

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

APPLIED PHYSICS DEPARTMENT

SRA 1204 – THE APPENDICULAR SKELETON

EXAMINATION

BSc HONOURS RADIOGRAPHY PART 1

MAY 2013

DURATION: 3 HOURS

ANSWER **ALL** PARTS OF QUESTION **ONE** IN SECTION A AND ANY **THREE** QUESTIONS FROM SECTION B. SECTION A CARRIES 40 MARKS AND SECTION B CARRIES 60 MARKS.

SECTION A

1. (a) Describe the clavicle. [5]
- (b) State five accessories found in a general X-ray room. [5]
- (c) State the anatomical features of the lower third of the femur. [5]
- (d) Explain the line focus principle. [5]
- (e) Describe how a projection to locate a metallic foreign body in the foot is performed. [5]
- (f) Explain the processes that result in a radiographic image having different shades of grey. [5]
- (g) State the muscles that are involved in the movement that occurs at the elbow joint. [5]
- (h) Construct an exposure chart for radiography of both hips. [5]

SECTION B

2. (a). Explain the importance of the request form when performing radiography of a family that has been involved in a road traffic accident (RTA). [5]
- (b) Explain modifications that may be done when performing radiography of trauma of trauma patients. [10]

- (c) Explain the advantages of a ceiling suspended tube over a floor mounted one in imaging the appendicular skeleton. [5]
3. (a) State the structure that are associated with a synovial joint. [5]
- (b) Describe how two projections are performed to demonstrate the gleno-humeral joint. [15]
4. (a) Explain the term osteomyelitis. [3]
- (b) Explain field coverage with reference to radiography of long bones. [2]
- (c) Describe the position of the patient and arrangement of relevant equipment used in producing two projections of the right tibia and fibula of a patient who has had multiple injuries in a road traffic accident (RTA). [15]
5. (i) Explain the following;
- (a) Monteggia's fracture,
- (b) Rheumatoid arthritis,
- (c) Colle's fracture,
- (d) Anode Heel Effect,
- (e) Open reduction. (2x5 marks) [10]
5. (ii) Explain how radiographs for the acromioclavicular joints are performed to inform subluxation as a diagnosis. [10]
6. (a) Explain the radiographic appearance of a calcaneum spur. [2]
- (b) Explain the radiographic appearances of a greenstick fracture. [2]
- (c) Explain three types of fractures that can occur in the hip region. [6]
- (d) Explain how lateral radiograph of the left hip of a patient on a stretcher is performed. [7]
- (e) Explain the role of a secondary radiation grid. [3]

END OF EXAMINATION