Mark Scheme - GCSE Computing Topic 1 (Unit 2.1.2)

Qn	Answer	Marks
1a	4GB	1
1b	Storage capacity / HDD size	1
1c	Windows 7 / Operating System	1
2	Keyboard - Input Touchscreen - Input AND Output USB stick - Storage Modem - Communication CPU - Processing Scanner - Input	6 correct - 4 marks 4/5 correct - 3 marks 2/3 correct - 2 marks 1 correct - 1 mark
3a	<u>Short term memory</u> for <u>currently running programs</u> and <u>currently used data</u>	1 1 1 (max 2)
3b	**Processor** Faster execution of instructions **RAM** More programs/files open without having to resort to virtual memory **HDD** More virtual memory, so better able to cope with more programs running simultaneously	**1 for component** 1 for reason Don't allow same component twice (e.g. clock speed & cache size both mean processor) Max 4
3c	**Upgrade** Less expensive in the short term, less environmental impact as fewer parts to recycle. Upgrade might provide limited improvement **Replace** More expensive in the short term, more environmental impact as more to recycle. Replacement might provide significant improvement	Marked in bands. For full marks, must include: Full consideration. Clear answer/advice. Technical language. SPaG. Max 6
4a	<u>Fetch</u> instructions <u>Execute</u> instructions <u>Store results</u>	1 1 1 (max 2)
4b	i. More instructions executed per second ii. More data available for fast access iii. More instructions executed simultaneously	1 1 1

Qn	Answer	Marks
5a	RAM is volatile / ROM is not RAM is (easily) rewriteable / ROM is not RAM is for currently running programs / ROM is for startup instructions	1 per response Max 2
5b	i. Memory ii. Acts as a <u>buffer</u> between main memory and CPU iii. Using part of the HDD as an extension to RAM	1 1 1
6a	Data could be damaged, erased or corrupted Meaning that the data (e.g. photo) could not be retrieved / would be lost permanently	1 for loss 1 for consequence
6b	i. CD/DVD/BluRay ii. HDD, floppy disc, DAT tape iii. USB stick, SSD, memory card	1 1 1
6c	Answers don't necessarily have to refer to the above choices. Consideration should include physical size, storage capacity, robustness, cost and portability. Good answers might suggest external HDD for backup and CD-ROM for sending work to clients	Marked in bands. For full marks, must include: Full consideration. Clear answer/advice. Technical language. SPaG. Max 6
7	e.g. - Immediately available... ... so the shopkeeper can start using it straightaway - Tried and tested … - and so less likely to have errors - No development costs... ... as this has already been borne by the developer - More support available... ... many other users who can provide help/third party help books, help lines or web sites available (marks in pairs)	
8a	Antivirus - Scans the computer <u>periodically</u> - To check if any software has been installed which contains code that may harm the computer - Removes/quarantines these programs / notifies the user - Prevents these programs from being installed - Protects the computer by preventing important files (e.g. the boot sector or operating system) from being changed	

8b	Disk defragmenter	
	• Moves (parts of) of files around so that all parts of a file are stored together (allowing files to be accessed more quickly)	
	• Free space is collected together (allowing large files to be saved easily)	