Write your name here

Surname		Other names

Edexcel Principal Learning

Centre Number

Candidate Number

Information Technology
Level 2
Unit 1: The Potential of Technology

Wednesday 30 May 2012 – Morning
Time: 1 hour

Paper Reference
IT201/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.

Information

- The total mark for this paper is 60.
- 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.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over

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PEARSON

Answer ALL questions.

All questions must be answered with a cross in a box ⊠. If you change your mind about an answer, put a line through the box ⬚ and then mark your new answer with a cross ⊠.

1   ATMs are a convenient way of withdrawing cash from a bank account.

(a) Customers wishing to withdraw cash insert a card into a reader.

Which **one** of the following identifies two places on the card where the electronic data can be stored?

(1)

A	Magnetic stripe and printed number	⊠
B	Microchip and printed name	⊠
C	Microchip and magnetic stripe	⊠
D	Hologram and magnetic stripe	⊠

(b) When customers insert their card they are asked to enter their:

(1)

A	password	⊠
B	account number	⊠
C	sort code	⊠
D	PIN	⊠

(c) Withdrawing cash is a task customers can do using an ATM.

Identify **one** task a customer would **not** be able to do.

(1)

A	Pay utility bills	⊠
B	Print a mini statement	⊠
C	Transfer funds between accounts	⊠
D	Create a new account	⊠

(d) The number of customers using ATMs is monitored.

The reason for monitoring usage of ATMs is to:

(1)

A	identify where additional machines are needed	☒
B	stop customers from other banks withdrawing cash	☒
C	stop customers from going overdrawn	☒
D	ensure staff are fully employed	☒

(e) The growth in the number of ATMs has helped banks to:

(1)

A	reduce the number of high street branches	☒
B	increase bank charges	☒
C	reduce the types of account available	☒
D	increase staff salaries	☒

(f) Some banks have introduced a system to send text alerts to customers who are nearing their account limit.

One reason for introducing this system is to:

(1)

A	attract new customers	☒
B	improve internal communication	☒
C	take advantage of improving technologies	☒
D	increase revenue from text charges	☒

(g) Most banks provide online banking facilities for customers.

This has had an impact on the banks, their employees and their customers.

Identify which **four** of the following statements are correct.

(4)

A	Banks that provide online banking facilities have access to a wider customer base	☒
B	Online banking has led to an increase in the number of call centres	☒
C	The security of customers' personal data has improved with the move to online banking	☒
D	Online banking has reduced the banks' overheads	☒
E	Customers can take advantage of online banking using a range of mobile devices	☒
F	Banks have been able to reduce charges as there is less personal data stored	☒
G	Online banking has improved job security for branch employees	☒
H	The technology necessary for online banking is available to all individuals	☒

(Total for Question 1 = 10 marks)

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2 *Bairns-toys* sells children's toys over the internet.

Customers order toys via the *Bairns-toys* website.

(a) Customers need a broadband connection to access the internet.

Which **one** of the following correctly identifies three other components necessary to use the internet effectively?

(1)

A	Web browser, printer and ISP	☒
B	Web browser, printer and communication software	☒
C	Application software, ISP and communication software	☒
D	Web browser, ISP and communication software	☒

(b) Identify **four** ways in which the *Bairns-toys* website can contribute to the success of the company.

(4)

A	Increased income from a wider customer base	☒
B	More staff can be employed to deal with demand	☒
C	Potential customers can be provided with up to date information	☒
D	Increased income from selling advertising space	☒
E	Overheads can be reduced in relation to the number of 'hits' the website receives	☒
F	Higher prices can be charged leading to increased revenue	☒
G	Customer feedback can be collected and acted upon	☒
H	Suppliers can be kept up to date with the goods for sale	☒

(c) Customers ordering goods online must make sure that they prevent unauthorised access to data on their PC.

(i) Identify the software that should be installed to prevent this happening.

(1)

A	Pop up blocker	☒
B	Firewall	☒
C	Internet filter	☒
D	Virus checker	☒

(ii) Identify the legislation that was passed to prevent unauthorised access to data on other people's computers.

(1)

A	Computer Application Act	☒
B	Copyright, Designs and Patent Act	☒
C	Computer Misuse Act	☒
D	Data Protection Act	☒

(d) Which row correctly identifies one benefit to the customer and one benefit to the company of trading online, rather than on the high street?

(1)

	Customer	**Company**	
A	Goods are cheaper	Sales data is always secure	☒
B	Better quality goods	Fewer staff are needed	☒
C	Can purchase goods 24/7	Reduced overheads	☒
D	Payments are always secure	Wider customer base	☒

(e) Stock is stored in *Bairns-toys'* warehouse.

When an order is received items are picked from stock.

Which **one** of the following correctly identifies the two pieces of information needed to pick the item?

(1)

A	Warehouse location and item number	☒
B	Date of order and order number	☒
C	Warehouse location and item price	☒
D	Date of despatch and item number	☒

(f) *Bairns-toys* attaches a barcode to all parcels ready for despatch.

The barcode enables the delivery of parcels to be tracked by *Bairns-toys* and their customers.

One of the major benefits to *Bairns-toys* of using item tracking is to:

(1)

A	reduce delivery times	☒
B	attract more customers	☒
C	reduce delivery costs	☒
D	improve customer services	☒

(Total for Question 2 = 10 marks)

3 EPOS systems are used in supermarkets.

(a) One benefit of an EPOS system is that stock levels can be updated automatically.

Identify **one** other benefit of using an EPOS system.

(1)

A	More staff can be employed on checkouts	☒
B	A wider range of items can be sold	☒
C	Price changes can be implemented easily	☒
D	Communication between staff is improved	☒

(b) The information collected by the EPOS system can be analysed to show how well individual items are selling.

This data can be used to:

(1)

A	determine stock levels	☒
B	decide opening hours	☒
C	reduce buying costs of stock	☒
D	determine staffing levels	☒

(c) EFTPOS systems are also used in supermarkets.

(i) Identify the device that is used in an EFTPOS system to read the electronic data from a customer's card.

(1)

A	Barcode scanner	☒
B	Optical character reader	☒
C	Biometric scanner	☒
D	Chip and PIN reader	☒

(ii) The main benefit of using an EFTPOS system is that:

(1)

A	the supermarket can monitor customer purchases	☒
B	the number of checkouts can be reduced as processing is fast	☒
C	the performance of checkout operators can be closely monitored	☒
D	funds are automatically transferred to the supermarket's bank account	☒

(d) Loyalty card schemes are provided by many supermarket chains.

Identify which **four** of the following statements are correct.

Loyalty card schemes:

(4)

A	enable overall sales of items to be analysed	☒
B	cannot be used by customers paying with cash	☒
C	enable advertising to be targeted at individual customers	☒
D	can only be used as part of an EPOS system	☒
E	increase the sale of 'own brand' goods	☒
F	enable an individual customer's purchase data to be analysed	☒
G	reduce the time that individual customers spend queuing	☒
H	encourage customers to return to the supermarket	☒

(e) When a customer joins a loyalty card scheme their data is stored electronically.

The customer's data will be stored in a:

(1)

A	database, which is an application package	☒
B	spreadsheet, which is a security system	☒
C	spreadsheet, which is an application package	☒
D	database, which is a security system	☒

(Total for Question 3 = 9 marks)

4 Modern hospitals are able to take advantage of new technologies in many areas.

(a) Hospitals store patient records electronically.

Patients have the right to check that their records are accurate and up to date.

The legislation that gives patients this right is:

(1)

A	Computer Misuse Act	☒
B	Health and Safety Act	☒
C	Data Protection Act	☒
D	Data Misuse Act	☒

(b) Patients can book appointments online to see a doctor.

(i) The most important item of data used to identify patients is their:

(1)

A	full name	☒
B	date of birth	☒
C	reference number	☒
D	address	☒

(ii) Identify **one** benefit to a hospital of patients being able to book appointments online.

(1)

A	Fewer doctors will be needed to see the patients	☒
B	Fewer staff will be needed to help manage appointments	☒
C	Doctors will be able to schedule more appointments	☒
D	Patients will be able to spend more time with doctors	☒

(iii) **One** benefit to patients of being able to book appointments online is that they will be able to:

(1)

A	select the length of the appointment to suit their needs	☒
B	spend less time waiting at the hospital	☒
C	select an appointment time to suit their needs	☒
D	see any doctor they want	☒

(c) Patient monitoring systems can be set up to monitor a patient's heart rate 24 hours a day.

The patient's heart rate is measured by a:

(1)

A	plotter, which is an output device	☒
B	biometric scanner, which is an input device	☒
C	scanner, which is an output device	☒
D	sensor, which is an input device	☒

(d) **One** benefit to a hospital of using patient monitoring systems is that:

(1)

A	staff are no longer needed to monitor patients	☒
B	data can be collected by the patient	☒
C	data can be collected and analysed later	☒
D	patients will be released from hospital earlier	☒

(e) Expert diagnostic systems are used to help doctors diagnose patients' illnesses.

Which **four** of these statements are correct?

An expert diagnostic system:

(4)

A	will have a wider knowledge base than an individual doctor	☒
B	will only have a small amount of data stored	☒
C	is based upon a set of facts and rules devised by medical practitioners	☒
D	uses computer software to simulate the decision making of a human expert	☒
E	will always give an accurate assessment of the patient's illness	☒
F	is based on mathematical formulae devised by medical practitioners	☒
G	can be updated as new discoveries are made	☒
H	is a type of computer hardware that simulates the knowledge of a human expert	☒

(f) The **main** benefit to a hospital of using expert diagnostic systems is that they:

(1)

A	can be used to assist doctors in diagnosing illnesses	☒
B	can be used to replace doctors in diagnosing illnesses	☒
C	can be used to replace doctors in treating illnesses	☒
D	reduce the amount of forms that need to be completed	☒

(Total for Question 4 = 11 marks)

5 *Kookykitchens* sells 'made to measure' kitchens.

Sales representatives visit potential customers' houses, discuss their needs and take measurements.

Each sales representative has a laptop with mobile internet access.

(a) The main reason for providing the laptops is to:

(1)

A	maintain communication between the sales representatives and their homes	☒
B	maintain communication between the sales representatives and the company	☒
C	ensure that the sales representatives are up to date with personal emails	☒
D	ensure that the sales representatives are up to date with local and international news	☒

(b) The sales representatives use a CAD package to design the kitchen.

One benefit of using a CAD package in this situation is that:

(1)

A	a virtual model of the kitchen can be produced	☒
B	all of the customers' requirements will be included in the design	☒
C	the time taken to produce the kitchen will be reduced	☒
D	the quality of the kitchen will be improved	☒

(c) When a customer purchases a kitchen from *Kookykitchens* the sales representative sends the details to the company.

The company will use the data to:

(1)

A	improve communications with the customer	☒
B	plan a sales strategy	☒
C	improve the quality of the kitchens	☒
D	plan a production schedule	☒

(d) *Kookykitchens* has an intranet that sales representatives can access from their laptops.

(i) Which **one** of the following statements is accurate?

An intranet is:

(1)

A	a private network hosted on the company's server	☒
B	a useful method of communicating with suppliers	☒
C	a public network that can be accessed via the internet	☒
D	a useful method of publishing advertising material	☒

(ii) **One** benefit of using an intranet is:

(1)

A	external communications will be improved providing more reliable and up to date information	☒
B	internal communications will be increased leading to increased sales	☒
C	internal communications will be improved providing more reliable and up to date information	☒
D	external communication will be increased leading to increased sales	☒

(e) Sales representatives use route finders to plan journeys to customers' houses.

(i) The information that **must** be entered into the route finder is:

(1)

A	departure post code and date of journey	☒
B	departure post code and destination post code	☒
C	destination post code and date of journey	☒
D	date and time of journey	☒

(ii) An alternative to a route finder is a SAT NAV device which incorporates GPS technology.

The basic components of these devices are:

(1)

A	a GPS receiver, a LAN and a database of maps	☒
B	a GPS receiver, the internet and a database of maps	☒
C	a GPS transmitter, a GPS receiver and a database of maps	☒
D	a GPS transmitter, a GPS receiver and the internet	☒

(iii) The benefit of GPS over a route finder is that:

(1)

A	suggested routes are always more direct	☒
B	suggested routes are always shorter	☒
C	information is always more accurate	☒
D	journey progress is updated in real time	☒

(Total for Question 5 = 8 marks)

6 CAD, CAM and process control systems are used in car manufacturing.

(a) **One** benefit of CAD systems in car manufacturing is that:

(1)

A	the costs of components will be reduced	☒
B	car designs can be viewed in both 2D and 3D	☒
C	petrol consumption can be calculated	☒
D	the software is easy to use, reducing the need for training	☒

(b) Identify which **four** of the following statements are correct.

(4)

A	CAM systems produce consistent results	☒
B	Process control systems are unable to respond to changing circumstances	☒
C	CAM systems reduce the pollution from the manufacturing process	☒
D	CAM systems can respond instantly to changing circumstances	☒
E	CAD and CAM systems can be integrated to speed up the design and manufacturing process	☒
F	Process control systems are used to control the supply of components to the production line	☒
G	CAM systems are used to carry out repetitive procedures, leaving more varied tasks for workers	☒
H	Process control systems use sensors to feed back data to a processor	☒

(c) Some car manufacturers use robots to spray-paint cars.

One reason for using robots for this application is they:

(1)

A	can be readily adapted to suit different models and colour schemes	☒
B	reduce industrial pollution	☒
C	do not require regular maintenance	☒
D	can operate continuously in difficult environments	☒

(Total for Question 6 = 6 marks)

7 The increase in the availability of mobile technologies has had an impact on both individuals and organisations.

(a) Identify which **four** of the following statements are correct.

The increased use of mobile technologies has:

(4)

A	reduced the need for communication between staff and their organisations	☒
B	reduced the need to store large amounts of data	☒
C	led to concerns about the health of individuals	☒
D	reduced the need of organisations to look after the health and safety of staff	☒
E	led to improved productivity within organisations	☒
F	improved communication between individuals and organisations	☒
G	changed the working patterns of many individuals	☒
H	made it easier to safeguard business critical data	☒

(b) The internet provides a vast amount of information.

(i) Which **one** of these statements is accurate?

(1)

A	Some governments censor websites they deem to be inappropriate	☒
B	The information provided on the internet is closely monitored	☒
C	There are no restrictions on the downloading and use of information on the internet	☒
D	Websites cannot be censored therefore everyone has equal access to information	☒

(ii) Access to information on the internet:

(1)

A	has provided equality of education for all	☒
B	has provided equality of communication for all	☒
C	allows governments to monitor citizens' movements	☒
D	allows individuals to make more informed choices	☒

(Total for Question 7 = 6 marks)

TOTAL FOR PAPER = 60 MARKS