The answers on this worksheet have been taken from the Original OCR GCSE Computer Science Specimen Paper

6-A-Day – Computer Science GCSE (p1.3-2016)

Q1	**i**	• A division of network functionality	**1** (AO1 1a)	Candidate's responses may differ from the given answer but must represent conceptually the same thing. e.g. "a layer is where jobs/processes are split up" would receive the mark.
	ii	• It is self-contained (1)… • …it allows different developers to concentrate on one aspect of the network (1) • A layer can be taken out and edited without affecting other layers (1)… • …it promotes interoperability between vendors and systems (1)	**2** (AO1 1a)	1 mark to be awarded for the correct identification and 1 for a valid description up to a maximum of 2 marks.
Q2		• It is easy to add a new node or device • Management of the network can be done centrally • Fewer data collisions can occur • If a node or device fails it does not affect the rest of the network • A signal does not need to be transmitted to all computers in the network	**4** (AO2 1b)	1 mark is to be awarded for each correct reason to a maximum of 4 marks. Any valid comparisons to other topologies can be awarded marks.
Q3		• Firewall (1 – AO2 1a) prevents unauthorised access (1 – AO2 1b) • Anti-malware (1– AO2 1a) removes viruses/spyware from infecting the system (1– AO2 1b) • Encryption (1– AO2 1a) any intercepted data is rendered useless (1– AO2 1b) • User access levels (1– AO2 1a) users have restricted access (1– AO2 1b) • Network policies (1– AO2 1a) rules that define acceptable use (1– AO2 1b)	**6** AO2 1a (3) AO2 1b (3)	1 mark to be awarded for each correct type to a maximum of 3 marks. (AO2 1a) 1 mark to be awarded for each correct explanation to a maximum of 3 marks. (AO2 1b)
Q4		• Brings in files via any medium (1- AO2 1a)… • …not allowing/stopping external devices being used on the network (1- AO2 1b) • Downloading infected files from the internet (1 - AO2 1a)… • …blocking/restricting access to insecure websites (1 - AO2 1b) • Allowing physical access to the surgery's network (1 - AO2 1a)… • …locking of doors/key cards/any physical security procedure (1 - AO2 1b) • Sending/sharing sensitive data with third parties (1- AO2 1a)… • … blocking/restricting access to USB ports/email/internet/printing (1 - AO2 1b)	**6** AO2 1a (3) AO2 1b (3)	1 mark to be awarded for each correct identification to a maximum of 3 marks. (AO2 1b) 1 mark to be awarded for each correct outlining of a procedure to a maximum of 3 marks. (AO2 1b) Allow any reasonable combination of error and reasonable procedure to mitigate the risk.
Q5		• Orders have been saved onto the system as they order food and then deleted once processed (1) • Once other orders have been made, new files are created (1) which may be bigger than the spaces left by the deleted files (1) • The order files are split up (1)	**4** (AO2 1b)	Up to a maximum of 4 marks. A maximum of three marks if there is no contextualisation Allow a mark if candidate's state that fragmentation increases access time (1)
Q6		• Files on the hard disc drive are moved (1) • Empty spaces collected together (1) • Files are moved to be stored together (1) • Fewer disc accesses are needed (1)	**3** (AO1 1b)	Up to a maximum of 3 marks.