Mark Scheme - GCSE Computing - Mock Exam A451

Qn	Answer	Marks
1 a	Ali's new computer uses a single-user, multi-tasking operating system. What is a single-user operating system? - Only one user... ... can use the computer <u>at any given time</u>	2
1 b	What is a multi-tasking operating system? The computer can (appear to) run several programs (1) at the same time (1). A Suitable example (e.g. word processing while playing music) (1) Max 2.	2
2	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)	4
3 a	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	2
3 b	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)	2

Qn	Answer	Marks
4 a	E.g. • Provides interfaces between user and computer/Determines look and feel of the computer • Provides a platform for software to run • Manages peripherals used by the system • Manages memory.	2
4 b	<table><thead><tr><th>Utility</th><th>Used for security</th><th>Used for disk organisation</th></tr></thead><tbody><tr><td>Antivirus</td><td>✓</td><td></td></tr><tr><td>Defragmenter</td><td></td><td>✓</td></tr><tr><td>File transfer</td><td></td><td>✓</td></tr><tr><td>Firewall</td><td>✓</td><td></td></tr></tbody></table>	4
4 c	• The source code is distributed with the software • The customer can modify the source code • The customer can redistribute the source code (with the same • licence/restrictions)	2
5	Ali wants to know which utility programs he will need to keep his computer secure and running smoothly. Discuss the utility programs Ali will need, justifying why he needs them. 0 = No response or response not worthy of credit. Level 1 (0-2 marks) Some relevant utilities are listed with limited justification or reference to security and smooth running. There is limited use of specialist terms. Answers may be ambiguous or disorganised. Errors of spelling, punctuation and grammar may be intrusive. Level 2 (3-4 marks) The candidate partially covers both security and smooth running or over emphasises one of these; correct utilities are identified supported by limited facts. Specialist terms are used in the most part correctly. The information will be presented for the most part in a structured format. There are occasional errors in spelling, punctuation and grammar.	

5 cont…	**Level 3 (5-6 marks)** The candidate has identified utilities for both security and smooth running, with a full justification of why they are needed. Specialist terms are consistently used appropriately and correctly. The information will be presented in a structured format. The candidate can demonstrate the accurate use of spelling, punctuation and grammar. Indicative content: Security • Antivirus/Anti-spyware – regularly checks computer for programs designed to harm the system / gather information and deletes / disables them – such software is easily acquired from the Internet and could result in significant damage / financial loss / identity theft etc… if not removed. • Firewall – controls access to the computer through the network to prevent hackers • Definitions need to be updated regularly– because new viruses and spyware programs are produced all the time. • Keep computer running smoothly: Disk maintenance • Defragmenting - reorganise files so that they are stored in blocks next to each other – because file access quicker and may free up space • Disk cleanup - search for and delete files which are no longer needed – because this frees up space which can be used for other programs System maintenance • System cleanup - search the computer for settings which are no longer needed – programs which are slowing down the computer – because this improves performance • System update - search on the Internet for updated versions of the software on the computer and downloading/installing the updates – because this ensures that the computer always has the latest version including any fixes for known problems / security issues.	6