

Centre No.						Paper Reference	Surname	Initial(s)
Candidate No.						3 1 8 5 / 2 H	Signature	

Paper Reference(s)

3185/2H

Edexcel GCSE (Short Course)

Information & Communication

Technology

Paper 2H

Higher Tier

Tuesday 20 May 2008 – Afternoon

Time: 1 hour

Examiner's use only

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Team Leader's use only

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Question Number	Leave Blank
A	
B1	
B2	
B3	
Total	

Materials required for examination
Nil

Items included with question papers
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. Do not return the Case Study with the question paper.

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, 3 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.

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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, put a line through the box and then mark your new answer with a cross.

eg: Mark the box like this:

<input type="checkbox"/> A
<input type="checkbox"/> B
<input checked="" type="checkbox"/> C <i>This shows your answer</i>
<input type="checkbox"/> D

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

<input checked="" type="checkbox"/> A <i>This shows your final answer</i>
<input type="checkbox"/> B
<input checked="" type="checkbox"/> C <i>First answer</i>
<input type="checkbox"/> D

1. Multi-copy invoices are printed on self-carbonised paper. The most appropriate type of printer to use is:

- A laser
- B dot matrix
- C inkjet
- D bubble jet

(Total 1 mark)

Q1

2. Which one of these is **not** a validation check?

- A typical check
- B range check
- C type check
- D length check

(Total 1 mark)

Q2

3. Which one of these is **not** a true statement when using a bar coding system?

- A data input is accurate
- B data input is fast
- C the bar code is a unique number
- D the bar code must include the price

(Total 1 mark)

Q3



<p>4. When an e-mail is received it can be sent on to other e-mail addresses. This is:</p> <p><input type="checkbox"/> A forwarding</p> <p><input type="checkbox"/> B replying</p> <p><input type="checkbox"/> C mailing</p> <p><input type="checkbox"/> D attaching</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Leave blank</p> <p>Q4</p> <input type="text"/>
<p>5. Which of these is not a principle of the Data Protection Act?</p> <p><input type="checkbox"/> A data must be kept secure</p> <p><input type="checkbox"/> B data must be relevant and not excessive</p> <p><input type="checkbox"/> C data cannot be copied without permission</p> <p><input type="checkbox"/> D data must be accurate and up to date</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q5</p> <input type="text"/>
<p>6. Two formats for graphics files are:</p> <p><input type="checkbox"/> A bitmap and clipart</p> <p><input type="checkbox"/> B vector and bitmap</p> <p><input type="checkbox"/> C vector and clipart</p> <p><input type="checkbox"/> D bitmap and CAD</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q6</p> <input type="text"/>
<p>7. Which of these is a true statement about ROM?</p> <p><input type="checkbox"/> A data is lost when the computer is switched off</p> <p><input type="checkbox"/> B data can be changed</p> <p><input type="checkbox"/> C it is non-volatile</p> <p><input type="checkbox"/> D it is volatile</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q7</p> <input type="text"/>
<p>8. Which of these is not a function of the operating system?</p> <p><input type="checkbox"/> A communicating with the system's hardware</p> <p><input type="checkbox"/> B managing the system's resources</p> <p><input type="checkbox"/> C performing arithmetic calculations</p> <p><input type="checkbox"/> D monitoring the performance of the system</p> <p style="text-align: right;">(Total 1 mark)</p>	<p>Q8</p> <input type="text"/>





<p>9. In terms of data storage and input, the most economical coding for a date field is:</p> <ul style="list-style-type: none"><input type="checkbox"/> A 11/06/2007<input type="checkbox"/> B 11 June 2007<input type="checkbox"/> C 11062007<input type="checkbox"/> D 11/jun/2007 <p style="text-align: right;">(Total 1 mark)</p>	Leave blank Q9 <input type="text"/>
<p>10. A series of commands written to solve a problem is:</p> <ul style="list-style-type: none"><input type="checkbox"/> A an algorithm<input type="checkbox"/> B a flow chart<input type="checkbox"/> C an acronym<input type="checkbox"/> D a formula <p style="text-align: right;">(Total 1 mark)</p>	Q10 <input type="text"/>
<p>11. The sharpness of an image on a VDU depends on its resolution. The resolution is measured in:</p> <ul style="list-style-type: none"><input type="checkbox"/> A pixels<input type="checkbox"/> B inches<input type="checkbox"/> C MHz<input type="checkbox"/> D kilobytes <p style="text-align: right;">(Total 1 mark)</p>	Q11 <input type="text"/>
<p>12. When using a web browser 'temporary' pages are stored in:</p> <ul style="list-style-type: none"><input type="checkbox"/> A history<input type="checkbox"/> B favourites<input type="checkbox"/> C temp<input type="checkbox"/> D cache <p style="text-align: right;">(Total 1 mark)</p>	Q12 <input type="text"/>
<p>13. Which type of software is used to set up a flight simulation to help train pilots?</p> <ul style="list-style-type: none"><input type="checkbox"/> A database<input type="checkbox"/> B spreadsheet<input type="checkbox"/> C CAD<input type="checkbox"/> D graphics <p style="text-align: right;">(Total 1 mark)</p>	Q13 <input type="text"/>



<p>14. Which of these is not a true statement about flight simulators?</p> <p><input type="checkbox"/> A flight simulators are much safer than the real thing</p> <p><input type="checkbox"/> B the simulation works in real time</p> <p><input type="checkbox"/> C the simulators make use of feedback loops</p> <p><input type="checkbox"/> D all real life situations can be simulated</p> <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Leave blank</p> <p style="text-align: center;">Q14</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>															
<p>15. What does http stand for?</p> <p><input type="checkbox"/> A hypertext transfer program</p> <p><input type="checkbox"/> B hypertext transfer protocol</p> <p><input type="checkbox"/> C higher text transfer program</p> <p><input type="checkbox"/> D higher text transfer protocol</p> <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q15</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>															
<p>16. Which row of the table correctly compares the two types of monitor?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 40%;">LCD MONITOR</th> <th style="width: 50%;">CRT MONITOR</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> A</td> <td>Takes up less desk space</td> <td>Generates less heat</td> </tr> <tr> <td><input type="checkbox"/> B</td> <td>Takes up more desk space</td> <td>Generates less heat</td> </tr> <tr> <td><input type="checkbox"/> C</td> <td>Takes up less desk space</td> <td>Generates more heat</td> </tr> <tr> <td><input type="checkbox"/> D</td> <td>Takes up more desk space</td> <td>Generates more heat</td> </tr> </tbody> </table> <p style="text-align: right;">(Total 1 mark)</p>		LCD MONITOR	CRT MONITOR	<input type="checkbox"/> A	Takes up less desk space	Generates less heat	<input type="checkbox"/> B	Takes up more desk space	Generates less heat	<input type="checkbox"/> C	Takes up less desk space	Generates more heat	<input type="checkbox"/> D	Takes up more desk space	Generates more heat	<p style="text-align: center;">Q16</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>
	LCD MONITOR	CRT MONITOR														
<input type="checkbox"/> A	Takes up less desk space	Generates less heat														
<input type="checkbox"/> B	Takes up more desk space	Generates less heat														
<input type="checkbox"/> C	Takes up less desk space	Generates more heat														
<input type="checkbox"/> D	Takes up more desk space	Generates more heat														
<p>17. Which of these is not dealt with by the 1990 Computer Misuse Act?</p> <p><input type="checkbox"/> A computer fraud</p> <p><input type="checkbox"/> B copying software</p> <p><input type="checkbox"/> C hacking into someone's computer</p> <p><input type="checkbox"/> D distributing viruses</p> <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q17</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>															
<p>18. Which of these is not a true statement about check digits?</p> <p><input type="checkbox"/> A check digits make sure that numbers fall in a particular range</p> <p><input type="checkbox"/> B check digits are worked out using a mathematical calculation</p> <p><input type="checkbox"/> C ISBN numbers on books use check digits</p> <p><input type="checkbox"/> D check digits are a type of validation</p> <p style="text-align: right;">(Total 1 mark)</p>	<p style="text-align: center;">Q18</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>															



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19. Magnetic tape is often used as a backup storage medium.

Which of these is **not** true about magnetic tape?

- A direct access is used to find data
- B data is read by magnetic heads
- C serial access is used to find data
- D access to data is relatively slow

Q19

(Total 1 mark)

20. A computer is advertised with 'A 3GHz Pentium 4 processor'.

What is the processor speed in pulses per second?

- A 4 000 000 000 000
- B 4 000 000 000
- C 3 000 000 000 000
- D 3 000 000 000

Q20

(Total 1 mark)

TOTAL FOR SECTION A: 20 MARKS



SECTION B

1. 'Zest for Life' collects personal data from members when they join a studio. This data is entered into the MEMBERS file.

Here is part of the file.

MEMBER-ID	SURNAME	FORENAME	DATE OF BIRTH	GENDER	MEMBER TYPE	LAST VISIT
1036	Briggs	Reece	07/07/93	M	J	06/11/07
0046	McShane	Leanne	09/12/75	F	F	13/05/08
1075	Nannar	Kulbir	25/02/79	M	F	24/02/08
1062	Jones	Carl	16/11/94	M	J	31/12/07
1145	Skirrow	Edmond	15/09/80	M	O	17/04/08
0076	Logan	Justine	16/05/84	F	O	21/10/07
0672	Singh	Amandeep	29/03/89	M	F	14/04/08
1032	Armson	George	12/11/78	M	O	13/03/08

- (a) After their data is entered into the database the member is issued with a membership card. The card is swiped each time the member visits a studio.

- (i) State what data **must** be stored on the card.

..... (1)

- (ii) State where the data is stored on the card.

..... (1)

- (iii) State which data will be recorded on the database when the card is swiped.

.....
 (1)



Leave
blank

(b) 'Zest for Life' would like a list of the junior male members.

This search is entered
MEMBER TYPE equals J OR GENDER equals M

The search produces a list of all the junior male and female members.

Write the correct search.

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

(c) Validation rules have been set on **MEMBER-ID**.

(i) Explain what is meant by validation.

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

(ii) Give an example of a validation rule that could be used on **MEMBER-ID**.

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



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blank

(d) It is important that the database is tested to make sure that it works correctly.

Describe suitable test data for the **MEMBER-ID** field.

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

(6)

(e) Databases can be flat file or relational.

(i) Describe the differences between a flat file and a relational database.

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

(3)

(ii) Explain the role of the key field in a relational database.

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

(2)

(Total 20 marks)

QB1

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2. The Head Office has three networked computers which deal with day-to-day administration tasks and advertising.

(a) At the beginning of every month a personalised letter is sent out to all members who have not attended a studio for more than one month.

Explain how the personalised letters would be produced.

.....

.....

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.....

(6)
(Quality of Written Communication: 3 marks)

(b) 'Zest for Life' produces a monthly newsletter.

(i) Desktop publishing software is used to create the newsletter.

Give **three** reasons why desktop publishing is chosen for this task rather than word processing software.

1

.....

2

.....

3

.....

(3)



(ii) Give **two** benefits to 'Zest for Life' of making the newsletter available via their website.

1

.....

2

.....

(2)

(Total 14 marks)

Leave
blank

QB2

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M 3 3 0 9 4 A 0 1 1 1 6

3. In order to monitor members' progress training mentors record personal statistics in a spreadsheet.

Here is part of the spreadsheet.

	A	B	C	D	E
1	NAME	WEIGHT(kg)	HEIGHT(m)	BMI	CATEGORY
2	Huckle: Robyn	62.73	1.85	18.3	U
3	McShane: Leanne	63.64	1.64	23.7	A
4	Nannar: Kulbir	60.84	1.77	19.4	A
5	Lackland: Daniel	80.84	1.79	25.2	O
6	Skirrow: Edmond	70.00	1.69	24.5	A
7	Logan: Justine	44.01	1.56	18.1	U
8	Singh: Amandeep	73.18	1.87	20.9	A

(a) One statistic that is used is Body Mass Index (BMI). This is calculated for adults by dividing weight (kg) by height squared (m²).

(i) Write down the formula that has been entered in cell D5.

.....

(2)

(ii) Identify **two** functions of the software that could have been used to automatically determine a member's category.

1

2

(2)



Leave
blank

(b) A macro has been used to alert training mentors when a category is calculated as U.

(i) Explain how a macro is created.

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

(3)

(ii) Give **two** ways in which a macro can be run.

1
.....
2
.....

(2)

QB3

(Total 9 marks)

TOTAL FOR SECTION B: 40 MARKS
(Quality of Written Communication: 3 marks)

TOTAL FOR PAPER: 63 MARKS

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M 3 3 0 9 4 A 0 1 5 1 6

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