

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF ARCHTECTURE AND QUANTITY SURVEYING
BACHELOR OF QUANTITY SURVEYING (HONOURS) DEGREE
PART I FIRST SEMESTER EXAMINATIONS – DECEMBER 2005**

INTRODUCTION TO INFORMATION TECHNOLOGY - AQS 1109

TIME: 3 Hours

INSTRUCTION TO CANDIDATES

This examination paper consists of a total of SIX (6) questions.

All questions carry equal marks.

Answer ALL questions in Section A and any one from Section B.

SECTION A

QUESTION 1

- a) What is a system? Which of the following are systems? Give reasons for your answer in each case.
- i. A house
 - ii. A football team
 - iii. A discussion group
 - iv. A textbook
- (10 marks)
- b) The commission earned by a used-car salesman is determined by the following rules. If the amount of the sale is
Less than US\$2000 there is no commission.
Between US\$2000 and US\$2500, the commission is 10% of the sale.
Greater than US\$2500, the commission is US\$2500 plus 12% of the amount above US\$2500
The amount of the sale is the price of the car sold less the value of any trade-in.
Write a complete C program that reads the price of the car and the value of the trade-in and then computes the commission. (10 marks)
- c) Why is System feedback given importance in any system? (5 marks)

QUESTION 2

- a) Give a brief description of some of the aspects that you would recommend for consideration when choosing a secondary storage device. (6 marks)

- b) Define the terms data and information. (2 marks)
- c) Distinguish between ROM and RAM. Is it necessary to include both in a general-purpose computer system? (10 marks)
- d) Describe the functions of the two main components that make up the Central Processing Unit (CPU) of a computer. (7 marks)

QUESTION 3

- a) Give a brief description of the differences between machine language and assembly language. In your description highlight the problems that programmers faced with the use of the two languages. Give any 3 examples of Third Generation programming languages. (10 marks)
- b) Write the algorithm for determining whether a number is prime or not. Hence write a C program that reads a number N as input, then determines whether the number is prime or not. (15 marks)

SECTION B

QUESTION 4

- a) Describe the factors that you would consider in buying an application software package. (5 marks)
- b) Describe the main functions carried out by an operating system. In your answer, briefly, compare leading PC operating systems. (10 marks)
- c) Discuss the following types of application software
v. Shareware
vi. Freeware
vii. Firmware (6 marks)
- d) What is the computer virus? What steps can be taken to prevent and/or eliminate computer viruses? (4 marks)

QUESTION 5

- a) Computers can be classified as being one of the following: microcomputers, minicomputers, mainframe computers, super computers, etc. Explain any three characteristics/ points that can be used in the classification? (9 marks)

- b) Briefly describe the main advantages of using a word processing package such as Microsoft Word, in business. (6 marks)
- c) Describe the typical facilities provided by a spreadsheet package such as Microsoft Excel. (10 marks)

QUESTION 6

- a) What is the difference between a website and a web page? (2 marks)
- b) As our society and the world itself come to depend on computers and information systems more and more, systems must become more reliable. State and briefly explain any four threats to computerised information systems? (8 marks)
- c) Give three reasons why an organization would decide to implement a computer network. (6 marks)
- d) Briefly explain the meaning of the following terms:
i) Internet
ii) World Wide Web
iii) Firewall (9 marks)

END OF EXAMINATION