

BCS Level 4 Certificate in Network Systems and Architecture
Answer Key and Rationale – QAN 603/0547/2

Question	Answer	Explanation / Rationale	Syllabus Sections
1	C	139 is the NetBIOS protocol and port 445 is the SMB protocol.	2.3
2	D	If ping works for the IP address but not the domain DNS is configured incorrectly.	4.2
3	A	Dynamic routing reacts to changes in the network and this information is passed on to other routers to keep them up to date.	8.2
4	D	Fdisk is able to access the disk at a low enough level to add or remove the boot flag. F10 and access to the BIOS will identify disks but won't change any settings. Device manager and disk manager are part of the operating systems but doesn't get low enough to change boot flags.	2.1
5	B	Having multiple sites gives redundancy and fault tolerance in the systems.	2.7
6	B	HR typically use databases linked with records of employees and roles that they provide.	9.4
7	C	If the LEDs are present the link is up. If data is being received slowly the duplex settings should be checked as they might not be the same.	3.2
8	A	Domain Name Server (DNS) stores addresses and names of resources that the domain runs. These can be interrogated either to find what IP address belongs to what name or what name belongs to an IP address.	9.3
9	C	Middleware is software that provides a link between separate software applications. Middleware is sometimes called plumbing because it connects two applications and passes data between them. It also allows data contained in one database to be accessed through another.	11.1
10	D	MX stands for mail exchange. A mail server sending an email to a domain will interrogate their DNS server for the MX record and the priority it has. It will then forward the email to the correct mail server for that domain.	1.1
11	A	Packet loss is a major sign of a slow network.	7.1
12	A	Processors are affected by heat which is why the heat sink was developed to reduce the heat effect.	5.1

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13	C	Software as a service (SaaS) allows users to connect to and use cloud-based apps over the Internet. Common examples are email, calendaring and office tools. SaaS provides a complete software solution that is purchased on a pay-as-you-go basis from a cloud service provider. Apps are rented by an organisation and users connect to it over the Internet, usually with a web browser. All the underlying infrastructure, middleware, application software and application data are located in the service provider's data centre (such as Microsoft Office 365).	10.2
14	A	The heatsink is the only answer that is directly attached to the CPU the others are based on the motherboard.	7.5
15	B	The socket information shows whether the connection is from internal network to external or vice versa. Based on that, the firewall will determine the integrity of the connection.	8.4
16	A	The type 1 hypervisor is also known as bare metal or native. One or more guests may be designated as 'special' (in Xen this is called 'dom-0') and given privileged control over the hypervisor.	10.1
17	D	These were the first types of server cases and are still in use today. They have now been superseded by rack mounted servers that take up a smaller foot print due to being stackable.	8.5
18	C	Unpatched software cannot offer up to date security. Patching vulnerabilities improves security. Outbound traffic on a firewall is not a factor on internal networks.	6.2
19	A	Video drivers also include audio drivers, as they are mainly from third party manufacturers they are not as closely supported by operating systems and may, therefore, require a separate install.	4.1
20	A	WPA2 is the latest wireless protocol. WPA2 further improves the security of a network because it requires a stronger encryption method called AES.	6.3