

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

APPLIED PHYSICS DEPARTMENT

SRA 4213 RADIOGRAPHY PRACTICE AND DIFFERENT USER GROUPS

EXAMINATION

BSc SPECIAL HONOURS RADIOGRAPHY

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) Justify the modifications necessary during the imaging of the following patients;
 - (i) a psychiatric patient with head injuries referred for skull x-rays and [5]
 - (ii) a teenage male patient with inguinal hernia referred for ultrasound scan of the scrotum. [5]
- c) Justify why it may be necessary to set up a well men's clinics in Zimbabwe. [6]
- d) Analyse the possible causes of long waiting times in your department. [4]
- e) A ten year old patient is referred to the imaging department on life support for brain CT scan to rule out intracranial hemorrhage. Discuss the management of this patient. [10]
- f) Following the imaging of a four year old patient, you discover radiological findings suspicious of Non- accidental injury. Explain the protocol for the management of this patient. [10]

SECTION B

2. With reference to the effects of aging on the various body systems: Justify the modifications necessary during the radiography of geriatric patients. [20]
3. a) Evaluate the factors to be considered when designing a new imaging department for

- disabled patients in a busy central hospital. [15]
- b) Explain why imaging departments require correct and full staffing levels. [5]
4. With examples, discuss why the trend in healthcare is now moving away from focusing on the expertise of health professionals to patient centered care. [20]
5. Children are known to cooperate well in a child friendly environment. Evaluate the factors which need to be considered designing a child friendly paediatric imaging department. [20]
6. (a) Compare and contrast the radiological imaging methods of duodenal atresia in paediatric patients and those of osteoarthritis in elderly patients. [10]
- c) Explain the psychological care necessary for a middle aged female patient referred for a hysterosalpingogram examination in the imaging department with an indication of first degree infertility. [10]

END OF EXAMINATION