patient has suffered a fracture of the neck of fibula, involvement of the common peroneal nerve in the injury would be indicated by:
- A. inability to dorsiflex the ankle
  - B. inability to plantar flex the ankle
  - C. anaesthesia of the sole of the foot
  - D. inability to plantar flex the digits
  - E. inability to extend the knee
8. The following hydration guidelines should be followed during heavy exercise;
- A. drink 200 – 400 ml every 15 minutes during exercise
  - B. drink 200 – 400 ml every 30 minutes during exercise
  - C. drink only when thirsty
  - D. avoid drinking prior to exercise to avoid cramping
9. A patient presents with recurring history of lateral ankle sprains. The most appropriate response would consist of the following;
- A. casting followed by the use of a bracing device for future sports participation
  - B. besides the usual ice, compression and elevation, no further action is necessary
  - C. application of either ankle taping and or bracing depending on the degree of swelling, followed by strengthening and proprioceptive gains

10. Chondromalacia patella is:
- A. an arthroscopic diagnosis
  - B. a separation of subchondral bone and cartilage from another bone
  - C. caused by contusive micro trauma or a sprain with inherent ligamentous laxity
  - D. causes peri patella synovitis
11. The 'keystone' of the medial longitudinal arch of the foot is supported by the:
- A. talus
  - B. calcaneus
  - C. navicular
  - D. cuboid
  - E. first metatarsal
12. Among the distance events, which chronic disorder is the most likely to sideline an elite athlete:
- A. Achilles tendonitis
  - B. Shoe interface problems like blisters
  - C. Patella femoral syndrome
  - D. Shin splints or stress fractures
  - E. Hamstring/quadriiceps strain tears
13. Treatment of the calcaneal apophysitis can include the following except:
- A. heel lift
  - B. cryotherapy
  - C. functional custom orthotics
  - D. cortisone infiltrations
14. Instability of the deltoid ligament is evaluated by the:
- A. talar tilt
  - B. squeeze test
  - C. eversion stress test
  - D. anterior drawers test
15. A wobble board is used for:
- A. strengthening of the peroneal muscles
  - B. calf stretching
  - C. flexibility of the ankle
  - D. proprioceptive enhancement

**(Total 15)**

**SECTION B: CASE HISTORY**

A 20 year old male squash player complains of a deep dull pain on the medial side of both lower legs, typically occurring during and after a game and for at least one day after activity. The pain has been getting progressively worse for 6 weeks, his general practitioner prescribed NSAIDS for 7 days with moderate effect. He tells you that he has started training for a tournament which is to occur in the next three weeks.

On examination tenderness is elicited along the medial border of the tibia, extending from the upper 2/3 to the lower 1/3 especially with resisted foot plantarflexion and inversion. He has a positive hop test and very tight calf muscles, for which she compensates fully. Gait analysis reveals a compensated forefoot varus with a static measurement of 4 degrees. High supination resistance force and hallux limitis are noted clinically.

- 1.1 What is your diagnosis? (2)
- 1.2 List 3 differential diagnosis (3)
- 1.3 Describe the pathophysiology of the identified diagnosis (5)
- 1.4 Describe the mechanism of injury (5)
- 1.5 List your clinical examinations and suspected findings (5)
- 1.6 What shoe advice, citing examples, and recommendation could you offer this patient (5)
- 1.7 What is the grading would you award this clinical presentation motivating your answer? (5)
- 1.8 Tabulate a training programme for rehabilitation of the this patient (15)

**(Total 45)**

**SECTION C: ESSAY-TYPE QUESTIONS**

**QUESTION 1**

Discuss the podiatric treatment of the following sporting injuries:

- 1.1 Lower limb compartment syndrome (15)
- 1.2 Treatment ideals for chronic compartment syndrome (15)

**(Total 30)**

**QUESTION 2**

Name two running shoes in each of the following categories:

- 2.1.1 Strong antipronation shoes (2)
- 2.1.2 Mild antipronation shoes (2)
- 2.1.3 Neutral shoes (2)

2.2 Discuss the aetiology of the following sporting injury:

Cuboid Subluxation (syndrome) (29)

**(Total 35)**

---

**QUESTION 3**

Describe and graphically represent a flow diagram for the diagnosis and treatment of ankle sprain

(25)

**(Total 25)**

---

**GRAND TOTAL 150 MARKS**