BCS Level 3 Award in Networking and Architecture
Answer Key and Rationale – QAN 603/0686/5

Question	Answer	Explanation / Rationale	Syllabus Sections
1	D	The binary number represents the following decimal columns: | 128	64	32	16	8	4	2	1	(Decimal)
1	1	0	1	0	0	1	1	(Binary)	 128+64+16+2+1=211	4.5
2	C	A cable tester would be used to make sure that the cables being used were of a decent quality and had not been compromised or damaged in any way. Compromised or damaged cables can have an adverse effect on a network.	1.5
3	B	A default gateway is a critical component of networking, allowing a machine to forge a path through to other networks or hosts.	4.1
4	A	A hard disk is the only medium that can reliably store data. Floppy disks are hardly ever used and are unreliable.	3.1
5	D	A limitation of the FAT32 file system is that no files larger than 4 GB can be written to it.	2.8
6	A	A technician should always prioritise the faults that need to be rectified in order to ensure the lowest business impact.	2.3
7	D	Active Directory is used to centralise management of users and computers.	5.11
8	D	All of these items are valid when a task has been requested at short notice.	2.4
9	A	An RJ45 connector is very distinctive and is used for CAT5 and CAT6 cables. It is generally clear in colour with a plastic clip to lock the connector in place.	1.1
10	B	Any web service that requires information storage will use a database server as the storage repository for easily accessible information.	3.2
11	D	As the permissions are the main issue the tech will have to escalate the problem with the theory and potential solution.	2.5
12	D	As the subnet mask is a 16 bit mask, the first two octets represent the network address and the second two represent the host address.	4.3
13	D	Cat6 uses RJ45 and is the only one of the cable types mentioned that supports up to 10 Gb/s data transfer rates.	1.2

Question	Answer	Explanation / Rationale	Syllabus Sections
14	B	DHCP is an abbreviation of Domain Host Configuration Protocol; its purpose is to provide an IP address and optionally other information such as DNS server address upon request from a client. DNS (Domain Name Server) resolves domain names to IP addresses (different service entirely) and VLAN and VPN are generic networking terms.	5.6
15	A	DNS stands for Domain Name System and is a directory that enables computers to look up a domain or host name and acquire a corresponding IP address	3.2
16	B	Improving the quality of future maintenance work is one of the primary reasons for creating maintenance work records.	2.2
17	D	In a Windows environment, Active Directory is the central repository for users, computers and groups and all policies relating to these objects.	5.7
18	C	Servers are generally given fixed (or static) IP addresses as there is a requirement for the server to always be contactable at the same IP address. There are occasional exceptions where DHCP reservations are created for servers but this is highly unusual.	5.2
19	C	The maximum amount of characters for a NETBIOS hostname or NETBIOS domain name is 15 characters.	5.10
20	C	This is the only valid DNS entry. Others could include SRV, MX or PTR.	5.3