National Council for Vocational Awards

Information Technology CITXX
(Clonmel Central Technical Institute)

Computer Architecture and Systems
C20012

Tuesday 16th May 2000
14:00 – 16:00

Answer ten questions in Section A (25%)
Answer three questions from Section B (75%)

Time allowed: 2 hours

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. Why is serial communication inherently slower than parallel communication?

2. How many kilobytes are in a gigabyte?

3. Apart from size, name one means of comparing the performance of hard disks.

4. List two brands of Irish manufactured personal computers.

5. List two types of re-writeable removable storage media.

6. List four common I/O devices.

7. List two functions of an operating system.

8. What do the letters USB stand for?

9. Convert 0101 1110 to decimal.

10. What device translates analogue telephone signals to digital computer signals?

11. Name two brands of network operating system (NOS) commonly available today.

12. List two benefits of e-mail over traditional mail.

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   (a) Name two types of non-impact printer and explain how each type functions.

        (b) How does a scanner work?

2   Much is made of the speed of the CPU in the modern PC. However, there are several other factors that seriously affect overall system performance and throughput. Name at least two other factors explaining how throughput is affected by each.

3   (a) Explain how magnetic disks work. Provide a diagram in support of your explanation.

        (b) There are two main types of hard-disks used in PCs. What are they and what are the advantages and disadvantages of each? What type of computers would you typically find each one in?

4   Outline the steps to connect a modern home computer to the Internet. Pay attention to hardware and software components required; allow also for obtaining any services external to the home.

5   What is the difference between multi-user, single user and network operating systems? Write notes on where each one might be used, giving examples.