THE UNIVERSITY OF AUCKLAND

SECOND SEMESTER, 2006
COMPUTER SCIENCE
Mastering Cyberspace: An Introduction to
Practical Computing

TEST
(Time allowed: 60 MINUTES)

Surname:	
Forenames:	
Student ID number:	
Login name (UPI):	

INSTRUCTIONS:

- Attempt **ALL** questions - write your answers in the box provided
- Calculators are **NOT** permitted

Question	Mark
Digital, Hardware, Software	(/25)
Internet	(/55)
Applications	(/20)

TOTAL: (/100)

ID Number ....

Digital Information, Hardware and Software (25 marks)

1. How many bytes are there in 32 bits?

(2 marks)

2. For each of the following amounts of information, write down the amount of information using the most appropriate SI prefix (e.g. 7 KiB, 5TB). The most relevant prefixes (in alphabetical order) are: GB, GiB, KB, KiB, MB, MiB, PB, PiB, TB and TiB.

(i). 2048 bytes

(2 marks)

(ii). 3,000,000 bytes

(2 marks)

(iii). 1,073,741,824 bytes

(2 marks)

3. Given that a piece of hardware stored exactly 2 GiB of information, what component would it most likely be?

(2 marks)

ID Number ....

4. Imagine that you have the following list of peripheral components that need to be connected to a system box. State the component that should be plugged into each location on the diagram below. The components are:

- Computer Screen
- Earphones
- Ethernet cable
- Printer using parallel port
- PS/2 Mouse
- USB Flash drive

(i) [   ]   (ii) [   ]

(iii) [   ]

(iv) [   ]

(v) [   ]   (vi) [   ]
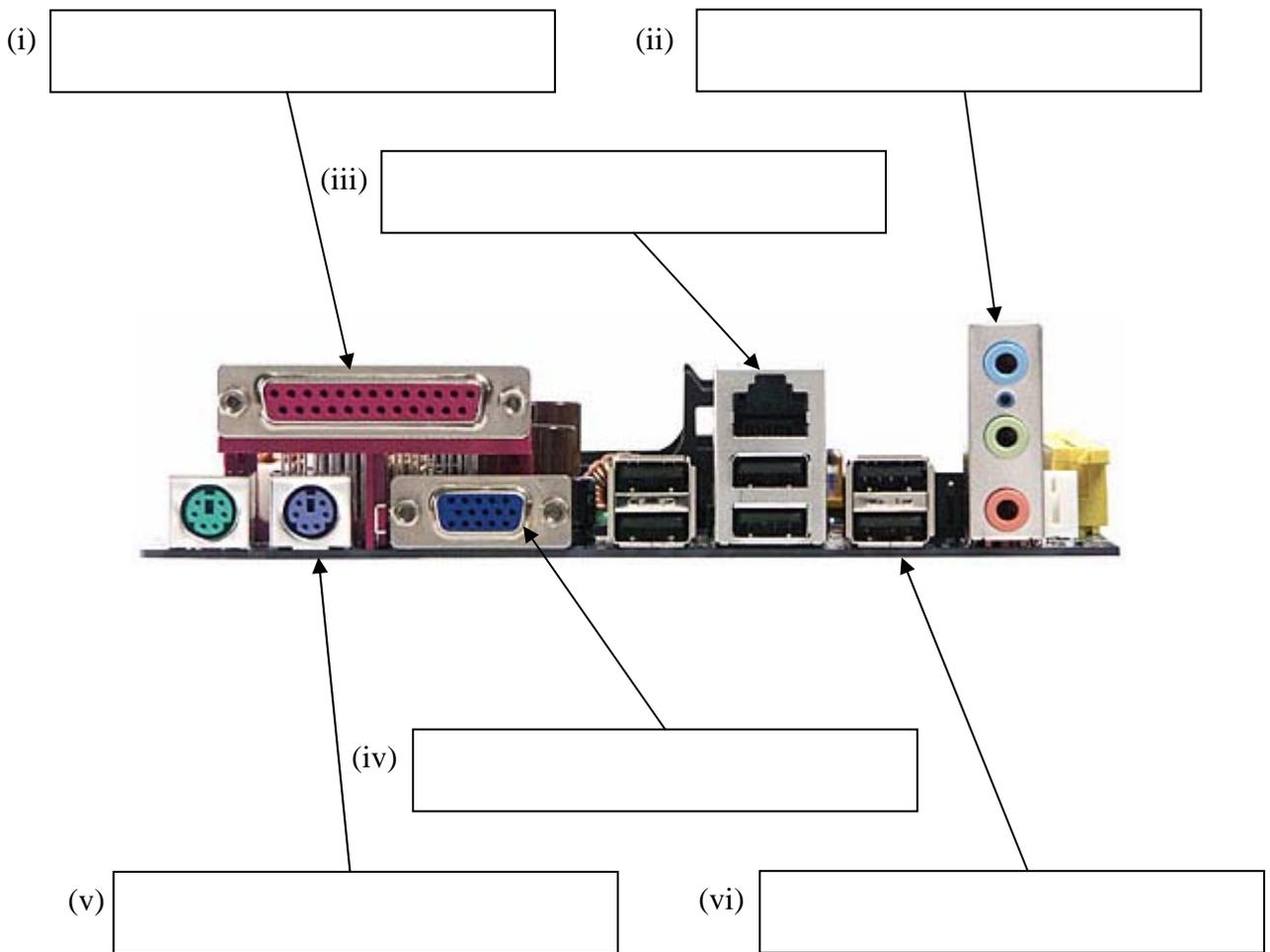
(12 marks)

5. Explain what shareware is.

(3 marks)

Internet (55 marks)

6. Put the following historical events into chronological order (i.e. arrange the events in order with the earlier events listed before later events).
   - WWW created
   - ARPAnet created
   - Sputnik launched
   - Browser wars occurred
   - DNS created

```
1.

2.

3.

4.

5.
```

(5 marks)

7. State the name of a protocol used on the Internet and what the protocol is used for.

   (i) State the name of a protocol.

   (2 marks)

   (ii) State what the protocol is used for.

   (2 marks)

8. Explain what a Domain Name Server does. Give an example to illustrate your answer.

(4 marks)

9. The url "http://www.freehomepages.org" refers to a unique location on the Internet. In which country is the web server that hosts this site most likely to be located? Explain why.

(i) Country

(2 marks)

(ii) Explanation

(2 marks)

10. Email, instant messaging, forums, blogs and wikis are all tools used by online communities, but each of these tools is suitable for a different purpose. For example, email is used to communicate privately with other individuals once you have their contact details. Explain the main purpose for each of the other tools (i.e. the primary use for this tool in an online community).

(i) Explain the main purpose of instant messaging

(2 marks)

(ii) Explain the main purpose of forums

(2 marks)

(iii) Explain the main purpose of blogs

(2 marks)

(iv) Explain the main purpose of wikis

(2 marks)

11. Describe the logs that are kept when a user views a web page using a normal web browser that is installed on their home computer. In other words, what information is stored about that transaction and where is it stored?

(5 marks)

12. The following wiki page was created for the COMPSCI 111/111G course using MediaWiki. Write the source code that would result in the wiki page shown below.


The following table of wiki markup is included as a reference. You do not need to use all of the codes.

```
''        emphasis                    '''       strong
=         level 1 heading             ==        level 2 heading
===       level 3 heading             ----      horizontal rule
~~~       user name                   [[name]]  link to a wiki page
url       link to a web page          *         unordered list
#         ordered list                ; t : d   definition list
:         indent text
```

ID Number ....
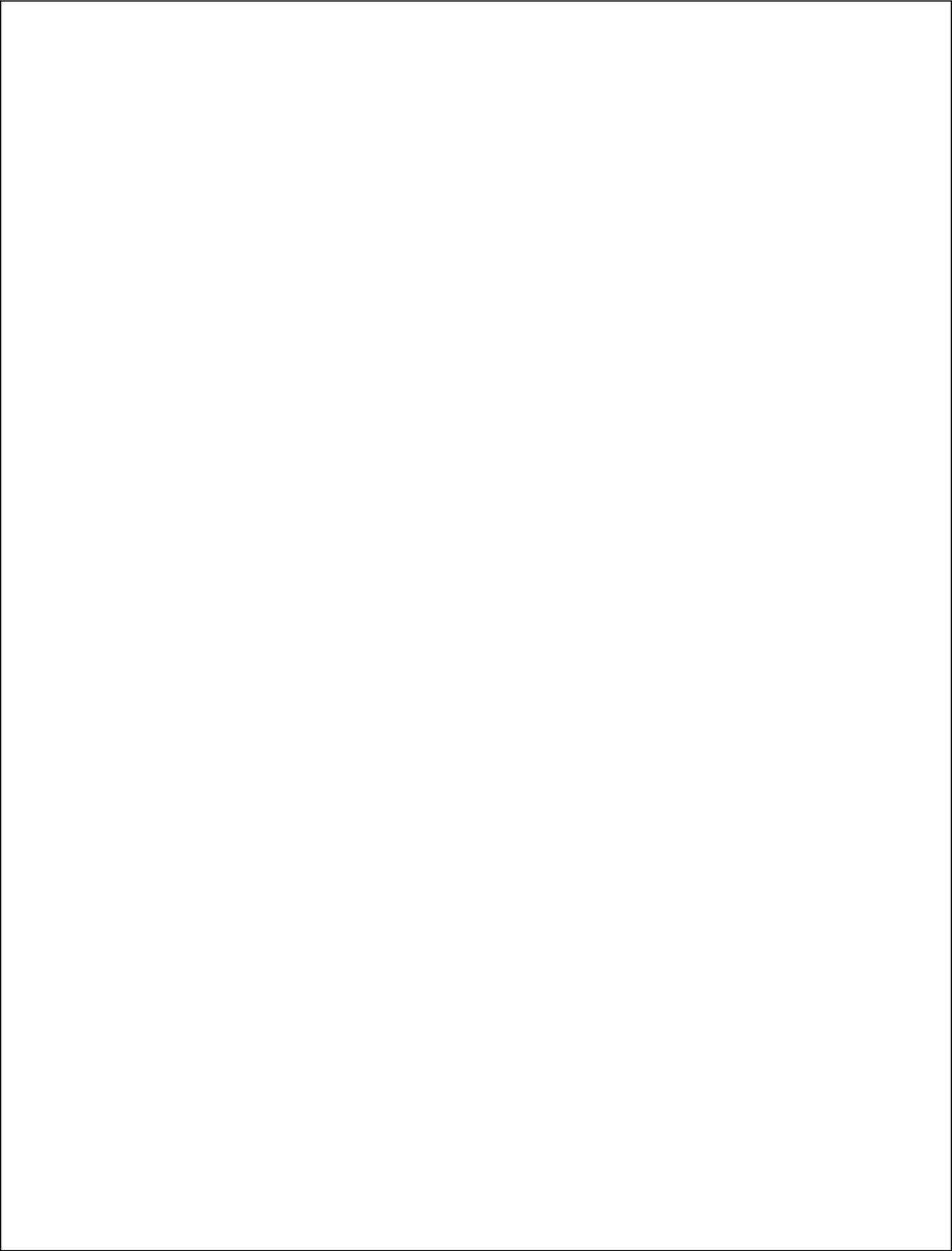
(10 marks)

13. The following web page has been created using XHTML 1.0 strict and CSS.
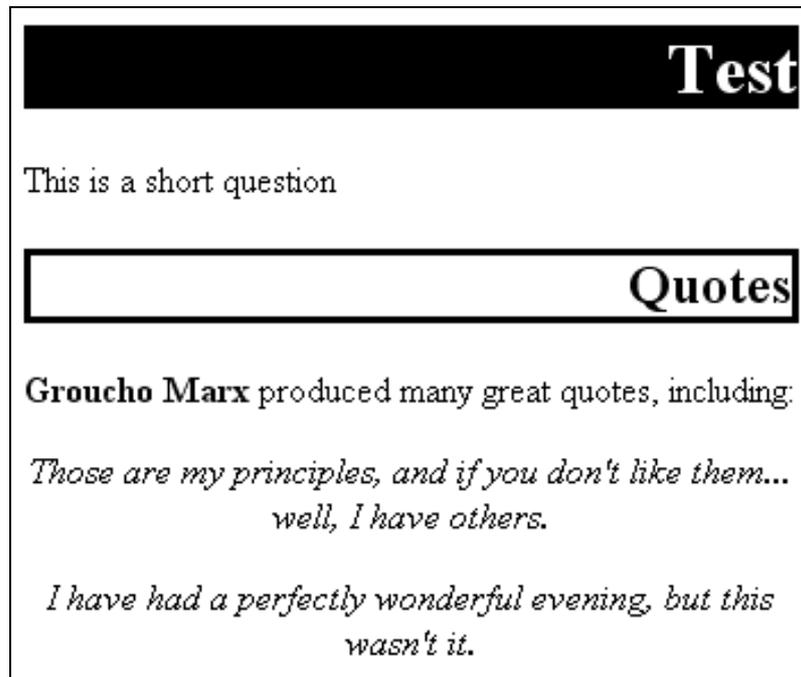
Complete the XHTML page listed below by writing the internal style sheet. Some CSS properties have been included below as a reference. You do not need to use all the CSS properties listed.

CSS Reference Sheet

```
background-color    color
color               color
text-align          left / right / center / justify
text-transform      none / capitalize / uppercase / lowercase
border-color        color
border-style        none / dotted / solid / dashed / inset / outset
border-width        thin / medium / thick
font-style          normal / italic
font-variant        normal / small-caps
font-weight         normal / bold
```

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE html PUBLIC
"-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">

<html>
<head>
<title>Test Question</title>
<style type="text/css">




```

```
</style>
</head>

<body>
<h1>Test</h1>
<p>This is a short question</p>

<h2>Quotes</h2>
<p><span id="name">Groucho Marx</span> produced many great quotes,
including:</p>

<p class="quote">Those are my principles, and if you don't like
them... well, I have others.</p>

<p class="quote">I have had a perfectly wonderful evening, but this
wasn't it.</p>
</body>
</html>
```

(15 marks)

ID Number ....

Applications (20 marks)

14. The following PowerPoint slide contains a number of poor design decisions. State the three aspects of the slide design that you think are the worst.
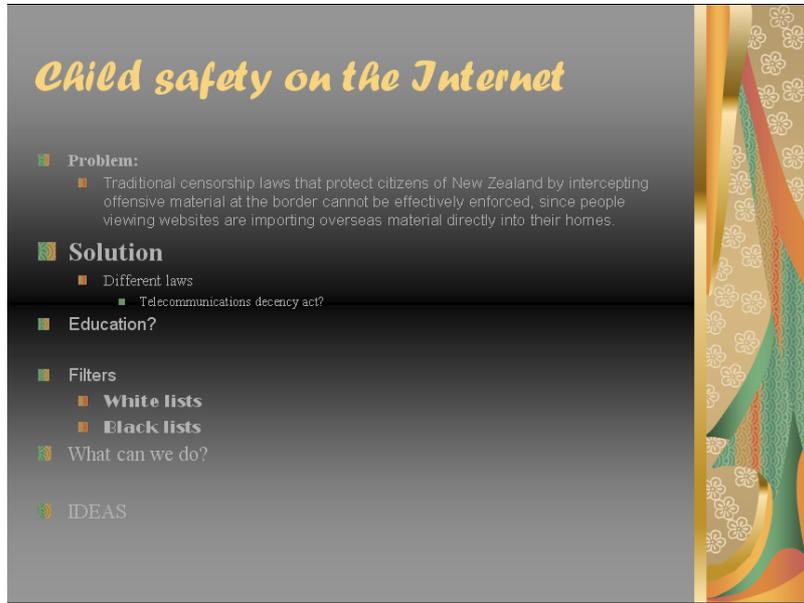

(i)

(2 marks)

(ii)

(2 marks)

(iii)

(2 marks)

15. Explain what the "three-click rule" of web page design is.

(3 marks)

ID Number ....

16. Give two reasons that JPEG would not be a good format to use when compressing a company logo such as the following:

(i)

(2 marks)

(ii)

(2 marks)

17. User defined styles in MS-Word ensure consistency, and speed up the formatting of long documents. Explain.

(i) How do user-defined styles ensure consistency?

(2 marks)

(ii) How do user-defined styles speed up formatting?

(2 marks)

18. Given that the ASCII code for the letter 'M' is 77 and the ASCII code for the letter 'a' is 97, what are the codes required to represent the word "Ode"?

(3 marks)

ID Number ....

OVERFLOW PAGE
(If you have used this page, please indicate clearly under the
relevant question that you have overflowed to this page)

ID Number ....

OVERFLOW PAGE
(If you have used this page, please indicate clearly under the
relevant question that you have overflowed to this page)

ID Number ....

OVERFLOW PAGE
(If you have used this page, please indicate clearly under the
relevant question that you have overflowed to this page)

ROUGH WORKING

(You may detach this sheet from the test script and use it for working.
This sheet will not be marked)

ID Number ....

ROUGH WORKING
(You may detach this sheet from the test script and use it for working.
This sheet will not be marked)