MODULE H SOFTWARE · H1

System software vs application software: mark scheme

20 marks · Cambridge 0478 syllabus 4.1.1 (describe the difference between system software and application software and provide examples of each; system software, including the operating system and utility software, provides the services the computer requires; application software provides the services the user requires)

How to use. One mark per creditworthy point up to the maximum shown. **/** separates alternative words; **//** separates alternative answers. Words in (brackets) are not needed for the mark. Credit any other valid answer that shows the same understanding. No marks for brand names of software.

QUESTION	ANSWER	MARKS	GUIDANCE
1(a) 0478 4.1.1	One mark for each correct row: Word processor: application software Operating system: system software Web browser: application software Encryption software: system software Photo-editing software: application software	**5**	A row with both boxes ticked scores 0.
2(a) 0478 4.1.1	One mark for each correct number, one mark for each matching correct rewrite: Statement 2 ... Application software provides the services that the user requires // System software (not application software) provides the services that the computer requires Statement 4 ... The operating system is a type of system software // The operating system and utility software are (both) types of system software // The operating system is not utility software	**4**	The rewrite mark is only awarded with the matching correct number (2 or 4). Numbers 1 and 3 score 0, and so does any rewrite of them. Accept "Application software lets the user carry out tasks" for statement 2. Do not accept "the operating system is application software" for statement 4.
3(a) 0478 4.1.1	One mark for the type, one mark for the reason: Application software ... it provides a service that the user requires // it lets the user / staff carry out a task (working out the cost / printing a quote)	**2**	Reason mark only if the type is correct. Do not accept "it is a program the user uses" alone.
3(b) 0478 4.1.1	One mark for the type, one mark for the reason: System software // utility software ... it provides a service that the computer requires // it maintains / looks after the computer (its storage) // it is defragmentation software, which is utility software // it does not carry out a task for the user	**2**	Reason mark only if the type is correct. Accept "it is a utility" as the reason when the type is given as system software. Accept "it helps the computer access files faster".

QUESTION	ANSWER	MARKS	GUIDANCE
4(a) 0478 4.1.1	Any two from: Compression software is utility software // utility software is (a type of) system software It provides a service that the computer requires // it maintains / looks after the computer // it manages storage, e.g. makes files take up less storage space The type of software depends on what the software does, not on who chooses to run it Application software provides the services the user requires // carries out the user's task, e.g. writing / sending the email	**2**	max 2. Accept "compression software is system software" for the first point. Do not accept "the user does not use it".
4(b) 0478 4.1.1	Any one from, e.g.: Defragmentation software // disk defragmenter Encryption software Anti-virus // anti-malware software Backup software Disk clean-up software Firewall (software)	**1**	Credit any other valid utility. Do not accept operating system (it is system software but not utility software). Do not accept functions of an operating system, e.g. "memory management". Do not accept compression software. No marks for brand names.
5(a) 0478 4.1.1	Any four from: **System software:** provides the services that the computer requires // lets the computer (hardware) work / run e.g. the operating system manages the computer's hardware / files / memory // provides an interface application software cannot run without the operating system // the operating system provides a platform for running the applications utility software maintains / looks after the computer, e.g. anti-malware protects the booking records // backup software keeps copies of the records **Application software:** provides the services that the user requires // lets staff carry out (their) tasks e.g. a database / spreadsheet to keep the booking records e.g. a word processor to write the letters without application software staff could not do their tasks // system software alone does not carry out the user's tasks	**4**	max 4. Max 2 if only one type of software is explained. An example earns a mark only when it is linked to what it does here; a bare list of names earns at most 1 mark for each type. Do not accept "system software makes the computer faster" alone.

Total: 20 marks