

COMP1000 Mid-Session Test 2017s1

Total Marks: 45 Duration: 55 minutes + 10 min reading time

This examination has three parts:

- Part 1: 15 Multiple Choice Questions (15 marks /45)
- Part 2: Practical Excel (20 marks /45)
- Part 3: Practical HTML (10 marks /45)

Part 1: Multiple Choice Questions – 15 Marks

- Download the Excel workbook, `examWorkBook_original.xlsx` from the exam interface.
- Right-click and rename workbook to `examWorkBook.xlsx`.
- Omit the warning message.
- Answer the questions in the **Multiple Choice Questions** worksheet.
- **Save** and **submit** regularly.

Part 2: Practical Excel (20 marks)

For this section, you need to complete the exercises in sheets Question 2A, Question 2B, Question 2C, Question 2D.

Part 2A: (5 marks)

Use the *Question 2A* worksheet for this part **(5 Marks)**

Create a line chart from the data on the Question 2A sheet.

- Create a line chart from the data on the Question 2A sheet.
- Add a Title "Hart University-line chart" to the Graph.

- Create another clustered column chart from the data on the Question2A sheet. The x-axis labels should be “colleges”, and the legend label should be “years”.
- Add a Title "Hart University-clustered column chart" to the Graph.

Part 2B: (5 marks)

Use the *Question 2B* worksheet for this part

You have been asked to develop a spreadsheet to store and analyse marks for students in a given course. You have been given the marks for the students' Lab Mark, Assignments, Session Mark and Exam.

- Calculate **Total Marks** using the following formula
 - Total Marks = $0.4 * \text{Session Marks} + 0.6 * \text{Exam}$
 - Enter the formula into cell G3 and copy or fill the formula down the column for each student.
- Write a formula for each student's **Grade** that determines whether a student passes or fails given the following criteria:
 - A student must get at least 40 for their Session Marks and 60 for their total marks to receive a PASS. Students who do not full-fill this requirement will receive a FAIL. (Hint: use IF function and AND function, IF(condition,"PS","FL"), AND(A \geq 40,B \geq 60)). Use PS for PASS and FL for FAIL.
 - Enter the formula into cell H3 and copy or fill the formula down the column for each student.
- In cells H49 and H50 use the COUNTIF function to determine the number of passes and fails in the subject.
- Make sure you **save** your work.

Part 2C: (5 marks)

Use the *Question 2C* worksheet for this part.

Create a pivot table using the data from the Question 2C sheet and put the pivot table on a new sheet named Pivot Table a. Use this pivot table to answer question (a) written at the bottom of Question 2C sheet.

Note: You must answer the questions on the Question 2C sheet in the pink cells under the data section (the answer for a goes in cell B508).

- Repeat this by making another pivot table on new sheet named Pivot Table b and answer question (b) on the Question 2C sheet.
- Repeat for question (c)
- Do not forget to **save** your work.

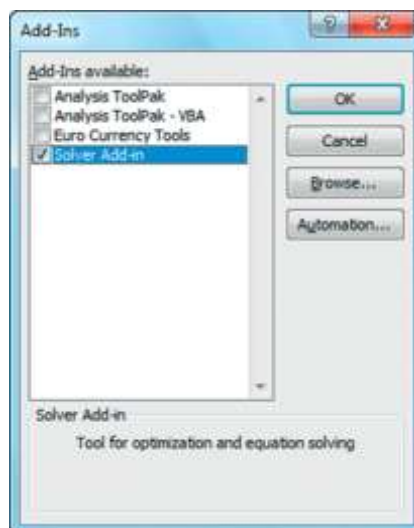
Part 2D: (5 marks)

Use the *Question 2D* worksheet for this part.

- Use solver to find the optimum quantities of Oak tables, Pine tables, Oak chairs and Pine chairs, to maximise the Total Profit in cell B18.
- Your solution must take into consideration the 2 constraints outlined on the sheet.
- **Hint:** Before launching solver, create formulas in the light blue cells to calculate total part usage for the constraints. For example in cell F11 write a formula to calculate the wood usage of Oak.
- Answer the questions.
- Do not forget to save your work.

If you can't find Solver from DATA Tab, you might need to load Solver:

1. Click the File tab, and then select Options
2. Click Add-Ins
3. Click the Manage arrow, select Excel Add-ins, and then click Go to open the Add-Ins dialog box
4. Click the Solver Add-in check box in the Add-Ins available list and click OK



Check: your final workbook should contain 8 worksheets: Multiple Choice Questions, Question 2A, Question 2B, Question 2C, Question 2D, and Pivot Table a, Pivot Table b, Pivot Table c.

Part 3: Practical HTML – 10 Marks

Download the HTML template file called `examPage_original.html` from the exam interface, if you have not already done so. Open it using WordPad (Right Click and open with WordPad. If WordPad not on the list, click on “Choose another app”, scroll down to select WordPad). Edit the page `examPage.html` to create a web page that has a layout similar to the figure shown below.

Edit the page `examPage.html` to create a web page that has a layout similar to the figure shown below. The exact appearance may depend on the browser used.

Monetary Conversion between AUD and USD

Applied Currency Rate: 1 AUD = 0.75 USD

Enter currency in AUD\$:	100
Currency in USDS is :	75

Convert

1. Your web page should have a title “Currency Conversion”.
2. Your web page Create a fieldset with the legend “Monetary Conversion between AUD and USD” and it should be a level 2 heading.
3. Next create a level 4 heading “Applied Currency Rate: 1 AUD=0.75 USD” as shown in the picture above
4. Next create a table, as shown above.
 - The table should have a border size of 2.
 - It has two text boxes and a button.
 - All table cells are 180 pixels in width and 40 pixels in height.
 - The backgrounds of the cells containing the labels are pink.

- Name your text boxes `aud` and `usd` and each text box must hold 15 characters
 - Provide labels for each of the text box. You must use the `<label>` tag to specify labels for the text boxes `aud` and `usd`.
 - The `Go` button should be centered in the last row within its table cell.
5. After typing in the amount in Australian dollars (example, with AUD\$ = 100) and on clicking the `Go` button, the equivalent currency in USD appears (75 in the example).
6. The formula to compute USD\$ is given by: $USD\$ = AUD\$ * 0.75$.

Note: An information sheet on CSS, HTML Forms and JavaScript, is provided at the end of these exam instructions.

Before proceeding to the next part, **save** and **submit** your HTML file.

Javascript, HTML and CSS Information Sheet

Here is a partial list of HTML `<form>` elements covered in lectures, with examples of use:

button	<code><input type="button" name="btn1" value="Press me"></code>
radio button	<code><input type="radio" name="rad1" value=3></code>
check box	<code><input type="checkbox" name="chk1" value="A"></code>
text box	<code><input type="text" name="txt1" value="default text" size=20></code>
reset	<code><input type="reset" name="clear" value="Clear all input"></code>
select	<code><select><option value="1">Happy</option> <option value="2">Sad</option></select></code>
select	<code><select size="2"><option value="1">Happy</option> <option value="2">Sad</option></select></code>
textarea	<code><textarea name="area1" cols=15 rows=7>Default text</textarea></code>

The syntax for a simple CSS in-line style definition is:

<code>text</code>
where you would replace <code>attribute</code> by a CSS attribute name, <code>value</code> by the desired value for that attribute, and <code>text</code> by the text to be formatted - e.g.
<code>big</code> to produce big .

Some CSS attributes, with example values, are:

font-family: Helvetica, sans-serif ;	list-style-type: circle ;
font-style: italic ;	line-height: 1.5 ;
font-variant: small-caps ;	text-decoration: underline ;
font-weight: bold ;	text-align: center ;
font-size: 18pt ;	text-indent: 15px;
color: blue ;	background-color: yellow ;
visibility: hidden visible ;	width: 15px;
height: 15px;	

**HTML element syntax (some, like `<a>`, `<p>`, `
`, `<h1>`..`<h6>`, you should memorize)**

<code><table border=<i>n</i> align="center" bgcolor=yellow></code>	<code><tr></code> table row
<code><th></code> table heading	<code><td rowspan=<i>m</i> colspan=<i>n</i></code>
<code>align="center"></code> table cell	
<code><div id="name" class="mnemonic"></code> in body	<code>div.class { property list ... }</code> in <code><style></code>
element in head	
<code>x<sup>2</sup> = x², x<sub>2</sub> = x₂, <code><hr></code>= horizontal rule, <code><img href='URL'</code></code>	
<code>alt="text"></code> for image	
common character codes: <code>&lt;</code> = <code><</code> , <code>&gt;</code> = <code>></code> , <code>&amp;</code> = <code>&</code> , <code>&nbsp;</code> = nonbreaking space, <code>&rarr;</code> = <code>→</code>	

Here is a list of the Javascript constructs that were covered in lectures & labs:

<code>alert('Put message here')</code>	displays a Javascript message box with an OK button
<code>name.value=string expression</code>	means "or", and name is the name of a form

string1 + string2

\n

if (condition action1 ; else action2)

element, such as a text area, e.g.

```
box1.value="Sam"
```

concatenates strings, e.g. "Hi, " + box1.value
= "Hi, Sam"

in the middle of a string means "start a new line"

if condition is true, do action1, otherwise do
action2. E.g.

```
if(layer2.style.visibility=='hidden')  
layer2.style.visibility='visible' ; else  
layer2.style.visibility='hidden'
```