IN COLLABORATION WITH IVTB

Diploma in Information Technology

Cohort DIP/03/Full Time

Examinations for 2003 – 2004 / Semester 1

MODULE: COMPUTER FUNDAMENTALS

MODULE CODE: BISE010

Duration: 2 Hours

Instructions to Candidates:

1. Answer any four questions.
2. Always start a new question on a fresh page.
3. All questions carry equal marks.
4. Total marks 100.

This question paper contains 5 questions and 4 pages.
ANSWER ANY FOUR QUESTIONS

QUESTION 1: (25 MARKS)

1) An information system has 5 interrelated parts that work together to perform a specific task. Briefly describe these five components. (5 marks)

2) Write short notes on the five generations of computers. (2x5 marks)

3) (i) How many bits are there in a byte? (1 mark)

   (ii) How many characters can be represented by a byte? (1 mark)

4) Differentiate between:
   a) RAM and ROM. (2+2 marks)
   b) Serial port and Parallel port.

5) List the main components of the CPU and state their functions. (4 marks)

QUESTION 2: (25 MARKS)

1) Describe the following:
   (a) Cache memory       (b) virtual memory (1+1 marks)

2) Explain the following statement: "Microcomputers have an open architecture." How is open architecture achieved? Support your answer with an example. (3 marks)

3) Distinguish between:
   (a) Mechanical and Optical mouse
   (b) LCD and the CRT monitor
   (c) Internal hard disk and hard disk cartridge
   (d) CD-Recordable and CD-erasable
   (e) Custom developed and off-the-shelf software (10 marks)

Continued on next page...
Question 2 (continued)

4) What is a plotter? 

   (2 marks)

5) With the help of an example and a suitable diagram, explain how the operating system performs process management (CPU management).

   (3 marks)

6) What is the use of translators in computing? 

   (2 marks)

7) List the three main features of word-processing software packages.

   (3 marks)

QUESTION 3: (25 MARKS)

1) Give two examples of operating systems that allow multitasking. 

   (2 marks)

2) Distinguish among freeware, shareware and public domain software. 

   (3 marks)

3) Define the following terms
   a) Server
   b) Client
   c) Modem
   d) Bandwidth
   e) Protocol

   (5 marks)

4) Which transmission mode does (i) a telephone (ii) a Walki-Talkie use? 

   (1+1 marks)

5) Describe packet switching and circuit switching and give one advantage of each.

   (3+3 marks)

6) Describe the star topology network, giving two advantages and two disadvantages. Illustrate with a diagram. 

   (2+4+1 marks)
QUESTION 4: (25 MARKS)

1) How are web pages created? (1 mark)

2) What is the role of an Internet Service Provider (ISP)? (2 marks)

3) Give three uses of the Internet. (3 marks)

4) Distinguish between an Intranet, an Extranet and the Internet. (6 marks)

5) List three Search Tools. (3 marks)

6) Differentiate between mailing lists and chat groups. (4 marks)

7) What do you understand by the following terms:
   a) Software piracy
   b) Cryptography
   c) Cracker (2x3 marks)

QUESTION 5: (25 MARKS)

1) Outline the role of the programmer in system development (1 mark)

2) What is the purpose of a feasibility study in the system development life cycle? (3 marks)

3) Describe the three techniques available for gathering data. State one advantage of each. (3+3 marks)

4) Describe the four approaches of migrating from an old system to a new one. (2x4 marks)

5) What do you understand by E-commerce? Discuss the three types of e-commerce site that can exist. (2+3 marks)

6) Define Artificial Intelligence. (2 marks)

***END OF QUESTION PAPER***