THE UNIVERSITY OF AUCKLAND

SECOND SEMESTER, 2012
Campus: City / Epsom

COMPUTER SCIENCE

Mastering Cyberspace: An Introduction to Practical Computing

(Time Allowed: ONE hour)

NOTE**:**
- Calculators are not 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 Number 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	**Solutions**
Login (UPI)	

	Question	Mark	Out Of
1 - 25	Multiple Choice		75
26	XHTML and Style Sheets		10
27	XHTML		5
28	XHTML/CSS		10
	TOTAL		100

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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
[3 marks] What is the largest decimal number that can be represented using a 5 bit binary number?

    (a) 32
    (b) 64
    (c) 63
    (d) 31
    (e) None of the above

Question 2
[3 marks] What is the decimal number equal to the binary number 1101?

    (a) 16
    (b) 11
    (c) 26
    (d) 22
    (e) 13

Question 3
[3 marks] Which of the following values is the **smallest**?

    (a) 100 GB
    (b) 10 000 000 000 Bytes
    (c) 1 TB
    (d) 100 000 MB
    (e) 1 000 000 KB

Question 4
[3 marks] Which piece of computer hardware is known as the "brain" of the computer and is responsible for processing instructions?

    (a) CPU
    (b) Motherboard
    (c) HDD
    (d) ROM
    (e) RAM

Question 5

[3 marks] Given the following advertisement for a computer, how much RAM is installed?

HP (Hewlett-Packard) Pavilion p7-1235 Mid-Tower Desktop (3.2 GHz AMD A8-5500 128KB Cache, 8 GB DDR3, 1 TB HDD, DVD±RW DL, AMD Radeon HD7560D, Windows 7 Home Premium, LED Backlight)

    (a) 3.2 GHz
    (b) 8GB
    (c) 7560D
    (d) 1TB
    (e) 128KB

Question 6

[3 marks] Which of the following is the main reason people choose to use a RAID?

    (a) It is faster to type using a RAID keyboard due to the improved keyboard layout.
    (b) The improved resolution of a RAID makes images appear to be higher quality.
    (c) A RAID allows data to be exchanged between computers using an open standard.
    (d) A RAID increases the access speed and reliability of data storage.
    (e) It prevents unauthorized access to information stored on a hard drive.

Question 7

[3 marks] Complete the following sentence: A file format is

    (a) a way to separate the style from the structure of a document.
    (b) a copy of information stored in a separate location in case the original is deleted.
    (c) used to determine the order in which files appear in a folder.
    (d) a particular way that information is encoded for storage.
    (e) a technique used to remove information from a hard drive.

Question 8

[3 marks] What is the main advantage of a Graphical User Interface compared with a Command Line Interface?

    (a) Higher level of security
    (b) Easier to use for non-experts
    (c) Requires less memory
    (d) Complex tasks can be performed faster
    (e) Less processing power is required

Question 9

[3 marks] Which one of the following statements about the design of the Internet is **true**?

(a) The Internet was designed primarily to connect military command centres together and was never originally intended to be used for research.
(b) The Internet uses the circuit-switching technique to ensure data reaches the destination reliably.
(c) The decentralized structure of the Internet was designed to make it difficult to control in case it fell into enemy hands.
(d) The Internet was originally designed by NASA for use with satellites during the space race and only later began to be used by research institutions.
(e) The Internet was designed to work even when parts of the network were known to be unreliable.

Question 10

[3 marks] What is a DNS?

(a) A "denial of service" attack typically used by hackers to overload web systems.
(b) A system used by search engines to automatically index and archive web sites.
(c) An error that occurs when a web site cannot be located – also known as a 404 error.
(d) A system used to convert addresses that humans can read into addresses that machines can read.
(e) A protocol used to transmit information in a faster but less reliable way than TCP/IP.

Question 11

[3 marks] Which of the following statements about TCP/IP is **false**?

(a) TCP converts packets from analogue to digital, and from digital to analogue.
(b) TCP/IP is a pair of protocols that are used to transfer packets from one machine to another using the Internet.
(c) IP stands for Internet Protocol.
(d) TCP stands for Transmission Control Protocol.
(e) IP defines network addresses and is used for routing packets.

Question 12

[3 marks] Given the following email fields, which of the addresses will **debra** be able to see when she receives the message?

To...	abbey@test.com
Cc...	beth@test.com; cath@test.com
Bcc...	debra@test.com; emma@test.com

    (a) abbey@test.com; beth@test.com; cath@test.com; debra@test.com; emma@test.com

    (b) abbey@test.com; beth@test.com; cath@test.com

    (c) abbey@test.com;

    (d) abbey@test.com; debra@test.com; emma@test.com

    (e) debra@test.com; emma@test.com; beth@test.com; cath@test.com

Question 13

[3 marks] Which of the following is **true**?

    (a) The content of a blog is able to be edited by anyone.

    (b) A blog is a synchronous communication system that allows people to chat in real time.

    (c) Information in a blog is trustworthy because moderators remove incorrect information.

    (d) A blog consists of posts in reverse chronological order.

    (e) A blog is a history of web pages that you have visited, maintained by an ISP.

Question 14

[3 marks] What will the wiki markup #hello produce?

    (a) **hello**

    (b) *hello*

    (c) 1. hello

    (d) ● hello

    (e) ***hello***

Question 15

[3 marks] Which one of the following statements about wikis is **false**?

    (a) Each wiki page has an associated page that allows discussion of the page content.

    (b) Wiki pages can be locked by moderators to prevent vandalism.

    (c) Every change that is made to a wiki page is logged and can be viewed in a history list.

    (d) Wikis were created by Tim Berners-Lee.

    (e) A wiki is designed to allow people to collaborate easily.

Question 16
[3 marks] Select the list of events which are in chronological order.

   (a) DNS created, WWW created, Mosiac created
   (b) WWW created, TCP/IP created, Mosaic created
   (c) Internet Explorer created, DNS created, WWW created
   (d) TCP/IP created, WWW created, DNS created
   (e) Sputnik launched, WWW created, TCP/IP created

Question 17
[3 marks] What does HTTP stand for?

   (a) Hypertext Transfer Protocol
   (b) Harddrive Terabyte/Tebibyte Package
   (c) Hyper Threading Transitional Port
   (d) Heat Transfer Titanium Part
   (e) Host Thread Transport Proxy

Question 18
[3 marks] What are the ASCII codes that represent the word BED?

   (a) 65 70 68
   (b) 67 73 71
   (c) 66 71 70
   (d) 66 69 68
   (e) 66 72 70

Question 19
[3 marks] Which one of the following statements about the use of styles in Microsoft Word is **false**?

   (a) Defining a style is a way of giving a name to a set of formatting changes.
   (b) Users can create their own styles, or use the ones that are built-in.
   (c) Styles can be used to apply many formatting changes at once.
   (d) Using styles helps to maintain consistency of appearance.
   (e) Once a style has been defined, it cannot be modified.

Question 20
[3 marks] What is PostScript?

   (a) An extension of ASCII that uses 16 bit codes.
   (b) A scripting language created by Apple to allow the user to automate actions.
   (c) A method of distinguishing between surface and structural markup in a word processor.
   (d) A language used to control laser printers.
   (e) A plugin to a word processor that allows the user to manage references easily.

Question 21
[3 marks] How many bits are required to represent 16 different colours?

   (a) 8
   (b) 4
   (c) 5
   (d) 16
   (e) 6

Question 22
[3 marks] Which of the following image formats is most likely to be used to display a photograph on a web page?

   (a) JPEG
   (b) SVG
   (c) RAW
   (d) PNG
   (e) GIF

Question 23
[3 marks] How much memory is required to represent a 4 colour image that is 80 pixels wide and 10 pixels high? Assume the image is uncompressed.

   (a) 400 Bytes
   (b) 200 Bytes
   (c) 800 Bytes
   (d) 100 Bytes
   (e) 3200 Bytes

Question 24
[3 marks] What is a PowerPoint "Slide Master"?

   (a) The view that allows the slides to be reordered.
   (b) The first slide that appears in a PowerPoint presentation.
   (c) A template that defines the appearance of slides in a presentation.
   (d) Creating a stand-alone presentation to maximize compatibility with unknown operating systems.
   (e) According to Edward Tufte, a person that forces non-hierarchical information into the bullet-point structure provided by PowerPoint.

Question 25

[3 marks] Which one of the following is NOT good advice for the design of PowerPoint presentations?

(a) Use different colours for main points and secondary points.

(b) The appearance of the slides should use a consistent style.

(c) Use a maximum of 1-2 slides for each minute of presentation.

(d) Make sure the background colour has high contrast with the text colour.

(e) Only use 1 or 2 font typefaces within a single presentation.

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.

Common HTML tags are included for your reference below.
<h1><h2><h3><h4><h5><h6><p><a><img>
<dl>
<dt><dd><table><tr><td>
<hr>

Question 26   XHTML and Style Sheets

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. Note that it uses both internal and external style sheets.
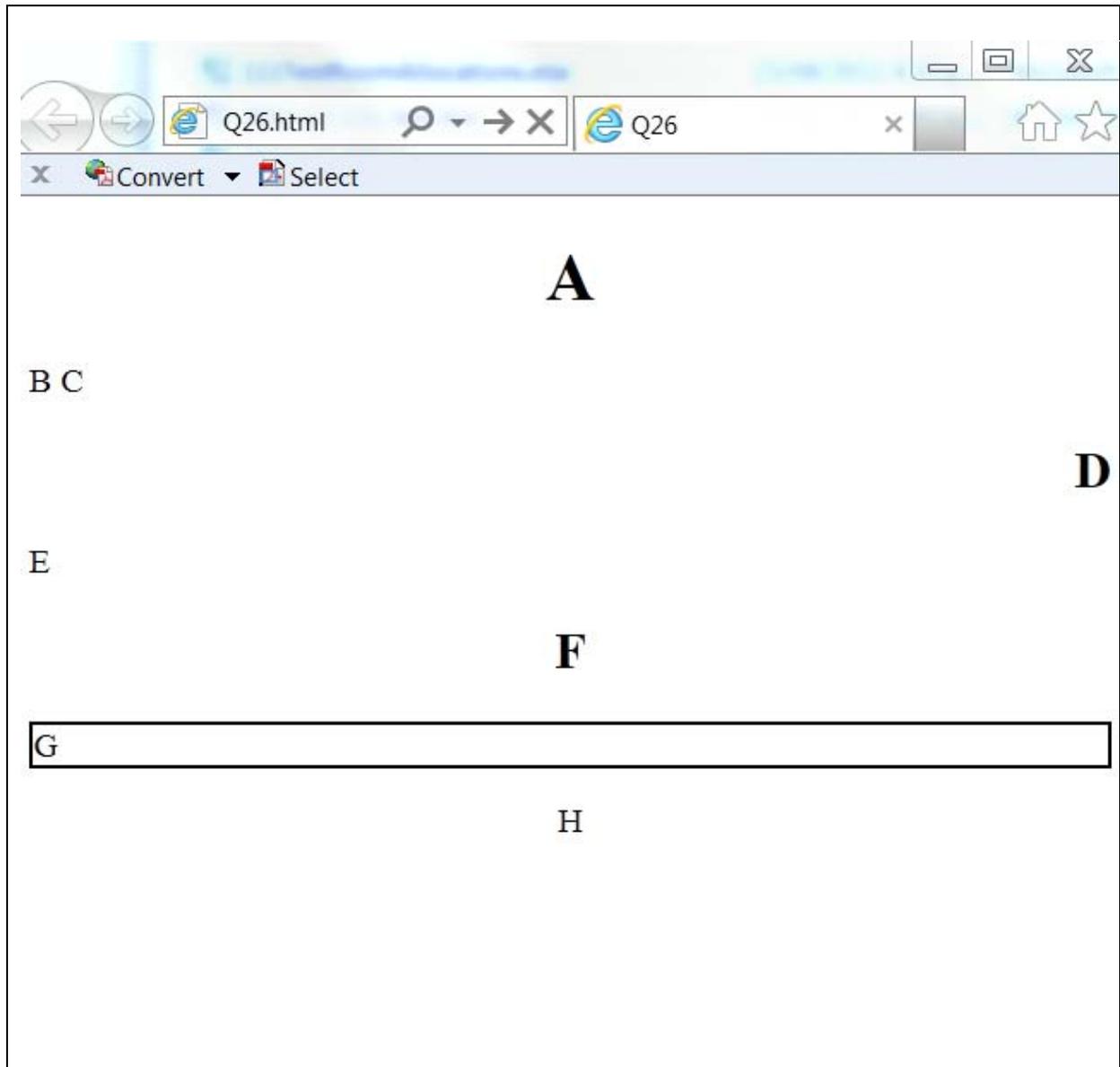
```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE html
     PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
     "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
 <head>
   <title>Q26</title>
   <link rel="stylesheet" href="test.css" type="text/css" />
   <style type="text/css">
      h1 { text-align: center; }
   </style>
 </head>
 <body>
<h1>A</h1>
<p>
B


C
</p>
<h2>D</h2>
<p>E</p>
<h2 class="test">F</h2>
<p id="test">G</p>
<p class="test">H</p>
</body>
</html>
```

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

```
h1,h2 {text-align: right;}
#test {border-style: solid; border-width: 2px; border-color:
black;}
.test {text-align: center;}
```

CONTINUED

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

(10 marks)

Question 27   XHTML

Draw the output produced by the following code fragment of XHTML 1.0 Strict.

```
<table border="1px">
<tr>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>F</td>
<td>E</td>
</tr>
</table>
```
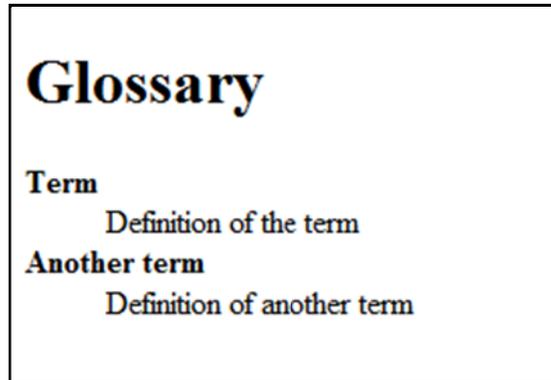

(5 marks)

Question 28   XHTML/CSS

Complete the XHTML 1.0 Strict code that would produce the following web page. Note that an internal style sheet has been used. The word "Glossary" is displayed with the largest size heading.


```
<?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>Computer Stuff</title>
     <style>
         .termstyle {font-weight: bold;}
     </style>
</head>
<body>


   <h1>Glossary</h1>
    <dl>
       <dt class = "termstyle">Term</dt>
       <dd>Definition of the term</dd>
       <dt class= "termstyle">Another term</dt>
       <dd>Definition of another term</dd>
    </dl>




</body>
</html>
```

(10 marks)

- Overflow Sheet -
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

Rough Working – This page will not be marked