

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**

**General Certificate of Secondary Education**

**INFORMATION AND COMMUNICATION TECHNOLOGY**



**2380/02**

ICT B (Higher Tier)

Wednesday **7 JUNE 2006**

Morning

1 hour 30 minutes

Additional materials:  
 Candidates answer on the question paper  
 Flowchart stencil  
 Candidates pre-prepared materials

Candidate Name

--

Centre Number

--	--	--	--	--

Candidate Number

--	--	--	--

**TIME** 1 hour 30 minutes

**INSTRUCTIONS TO CANDIDATES**

- Write your name, Centre number and candidate number in the spaces at the top of this page.
- Answer **all** questions.
- Write your answers in the spaces provided on the question paper.
- Do not write in the bar code. Do not write in the grey area between the pages.
- **DO NOT WRITE IN THE AREA OUTSIDE THE BOX BORDERING EACH PAGE. ANY WRITING IN THIS AREA WILL NOT BE MARKED.**

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **80**.
- No marks will be awarded for using brand names of software packages or hardware.

FOR EXAMINER'S USE	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
<b>TOTAL</b>	

**This question paper consists of 13 printed pages and 3 blank pages.**

- 1 State the type of software that would be most suitable for each of the tasks shown in the table below.

You may use the same software more than once. Do not use brand names.

<b>Task</b>	<b>Type of software</b>
to access a health centre website	
to write a letter	
to calculate the cost of medicines	
to send an electronic message from a computer	
to analyse numeric data	

[5]

2 At present all patient data is stored on paper. Wordsworth Health Centre has to capture data on its patients for use in its IT system.

Two types of data capture are needed:

- manually input data
- automatically captured data.

(a) A keyboard is one manual input device.

Give **one** example of its use in the health centre.

.....  
..... [1]

(b) (i) Identify **one** automatic input device that could be part of the health centre's system.

..... [1]

(ii) Give **one** example of the use of this device in the health centre.

.....  
..... [1]

(c) A doctor has access to both a screen and a printer. Explain why **both** of these devices are needed.

Use examples to illustrate your answer.

.....  
.....  
.....  
.....  
.....  
..... [4]

3 The health centre wishes to produce a health and safety poster for people using computers.

The poster has been started for you below.

Add your own labels or statements to indicate **eight** health and safety issues.



[8]

4 Wordsworth Health Centre stores data about its patients on a database. The Data Protection Act defines certain types of information as sensitive.

(a) State **three** types of sensitive information that could be held on a patient.

Type 1 .....

..... [1]

Type 2 .....

..... [1]

Type 3 .....

..... [1]

(b) Data protection is an essential issue for the health centre.

The table below states a number of points from the Data Protection Act.

Complete the table by indicating how each point relates specifically to the health centre situation.

An example is given:

<b>Data Protection Act</b>	
Data should not be transferred to a country outside the European community.	Other countries may not have as rigorous laws to protect misuse of patient data.
Appropriate technical and organisational measures should be taken against unauthorised access.	
Data should be processed in accordance with the rights of data subjects.	
Data should be accurate and up to date.	
Data should not be excessive.	
Data should only be obtained for the stated purpose.	

5 Wordsworth Health Centre uses a wide range of digital monitoring equipment.

(a) Describe, using examples, how digital data and analogue data differ.

.....  
.....  
.....  
.....  
.....  
..... [4]

(b) Explain why digital signals are more appropriate than analogue when recording patient temperatures.

.....  
.....  
.....  
.....  
..... [3]

6 Give **two** advantages and **one** disadvantage of using an on-line medical encyclopaedia as opposed to a paper-based encyclopaedia.

Advantage 1 ..... [1]

Advantage 2 ..... [1]

Disadvantage ..... [1]

7 Wordsworth Health Centre is linked to other health centres across the country to enable the exchange of patient data.

(a) State **one** advantage to the **patient**

.....  
..... [1]

(b) State **one** advantage to the **doctor**

.....  
..... [1]

(c) The health centre system uses two types of network.

Describe **one** difference between a Local Area Network (LAN) and a Wide Area Network (WAN).

.....  
.....  
.....  
..... [2]

8 Wordsworth Health Centre uses a paper based diary for booking appointments. The centre plans to introduce a fully computerised appointment booking system.

Identify and explain **three** issues that would affect the health centre staff if the fully computerised appointment system is implemented.

Issue 1 .....

.....

.....

Issue 2 .....

.....

.....

Issue 3 .....

.....

..... [6]



9 Complete the table below to describe how each task could be carried out.

<b>Job title</b>	<b>Software</b>	<b>Task</b>	<b>How task is carried out</b>
Doctor	Monitoring Software	To monitor a patient's blood pressure.	
Nurse	Database	To record a serial number from a barcode on a medicine bottle and store this on a patient's record.	
Receptionist	Database	To book a new appointment.	
Receptionist	Word processor	Types letters to send to all patients due for a checkup.	

[8]

[Turn over

10 Wordsworth Health Centre has recently been involved in a nationwide survey of health service providers. Part of a spreadsheet of results is shown below.

Wordsworth Health Centre details are shown in row 12.

	A	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	<b>Local Health Services Questionnaire 2005</b>														
2	<b>Visiting your GP Surgery or Health Centre</b>														
3		<b>Q1. Have you visited your GP surgery in the last 12 months?</b>			<b>Q2. When you arrived, how would you rate the courtesy of the receptionist?</b>						<b>Q3. Does your surgery make good use of ICT?</b>				
4		Yes	No	number of replies	Excellent	Very good	Good	Fair	Poor	Very poor	number of replies	Yes	No, but I would like it to	No, but didn't mind	number of replies
5	<b>Code</b>	%	%		%	%	%	%	%	%		%	%	%	
6	<b>Total</b>	<b>97</b>	<b>3</b>	<b>106833</b>	<b>26</b>	<b>36</b>	<b>24</b>	<b>11</b>	<b>2</b>	<b>1</b>	<b>103691</b>	<b>11</b>	<b>53</b>	<b>36</b>	<b>34216</b>
7	1	97	3	4342	27	38	24	10	2	1	4220	12	52	35	1343
8	2	98	2	371	21	37	26	13	2	1	363	6	61	33	133
9	3	98	2	394	20	35	26	13	3	2	378	13	46	41	100
10	4	98	2	368	35	36	20	8	0	0	357	14	36	50	118
11	5	97	3	355	33	42	18	6	1	1	349	17	49	34	109
12	<b>6</b>	<b>99</b>	<b>1</b>	<b>315</b>	<b>26</b>	<b>35</b>	<b>20</b>	<b>13</b>	<b>6</b>	<b>0</b>	<b>308</b>	<b>5</b>	<b>56</b>	<b>27</b>	<b>102</b>
13	7	97	3	318	25	33	29	10	2	1	310	22	57	22	116
14	8	97	3	355	23	35	28	10	2	1	342	7	54	39	110
15	9	99	1	395	29	41	18	10	1	1	390	9	51	39	109
16	10	97	3	355	27	40	24	7	2	1	346	14	57	29	87
17	11	96	4	364	26	36	25	11	3	1	354	11	57	32	102
18	12	97	3	356	33	40	19	6	1	0	344	11	57	32	110
19	13	95	5	396	25	38	28	8	1	1	379	12	49	39	147

(a) State **two** reasons for using a spreadsheet to analyse the data collected.

Reason 1 .....

.....

Reason 2 .....

..... [2]

(b) Explain why the questionnaire uses closed questions with responses such as 'good', 'very good' rather than open response questions.

.....

.....

.....

..... [2]

(c) Use the data shown to suggest where Wordsworth Health Centre provides a good service and where improvements could be made. You must make use of the data provided in your answer.

.....  
.....  
.....  
.....  
.....  
..... [4]

(d) Produce **one** closed question that could be used by Wordsworth Health Centre as part of a follow-up questionnaire for further computerised data analysis.

.....  
.....  
.....  
..... [2]

**Turn over for next question**

**[Turn over**

11 Wordsworth Health Centre produces a range of instruction leaflets for its staff.

A number of the staff at the health centre have limited knowledge of PCs and will need instruction leaflets which are written in a user-friendly way and give clear instructions and support for common processes used regularly.

(a) Choose **one** type of software used by Wordsworth Health Centre.

Software chosen .....

Design an instruction leaflet for using this software.

You should show

- structure
- layout
- content

(b) State the type of software you would use to produce the leaflet.

.....  
..... [1]

**14**  
**BLANK PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

15  
**BLANK PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

PLEASE DO NOT WRITE ON THIS PAGE