

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

For Examiner's Use

General Certificate of Secondary Education
June 2008

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

H



Tuesday 20 May 2008 1.30 pm to 3.00 pm

You will need no other materials.
You may use a calculator.

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		11	
2-5		12	
6		13	
7		14	
8		15	
9			
10			
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			



J U N 0 8 3 5 2 7 H 0 1

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

For Questions 1 to 5, write the letter for each answer in the box given.

1 Below is a list of various types of application software.

- A database
- B desk top publishing
- C drawing
- D mail-merging
- E modelling
- F spreadsheet
- G web design
- H word processing

Which **one** would be the **most suitable** to use for the following tasks?

1 (a) Rotation of shapes

Answer

(1 mark)

1 (b) Typing in text for a novel

Answer

(1 mark)

1 (c) Using frames to position text and graphics on a page

Answer

(1 mark)

1 (d) Replication of cells

Answer

(1 mark)

1 (e) Carrying out a complex search on two or more criteria

Answer

(1 mark)

1 (f) A simple flight simulation

Answer

(1 mark)

6



2 Which **one** of the following is an input device?

- A Speakers
- B Hard disk drive
- C Feedback
- D Processor
- E Scanner

Answer

(1 mark)

3 Which **one** of the following is an output device?

- A Speakers
- B Hard disk drive
- C Feedback
- D Processor
- E Scanner

Answer

(1 mark)

4 Which **one** of the following is a storage device?

- A Speakers
- B Hard disk drive
- C Feedback
- D Processor
- E Scanner

Answer

(1 mark)

5 What is meant by the term hard copy?

- A Information that is never output
- B Output saved on to ROM
- C Output on to a screen
- D Printed output

Answer

(1 mark)

4

Turn over ►



- 6 MInotes is a Music shop which sells CDs, DVDs and a range of related goods. To try to increase sales, the manager uses a Desktop Publishing (DTP) Package to produce an advertising leaflet which is shown below.

MInotes

Special Offers

If you buy one full price CD during June you will get a second CD for half of the regular price.

If you spend over £30 on any item or items in our store, you will receive a free CD from our £3.99 range of CDs.

Do not miss out on these great bargains

The manager was not very pleased with this leaflet and has produced a second version which is shown below.

MInotes

Special Offers

1. If you buy one full price CD during June you will get a second CD for half of the regular price.

2. If you spend over £30 on any item or items in our store, you will receive a free CD from our £3.99 range of CDs.

Do not miss out on these great bargains

- 6 (a) Name **three** features of the DTP software that have been used to make changes to the leaflet.

Feature 1.....

Feature 2.....

Feature 3.....

(3 marks)

- 6 (b) Name **two** different features of the software that could be used to further improve the leaflet. Give a reason for each.

Feature 1.....

Reason 1.....

Feature 2.....

Reason 2.....

(4 marks)



7 A fast food restaurant has decided to store details of its staff on a database. Below is the start of a design for this database.

7 (a) Finish the design below by completing the **four** blank boxes. The first two have been completed for you.

Field name	Example of field	Most suitable field type
Employee code	FFD000231	Text
Surname	Abbott	Text
First name	Jane	
Date of Birth	20 th January 1980	
Telephone number	(01122) 787878	
Annual salary	£11500	

(4 marks)

7 (b) Give **two** more fields, other than address, which could be included in the staff database.

Field 1

Field 2

(2 marks)

7 (c) Give **one** type of data validation that could be used on each of the following fields.

Employee code.....

Annual salary

(2 marks)

Turn over for the next question

8

Turn over ▶



8 Some students are planning a School Prom for Year 11. Their first attempt is shown below.

	A	B	C	D	E
1	Year 11 Prom Planner				
2					
3	29 June 2008				
4					
5	Number of students paying	150			
6					
7	Expenditure	Cost of each	Number needed	Total Cost	
8	Coach Hire	£75.00	4	£300.00	
9	Function rooms	£100.00	3	£300.00	
10	Decorations (per room)	£22.50	3	£67.50	
11	Three course meal	£14.00	150	£2,100.00	
12	Soft drinks	£3.50	150	£525.00	
13					
14					
15					
16					
17	Total cost of the Prom			£3,292.50	
18					
19	Cost per student			£21.95	

8 (a) What is the shaded area A14 called?

	Tick one box only
A cell	<input type="checkbox"/>
A column	<input type="checkbox"/>
A row	<input type="checkbox"/>
A calculation	<input type="checkbox"/>

(1 mark)

8 (b) Name **three** cell formats that have been used in this spreadsheet.

Cell format 1

Cell format 2

Cell format 3

(3 marks)



- 8 (c) A spreadsheet can generate different types of graph. Give **one** suitable type of graph that could be used to display the various kinds of expenditure.

.....
(1 mark)

- 8 (d) What formula has been used to calculate the cost per student in D19?

.....
(1 mark)

- 8 (e) Many Year 11 students said that the maximum they would pay to go to the Prom would be £20. Explain how the software could be used for 'what if' situations, to try to keep the cost under £20.

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.....
.....
(2 marks)

Turn over for the next question

8

Turn over ▶



9 The definitions below are all related to data logging and control systems. From the list given below, choose the term which best matches the definition. Write the letter for your answer in the box provided.

- | | | |
|-----------------------|---------------------------|----------------------------|
| A actuator | E feedback | I modem |
| B calibrate | F graphing | J period of logging |
| C data logging | G keyboard | K sensor |
| D encryption | H logging interval | L wizard |

9 (a) Collecting and storing of data at regular, fixed intervals over a period of time.

Answer

(1 mark)

9 (b) An input device used to measure environmental conditions.

Answer

(1 mark)

9 (c) The time taken between one reading and the next.

Answer

(1 mark)

9 (d) To compare the readings of a sensor against those of a known scale.

Answer

(1 mark)

4



10 Give **four** responsibilities placed on **data users** by the 1998 Data Protection Act.

Responsibility 1

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Responsibility 2

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Responsibility 3

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Responsibility 4

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(4 marks)

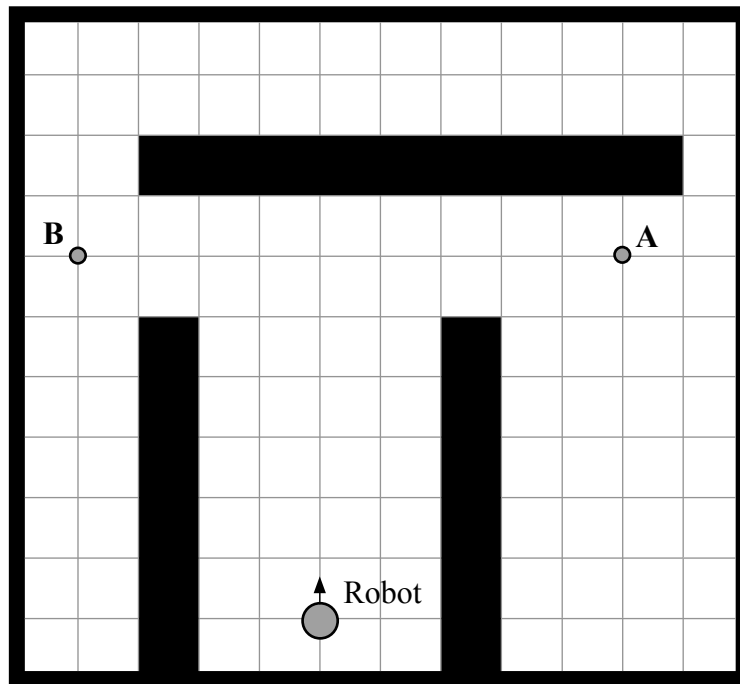
4

Turn over for the next question

Turn over ▶



- 11** A group of pupils from a school enter a competition to build a programmable robot. The robot must move around an obstacle course without bumping into the walls. The walls are shown in black in the diagram below.



Examples of the instructions needed to program the robot are given below.

Instruction List	Movement by the robot
Fd2	Moves the robot forward 2 squares
Bk2	Moves the robot backward 2 squares
Rt90	Turns the robot right through 90 degrees

Command List

Fd4
Fd5
Fd6
Rt90
Bk4
Bk5



11 (a) Using **only** the commands from the Command List opposite, write down instructions to move the robot from the starting position shown to point A.

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(2 marks)

11 (b) Again using **only** the commands from the Command List, write down instructions to move the robot from the original starting position shown to point A, then to point B and finally back to the original starting position.

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(3 marks)

5

Turn over for the next question

Turn over ▶



12 CottagesRUS is a company that rents out holiday homes. They use a database to store information on their properties to rent. Part of the Database file is shown below.

Property ID	Type of Property	Property location	Max people	Heating	Weekly rent (min – max)	Pets allowed	Deposit needed
C4UC01	C	Lancre	4	CH	£200 - £300	Y	£50
C4UC02	C	Lancre	4	CF	£200 - £300	N	£50
C4UH02	H	Hickley	12	CH	£300 - £500	N	£100
C4UC04	C	Hickley	6	EF	£250 - £375	N	£75
C4UB02	B	Lancre	6	CH	£275 - £375	N	£75
C4UB03	B	Hickley	4	CH	£175 - £275	Y	£50
C4UH03	H	Lancre	8	CH	£300 - £400	Y	£100
C4UC06	C	Lancre	6	CF	£200 - £300	N	£50
C4UC07	C	Lancre	2	CH	£150 - £225	N	£40
C4UH05	H	Hickley	8	CH	£250 - £375	N	£75
C4UB05	B	Hickley	4	CH	£175 - £250	Y	£50
C4UC09	C	Lancre	2	CH	£150 - £225		£50

The following codes have been used for the **Type of Property** field.

C - Cottage H - House B – Bungalow

12 (a) Name **one** other field that has been coded. (1 mark)

12 (b) How many records are shown in this database file?

Answer (1 mark)

12 (c) Why is the **Property ID** field needed?..... (1 mark)



12 (d) Give **three** advantages to CottagesRUS of using a database rather than a manual method for storing this information.

Advantage 1

.....

Advantage 2

.....

Advantage 3

.....

(3 marks)

12 (e) Write down the **Property ID(s)** found as a result of the following searches.

12 (e) (i) Search 1: **Max people** equal to 12

Property ID(s)

(1 mark)

12 (e) (ii) Search 2: **Property location** equal to Lancre AND **Pets allowed** equal to Y

Property ID(s)

(1 mark)

12 (e) (iii) Search 3: **Heating** NOT equal to CH

Property ID(s)

(1 mark)

12 (f) (i) The final entry in the **Pets allowed** field has been left blank. Give **one** reason why this might have been left blank.

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(1 mark)

12 (f) (ii) Explain how CottagesRUS could reduce the chance of this happening.

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(2 marks)

Turn over ▶



13 Interauc is an on-line auction site where you can buy or sell almost anything.

13 (a) What is meant by the term on-line?.....

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(1 mark)

13 (b) Give **two** possible advantages to the customer of **buying goods** on Interauc rather than from a local auction house or a high street shop.

Advantage 1

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Advantage 2

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(2 marks)

13 (c) Give **two** possible disadvantages to a company/individual of **selling goods** on Interauc rather than selling them locally.

Disadvantage 1

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Disadvantage 2

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(2 marks)

13 (d) Why might Interauc **not** allow some goods to be sold on their auction site?

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(1 mark)

6



14 Increasingly, companies are using e-mails to communicate between their offices around the world.

14 (a) Describe what is meant by the term e-mail.
.....
.....
(2 marks)

14 (b) Which **two** of the following are advantages of using e-mail as a means of communication compared to using **post**?

	Tick two boxes only
E-mails will arrive faster	
E-mails can contain pictures	
E-mails are cheaper to send	
E-mails can be sent in any weather	
E-mails can be sent to more places than post	

(2 marks)

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

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

14 (d) Give **one** reason why some people may still use the telephone to communicate with people in other offices.

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

6

Turn over ▶



15 An increasing number of companies store vast amounts of information on their computer systems. Information is stored on a wide range of items such as details of their employees, customers and suppliers. It is vital that the information stored is accurate.

15 (a) Describe possible consequences to a company if some of this information is inaccurate.

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(3 marks)



15 (b) Describe ways in which the information stored by the company on the computer system may have become inaccurate.

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(3 marks)

Question 15 continues on the next page

Turn over ▶



15 (c) Describe ways in which a company could reduce the risks of inaccurate data being stored on its computer system.

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(4 marks)

END OF QUESTIONS

10



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