



**PROGRAM** : BACCALAUREUS TECHNOLOGIAE  
*PODIATRY*

**SUBJECT** : **SURGERY 1**

**CODE** : **GCC 211**

**DATE** : SUPPLEMENTARY EXAMINATION 2016

**DURATION** : 180 MINUTES

**WEIGHT** : 50:50

**TOTAL MARKS** : 164 marks

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**EXAMINER** : MS N. SITHOLE

**MODERATOR** : MR S. NTULI

**NUMBER OF PAGES** : 4 (Including the cover page)

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**INSTRUCTIONS** :

- ANSWER ALL QUESTIONS
- MARKS WILL BE ALLOCATED FOR A CLEAR AND LOGICAL EXPOSITION OF THE ANSWER
- PLEASE HAND IN ALL QUESTION AND ANSWER PAPERS TO THE INVIGILATOR

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**QUESTION 1**

*Mrs X, a 45 year old patient presents with painful swollen ankles. She tells you that she has been having this problem for about 6 years and it is progressively getting worse, and she's finding it difficult to walk and move her ankles especially in the mornings. She has been taking medication and has had a few injections in her joints to help alleviate pain and swelling.*

- 1.1 Give 2 differential diagnoses for Mrs X's condition. (3×2=6)
- 1.2 Identify the X-ray presentations of each of the conditions you have mentioned above. (5×2=10)
- 1.3 List and briefly discuss the steps you would follow to reach a diagnoses for Mrs X, if you intend referring her to an orthopaedic surgeon. (15)
- 1.4 Surgery involves cutting, to remove or replace a part from a human body. What are some of the factors that a surgeon might consider if they decide to perform surgery on any patient? (3×5=15)

*All the special tests confirm that Mrs X has a rheumatic disorder: RA and the disease have progressed to stage 3.*

- 1.5 What could be the surgical procedure that could be performed on Mrs X? Motivate your answer. (5)
- 1.6 Explain the procedure, you have chosen in 1.4 under the following:
- a) Define this procedure to your patient (3)
  - b) Indications. (2)
  - c) Advantages (3×2=6)
  - d) Disadvantages. (2×2=4)

**[56]**

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**QUESTION 2**

*Mr Larry, a 45 year old patient present to the clinic complaining of poorly localized bone pain of his left leg (tibia). The pain is constant in nature and present at rest. He describes the pain as dull aching pain which is worsened by weight bearing. On examination the skin felt warm and some of the sensory tests (vibration) were reduced and you also noticed that his left tibia is bowed.*

- 2.1 Provide a possible diagnosis for Mr Larry. (2)
- 2.2 Provide a definition for Mr Larry's condition. (4)

*Mr Larry's condition result in biomechanically weakened bone and predispose patients to fractures.*

- 2.3 In your own words, define a fracture. (2)
- 2.4 Fractures can heal by 2 different mechanisms. Identify and briefly discuss these two different methods of fracture healing. (4)
- 2.5 An average time for fracture to completely heal is +/- 12 – 16 weeks. List the factors that may affect the healing time for fractures. (8)

**[20]**

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**QUESTION 3**

*A 27 year old patient; present to the clinic complaining of aching joints in the feet. During history taking the patient reports a history of falling a few times lately. Also states that they were born with normal feet, but at the age of 6 years, the patient could not run or jump properly and later on his feet had become high arched and inverted. He also mentions that his mother had the same problem.*

*On examination revealed that muscle power is reduced in all limbs, reflexes absent, and dorsiflexion and eversion reduced. Gait analysis revealed a dropped foot type of gait.*

- 3.1 Provide a possible diagnosis for this patient. (2)
- 3.2 Neuromuscular disorders that cause foot deformities are often divided into two main types. Based on your answer to **question 1** above, in which type does this patient's condition falls under. Motivate your answer. (4)
- 3.3 Pes cavus can result from a broad range of etiologies, majority being neurologic. The treatment depends on the presenting symptoms, resultant gait dysfunction and degree of foot joint mobility (flexibility or rigidity).
- i. Which test would assist you in determining whether the deformity is flexible or not? (2)
  - ii. Briefly explain how this test is conducted and the results thereof. (5)
- 3.4 Identify and give a brief description of the different surgical options for a pes cavus deformity. (7×3=21)

**[34]**

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**QUESTION 4**

*Mr. Anderson, a 35 year old patient present with painful lesion under his left foot. He describes the pain as burning pain. On examination of the lesion you see hard thick skin with "black pin-points" and there's pain when squeezing.*

- 4.1 Provide a possible diagnosis for Mr. Anderson. (2)
- 4.2 This type of lesion can be treated using 3 different treatments. Identify and briefly explain each of these treatments to Mr. Anderson. (3×2)
- 4.3 If Mr. Anderson were presenting with an ingrown toe nail (stage 2 or stage 3) and you both decided on a Nail Wedge Resection. Briefly discuss the process or steps that you

will follow before, during and after the procedure.

(20)

4.4 List the contraindications for local anaesthetic administration and a NWR.

(10)

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**QUESTION 5**

5.1 Tabulate the difference between benign and malignant tumors; when seen on X-ray.

**[10]**

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**Grand total: 164 marks**

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