The answers on this worksheet have been taken from the Additional OCR GCSE Computing Specimen Paper

6-A-Day – Computer Science GCSE (5)

Q1

4(b) Peter wants to send the picture as an email attachment.
State <u>two</u> methods for reducing the size of the picture file so that it is suitable for sending as an email.

Any 2 from:
- Resize the image/picture to reduce the number of pixels
- Reduce the colour depth to reduce the number of bits needed to store each pixel
- Compress the file

[2]

Q2

5(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]

5(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]

Q3

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.

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
  - o defragmenting - reorganise files so that they are stored in blocks next to each other – because file access quicker and may free up space
  - o 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
  - o system cleanup - search the computer for settings which are no longer needed – programs which are slowing down the computer – because this improves performance
  - o 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]

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Q4			
	6(a)	A classroom in a primary school has 6 stand alone computers. The school decides to connect them to form a LAN. **What is a LAN?** Local Area Network / A network which covers a small area like a building	[1]
	6(b)	**State two advantages of connecting the computers into a LAN.** • Can share files • Can share resources (e.g. printer) • Computers can be managed/controlled centrally • Users/computers can communicate with each other (1 mark for each bullet. Max 2 marks)	[2]

Q5			
	7	Davinder is a music student. She needs to take her files from her home computer into college. **Identify a method of storage which is suitable for taking her music files into college. State why this method is suitable.** 1 from: • Flash storage/USB stick/MP3 player(1)... small and convenient to carry(1) / plug and play(1) • Optical storage / CD-ROM) / CD – RW(1)...convenient to carry(1) / cheap(1) / music can be stored in a format which can be played by e.g. HiFis(1). • External hard drive (1)...plug and play on either computer(1) / large capacity for music files(1) [max 2 marks per bullet]	[2]

Q6			

	8(a)	A program includes the following code.
		`If A > B Then`
		`    A = B`
		`    B = A`
		`End If`
		
		The code uses the variables A and B.
		Describe what is meant by a variable.
		A name (1) which is used to identify a (memory) location (1) used to store a value which can change (1)
		Max 2
			[2]