



BCS Level 4 Certificate in Network and Digital Communications Theory QAN 603/0703/1

Specimen Paper A

Record your surname/last/family name and initials on the Answer Sheet.

Specimen 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.

This is a specimen examination paper only. The full paper will contain 40 questions with a pass mark for the full paper of 26/40.

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- 1** Which of the following can be used to prioritise business related communications over non-business related communications?
- A** Bandwidth throttling.
 - B** Traffic shaping.
 - C** Rate limiting.
 - D** Traffic policing.
- 2** What is the information that is transported over a data communications system called?
- A** Model.
 - B** Protocol.
 - C** Message.
 - D** Medium.
- 3** When a new router has been commissioned with its interfaces enabled and with IP addresses configured on all its constituent interfaces and with no routing protocols configured, what routes are present in the routing table?
- A** Default routes.
 - B** No routes, the routing table is empty.
 - C** Direct connections.
 - D** Broadcast routers.
- 4** A feature of the link layer in the TCP/IP layer model is?
- A** It is agnostic of data structures.
 - B** It is hardware independent.
 - C** It is independent of network protocols.
 - D** It provides error detection.
- 5** Which of the following is a link-state routing protocol?
- A** RIP.
 - B** OSPF.
 - C** EIGRP.
 - D** BGP.

6 Which of the following layers in the OSI 7 layer model are equivalent to the application layer in the TCP/IP model?

- a) Application.
- b) Presentation.
- c) Session.
- d) Network.
- e) Transport.

- A** a, b and c only.
- B** a, c, and e only.
- C** b, c, and d only.
- D** c, d and e only.

7 What factor is a measure of the frequency network failure and associated recovery time after a network fault?

- A** Feasability.
- B** Performance.
- C** Security.
- D** Reliability.

8 What is the name of the unidentified layer in the TCP/IP Model table below?

Application
Transport
?
Network Access

- A** Internet.
- B** Session.
- C** Physical.
- D** Virtual.

9 How does network contention affect network performance?

- A** Protocols allocate bandwidth based on priority.
- B** The physical number of network nodes is restricted.
- C** Network nodes have to compete for bandwidth.
- D** It restricts the bandwidth to allocated nodes.

- 10 Which layer of the OSI 7 layer model defines the electrical details of the network?
- A Data.
 - B Network.
 - C Transport.
 - D Physical.
- 11 Which of the following is the **BEST** definition of the Transport layer?
- A It creates the frames for data, ready for transmission.
 - B It creates end-to-end communication services for the application.
 - C It synchronises the interaction between communication systems.
 - D It defines the connection between systems and the network.
- 12 Which of the following is an advantage of dynamic routing protocols?
- A The propagation of routing information is more secure.
 - B The route to a destination is always the same.
 - C Suitable for simple and complex topologies.
 - D No additional router resources are required.
- 13 What is the convergence characteristic of a routing protocol?
- A Routing tables across all routers are consistent.
 - B Routing tables across all routers are constantly changing.
 - C Routing table on a single router is stable.
 - D Routing table on a group of routers is fluctuating.
- 14 What is meant by the concept of 'split horizon'?
- A Allowing the advertising of identical routing information to be advertised out of more than one interface.
 - B Preventing the advertising of routing information on all interfaces apart from the interface it was learned on.
 - C Preventing the advertising of a route back to the same interface it was learned on.
 - D Allowing the advertising of routing information on all interfaces.

- 15** What routing metric is used by RIPv1?
- A** Bandwidth.
 - B** Hop count.
 - C** Cost.
 - D** Load.
- 16** Which of the following controls the actual amount of transferred data?
- a) Latency.
 - b) Signal-to-noise ratio.
 - c) Bandwidth.
 - d) Jitter.
- A** a and b only.
 - B** a and d only.
 - C** b and c only.
 - D** c and d only.
- 17** At the Data Link Layer, what does CRC stand for?
- A** Combination Resistance Code.
 - B** Cyclic Redundancy Check.
 - C** Combine Redundancy Code.
 - D** Computation Resiliency Change.
- 18** Which of the following are examples of the Data Link Layer?
- a) Ethernet.
 - b) File Transfer Protocol.
 - c) Point-to-Point Protocol.
 - d) Peer-to-Peer.
- A** b and d only.
 - B** a and c only.
 - C** c and d only.
 - D** a and b only.

19 What protocol is used to reliably send email messages to a mail server?

- A HTTP.
- B EAP.
- C SNMP.
- D SMTP.

20 Select the option which **BEST** describes 'Latency'.

- A The time taken for a packet of data to be transmitted.
- B The number of packets not transmitted.
- C The routing of data packets over a network.
- D The delay in transmitting packets over a network.

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