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<small>Pearson BTEC Level 3 Nationals Extended Certificate, Foundation Diploma, Diploma, Extended Diploma</small>									

Information Technology

Unit 1: Information Technology Systems

Thursday 25 January 2018 – Afternoon Time: 2 hours	Paper Reference 31760H
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You do not need any other materials.	Total Marks
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Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Answer ALL questions. Write your answers in the spaces provided.

1 Anderson is an accountant hired by companies to help with financial tasks.

He works from home and travels around the country visiting clients.

He uses a laptop computer for personal and work-related tasks.

He has confidential information stored on his laptop which includes personal and financial information.

(a) Anderson uses a username and password to restrict access to his laptop.

Describe **one** other method Anderson could use to restrict access to his laptop.

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(b) Anderson has a home network.

He connects his laptop to his home network using an Ethernet cable rather than a wireless connection.

Explain **two** advantages to Anderson of using an Ethernet cable to connect to his laptop.

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(c) When travelling Anderson uses a Virtual Private Network (VPN) to access his home network.

Explain **two** benefits to Anderson of using a VPN.

(4)

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(d) During a virus scan of his laptop Anderson receives this alert.



Describe how the features of anti-virus software will protect Anderson's laptop against this threat.

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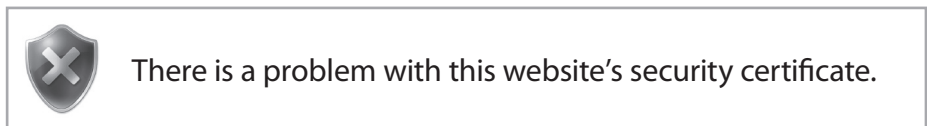
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(e) Anderson visits a website and sees this message.



Explain why websites use digital certificates.

(3)

(Total for Question 1 = 20 marks)



2 Aleema owns a small high street store selling clothes, shoes and fashion accessories.
Aleema plans to start using online systems to assist her business.

(a) Two features of social media are status updates and data analysis tools.

Describe how Aleema could use these features to assist her business.

(4)

Status updates

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Data analysis tools

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(b) Aleema creates a podcast to promote new products and provide fashion news, tips and advice.

The podcast will be available to download.

Explain **one** way that making the podcast available to download will affect her choice of file type.

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(c) Aleema creates an online store.

Aleema has decided to subscribe to an online service to host the website and data for her online store.

Explain **one** way subscribing to an online service will impact on Aleema's business.

(3)



(d) Aleema's customers must create an account in order to place an order.

The customers are asked to create a password for their account.

Describe how verification and validation would be used to ensure the password entered is suitable.

(4)

Verification

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Validation

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(e) Aleema has now started trading online.

Analyse how selling goods online as well as in-store will impact on stock control.

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(Total for Question 2 = 21 marks)



- 3 Manuel owns a parcel delivery company that provides a collection and delivery service for businesses and individuals.

Customers can use the company's website to book the collection of a parcel.

- (a) When a customer books the collection of a parcel the website generates a shipping label.

Figure 1 shows part of the shipping label. It contains a QR (Quick Response) code.



Figure 1

The shipping label will be attached to the parcel by the customer.

When the driver collects the parcel they use a multifunctional device to access the information provided by the QR code.

The status of the parcel is then changed to 'collected'.

Customers can use the company's website to track the parcel's location.

Draw a diagram to show how the parcel tracking system works.

The diagram should include:

- devices and systems that could be used
- devices to be connected and the connection type(s) used
- the flow of data through the system
- annotations to show actions taken by customers and drivers
- annotations indicating the information and data to be passed between systems, devices and users.

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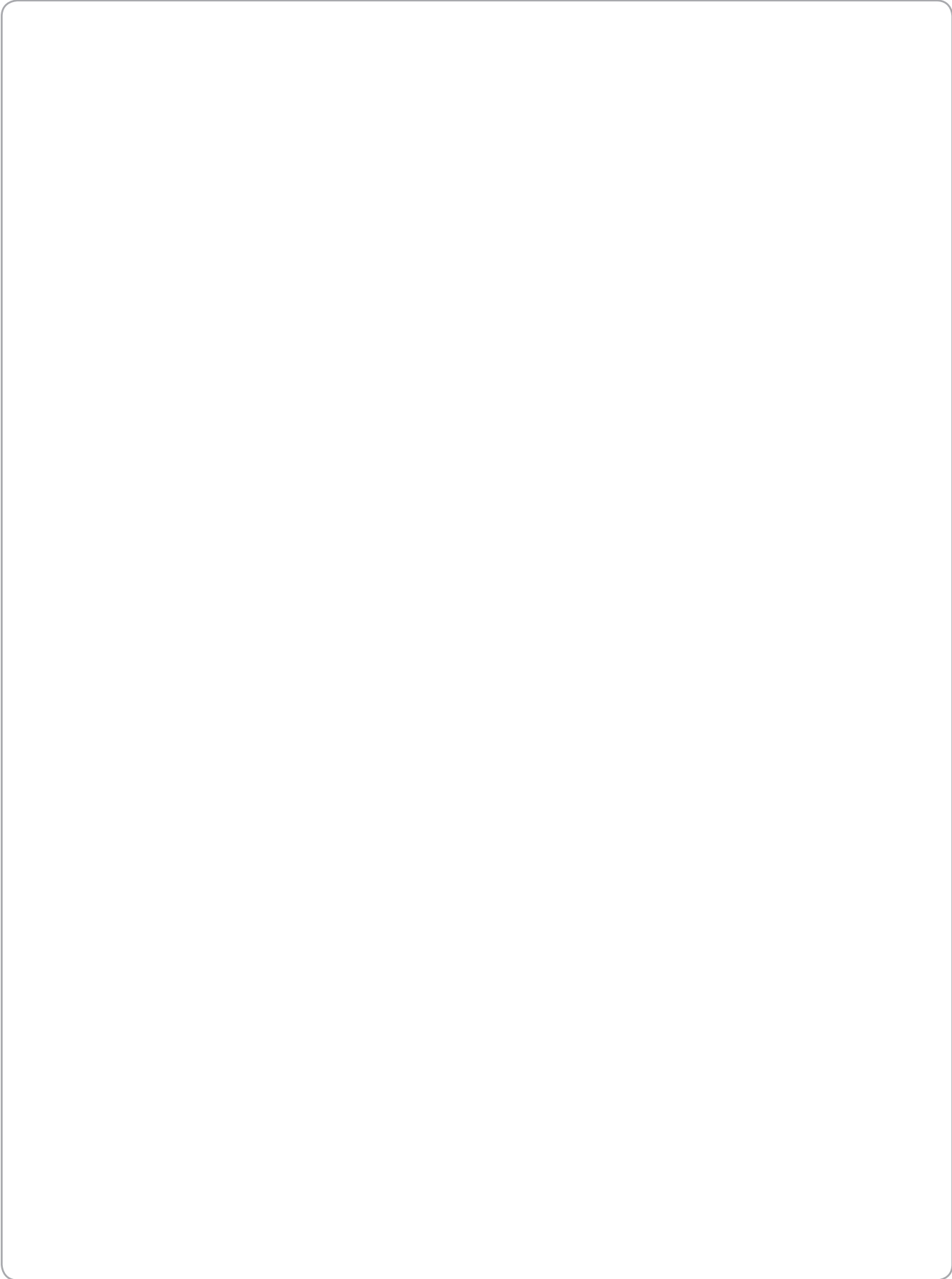
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Use this space to draw your diagram for Q3a.

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(b) Manuel wants to ensure that his data is backed up.

Discuss what Manuel should consider when deciding on backup and recovery procedures.

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Manuel is worried that his customers may be targeted by phishing scams.

(c) Explain what is meant by the term 'phishing'.

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(d) Describe **one** way a customer can reduce the risk from phishing.

(2)

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(e) Manuel has purchased a new server for the company network.

The server will be used to store shared resources for staff, host the website, hold customer details and details of collections and deliveries.

Discuss the factors Manuel should consider when planning the implementation of the new server.

(10)

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(Total for Question 3 = 27 marks)



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(b) Shayan's charity provides a number of services including:

- recycling and repurposing old computers
- access to educational materials stored on the charity's server.

Shayan has decided that access to the educational materials will be by use of a Command Line Interface rather than a Graphical User Interface.

Evaluate Shayan's decision to use a Command Line Interface.

(12)

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(Total for Question 4 = 22 marks)

TOTAL FOR PAPER = 90 MARKS



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