# nelsonnet

Name: _____

Class: _____

## CHAPTER TEST

## Chapter 3 Networks

| Section | Number of questions | Number of questions to be answered | Number of marks | Marks achieved |
|---|---|---|---|---|
| A | 15 | 15 | 15 | |
| B | 5 | 5 | 25 | |
| Total | | | 40 | |

**Grade:** _____

**Scale:**

| A+ | 36–40 | A | 32–35 | B | 28–31 | C | 24–27 | D | 20–23 | E | 11–19 | UG | 0–10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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### INSTRUCTIONS

Write your **name** and **class** in the space provided above. All written responses must be in English.

### MATERIALS

- Question book of 7 pages.
- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are **NOT** permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- Calculators are **NOT** permitted in this examination.
- Students are **NOT** permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

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# Section A

## Multiple-choice questions

INSTRUCTIONS FOR SECTION A

- Circle the correct answer in pencil for multiple-choice questions.
- Choose the response that is **correct** or that **best answers** the question.
- A correct answer scores 1 and an incorrect answer scores 0.
- Marks will **not** be deducted for incorrect answers.
- No marks will be given if more than one answer is given for a question.

**1** LAN stands for:

   **A** logical area network

   **B** large area network.

   **C** local area network.

   **D** lenticular accessibility node.

**2** The network device that allows multiple cables to connect together is a:

   **A** router.

   **B** switch.

   **C** node.

   **D** WAP.

**3** Wireless networks communicate using:

   **A** radio waves.

   **B** infrared signals.

   **C** microwave bursts.

   **D** wires.

**4** The defining characteristic of a LAN is that:

   **A** it is simple.

   **B** it is only used in homes and small offices.

   **C** it does not spread very far.

   **D** it does not have many computers in it.

**5** A node in a network is:

   **A** the core of the network.

   **B** a workstation or server.

   **C** a switch, hub or router.

   **D** any device that can receive or transmit data.

**6** An intranet is:

    **A** the way outsiders view corporate websites.

    **B** a closed, local form of the internet.

    **C** bigger than a LAN but smaller than the internet.

    **D** a common misspelling of 'internet'.

**7** A web server:

    **A** is any server on the internet.

    **B** manages email.

    **C** delivers webpages.

    **D** is needed to make a LAN work.

**8** A wide area network (WAN) covers:

    **A** a suburb.

    **B** a state.

    **C** a country.

    **D** a larger area than a LAN.

**9** What is the difference between client–server and peer-to-peer networks?

    **A** Client–server networks have a central controlling authority.

    **B** Peer-to-peer networks have a central controlling authority.

    **C** Client–server networks are used in commercial settings.

    **D** Peer-to-peer networks are used for illegal file swapping.

**10** A virtual private network (VPN):

    **A** allows external users to gain secure access to a LAN.

    **B** only exists as a theoretical concept.

    **C** is needed for the public to access a company's web server.

    **D** does not rely on encrypted communications.

**11** What is a firewall used for?

    **A** Handling network emergencies

    **B** Protecting users against viruses

    **C** Protecting a LAN against outside intrusion

    **D** Protecting hardware from overheating

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**12** A network interface card (NIC):

    **A** provides wireless access.

    **B** encrypts network traffic.

    **C** scans for viruses.

    **D** allows a node to connect to a LAN.

**13** A major potential problem associated with using wireless networking is:

    **A** high cost.

    **B** security.

    **C** health issues.

    **D** difficulty in setting it up.

**14** A Melbourne business has 20 workers, many of whom are constantly roaming around the offices and factory with mobile computers and connecting to the company's database from different locations. Their LAN would be best to focus on using:

    **A** CAT6 cables with network wall sockets throughout the site.

    **B** wireless networking.

    **C** fibre optic cable.

    **D** Ethernet.

**15** A network operating system is needed for:

    **A** a file server.

    **B** a web server.

    **C** a proxy server.

    **D** a P2P network.

# Section B

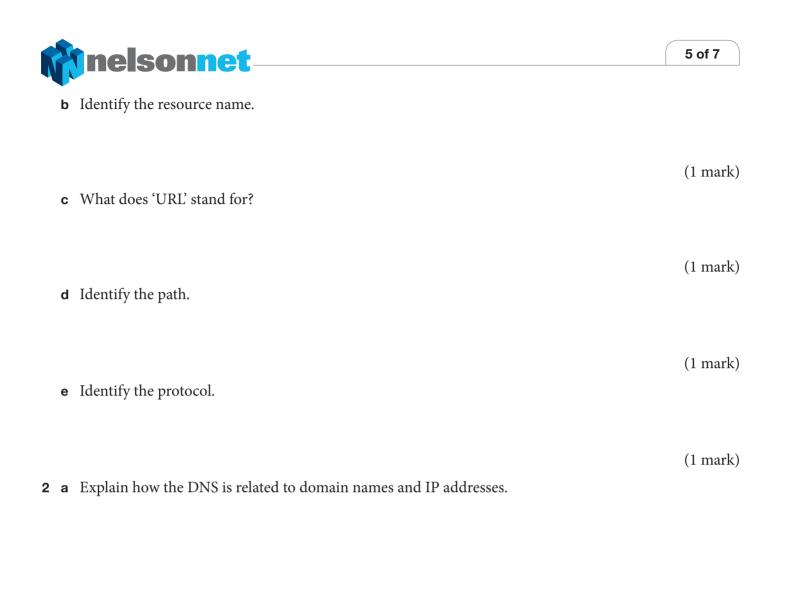## Short-answer questions

INSTRUCTIONS FOR SECTION B

Answer **all** questions in the spaces provided.

**1** Refer to the following URL to answer the question.

http://www.vcaa.vic.edu.au/Pages/vce/Index.aspx

    **a** Identify the domain name.

(1 mark)

**b** Identify the resource name.

(1 mark)

**c** What does 'URL' stand for?

(1 mark)

**d** Identify the path.

(1 mark)

**e** Identify the protocol.

(1 mark)

**2 a** Explain how the DNS is related to domain names and IP addresses.

(3 marks)

**b** Explain what HTTPS, TLS and SSL have in common.

(2 marks)

**3** A small office has three workstations, laptops for the manager and assistant manager, a smartphone for the manager, a shared printer and internet access for all users.

Create a network diagram suitable for this office. Label all components.

(5 marks)

**4 a** Define 'network protocol'.

(2 marks)

**b** Why is it important to use standard networking protocols?

(2 marks)

**c** Identify the protocol used to request and send webpages.

(1 mark)

**5** A networking consultant is hired to advise the manager of a small business how to protect his network. The network has an ADSL internet connection so staff can use email. They have a file server, and staff need to login to the network before they can use it. They use wireless networking to connect their laptops, phones and tablets to the internet.

Write a report identifying the five main accidental and deliberate threats to the company's data, and recommendations to protect against them.

(5 marks)