# Homework 1 Hardware and software Answers

# Define the following terms:

(i) Hardware The electronic and electromagnetic parts of a computer system

 (ii) Software The programs that make the computer system work

 [2]

2. This software classification chart has been left incomplete.

**Software**

**[i]**

**Operating Systems**

**Utility Programs**

**General Purpose**

**[iv]**

**[ii]**

**[iii]**

**Translators**

Complete the chart by filling in the gaps:

(i) Systems software

(ii) Application software

(iii) Library programs

(iv) Special purpose

 [4]

3. Give an example of **one** utility in each of the following categories and describe its purpose.

 1 mark for the type and 1 mark for each description. Maximum 2 marks per category.

 (i) Security

 Firewall – prevent access to data

 Anti-virus – protect against viruses

 Encryption – keep data secure when transmitting

 Automatic updates – automatically check for, download and install updates

 (ii) File management

 Compression – reduce file size / group files together for transmission

 Backup/Restore utility – create a copy of data files in case the originals are lost/damaged and restore originals

 (NOT file copy, move, list etc which are part of the operating system)

 (iii) Disk management

 Defragmenter – reorganise data on the disk to free up continuous space

 Disk checker – check for damaged/corrupt sectors and attempt to repair

 Disk cleanup – delete leftover installation and other temporary files

 [6]

 (These lists are not exhaustive. Other answers are acceptable.)

4. Describe, with at least two examples of each, the difference between general purpose and special purpose software.

 General purpose is written to fulfil a range of generic tasks e.g.:

 Word processors, spreadsheets, databases, desktop publishing, graphics software etc.

Special purpose software is written with a specific application in mind. Examples include:

Accounting software, satellite navigation software, email clients, media players, calendars etc. [2]

5. Describe **two** advantages and **one** disadvantage of

 (a) Bespoke software

 Advantages:

 Contains only the features you want

 Can give a company a competitive advantage

 Could be resold by the company to others

 Can be customised to match your corporate style

 Disadvantage:

 More expensive to produce and takes more time

 May have bugs

 (b) Off-the-shelf software

 Advantages:

 Likely to have a wide user base, so more chance that bugs have been ironed out

 Updates will be available

 Ready to use straight away

 Less costly as development costs shared among many purchasers

 Technical support available from software company

 Disadvantage:

 Cannot customise to specific requirements

 May have unnecessary features

 May lack features that you need

(Don’t allow “opposite” answers for advantages/disadvantages, e.g. adv, less expensive, disadv. more expensive)

 [6]

 [Total 20 Marks]