

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

For Examiner's Use
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General Certificate of Secondary Education  
June 2009



**INFORMATION AND COMMUNICATION TECHNOLOGY 3527/H  
(SPECIFICATION A) (SHORT COURSE)  
Higher Tier  
Written Paper**

**H**

Tuesday 19 May 2009 1.30 pm to 3.00 pm

<p><b>You will need no other materials.</b> You may use a calculator.</p>
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Time allowed: 1 hour 30 minutes

**Instructions**

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. **Answers written in margins or on blank pages will not be marked.**
- Do all rough work in this book. Cross through any work you do not want to be marked.

**Information**

- The maximum mark for this paper is 80.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers.

For Examiner's Use			
Question	Mark	Question	Mark
1		10	
2		11	
3		12	
4		13	
5		14	
6		15	
7		16	
8		17	
9			
Total (Column 1)		→	
Total (Column 2)		→	
TOTAL			
Examiner's Initials			



J U N 0 9 3 5 2 7 H 0 1

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

- 1 (a) Each piece of hardware in the table below is either an input, output or storage device. For **each** put a tick in the correct box. As an example, a mouse is an input device and so a tick is placed in the Input column.

Device	Input	Output	Storage
Mouse	✓		
Hard disk drive			
Laser printer			
Microphone			
Speakers			

(4 marks)

- 1 (b) Name **one** output device **not** given in the table above.

.....  
(1 mark)

- 1 (c) Name **one** storage device **not** given in the table above.

.....  
(1 mark)

- 2 Which **two** of the following are exemptions to the 1998 Data Protection Act?

- A Data is obtained for specified and lawful purposes
- B Data where national security is concerned
- C Data is never to be given to anyone
- D Data must not be more than six months old
- E Data can be prevented from being used for direct marketing
- F Data individuals want removed from their record must be removed immediately
- G Data is not under any circumstances to be transferred outside the UK
- H Data is to be kept secure against loss, damage or unauthorised processing
- I Data used for health, education and social work

Answers

(2 marks)

6

2



3 Which software packages would be the **best** to use for the following tasks? Write the letter for each answer in the space given.

3 (a) For a school to create a newsletter to send to parents each term

- A database management
- B spreadsheet
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

3 (b) For a student to store and organise details of a large CD collection

- A database management
- B spreadsheet
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

3 (c) For a small hotel to calculate the bills for guests

- A database management
- B spreadsheet
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

3 (d) For a shop selling DVDs to advertise their products on the Internet

- A database management
- B modelling
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

4
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Turn over ▶



4 What do the following abbreviations stand for?

4 (a) ROM

- A Read Online Memory
- B Reduced Online Memory
- C Reduced Only Memory
- D Read Only Memory
- E Right Only Memory

Answer

(1 mark)

4 (b) RAM

- A Recently Accessed Memory
- B Reduced Access Memory
- C Reduced Active Memory
- D Random Active Memory
- E Random Access Memory

Answer

(1 mark)

4 (c) CD-RW

- A Compact Disc-Recordable
- B Compact Disc-Rewriteable
- C Compact Disc-Readable
- D Compact Disc-Reclaimable
- E Compact Disc-Receiveable

Answer

(1 mark)

3



5 In each part of this question, which term **best** matches the definition given? Choose your answers from the list given below. Write the letter for each answer in the space given.

- A Calibrate
- B Data logging
- C Feedback
- D Logging interval
- E Mouse
- F Period of logging
- G Sensor

5 (a) An input device used to measure environmental conditions

Answer

(1 mark)

5 (b) The collecting and storing of data at regular, fixed intervals over a period of time

Answer

(1 mark)

5 (c) The time between the first reading being taken and the last reading being taken

Answer

(1 mark)

5 (d) To match the readings of a sensor with those of a known standard

Answer

(1 mark)

4

**Turn over for the next question**

**Turn over ▶**



- 6 A high street shop that sells DVDs and computer games offers a 10% discount to customers who join their membership scheme.

In the space below, complete the design of a Data Capture Form for people applying to join the shop's membership scheme. Care should be taken to include suitable fields and enough space to fill in their details.

Surname 

--	--	--	--	--	--	--	--	--	--	--	--	--

First name 

--	--	--	--	--	--	--	--	--	--	--	--	--

Address 1 

--	--	--	--	--	--	--	--	--	--	--	--	--

Address 2 

--	--	--	--	--	--	--	--	--	--	--	--	--

Address 3 

--	--	--	--	--	--	--	--	--	--	--	--	--

(4 marks)

4
---



- 7 Lancre Theme Park has decided to produce a leaflet to attract more customers. They have used a Desktop Publishing package to produce the leaflet shown below.

## Lancre Theme Park

20 new and exciting rides for 2009  
Over 80 rides available every day  
Open daily from 20<sup>th</sup> April 2009 until 20<sup>th</sup> October 2009.

Entrance fee

Children under 16 only £7.99

Adults £9.99

10 food outlets

Wide variety of shops

Telephone 0123 8989898 or email [park.admin@lancreconnet.com](mailto:park.admin@lancreconnet.com) for more details or group reservations

- 7 (a) Give **one** feature of the software that has been used to make the heading 'Lancre Theme Park' stand out.

Feature used ..... (1 mark)

- 7 (b) Give **one** other feature of the software that could be used to make the sub-heading 'Entrance fee' stand out.

Other feature ..... (1 mark)

- 7 (c) Give **three** other features of the software that could be used to improve the appearance of the rest of the leaflet.

Feature 1 .....

Feature 2 .....

Feature 3 .....

(3 marks)



- 8 Betabookz is a company that sells books, CDs and other related items online. Part of its stock database file is shown below.

Stock Number	Item Name	Type of Item	Number in Stock	Selling Price
A1002	The End	Bk	14	£9.99
A1009	Best of the Eagles	CD	12	£7.99
A1013	Super Mario 4	Gm	23	£29.99
A1024	Last Attack	Gm	19	£32.99
A1028	Best of the Beatles	CD	15	£11.99
A1032	Guinness Book of Records	Bk	20	£15.99
A1033	Chaos	Bk	7	£11.99
A1035	Hannah	Bk	5	£3.99
A1037	Bat Out of Hell 2	CD	10	£6.99

- 8 (a) Which is the key field in this database table?

.....  
(1 mark)

- 8 (b) A member of staff tries to add this incorrect record to the database.

Stock Number	Item Name	Type of Item	Number in Stock	Selling Price
A1002	Sign of Four	Bk	5	£5.99

- 8 (b) (i) State why this record should be rejected.

.....  
.....  
(1 mark)

- 8 (b) (ii) Give **one** method of avoiding this problem.

.....  
.....  
(1 mark)





- 8 (c) A member of staff tries to add this incorrect record to the database.

Stock Number	Item Name	Type of Item	Number in Stock	Selling Price
A1064	My Way	Bk	-3	£7.99

- 8 (c) (i) State why this record should be rejected.

.....  
 .....

(1 mark)

- 8 (c) (ii) Tick **one** box to show which of the following is a type of check that would be used to detect that this record is incorrect.

	Tick <b>one</b> box only
Interval data	
Data spelling	
Data validation	
Digital data	
Data logging	

(1 mark)

- 8 (d) In order to search the database, the following commands are used.

**And**  
**Or**  
**Equals**  
**Less than**

Write down the Stock number(s) selected as a result of the following searches.

- 8 (d) (i) Type of Item **Equals** Gm

.....  
 .....

(1 mark)

- 8 (d) (ii) Type of Item **Equals** Bk **And** Selling Price **Less than** £9.99

.....  
 .....

(1 mark)

7
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Turn over ▶



- 9 A family uses a PC to help to plan the costs for a holiday. The first attempt is shown below.

	A	B	C	D	E
1	<b>Family Holiday Plan - 2 weeks self catering</b>				
2					
3					
4		<b>Cost each</b>	<b>Number needed</b>	<b>Total cost per item</b>	
5	Holiday cost per adult	£369.00	2	£738.00	
6	Holiday cost per child	£179.00	2	£358.00	
7	Insurance per adult	£9.99	2	£19.98	
8	Insurance per child	£4.99	2	£9.98	
9	Trips - family cost	£39.99	3	£119.97	
10	Food/meals - family cost per day	£50.00	14	£700.00	
11	Other expenses per day	£25.00	14	£350.00	
12	Petrol costs to the airport	£40.00	1	£40.00	
13	Airport parking (two weeks)	£70.00	1	£70.00	
14					
15					
16		<b>Total cost of holiday</b>		£2,405.93	
17					

- 9 (a) Tick **one** box to show which type of software package has been used to produce this plan.

	Tick <b>one</b> box only
Database	
Graphics	
Spreadsheet	
Word processing	

(1 mark)

- 9 (b) Which cell contains the **total other expenses** for the holiday?

	Tick <b>one</b> box only
A11	
B11	
C11	
D11	

(1 mark)



9 (c) The cells in this spreadsheet have been formatted to contain text, number or currency.

State which **one** of these is contained in the following cell.

B13.....  
*(1 mark)*

9 (d) State the formula which would be contained in the following cell.

D16.....  
*(1 mark)*

9 (e) The family has set a maximum of £2200 to spend on their holiday. Explain clearly how they could use the spreadsheet to investigate ‘what if’ situations to help them keep within their budget.

.....  
.....  
.....  
.....

*(2 marks)*

**Turn over for the next question**

6

**Turn over ▶**



**10** Most people who work in call centres use their computers for a large part of each day. The firms that employ them are increasingly aware of computer-related health issues such as eye strain.

**10 (a)** Give **two** different steps that can be taken to help reduce the risk of eye strain for call centre staff.

Step 1 .....

.....

Step 2 .....

.....

*(2 marks)*

**10 (b)** Give **two other** health problems that can occur as a result of staff using a computer for long periods of time.

Problem 1 .....

.....

Problem 2 .....

.....

*(2 marks)*

4





12 A national chain of sports shops is increasingly using e-mail as a means of communication. They use e-mail to communicate with head office, suppliers and customers.

12 (a) Explain what is meant by the term e-mail.

.....  
.....

(1 mark)

12 (b) A secretary wants to send an e-mail to a supplier to report some stock which has not arrived. Tick **two** boxes to show how the secretary could find out the e-mail address of the supplier.

	Tick <b>two</b> boxes only
Look in the telephone book	
Click the reply button on an e-mail received from this supplier	
Move all supplier e-mails to another folder	
Remove other supplier e-mails from the In folder	
Use the address book set up in the e-mail software	

(2 marks)

12 (c) For many years, the company used post to communicate with suppliers rather than e-mail. Give **two** advantages of using e-mail as a means of communication compared to using post.

Advantage 1 .....

.....

Advantage 2 .....

.....

(2 marks)

12 (d) Give **one** disadvantage of using e-mail as a means of communication compared to using post.

Disadvantage .....

.....

(1 mark)

6



13 A health club uses a computer system to store information about the club’s members on a database.

13 (a) Explain what is meant by the following terms. You may find it helpful to give an example.

13 (a) (i) Field.....  
.....

13 (a) (ii) Record .....  
.....

(2 marks)

13 (b) Which **one** of the following would be a **disadvantage** to the health club in using a database to store the information rather than storing the information on paper in filing cabinets?

	Tick <b>one</b> box only
Staff could work more flexible hours	
The health club could open for longer hours	
Staff would need training	

(1 mark)

13 (c) Give **two advantages** to the health club in using a database to store the information rather than storing the information on paper in filing cabinets.

Advantage 1 .....  
.....

Advantage 2 .....  
.....

(2 marks)

5

Turn over ▶



14 A car hire firm is going to use a database to store the information it needs to run its business. They have decided to store the data in three linked tables. The three tables they will use are:

- Car Details
- Customer Details
- Billing Details.

14 (a) Give the name of a suitable key field for the following tables.

14 (a) (i) Car Details .....

14 (a) (ii) Customer Details .....  
(2 marks)

14 (b) Which **two** of the following fields would you expect to find in the Car Details table?

	Tick <b>two</b> boxes only
Name of customer	
Date of birth of customer	
Model of car	
Owner of car hire firm	
Engine size	

(2 marks)

14 (c) Give **one** advantage to the company in using three linked tables rather than just one table.

.....  
.....

(1 mark)

5
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**15** A hospital has recently changed its method of arranging patients' appointments with a specialist doctor. Originally, staff at the hospital chose the time and the date of the appointment and posted these details to the patient. Now, using the Internet, patients will be allowed to book the time and date of their own appointments on-line.

**15** (a) Describe **two** possible advantages to patients in booking the time and date of their own appointments.

Advantage 1 .....

.....

Advantage 2 .....

.....

*(2 marks)*

**15** (b) Describe **one** possible disadvantage to patients in booking the time and date of their own appointment.

Disadvantage .....

.....

*(1 mark)*

3

**Turn over for the next question**

**Turn over ▶**



**16** WizzyWorks is a company that produces websites for other companies. Their web designers usually work from home, but once a week they travel by car to the firm's head office in a large town.

**16 (a)** Tick **two** boxes to show the **advantages** to the web designers of working at home rather than at the company's head office.

	Tick <b>two</b> boxes only
They can start work at 9 am	
They can use a computer at home	
They do not have to spend money on travelling to work each day	
They do not have to spend time travelling to work each day	
They do not have to plan their work	

(2 marks)

**16 (b)** Tick **two** boxes to show the **disadvantages** to the web designers of working at home rather than at the company's head office.

	Tick <b>two</b> boxes only
They cannot start work until 9 am	
Work can take longer as it is easier to be distracted at home	
The work is more boring at home	
They will not get a lunch hour when working from home	
They feel out of touch with those who work at head office every day	

(2 marks)



**17** A chain of high street computer shops is about to develop their own high quality website.

**17** (a) Describe some of the issues they will need to consider when designing this website.

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*(4 marks)*

**Question 17 continues on the next page**



17 (b) Once the website is designed, it will need to be Implemented and Tested. Describe some of the issues they will need to consider when Implementing and Testing this website.

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(4 marks)

**END OF QUESTIONS**

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8

