Paper Reference(s)

3185/2H

Edexcel GCSE (Short Course)

Information & Communication Technology

Paper 2H

Higher Tier

Tuesday 7 June 2005 – Morning

Time: 1 hour

Materials required for examination	**Items included with question papers**
Nil	Case Study

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
For Section A: Do not use pencil. Use blue or black ink. For each question, choose an answer and put a cross in the box (☒). Mark only one answer for each question. If you change your mind about an answer, put a line through the box (☒) and then mark your new answer with a cross (☒).
Write your answers to Section B in the spaces provided.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (**2**).
You will be awarded up to 3 marks for quality of written communication.
This paper has 20 questions in section A, 5 questions in section B.
Section B contains questions on the Case Study. The total mark for this paper is 63. There are 16 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

You are reminded of the importance of clear English and careful presentation in your answers.
Show all stages in any calculations and state the units.
Include diagrams where these are helpful.

Turn over

edexcel

SECTION A

Answer ALL questions.
For each question, choose an answer A, B, C or D and put a cross in the box.
Mark only one answer for each question. If you change your mind about an answer,
put a line through the box and then mark your new answer with a cross.

eg: Mark the box like this: If you change your mind, mark the boxes like this:

☐ **A**	☒ **A** *This shows your final answer*
☐ **B**	☐ **B**
☒ **C** *This shows your answer*	☒ **C** *First answer*
☐ **D**	☐ **D**

1. Joanne suffers from RSI when using her computer.

    What does RSI stand for?

    ☐ **A** Repetitive Strain Illness

    ☐ **B** Repetitive Sprain Infection

    ☐ **C** Reduced Stress Injury

    ☐ **D** Repetitive Strain Injury

    (Total 1 mark)

2. Identify the hardware that is necessary to connect a standard computer system to the Internet.

    ☐ **A** keyboard

    ☐ **B** database

    ☐ **C** modem

    ☐ **D** mouse

    (Total 1 mark)

3. What is the most suitable storage medium for storing an encyclopaedia?

    ☐ **A** floppy disc

    ☐ **B** spreadsheet

    ☐ **C** CD ROM

    ☐ **D** database

    (Total 1 mark)

4. Which of the following is a verification method?

  ☒ **A** range check

  ☒ **B** proof reading

  ☒ **C** check digit

  ☒ **D** data logging

Q4

(Total 1 mark)

5. Two formats for graphic files are

  ☒ **A** bitmap and clip art

  ☒ **B** vector and bitmap

  ☒ **C** CAD and vector

  ☒ **D** CAD and CAM

Q5

(Total 1 mark)

6. Which one of the following is **not** a function of the CPU?

  ☒ **A** handling control functions

  ☒ **B** performing arithmetical operations

  ☒ **C** storing data

  ☒ **D** file management

Q6

(Total 1 mark)

7. A school has installed filtering software on its computer network.

  They have done this to

  ☒ **A** prevent hackers accessing the pupils' files

  ☒ **B** help them sort database files

  ☒ **C** prevent pupils accessing inappropriate web sites

  ☒ **D** prevent viruses

Q7

(Total 1 mark)

8. The higher the resolution the clearer the image on the screen.

The resolution is measured in

☒ **A** pixels

☒ **B** dpi

☒ **C** MHz

☒ **D** MB

(Total 1 mark)

9. Data entered into a computer should be as accurate as possible. One technique used is validation.

Validation is carried out by

☒ **A** the software on data entry

☒ **B** the hardware on data entry

☒ **C** proof reading the data

☒ **D** the data entry clerk

(Total 1 mark)

10. What are the two most appropriate application packages for producing personalised letters to send to a large number of people?

☒ **A** database and spreadsheet

☒ **B** CAD and Desktop Publishing

☒ **C** database and word processing

☒ **D** graphics and word processing

(Total 1 mark)

11. A series of commands written to solve a problem is called

☒ **A** an algorithm

☒ **B** a decision

☒ **C** a process

☒ **D** feedback

(Total 1 mark)

12. When solving an ICT systems problem, the correct sequence is

⊠ **A**   analysis, design, implementation, evaluation

⊠ **B**   implementation, design, evaluation, analysis

⊠ **C**   design, implementation, analysis, evaluation

⊠ **D**   analysis, implementation, design, evaluation

(Total 1 mark)

Q12

13. Which is **not** one of the principals of the Data Protection Act?

⊠ **A**   data must be collected fairly and lawfully

⊠ **B**   data can only be used for the purpose specified

⊠ **C**   data must be accurate and kept up to date

⊠ **D**   data must only be used for accounting purposes

(Total 1 mark)

Q13

14. Which of the following statements is **not** correct?

⊠ **A**   RAM stores the instructions for starting up the computer

⊠ **B**   RAM holds the data that is being worked upon

⊠ **C**   RAM is volatile

⊠ **D**   RAM can be read from and written to

(Total 1 mark)

Q14

15. Part of the Central Processing Unit is the ALU.

What does ALU stand for?

⊠ **A**   Analogue Logic Unit

⊠ **B**   Arithmetic Learning Unit

⊠ **C**   Arithmetic Logic Unit

⊠ **D**   Analogue Learning Unit

(Total 1 mark)

Q15

16. A database that contains linked tables is called

☒ **A** a relational database

☒ **B** a linked database

☒ **C** a database management system

☒ **D** a multiple database system

(Total 1 mark)

Q16

17. The most suitable computer system for a large amount of graphic design work would consist of

☒ **A** 512MB of ROM, a big monitor and a scanner

☒ **B** a large hard drive, CD ROM and a mouse

☒ **C** 512MB of RAM, a large hard drive and a fast processor

☒ **D** 256MB of RAM, a large hard drive and a scanner

(Total 1 mark)

Q17

18. The main factors that determine the power of a computer are

☒ **A** the type of processor, clock rate and the amount of RAM

☒ **B** the type of processor, the amount of ROM and the programming language used

☒ **C** the type of processor, its memory and the speed of the modem

☒ **D** the type of processor, the amount of ROM and the software available

(Total 1 mark)

Q18

19. Which of the following is **not** an example of computer modelling?

☒ **A** using a spreadsheet to predict how successful a business could be

☒ **B** a virtual walk through a building using 3D equipment

☒ **C** sorting a database of pupils into alphabetical order

☒ **D** learning to fly an aeroplane using flight simulating software

(Total 1 mark)

Q19

20. Pupils in a secondary school are between 11 and 18 years of age.

Which one of the following values would be extreme data?

☒ **A**   22

☒ **B**   16

☒ **C**   18

☒ **D**   10

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(Total 1 mark)

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TOTAL FOR SECTION A: 20 MARKS

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Q20

SECTION B

Case Study Questions.

Attempt ALL questions using the spaces provided.

1. Herstham Community Theatre uses database software to store a mailing list of people who are sent the *Programme of Events* brochure.

    This table shows part of the database:

Customer-ID	Date of Last Visit	Title	Initial(s)	Surname	Friend
221	02/03/04	Mr	A	Williams	Y
222	19/07/04	Miss	P K	Thomson	Y
223	25/11/04	Ms	G	Pearce	N
224	15/01/05	Mrs	T H	Rahman	N

(a) (i) Identify the key field.

....

(1)

(ii) Explain the purpose of a key field.

....

....

....

(2)

(b) The **Friend** field is encoded.

(i) Explain the meaning of '*encoded*'.

....

....

....

(2)

(ii) Give **two** benefits of encoding data.

1 ....

....

2 ....

....

(2)

(c) Explain how Herstham Community Theatre can ensure that the data in their mailing list database is kept as accurate as possible.

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(4)

Q1

(Total 11 marks)

2. (a) The theatre has a computer network.

Give **two** disadvantages of a networked computer system compared to standalone systems.

1 ....

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2 ....

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(2)

(b) The theatre produces a *Friends' Newsletter.* This is sent to people as an e-mail attachment.

Describe the process of sending an e-mail with an attachment to the people on a mailing list.

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(6)

(Quality of Written Communication: 3 marks)

(Total 11 marks)

Q2

3. At the moment when an item is sold at the refreshment kiosk, the item code is keyed in using a conventional keypad. During busy periods this method is too slow and queues develop.

(a) Recommend a more suitable input device. Explain how this device works.

Device ....

How it works ....

....

....

(3)

(b) Here is part of the spreadsheet used to maintain stock records.

	A	B	C	D	E	F	G	H
1	Item	Cost price (£)	Selling price (£)	Number in stock	Re-order level	Re-order Qty	Supplier code	Reorder?
2	Choc-ice	0.60	1.50	267	300	2000	KL43	Y
3	Cola (can)	0.33	0.80	476	450	3000	FG27	N
4	Orange (can)	0.33	0.80	425	450	3000	FG27	Y
5	Crisps (plain)	0.27	0.72	662	600	5000	GD68	N

Formulae have been entered in Column H to indicate whether an item needs reordering.

Write down the formula that has been entered in cell H2.

....

(6)

(Total 9 marks)

4. The theatre produces the *Friends' Newsletter* internally.

(a) Here is the first draft of the *Friends' Newsletter*.

Friends' Newsletter May 2005

Welcome to the latest edition of the newsletter.

We have some very exciting performers appearing in the next three months and so that you can enjoy as many performances as possible we have some incredible offers for you.

Prices for first night performances have been reduced by an extra 10% for all of the shows in June. So come along and see The Pirates of Penzance on 13th June, The Hoax on 20th June and Wonderland on 27th June.

There have been some major changes to the theatre bar area over the last few weeks. The whole area has been completely redecorated and there is now much more seating available. In addition a much wider range of refreshments have been introduced. To celebrate the refurbishment all bar prices will be reduced by 50% for the opening nights of all shows in June.

Remember that you can visit our website to get up-to-the minute information on all forthcoming attractions.

Adding pictures is one way to make the newsletter more appealing.

Give **two** other ways, and state how they make the newsletter more appealing.

1 ....

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2 ....

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(4)

(b) The theatre wishes to include photographs of productions in the newsletter.

Describe the process of including a photograph in the newsletter.

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(3)

(Total 7 marks)

5. People may choose to join the 'Friends of Herstham Community Theatre' using the theatre's website.

Here is a partially designed data capture form.
Complete the design of the form.
Marks will be awarded for layout, functionality and ease of use.

Forename																			
Surname																			
Street																			
Town																			

(Total 5 marks)

TOTAL FOR SECTION B: 40 MARKS

Quality of Written Communication: 3 marks
TOTAL FOR PAPER: 63 MARKS

END

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