

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

APPLIED PHYSICS DEPARTMENT

SRA 4113 – QUALITY MANAGEMENT

BSc HONOURS PART IV: MAY 2006

DURATION: 3 HOURS

ANSWER ALL QUESTIONS FROM SECTION A AND ANY THREE QUESTIONS FROM SECTION B. SECTION A CARRIES 40 MARKS WHILE SECTION B CARRIES 60 MARKS.

SECTION A

1. (a) What do the terms quality, speed, dependability, flexibility and cost mean in the context of operations of an organisation. [10]
- (b) (i) Identify any two quality assurance tests that may be carried out on automatic exposure devices. [1]
- (ii) For one of these tests, describe the procedure. [4]
- (c) Using management theories, explain how workers and management can interact and the impact their interaction can have on the performance of an imaging department. [10]
- (d) Define the following terms in management:
 - (i) organisation,
 - (ii) financial strategy. [5]
- (e) With reference to radiographic equipment, differentiate between the following terms:
 - (i) critical examination and acceptance test,
 - (ii) commissioning tests and routine tests. [5]
- (f) Show the relationship between procurement and the quality assurance programme in an imaging department. [5]

SECTION B

2. (a) Explain why organisations must emphasize on quality. [5]
- (b) Discuss Juran and Deming's perspectives of quality. [15]
3. (a) Outline the role of marketing in the design of products and services [10]
- (b) Taking examples from your work (clinical) experience discuss how the marketing concept can be effectively utilised in radiography services in Zimbabwe. [10]
4. (a) Justify the methodology you would use in setting up a quality assurance programme in an imaging department in a district/provincial hospital. [15]
- (b) Outline the organisational structure at this level of the health care delivery system and illustrate how it influences the quality of care. [5]
5. The concept of image quality should be looked at from a clinical perspective and not only from the technical aspect. Discuss. [20]
6. Discuss how the concept of total quality management can be beneficial in the health care organisation. [20]

- END OF EXAMINATION -