

# Systems Software

## Warm-Up

Find the names of five operating systems below.

E	M	J	R	C	O	D	E	R	D	A	I	K	Y	S	E
F	L	E	G	I	M	R	B	N	Z	B	O	V	I	A	U
W	I	F	M	E	A	N	D	R	O	I	D	A	O	L	M
A	N	T	B	Q	C	C	E	R	I	H	T	I	S	R	T
R	U	S	E	H	O	D	W	I	N	D	O	W	S	D	S
D	X	F	U	H	S	D	G	T	B	N	I	R	T	Z	B

1 David has just installed a new operating system on his computer.

a) State **three** functions of an operating system.

- 1 .....
- 2 .....
- 3 .....

[3]

After the new OS was installed, it automatically downloaded and installed the device drivers.

b) Describe what is meant by device drivers.

.....

.....

[2]

c) Identify **two** features the operating system may provide to help protect David's personal data.

- 1 .....
- 2 .....

[2]

[Total 7 marks]

2 Josephine's computer has a multi-tasking operating system. Explain how the operating system manages memory and CPU time to allow the computer to multi-task.

.....

.....

.....

.....

.....

.....

.....

[Total 6 marks]

3 Selina has customised the graphical user interface (GUI) on her computer's operating system.

a) Describe the purpose of a graphical user interface.

.....  
..... [2]

b) Selina's operating system also has an optional command line interface.

i) Define what is meant by a command line interface.

..... [1]

ii) Identify **two** benefits of using a command line interface instead of a GUI.

1 .....  
2 ..... [2]

c) The operating system includes an encryption utility that can be used to encrypt folders and files. Explain **one** reason why Selina may use the encryption utility.

.....  
..... [2]

[Total 7 marks]

4 An accounting firm plans to introduce a new scheme for regularly backing up its data.

a) Define what is meant by the following types of backup.

Full backup .....

Incremental backup ..... [2]

b) Describe a possible backup scheme for the firm that includes:

- full backups
- incremental backups
- data compression
- security measures

.....  
.....  
.....  
..... [4]

[Total 6 marks]



5 Annie has a three year old laptop. She is giving the laptop a full service before selling it on.

a) Annie runs some 'Disk Health' utility software to check for any problems with her HDD.

i) Define what is meant by utility software.

..... [1]

ii) Give **two** other examples of utility software.

1 .....  
2 ..... [2]

b) The 'Disk Health' utility recommends performing a disk clean-up to remove unnecessary files. Suggest **two** types of files that might be removed during the clean-up process.

1 .....  
2 ..... [2]

c) The utility also reports that Annie's hard disk is 25% fragmented.

i) Describe how a hard disk can become fragmented over time.

.....  
..... [3]

ii) Explain **one** problem caused by a fragmented hard disk.

.....  
..... [2]

iii) Briefly describe the defragmentation process.

.....  
..... [3]

iv) Suggest why it could be better to do the disk clean-up before defragmentation rather than afterwards.

..... [1]

[Total 14 marks]



# Open Source and Proprietary Software

**Warm-Up**

Circle the open source software and underline the proprietary software below.

Android™                      Linux                      Adobe® Photoshop®                      Mozilla® Firefox®  
 Microsoft® PowerPoint®                      VLC                      Spandau Ballet                      Microsoft® Word

1 A marketing company has the same, paid-for, proprietary software on all of its computers. The software provides facilities for word processing, presentations, spreadsheets and databases.

a) Describe what is meant by proprietary software.

.....  
 ..... [2]

b) Identify **two** advantages and **two** disadvantages to the company of using proprietary software.

Advantages 1 .....

2 .....

Disadvantages 1 .....

2 ..... [4]

[Total 6 marks]

2 Iotek has created TV-PCs. TV-PCs plug into any USB-compatible TV, and come packaged with a selection of open source software.

**NEW**

**TV-PC** Only £39.99!  
 Turn your TV into a PC for word processing, spreadsheets, slideshows, databases and photos!  
 Includes portable projector-keyboard — type on any surface!

a) Describe what is meant by open source software.

.....  
 ..... [2]

b) Explain **one** advantage and **one** disadvantage to Iotek of using open source software on the TV-PCs.

Advantage .....

.....

Disadvantage .....

..... [4]

[Total 6 marks]

