



COMPUTER ENGINEERING

Level 4 Diploma

UNIT 1 – COMPUTER SYSTEMS

Question 1

- (a) Describe FIVE input peripherals that are attached to computer systems. (10 marks)
- (b) Discuss the differences between embedded computer systems and 'system on a chip' devices. (10 marks)

Question 2

A small housing office at a university is overwhelmed by increasing student numbers and housing demands. The office manager intends to establish a web system that will enable local landlords to advertise and manage lets to students. The system will, therefore, automate procedures previously handled by employees such as: maintaining adverts; arranging property viewings; establishing contracts; and handling deposits.

- (a) Propose a set of system design requirements for this project, noting those which will require further elaboration and investigation. (10 marks)
- (b) Propose and justify test plan for the new computer system. (10 marks)

Question 3

- (a) Discuss the importance of back-up procedures. (10 marks)
- (b) Illustrate the hardware architecture of a typical desktop computer system, including internal components (e.g. the central processing unit) and busses. (10 marks)

Question 4

Compare the role of computer systems in the medical and educational contexts, with reference to the implications of the key differences. (20 marks)

Question 5

Analyse how the performance of a new computer system can be evaluated. (20 marks)

Question 6

Produce a design specification for a new computer system that will be used by a school to scan student essays and annotate those essays with comments. (20 marks)

Question 7

Explain how to upgrade an Operating System on a computer system to a different version (e.g. Windows XP to Windows 7). (20 marks)