NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF APPLIED SCIENCE

DEPARTMENT OF ENVIRONMENTAL SCIENCE AND HELTH

PUBLIC HEALTH MAIN EXAMINATION

INTRODUCTION TO COMPUTER SCIENCE: EPH 1005

August 2012   Time Allowed: 3 hours   Total Marks:100

INSTRUCTIONS TO CANDIDATES
Answer any **FOUR** questions. Each question carries 25 marks.

Question One
a) The main features used to distinguish between computer generations are; i) Storage devices, ii) Hardware components, iii) I/O devices, iv) Programming languages and v) Efficiency. Based on these features describe the first generations of computers.

[10]

b) Discuss the main functions of a Network Operating System.   [15]

Question Two
a) There are two types of memory facilities in conventional computers namely random-access memory (RAM) and read-only memory (ROM). Explain the operations of these memory types.   [10]

b) Write a Visual Basic program that calculates and displays the sum of two numbers given by a user on a suitable GUI with object-property table shown in Table 2.1.

[15]

Object-Property Table

Object	Property	Value
UserForm1	Caption	Simple Calculator
Label1	Caption	First Number
Label2	Caption	Second Number
Label3	Caption	The sum is:
Label4	Name	lblAnswer
Label4	Caption	<BLANK>
Textbox1	Name	txtNum1
Textbox1	Text	<BLANK>
Textbox2	Name	txtNum2
Textbox2	Text	<BLANK>
Commandbutton1	Name	cmdAdd
Commandbutton1	Caption	Add

Table 2.1: Graphic User Interface Design Properties

Question Three
a) List five networking equipment that can be used to connect a LAN. [5]
b) With the aid of a diagram illustrate how computers can be networked over the internet. [10]
c) Write a program in Visual Basic that displays a splash screen when a form is loaded. [10]

Question Four
 a) Describe the operation of a Laser Jet printer. [5]
 b) Design a database using an E-R diagram for a Hospital Patient Management System. [20]

Question Five
a) Distinguish between data and information. [4]
b) Sketch the following network topologies;
   i.   Star [3]
   ii. Ring [3]
   iii. Bus [3]
c) The CPU is the heart of the computer whereas the ALU is the brains. Discuss. [12]

Question Six
a) Clarify why a database management system (DBMS) is both hardware and software. [4]
b) Differentiate an intranet from an extranet and internet. [9]
c) Justify that an information society is a necessary stage for becoming a knowledge society. [12]

END OF QUESTION PAPER