**SL Unit 1** **- System Fundamentals**  
Quiz 4

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| **Question 1** | | | |
| Objectives: | 1.1.3 | Exam Reference: | May-16 Question 1 |

Outline one problem of maintaining legacy systems. [2]

*Award up to* ***[2 max]****.*

*Award* ***[1]*** *for evidence that the candidate knows what is meant by “maintaining legacy systems”.*

*Award* ***[1]*** *for any appropriate problem outlined.*

*Example:*

Maintaining previous/outdated computer system, which uses old technology and

old application programs ;

That are hard to understand/expensive to change/evolve **because** programs might be disorganized/

documentation might be missing/incomplete/unreliable;

Compatibility issues (typically refer to old programming languages/old database technology);

Maintaining but not updating the old system can lead to compatibility / security issues;

It may be difficult to recruit staff/programmers familiar with old languages/operating systems;

Database contains inconsistencies/redundancies (eg information systems and no DBMS);

Usually pre-internet, needs interfaces;

Typically large and complex systems/mainframes;

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| **Question 2** | | | |
| Objectives: | 1.2.3 | Exam Reference: | Nov-15 Question 5.c |

A school uses a local area network (LAN) which connects several computers and a printer to a server and allows access to the internet.

Identify **one** external threat to the security of the school’s computer system. [1]

*Award* ***[1 max]***.

Viruses;

Spyware;

Hackers who attempt to crack the system;

***Note:*** *Do not accept theft/vandalism/natural disasters*

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| **Question 3** | | | |
| Objectives: | 1.2.14 | Exam Reference: | Nov-15 Question 1.b |

Human interaction with the computer system includes a range of usability problems.

Identify **two** methods that could be used to improve the accessibility of a computer system. [2]

*Award up to* ***[2 max]***.

Voice recognition;

Text to speech;

Use of touch screen;

Braille keyboard; **[2]**

*Etc*.

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| **Question 4** | | | |
| Objectives: | 1.1.13 | Exam Reference: | May-15 Question 8.d |

An insurance company holds a large database of information about its customers, including  
the date of their next payment.

Describe **one** method that the company could use to prevent data loss. [3]

*Award marks as follows up to* ***[3 marks max]****.*

*Award* ***[1 mark]*** *for a suitable measure and* ***[2 marks]*** *for a description related to the insurance company.*

*Example answers:*

Mirror system;

All changes to the records made on two systems;

If one fails then the other holds all current data;

Off site backup;

Snapshots/backups made on a regular basis;

In the case of failure a dated/time stamped copy exists and the state up until then can be used to restore customer records;

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| **Question 5** | | | |
| Objectives: | 1.2.7 | Exam Reference: | Nov-15 Question 8.a |

A book shop has a computer at each point of sale, and also a central computer.  
When a customer buys a book in the book shop, the salesperson at the point of sale uses a  
scanning device to input a barcode from the book.  
  
The barcode is sent to the central computer where the barcode of each book and the   
corresponding price are held in a database on a disk.  
  
When the price is found, it is sent to the point of sale computer where all necessary  
calculations are performed, details of the transaction are stored on a local disk and a receipt  
is printed out.

Construct a **system flow chart** for the system described above. [5]

