

THE UNIVERSITY OF AUCKLAND

FIRST SEMESTER, 2013
Campus: City

COMPUTER SCIENCE

Mastering Cyberspace: An Introduction to Practical Computing

(Time Allowed: ONE hour)

- NOTE:
- No calculators are permitted
 - Compare the test version number on the Teleform sheet supplied with the version number above. If they do not match, ask the test supervisor for a new sheet.
 - Enter your name and student ID on the Teleform sheet. Your name should be entered left aligned. If your name is longer than the number of boxes provided, truncate it.
 - Answer Section A (Multiple choice questions) on the Teleform answer sheet provided. Answer Section B in the space provided in this booklet.
 - Use a dark pencil to mark your answers in the multiple choice answer boxes on the Teleform sheet. Check that the question number on the sheet corresponds to the question number in this question book. If you spoil your sheet, ask the supervisor for a replacement.
 - There is space at the back for answers that overflow the allotted space.

Surname	
Forenames	Sample
Student ID	Answers
Login (UPI)	

	Question	Mark	Out Of
1 - 30	Multiple Choice		75
31	XHTML/CSS		6
32	XHTML and Style Sheets		12
33	XHTML		7
	TOTAL		100

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CONTINUED

SECTION A

MULTIPLE CHOICE QUESTIONS

For each question, choose the **best** answer according to the information presented in lectures. Select your preferred answer on the Teleform answer sheet by shading in the appropriate box.

Question 1

[2.5 marks] The CompSci111/111G course has two main themes. What are they?

- (a) The speed at which data from the real world is transmitted by computers and the way it is represented in computers.
- (b) The design of computer hardware and how the hardware allows the Internet to work.
- (c) The way in which data from the real world is represented in computers and the use of formal languages to control computers and manipulate data.**
- (d) The use of formal languages to translate data from one language to another and the protocols and applications which allow data to be sent between computers.

Question 2

[2.5 marks] Computer components are changing as we move from desktop system units to laptops. Which of the following changes is NOT happening?

- (a) Slower processors are used to save power and reduce heat.
- (b) Cooling fans are unnecessary in laptops so they have been removed.**
- (c) Expansion card slots have been replaced by ports such as USB ports.
- (d) Spinning hard disk drives are being replaced by solid-state or flash drives.

Question 3

[2.5 marks] The number of transistors on a chip has doubled roughly every 18 months over the last 30 years. Approximately how many more transistors are on a chip now compared to 30 years ago?

- (a) 1,000 times as many
- (b) 1,000,000,000 times as many
- (c) 20 times as many
- (d) 1,000,000 times as many**

Question 4

[2.5 marks] Which of the following is NOT used for secondary storage?

- (a) Magnetic tapes
- (b) Flash drives
- (c) Graphics cards**
- (d) DVDs

Question 5

[2.5 marks] Which of the following is NOT true about RAID (Redundant Array of Independent Disks) technology?

- (a) It can be used to speed up reading and writing by doing these in parallel.
- (b) It is fast, cheap and reliable.
- (c) Extra information can be written to prevent data being lost.
- (d) It is fast because it has no moving parts.**

Question 6

[2.5 marks] Which of the following lists only includes input devices?

- (a) printer, scanner, mouse, microphone
- (b) keyboard, mouse, scanner, trackball**
- (c) keyboard, mouse, touch screen, speaker
- (d) mouse, projector, trackball, webcam

Question 7

[2.5 marks] How many different values can be represented with 4 bits?

- (a) 16**
- (b) 8
- (c) 4
- (d) 40

Question 8

[2.5 marks] What decimal number has the binary representation 1100?

- (a) 30
- (b) 11
- (c) 13
- (d) 12**

Question 9

[2.5 marks] Which of the following goes from smallest to largest?

- (a) 1KiB, 1GiB, 1MB, 1MiB
- (b) 1KB, 1KiB, 1MiB, 1MB
- (c) 1KB, 1KiB, 1MB, 1GiB**
- (d) 1KiB, 1KB, 1MiB, 1GB

Question 10

[2.5 marks] Which of the following types of software licence may be associated with a program made available without cost?

- (a) Open-source software
- (b) Proprietary software
- (c) Freeware
- (d) All of the above**

Question 11

[2.5 marks] Which of the following is NOT an operating system?

- (a) Microsoft Windows
- (b) Microsoft Office**
- (c) Android
- (d) Mac OS X

Question 12

[2.5 marks] What does GUI stand for?

- (a) Graphical Utility Interface
- (b) Graphical User Implementation
- (c) Game Usability Index
- (d) Graphical User Interface**

Question 13

[2.5 marks] Which of the following is TRUE about packet-switching networks?

- (a) Messages are broken down into packets.
- (b) No continuous connection is formed between the source and destination of a message.
- (c) Parts of a message can reach the destination via a number of different routes.
- (d) All of the above.**

Question 14

[2.5 marks] Which of the following is NOT an important internet technology or protocol?

- (a) CLI**
- (b) TCP/IP
- (c) HTTP
- (d) DNS

Question 15

[2.5 marks] When connecting to a web site from home, which of the following best describes the path the request makes from your computer to the web server if you have a home network?

- (a) From your computer to your modem then through the router to your ISP to the web server.
- (b) From your computer to your modem to your ISP then through the router to the web server.
- (c) From your computer to your ISP then through your modem to the web server.
- (d) From your computer through the router to your modem to your ISP then to the web server.**

Question 16

[2.5 marks] Which of the following statements about email is FALSE?

- (a) Emails can be accessed by administrators of the system.
- (b) To send email you connect to an SMTP (Simple Mail Transfer Protocol) server.
- (c) Emails go directly from the sender's computer to the recipient's computer.**
- (d) A difference between POP3 and IMAP is that email is usually kept on the server when using IMAP.

Question 17

[2.5 marks] Which of the following statements about instant messaging chat systems is FALSE?

- (a) Many people can chat with each other at the same time.
- (b) Instant messaging is a form of asynchronous communication.**
- (c) Clients can chat to each other without passing through the server.
- (d) Instant messaging can be used to see if friends are online.

Question 18

[2.5 marks] Which of the following lines would be used in the Stage One Wiki to add a link to an external web site but show the link as "Mac Mini"?

- (a) [http://en.wikipedia.org/wiki/Mac_Mini Mac Mini]**
- (b) =http://en.wikipedia.org/wiki/Mac_Mini= Mac Mini
- (c) [http://en.wikipedia.org/wiki/Mac_Mini] Mac Mini
- (d) [Mac Mini] http://en.wikipedia.org/wiki/Mac_Mini

Question 19

[2.5 marks] Which of the following is the correct form of a URL?

- (a) Standard, domain, path, filename
- (b) Domain, protocol, path, filename
- (c) Protocol, domain, path, filename**
- (d) Domain, standard, path, filename

Question 20

[2.5 marks] Which of the following does NOT keep a log of webpage accesses?

- (a) Domain Name Server**
- (b) Web Server
- (c) Internet Service Provider
- (d) Operating System

Question 21

[2.5 marks] Which of the following statements is FALSE?

- (a) A cache may be used by an ISP to avoid re-fetching a page in quick succession.
- (b) A web server makes local files available through the web.
- (c) A web browser is used to access information on the World Wide Web.
- (d) A firewall is a computer which sits between the client and server and intercepts and processes requests.**

Question 22

[2.5 marks] What is the English translation for this ASCII word “67 79 77 80 85 84 69”, given that a capital A is 65?

- (a) COMPILE
- (b) COMPOSE
- (c) COMPUTE**
- (d) COMPOST

Question 23

[2.5 marks] What is the ASCII translation for the English word “FRIEND”?

- (a) 70 82 73 69 79 68
- (b) 70 82 73 69 78 68**
- (c) 70 82 73 69 78 69
- (d) 70 82 73 69 77 69

Question 24

[2.5 marks] What does WYSIWYG stand for?

- (a) What you sow is what you grow
- (b) What you show is what you got
- (c) What you see is what you get**
- (d) What you saw is what you got

Question 25

[2.5 marks] If you have a 9 megapixel square image and you are displaying it on a screen that has 1000 pixels across and 1000 pixels down, how much of the image would you see?

- (a) 2/3
- (b) 1/9**
- (c) 4/9
- (d) 1/3

Question 26

[2.5 marks] If you had a 16 colour image, 100 pixels wide by 50 pixels long, how much memory would be required to store it?

- (a) 10,000 bits
- (b) 20,000 bytes
- (c) 2500 bytes**
- (d) 10,000 bytes

Question 27

[2.5 marks] Which of the following statements is FALSE?

- (a) PNG can only handle 256 colours**
- (b) JPEG is good for photos and poor for graphics.
- (c) JPEG is a lossy method.
- (d) PNG is a lossless method.

Question 28

[2.5 marks] Which of the following is one of Edward Tufte's main criticisms of Powerpoint?

- (a) Powerpoint does not allow enough animation.
- (b) Powerpoint creates too much focus on appearance.**
- (c) Powerpoint provides too few constraints on the presenter.
- (d) Powerpoint does not have enough theme choices.

Question 29

[2.5 marks] Which of the following is NOT considered to be good advice when creating PowerPoint presentations?

- (a) Use lots of different colours.**
- (b) Use short terse statements.
- (c) Use a font size of at least 18 point.
- (d) Use "white space" to set off blocks of text.

Question 30

[2.5 marks] What does the 3-click rule mean?

- (a) That you can get from any page in a web site to any other page on the World Wide Web in 3 clicks or less.
- (b) That you can get from any page in a web site to any other page in the same web site in exactly 3 clicks.
- (c) That you can get from any page in a web site to any other page on the World Wide Web in exactly 3 clicks.
- (d) That you can get from any page in a web site to any other page in the same web site in 3 clicks or less.**

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SECTION B

Answer all questions in this section in the space provided. If you run out of space then please use the Overflow Sheet and indicate in the allotted space that you have used the Overflow Sheet.

Question 31 XHTML/CSS

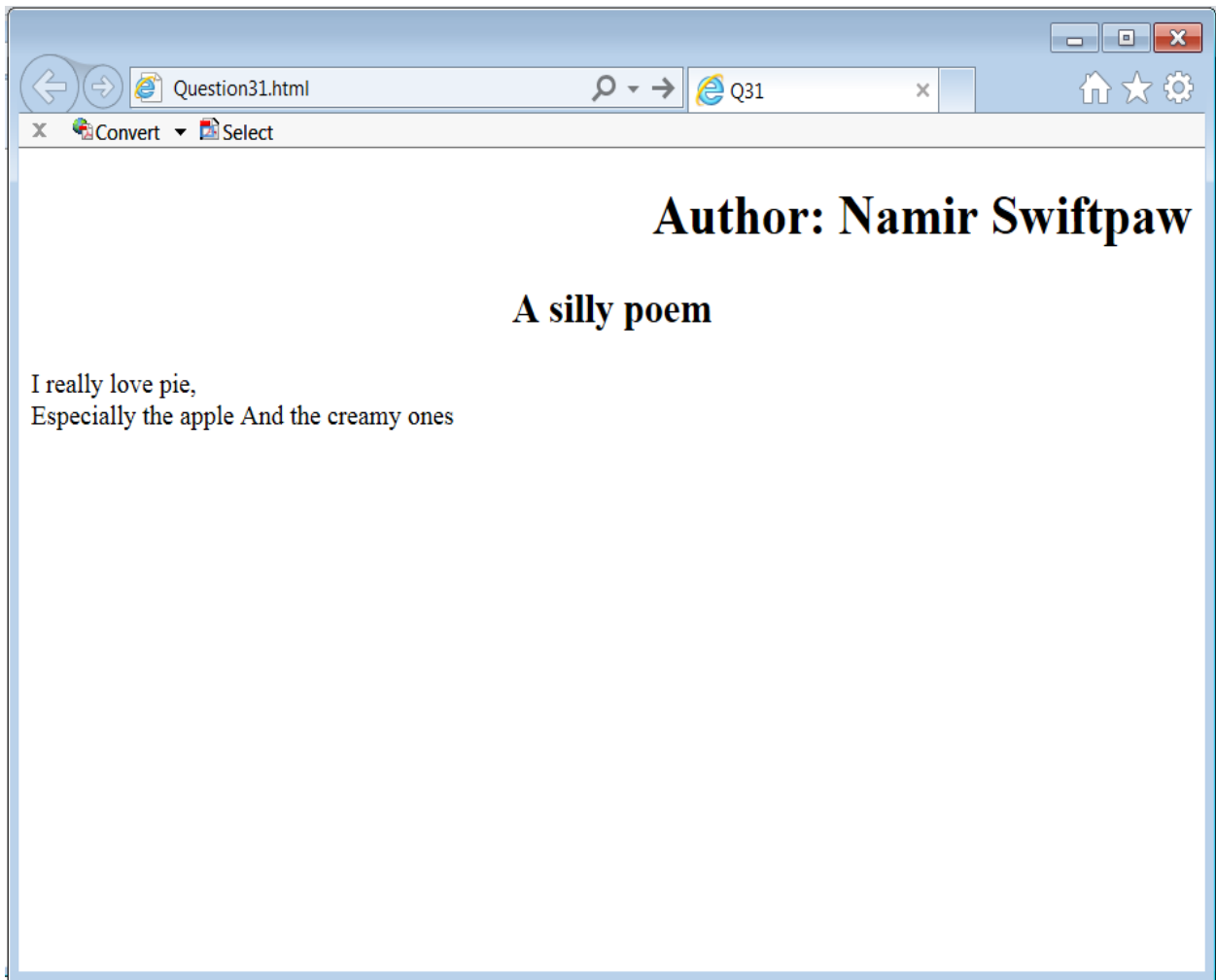
The following web page has been successfully validated as XHTML 1.0 Strict. On the following page, draw what the page will look like when it is displayed by a web browser. Show any links with underlines and any **bold text** by writing it **darker**.

```
<?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 xmlns="http://www.w3.org/1999/xhtml">

<head>
<title>Q31</title>
<style type="text/css">
h1 {text-align: right;}
h2 {text-align: center;}
</style>
</head>

<body>
<h1> Author: Namir Swiftpaw </h1>
<h2>A silly poem</h2>
<p>I really love pie,<br />
Especially the apple
And the creamy ones</p>
</body>
</html>
```



(6 marks)

Question 32 XHTML/CSS

On the following page, draw the appearance of the web page produced by the following XHTML 1.0 Strict code. Show any links with underlines and any **bold text** by writing it **darker**. Note that it uses inline, internal and external style sheets.

```
<?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 xmlns="http://www.w3.org/1999/xhtml">

<head>
<title>Q32</title>
<link rel="stylesheet" href="test1.css"
type="text/css"></link>
<style type="text/css">
h2 {text-align: right;}
.section{border-style : dashed;}
</style>
</head>

<body>
<h1>Title</h1>
<p>This is a web page. <br />Here is another web page,
  <a href="page2.html">My other webpage</a>.</p>
<div id = "section">
<h2>Info</h2>
<p>More information goes here.</p>
<h2 style="text-align: left;">Even More Info</h2>
</div>
</body>

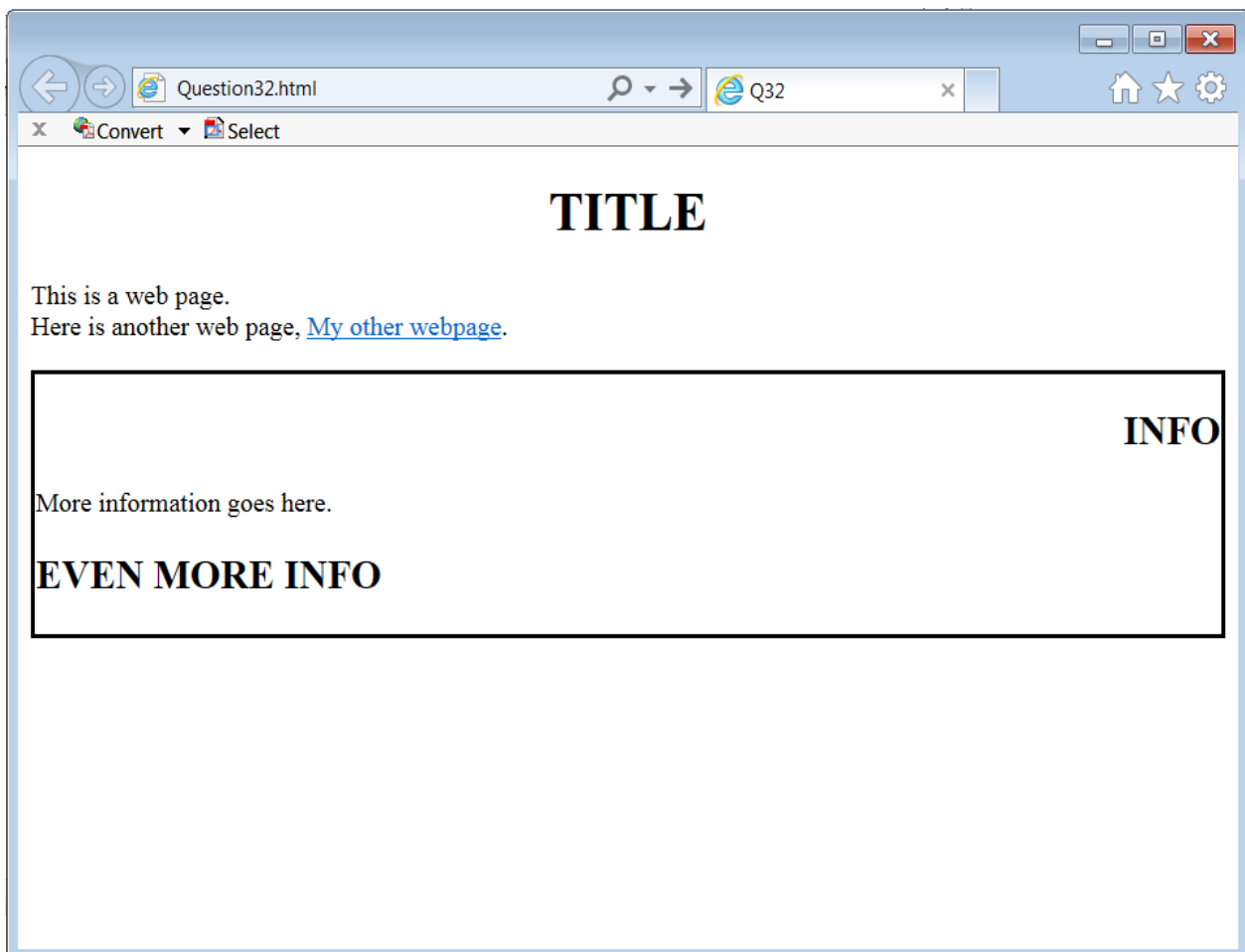
</html>
```

The external style sheet is defined in a file called "test1.css", with the contents:

```
h1, h2 {
text-align: center;
text-transform: uppercase; }

#section { border-style : solid }
```

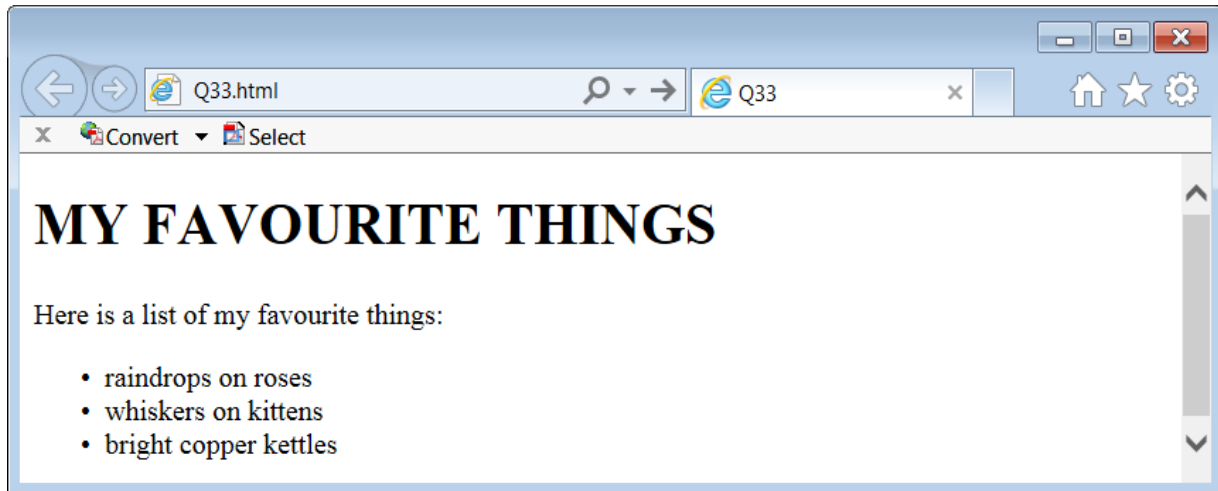
Note that the web page uses inline, internal and external style sheets.



(12 marks)

Question 33 XHTML

Complete the XHTML 1.0 Strict code that would produce the following web page.



```
<?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 xmlns="http://www.w3.org/1999/xhtml">

<head>
<title>Q33</title>
</head>

<body>
  <h1>MY FAVOURITE THINGS</h1>
  <p>Here is a list of my favourite things:</p>
  <ul>
    <li>raindrops on roses</li>
    <li>whiskers on kittens</li>
    <li>bright copper kettles</li>
  </ul>
</body>
</html>
```

(7 marks)

- Overflow Sheet 1 -

Write the question number and letter next to your answer. You must ALSO indicate in the allotted space that you have used the overflow sheet.

- Overflow Sheet 2 -

Write the question number and letter next to your answer. You must ALSO indicate in the allotted space that you have used the overflow sheet.

Rough Working – This page will not be marked

Rough Working – This page will not be marked
