

Level 2 Control and security systems for the digital home technology integrator (7575-005)

Assignment guide for Candidates Assignment A



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Level 2 Control and security systems for the digital home technology integrator (7575-005)

Assignment A

Introduction – Information for Candidates

About this document

This assignment comprises all of the assessment for Level 2 Control and security systems for the digital home technology integrator (7575-005)

Health and safety

You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

Time allowance

The recommended time allowance for this assignment is **three hours**.

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Candidate Instructions

Time allowance: 3 hours

Assignment set up:

This assignment is made up of **two** tasks

Scenario

AceSecHome is a company that specialises in planning and installing home control and security systems. As part of the process it offers customers a free site visit to discuss their requirements.

Following the site visit, your role is to prepare a plan and prepare documentation, detailing the layout of the devices and transmission media that will be installed.

When the customer has agreed the design and specifications that you have recommended, you will install and troubleshoot the devices and associated transmission media.

Read all of the instructions carefully and complete the tasks in the order given.

The customer has a PC which is connected to the Internet via a cable connection.

During the discussion with the customer the following requirements were identified:

- A secure wireless network is to be implemented.
- The front entry point is to be monitored with a wireless camera and the images are to be stored and accessed on the PC.
- A facility to remotely control the lighting in the lounge and kitchen is to be installed.
- A motion detector should be installed in the hallway allowing the hallway lights to automatically switch on when motion is detected.

Task A

- 1 Using the **Answer sheet** and any technical specifications provided by your instructor, produce documentation that details the:
 - Devices that are required to meet the customer's requirements.
 - main technical specifications of the devices that you are going to install.
 - sources used to find the specifications
 - transmission media to be used and the associated characteristics, including any approximate cable lengths.
 - software and device drivers required
 - proposed locations of the devices that you have selected.
- 2 Using the room diagram provided by the assessor, detail the following:
 - the location of devices you are going to install
 - the appropriate layout of the transmission medium that you are going to use.
- 3 **Please use the Answer Sheet provided to complete Task A3**
List **three** methods that can be used to control access to the home.
- 4 **Please use the Answer Sheet provided to complete Task A5**
Give **two** reasons why it is important to plan and document customer installations.

Task B

In this part of the task you are required to install and configure the devices selected meet the customer's requirements.

- 1 Install and configure a router to create a secure wireless network. Document the configuration used on the Answer sheet provided
- 2 Connect the PC to the network.
At this point demonstrate to the assessor that everything functions correctly.
- 3 Install a wireless security camera and any associated hardware required to allow it to communicate with the PC.
- 4 Install and configure the software required to view the security camera images onto the PC.
At this point demonstrate to the assessor that everything functions correctly.
- 5 Correctly configure the pre-existing mechanism for the **two** light/lamps to be remotely controlled.
- 6 Install and configure a control panel for the remotely controlled lights/lamps.

7 Test the remote control system on both lights/lamps to ensure that it is working correctly.

Demonstrate to the assessor that the remote control system is working correctly

8 Install, configure and test a motion sensor onto the hall light.

Demonstrate to the assessor that the system works correctly

9 **Please use the Answer Sheet provided to complete Task B10**

You receive a telephone call from a previous customer who has the following system problem:

An external motion detector is frequently causing false alarms. When you question the customer, there appears to be no person near the sensor when it is being triggered. The sensor has been replaced and the false alarms persist.

Provide **two** acceptable explanations for the false alarms.

10 **Please use the Answer Sheet provided to complete Task B10**

Identify **one** method that can be used to protect the home from fluctuations in the electrical supply.

11 **Please use the Answer Sheet provided to complete Task B11**

Name **two** common electrical appliances that are known to sometimes cause interference on Wi-Fi networks.

When you have finished working:

- Sign each document above your name.
- Hand all paperwork and removable storage media to your assessor.

If the assignment is taken over more than one period, all paperwork and removable media must be returned to the test supervisor at the end of each sitting.

End of assignment

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