

This exam has 13 pages. Check that you have a complete paper.

Time: 60 min

S1	S2	S3	S4	S5	Total
/6	/6	/14	/4	/16	/46

Lab section (circle one):

(Tue 11-14)

(Wed 9-12)

(Tue 14-17)

(Wed 12-15)

(Tue 17-20)

(Wed 15-18)

Name _____

(PRINT)

(Last)

(First)

Student No _____ **Signature** _____

(Your signature indicates your agreement to the rules below. Note: you **must** agree to the rules to write the exam.)

Rules Governing Formal Examinations

1. Each candidate must be prepared to produce, upon request, a Library/AMS card for identification.
2. Candidates are not permitted to ask questions of the invigilators, except in cases of supposed errors or ambiguities in examination questions.
3. No candidate shall be permitted to enter the examination room after the expiration of one-half hour from the scheduled starting time, or to leave during the first half hour of the examination.
4. Candidates suspected of any of the following, or similar, dishonest practices shall be immediately dismissed from the examination and shall be liable to disciplinary action.
 - a. Having at the place of writing any books, papers or memoranda, calculators, computers, audio or video cassette players or other memory aid devices, other than those authorized by the examiners.
 - b. Speaking or communicating with other candidates.
 - c. Purposely exposing written papers to the view of other candidates. The plea of accident or forgetfulness shall not be received.
5. Candidates must not destroy or mutilate any examination material; must hand in all examination papers; and must not take any examination material from the examination room without permission of the invigilator.

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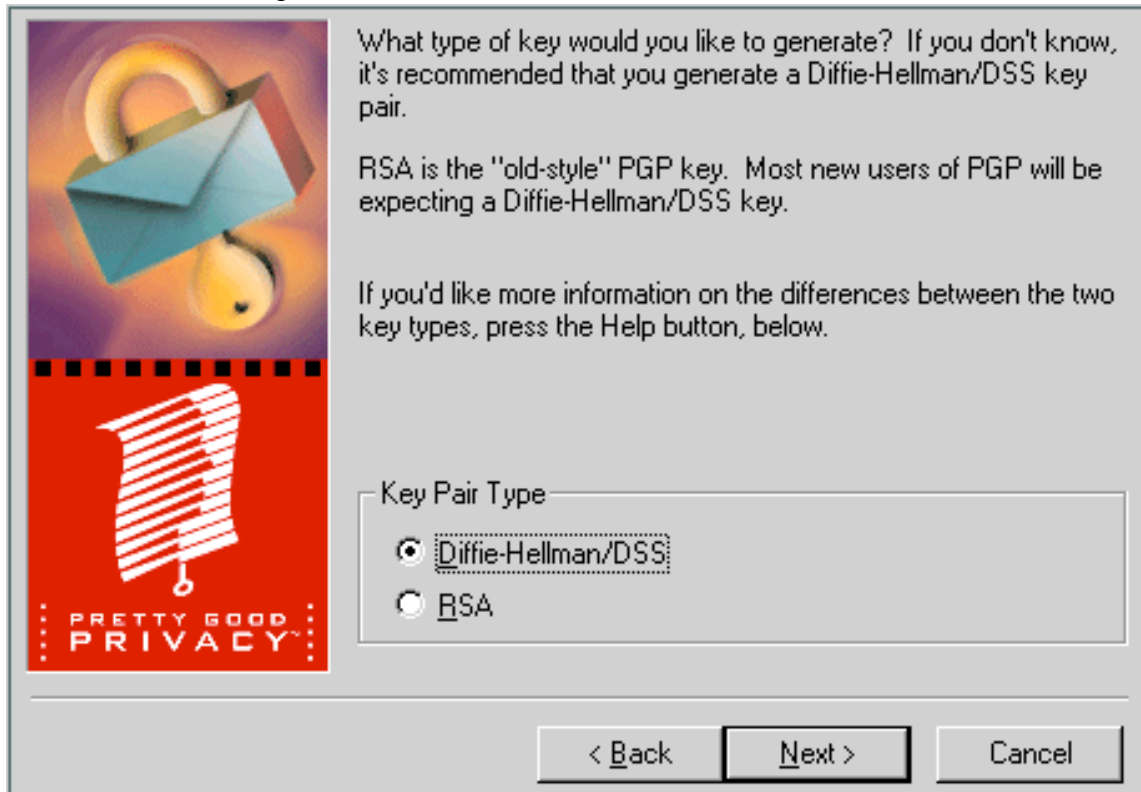
Section 1: Multiple Choice [6 marks]

Unless otherwise specified, choose the *best* answer.

1. How does a web search using AND compare to a web search using OR:
 - a. AND will return more results than OR
 - b. AND will return the same number of results as OR
 - c. OR will return more results than AND
 - d. OR will return fewer results than AND
 - e. It is impossible to tell.
2. The binary number 10111 is equivalent to what denary number?
 - a. 23
 - b. 28
 - c. 46
 - d. 10,111
 - e. none of the above
3. Most web pages have not been indexed because (choose all that apply):
 - a. search engines have not crawled them
 - b. they are created on demand or are otherwise temporary
 - c. they do not include the appropriate title content for their page
 - d. there are no links pointing to them
 - e. no one has gotten around to doing it yet
 - f. the page is encrypted
4. From LARGEST to SMALLEST: which ordering is correct?
 - a. word > byte > bit > double word
 - b. double word > word > bit > byte
 - c. double word > word > byte > bit
 - d. half word > word > bit > byte
 - e. none of the above
5. In JavaScript, an *loop* allows us...
 - a. ...to program different behaviour depending on whether or not a particular situation/condition is true or false
 - b. ...to continually execute code until a given condition is no longer true
 - c. ...to temporarily define variables (called local variables)
6. An ASCII character is
 - a. ...a sequence of 8 bits and 128 characters
 - b. ...a sequence of 7 bits and 128 characters
 - c. ...a sequence of 8 bits and 256 characters
 - d. ...a sequence of 8 bits and 255 characters

Section 2: Human Computer Interface [6 marks]

Given the principles of human-computer interface (HCI) that we have discussed in class, answer the next two questions:



What type of key would you like to generate? If you don't know, it's recommended that you generate a Diffie-Hellman/DSS key pair.

RSA is the "old-style" PGP key. Most new users of PGP will be expecting a Diffie-Hellman/DSS key.

If you'd like more information on the differences between the two key types, press the Help button, below.

Key Pair Type

☒ Diffie-Hellman/DSS

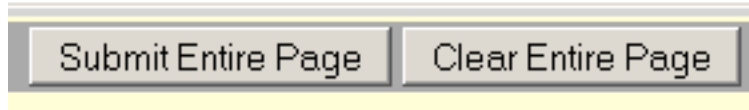
☐ RSA

< Back Next > Cancel

1. [2 points] Is the input window shown below an example of good interface design? Why or why not?

Answer:

2a. [2 points] Consider a web store “checkout” page on which users must type their complete name and address, along with any specialized shipping instructions. At the bottom of this page are the following two buttons:



Is an example of good interface? Why or why not?

2b. [2 point] Suggest or sketch a design that would work better and explain why:

Section 3: JavaScript, HTML, and Algorithms [18 marks]

1. [4 marks] Consider the following algorithm to get to the bookstore at UBC:

- (1) Drive from home to UBC
- (2) Go to University Blvd and turn left
- (3) Continue until you reach East Mall
- (4) The bookstore is on the corner of University Blvd and East Mall

List two problems with this algorithm, and explain why they are problems.

[2 marks] Problem 1:

[2 marks] Problem 2:

2. [2 marks] Circle one word on each of the following lines to describe the HTML colour #00CCFF

circle one: **BRIGHT DARK**

circle one: **RED YELLOW GREEN BLUE-GREEN BLUE PURPLE**

2. [4 marks] Use the following list of HTML keywords to produce the output described in the questions below (each question is independent). *Note you may need to provide additional information; there may be more than one solution.*

<code><h1></code>	<code><i></code>	<code>html</code>
<code><h5></code>	<code></code>	<code>script</code>
<code><p></code>	<code>src</code>	<code>head</code>
<code></code>	<code><a></code>	<code>title</code>
<code><hr></code>	<code>width</code>	<code>href</code>
<code>
</code>	<code>height</code>	<code>size</code>
<code><u></code>	<code>font</code>	<code>javascript</code>
<code></code>	<code>color</code>	<code>large</code>
<code></code>	<code>body</code>	<code>align="center"</code>

- a. [2 marks] A picture that when clicked on links to the page "www.ubc.ca". Assume the picture is called "pic.jpg".

- d. [2 marks] Display your name on the screen as a heading. Below it, in a paragraph, display your last name in bold. (This does not have to be centred.) Separate the paragraph and heading by a screen-wide horizontal line.

3. Answer the questions below:

a. [3 marks] Will the following JavaScript code work?

```
function myAddingProgram(num1, num2)
{
    addTwoNumbers(num1,num2);
}

function addTwoNumbers(number1, number2)
{
    return num1 + num2;
}
```

If so, what will it produce when `myAddingProgram(1, 2)` is called? If not, how can you fix it (circle and write the correction where relevant)?

b. [1 mark] Given the correct program, write the an alert statement that will display the result to the screen:

Section 4: The Internet [5 marks]

[5 points] Imagine a conversation with a friend who has never taken CPSC 101. At one point, completely confused, the friend says “But I just don’t get it! What *is* the Internet? Where is the Internet *located*?” How do you set your friend straight? Be sure to address both questions in your answer.

Section 5: Art, Images and Fonts [16 marks]

1. [10 marks] Given each of the following, suggest a preferred image file format, raster or vector, and justify your choice:

i.[2 marks] Photograph:

ii.[2 marks] Icon:

iii.[2 marks] Avatar:

iv.[2 marks] Company logo (to be printed in a range of sizes):

3. [2 marks] What or who was AARON?

4. [2 marks] Name one way that digital art can be different from traditional, non-computer-based art?

5. [2 marks] Refer to the collection of sentences below:

This is a test.	This is a test.
This is a test.	This is a test.
This is a test.	This is a test.

a. [1 mark] Circle the sentences written in a serif font.

b. [1 mark] Put a star beside the first word of any sentence written in monospace font.

Appendix A: Commonly used HTML tags and their meanings

Start Tag	End Tag	Meaning
<code><html></code>	<code></html></code>	HTML document; first and last tags in an HTML file
<code><title></code>	<code></title></code>	title bar text; describes page
<code><head></code>	<code></head></code>	preliminary material, e.g. title, at start of the page
<code><body></code>	<code></body></code>	the main part of the page
<code><p></code>	<code></p></code>	paragraph, can use <code>align</code> attribute
<code><hr></code>		line (horizontal rule), can use <code>width</code> and <code>size</code> attributes
<code><h1> ... <h8></code>	<code></h1> ... </h8></code>	headings, eight levels, use in order, can use <code>align</code> attribute
<code></code>	<code></code>	bold
<code><i></code>	<code></i></code>	italic
<code></code>	<code></code>	anchor reference, <i>fn</i> must be a pathname to a file, e.g. html or pdf file
<code></code>		image source reference, <i>fn</i> must be pathname to image file (e.g. .jpg or .gif)
<code></code>	<code></code>	ordered list
<code></code>	<code></code>	unordered list
<code></code>	<code></code>	list item
<code><table></code>	<code></table></code>	table, can use <code>border</code> attribute
<code><th></code>	<code></th></code>	table heading
<code><td></code>	<code></td></code>	table data
<code><input type="fn"></code>		input field, <i>fn</i> must be an input type like <code>button</code> or <code>radio</code> ; can use attributes like <code>value</code> (for button text) and <code>onclick</code> (for button behaviour when clicked)

Appendix B: Useful Tables for Number Conversion

decimal	binary	hexadecimal
0	0	0
1	1	1
2	10	2
3	11	3
4	100	4
5	101	5
6	110	6
7	111	7

decimal	binary	hexadecimal
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F

Powers of 2:

27	26	25	24	23	22	21	20
128	64	32	16	8	4	2	1

Appendix C: Glossary

avatar-- this refers to your representation in a virtual environment, e.g. the picture you choose to represent yourself in an online messaging program, such as MSN Messenger, or ICQ

clipart-- ready made pieces of computerized graphic art, such as illustrations, borders and backgrounds that can be copied into a document such as Microsoft Word, iWork Pages or NeoOffice