BCS Level 4 Certificate in Network Systems and Architecture
QAN 603/0547/2

Specimen Paper A

Record your surname / last / family name and initials on the answer sheet.

**Sample paper only 20 multiple-choice questions** – 1 mark awarded to each question. Mark only one answer to each question. There are no trick questions.

A number of possible answers are given for each question, indicated by either A. B. C. or D. Your answers should be clearly indicated on the answer sheet.

Pass mark is 13/20.

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This qualification is regulated by Ofqual (in England).
1. Which **two** ports does SMB use?
   
   A. 20 and 21.
   B. 133 and 443.
   C. 139 and 445.
   D. 139 and 1096.

2. A customer is unable to access website. An engineer discovers that their computer can ping a web IP address but not www.google.com. What **SHOULD** be investigated next?
   
   A. The computer's ARP table.
   B. The physical network cable.
   C. The wireless SSID.
   D. The computer's DNS settings.

3. Which of the following is a benefit of using dynamic routing protocols?
   
   A. Adapts to changes in the network state automatically.
   B. Adapts to security threats found on the network.
   C. Can reboot routers when the network load is too heavy.
   D. Uses the same pre-defined route for redundancy.

4. A Linux device does not boot. The primary partition has lost the boot flag. Which application would be used to repair this fault?
   
   A. Disk manager.
   B. F10 BIOS setup.
   C. Device manager.
   D. Fdisk.

5. Which of the following is **MOST LIKELY** to reduce data loss from a cloud storage failure?
   
   A. Using a single service provider.
   B. Using multiple data centres.
   C. Encrypting data.
   D. Having good cloud security.
6 Which **KEY** function of business would employee record management be used in?

A Finance.
B HR.
C Marketing.
D Sales.

7 The LEDs on the ports at both ends of a wired link between a server and a switch appear to be correct and the link is working, but its performance is very slow. What **COULD** be a cause of this?

A The switch port is set to reject broadcast packets.
B The patch cable is broken and should be replaced.
C There is a duplex mismatch between the switch and server network cards.
D The server has not authenticated correctly in the switch's ARP table.

8 What functions does a DNS server perform?

A Returns IP address for a given system name.
B Returns system name for a given MAC address.
C Allows access to resources without knowing the server name.
D Provides dynamic TCP/IP addresses to clients.

9 Which of the following is a **KEY** feature of middleware?

A Creates a portable GUI.
B Manages system monitoring.
C Coordinates processes across systems.
D Coordinates disaster recovery.

10 A mail server is not receiving external mail. Which DNS record **SHOULD** be checked?

A PTR.
B CNAME.
C A.
D MX.
11 Excessive latency creates bottlenecks in a network, this can lead to a reduction of effective bandwidth. Which of the following is a sign of an overloaded network device?

A. Loss of packets.
B. High throughput.
C. Low far-end crosstalk.
D. Low near-end crosstalk.

12 If a server room AC fails, which components within the computer will MOST LIKELY be affected and fail first?

A. CPU.
B. Hard drives.
C. DVD drives.
D. Graphics card.

13 What type of cloud service would a hosted email service be?

A. IAAS.
B. PAAS.
C. SAAS.
D. XAAS.

14 Which of the following can cause CPU failure?

A. Heatsink failure.
B. Northside bus failure.
C. Southside bus failure.
D. VGA failure.
15 How does a stateful inspection firewall know that a packet belongs to a valid session?
A The firewall inspects the packet to see what IP address it has come from and the port that it is communicating through.
B The firewall inspects the packet to see what connections have been opened from the inside of the network to the Internet.
C The firewall inspects the packet to determine which domain it has come from.
D The firewall inspects the packet to determine the data link information of the connection.

16 What is the **KEY** function of type 1 hypervisor?
A Acts as the operating system and shares physical resources to virtual machines.
B Uses the installed operating system to share physical resources to virtual machines.
C Acts as a virtual machine to share physical resources to the operating system.
D Uses the virtual machine's installed operating system to share physical resources.

17 A server that is described as a tower has which of the following characteristics?
A A system made of blades each acting as a single server system.
B A system that can be stacked on top of each other in a rack.
C A system that runs virtual machines in a rack.
D A free standing system requiring no support of any kind.

18 Which of the following is a cause and effect of a malware infection?
A Weak passwords enabling a DDOS attack.
B Patched vulnerabilities on a server allowing installation of ransomware.
C Unpatched vulnerabilities on a server allowing installation of a crypto virus that encrypts all files.
D Enabling outbound http traffic on a firewall enabling remote installation of spyware.
19 A Windows update has taken place and the sound has stopped working on a user's device. An engineer has checked that the latest drivers are installed. After a restart the sound still does not work. What further step **SHOULD** solve the problem?

A  Download the latest video drivers and install them as they have audio drivers.
B  Roll back the update and ignore the constant update attempts.
C  Change the sound card for a more up-to-date card.
D  Use a USB headset as this doesn't use the on-board sound card.

20 Which of the following is the strongest wireless encryption method?

A  WPA2.
B  WPA.
C  WEP.
D  WAP.

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