



4.6.1 Hardware & Software

- 1) Tick the appropriate cell in the table to indicate which category of system software a virus checker belongs to.

Category	Tick ✓
Operating systems	
Translators	
Utilities	✓

[1 mark]

- 2) The operating system is responsible for resource management.

Describe **two** different types of resource management that an operating system is responsible for.

[2 marks]

- Allocate processors/core to process // processor scheduling
- Allocate memory/RAM to processes // moving data in and out of RAM to virtual memory
- Allocate I/O devices to processes // manage communication between processes and I/O devices
- Allocate space on a storage device to files
- Installation of new software // managing updating of software

- 3) Explain the relationship between hardware and software.

[1 mark]

- Software is the programs that execute on the hardware // hardware is the physical components that allow software to execute





4) Utilities are a type of system software.

a) Describe the difference between application software and system software.

[2 marks]

- **Application software performs user-oriented tasks**
- **System software is used in the management of a computer system // layers of software that abstract the user from how the computer works**

b) Describe what utilities are **and** include an example of a utility in your answer.

[2 marks]

- **Performs a specific management function for a computer**
- **E.g. virus checker, disk defragmenter, backup, compression, encryption software, etc**

5) The list below contains five types of software. Four of these are examples of systems software.

A	Assemblers
B	Bitmap image editors
C	Interpreters
D	Libraries
E	Utility programs

State the letter which indicates a type of software which is **not** system software.

[1 mark]

- **B**





6) Describe two functions of the operating system.

[2 marks]

- To hide the complexities of the hardware from the user
 - To handle interrupts // call the appropriate interrupt handler when an interrupt occurs
 - To allocate processors to processes // processor scheduling
 - To allocate RAM to processes // moving data into and out of RAM to virtual memory
 - To allocate I/O devices to processes // manage communication between processes and I/O devices
 - To allocate space on a storage device to files
 - Installation of new software
 - Manage power consumption
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