FETAC
Further Education and Training Awards Council
Comhairle na nDámhachtaini Breisoideachais agus Oiliúna

(National Council for Vocational Awards)

Computer Architecture & Systems C20012

Theory Examination 2002

Duration: Two Hours

INSTRUCTIONS TO CANDIDATES:

Answer ten questions in Section A (25%)

Answer three questions from Section B (75%)

This written exam counts as 40% of the total module

Section A (25%)

Answer any ten questions. All questions carry equal marks. If you answer more than ten questions the best ten marks will be chosen.

1. How many megabytes are in a gigabyte?

2. What is the typical transmission speed of a modern modem?

3. What is the function of the LINUX command **cp**?

4. Apart from capacity, name another way to evaluate the performance of disks for storage.

5. What is the purpose of the registry in the Windows range of operating systems?

6. Convert the hexadecimal value FF to decimal.

7. What do the letters ISA stand for?

8. Convert the binary value 0100 0101 to decimal.

9. What device is used to capture images from paper to computer?

10. What is the function of virtual memory?

11. Name an advantage of zip disks over CDROM disks.

12. List two advantages of inkjet printers over dot-matrix printers.

Section B (75%)

Answer any three questions. All questions carry equal marks. If you answer more than three questions the best three marks will be chosen.

1 Explain the difference between the laser, dot-matrix and plotter types of printers. Give an example of the application of each and where they might be used.

2 A computer is offered for sale with the following specification:

Intel Pentium 2.2Ghz
10GB Hard Drive
64MB RAM
4MB Video RAM
14" Colour Monitor
SoundBlaster Surround Sound
Harmon Kardon Speakers with Sub-Woofer
16X DVD ROM & CDRW
56K Modem

Is this computer suitable for gaming? If not state what components should be changed and suggest improvements. Explain the underlined items.

3 (a) Explain how a mechanical mouse works. Draw a diagram.

(b) Define the terms DMA and PIO. How does DMA speed up the operation of a computer?

4 List the items required to connect a home computer to the Internet. Briefly outline the steps required to install and/or connect the items.

5 Write a description of the main components required to create a computer network.