COMPUTER APPLICATIONS TECHNOLOGY: PAPER II

Time: 3 hours   180 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1.   This question paper consists of 12 pages and an HTML Tag List insert of one page. Please check that your question paper is complete.

2.   You may only use the text-based editors for the HTML section, namely Notepad, Notepad ++, WordPad and Komodo text editor.

3.   You must answer ALL the questions. Please read the entire question before attempting a solution. Do not do more than is required by the question.

4.   Take note of the mark allocation to ascertain the solution required and the amount of time needed to spend on each question.

5.   It is in your best interest to get into the habit of saving regularly.

6.   If a formula/function such as a complicated *if* statement does not work, indicate the question number, give a brief explanation, and paste a screenshot of the spreadsheet or database into the **Screenshots** document to obtain part marks; you may then leave it out of the spreadsheet or database program.

7.   It is recommended that you make a backup copy of all database files **before** you start your examination.

8.   All word processing documents should be set up as follows (unless other instructions are given)
        • The default for measuring units – centimetres (cm)
        • Language – English (South Africa)
        • Page size – A4
        • Margins – 2,54 cm

9.   Note that you may use the *offline* help function available in each application.

10.   Figures in the question paper have a border. When a figure is provided as part of a question, you are not expected to add the border unless specifically instructed to do so.

11.   All data files listed in Instruction 12 can be found on the network drive that has been allocated for this examination. Please note that all solutions must be saved to your examination folder on this network drive.

12.   You have been supplied with two subfolders and 25 files in your examination folder. Refer to **Figure 1** below and check that the following folders and files exist in your examination folder:
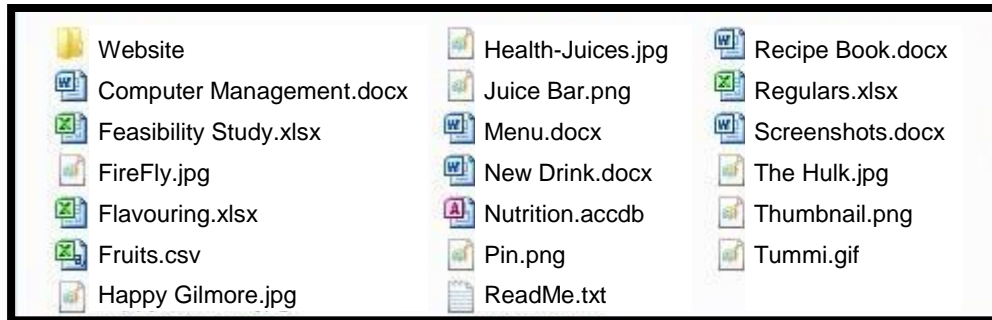
Website	Health-Juices.jpg	Recipe Book.docx
Computer Management.docx	Juice Bar.png	Regulars.xlsx
Feasibility Study.xlsx	Menu.docx	Screenshots.docx
FireFly.jpg	New Drink.docx	The Hulk.jpg
Flavouring.xlsx	Nutrition.accdb	Thumbnail.png
Fruits.csv	Pin.png	Tummi.gif
Happy Gilmore.jpg	ReadMe.txt	

Figure 1

The **Website** subfolder contains 3 files and 1 subfolder. Refer to **Figure 2** below.

Images	Firefly.html
Hulk.html	Index.html

Figure 2

The **Images** subfolder within the website folder contains 3 files. Refer to **Figure 3** below.

Firefly.jpg	Hulk.jpg
Logo.png	

Figure 3

Read the scenario below that describes the background to the practical tasks you are required to perform.

SCENARIO
You and your friend Peter propose a juice bar venture to your university. The location of the juice bar is set to be in a small vacant building in the popular area in the middle of campus. Before they will allow you to open a business, the university requires a business proposal with backup information regarding the feasibility of this venture.

QUESTION 1

1.1   Compress **Tummi**, **Healthy-Juices** and **ReadMe** into a single zipped file named **Making of Logo**.   (2)

1.2   Convert the file **Fruits.csv** into a Microsoft Excel workbook file.   (1)

1.3   Create a new folder and name it <<Your IEB Examination Number>>.   (2)

Open the word processing document **Computer Management** and answer the following questions in the appropriate section:

1.4   **Juice Bar** and **Thumbnail** both contain the same image. Answer the following questions on their differences:

  1.4.1   What is the file size of each image?   (2)

  1.4.2   What are the dimensions of each image?   (2)

  1.4.3   Why would you have a thumbnail image?   (2)

1.5   You advise Peter that it is good practice when designing a webpage to test the page at various screen resolutions. Give Peter instructions on how to view the screen resolution, and capture a screen image of your current screen resolution.   (3)

1.6   When designing a website, you need to ensure that it is compatible with different browsers. Give instructions on how you would open a webpage file with a program other than the default application.   (3)

1.7   All of Peter's measurements on his computer are in imperial units, not metric; what is wrong with his computer setup? Give him steps on how to fix this.   (4)

Add your Examination Number to the header of the document.

Save and close the document **Computer Management**.

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QUESTION 2

Open the word processing document **Recipe Book** and make the following changes:

2.1   Modify the page setup as follows:

       2.1.1   Set the paper size to a custom size of 10 cm wide by 15 cm high.   (2)

       2.1.2   Set the top, bottom, left and right page margins to 1 cm.   (2)

       2.1.3   Add a single line page border to the whole document.   (1)

2.2   Add a footnote to the heading 'Just Juice Selection'. The footnote must read 'Click the image to go to the recipe'.   (2)

2.3   Hyperlink the images of **The Hulk**, **Happy Gilmore** and **FireFly** to the relevant headings in the document.   (2)

2.4   Create a cover page:

       2.4.1   Insert a new page before the heading 'Just Juice Selection'.   (1)

       2.4.2   Set the cover page to have a landscape orientation. The rest of the document should remain portrait.   (2)

       2.4.3   Insert the image **Juice Bar** as follows:

            • Aligned to the left of the page.
            • Set to not lock the aspect ratio.
            • Size of image set to 6 cm high and 7 cm wide.   (4)

       2.4.4   Add the words 'Recipe Book' as WordArt to the cover page. An example is shown in **Figure 4**.   (2)

Figure 4

2.5   Modify the Heading 2 style as follows:

- Set font colour to blue
- Set 6 pt. after paragraph spacing   (3)

2.6   List the ingredients of The Hulk, Happy Gilmore and FireFly drinks respectively as
        bullet points. Use the image **Pin** as the bullets.   (3)

Save and close the document **Recipe Book**.

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QUESTION 3

You and Peter have decided to allow people to pre-order their juice via email. Open the word processing document **Menu** and make the following changes:

3.1   Add a watermark of 'Students Only' to the whole document.   (2)

3.2   Change the page layout as follows:

        Set 'Multiple pages' to be 'Book fold'.   (1)

3.3   Add a decimal aligned tab stop with a dotted leader at the 5 cm mark to all the text
        on the second page.   (3)

3.4   On the right of the footer add today's date. This date should automatically update
        and not be displayed on the first page.   (2)

3.5   After the given menu, create a form utilising control elements. Follow the
        instructions given in { } brackets. Refer to **Figure 5** for these instructions.   (7)

Student Number: (Click here to enter text.)

{Add Rich Text Content Control}

Date of Collection: (Click here to enter a date.)

{Add Date Picker Content Control}

○ The Hulk

○ Happy Gilmore

○ FireFly

{Add three option buttons with correct captions, ensuring only one option can be selected}

Figure 5

Add your Examination Number to the header of the document.

Save and close the document **Menu**.

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QUESTION 4

You have added a new drink to your menu and want to notify all your regulars of this drink via email.

Open the word processing document **New Drink** and make the following changes:

4.1   Add your Examination Number as an Author of the document.   (2)

4.2   Modify the image of Flash as follows:

      4.2.1   Add the caption 'Figure 1 taken from http://www.miccostumes.com on 09/01/2016'.   (2)

      4.2.2   Remove the hyperlink from the picture.   (1)

4.3   Merge the document as follows:

      4.3.1   Link the document to the data source **Regulars.xlsx** using *Sheet1*.   (2)

      4.3.2   Replace the text 'FirstName' and 'Surname' with the field codes <<FirstName>> and <<Surname>> respectively.   (2)

4.4   Complete the merge by sending out email messages. Set the 'To' field as the Email Address field and give it an appropriate subject. Do not complete this step; take a screen capture of the merge to email dialog and place it under the heading 'Question 4.4' in this document.   (3)

Add your Examination Number in the header of the document.

Save and close the document **New Drink**.

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QUESTION 5

You have been asked to complete a feasibility study for the juice bar. Please take note of the following relevant information:

- The university has only been open since 1 February 2001.
- All students were born in the 1900s.

Open the spreadsheet **Feasibility Study** and note that the workbook consists of five worksheets, namely *Questions, Lecturer, Lecturer Summary, Student* and *Student Summary.*

Note all the changes below must be applied to the worksheet labelled *Questions*.

5.1   Auto expand column B to fit the data.   (1)

5.2   Format cell ranges A1:B1 and A5:B5 as follows:

- Yellow fill
- Bold
- Single line inner border
- Double line outer border   (4)

5.3   Add your Examination Number to the centre of the heading of the sheet.   (2)

5.4   Group rows 2 and 3, and rows 6 and 7.   (2)

5.5   Set the print area to only print the range A1:B3.   (2)

5.6   Hyperlink the cell containing the word 'Lecturer' to *Lecturer* sheet.   (2)

Note all the changes below must be applied to the worksheet labelled *Lecturer*.

5.7   Name the cell range A2:A19 'LecturerName'.   (1)

5.8   Correct the ID numbers of the lecturers so that they are displayed as normal numbers.   (2)

5.9   Column C with the heading Q 5.9 represents the date on which the lecturer was employed. Set a data validation rule for the cell range C2:C19 so that only dates between the university opening and the current date may be inputted.   (4)

5.10   Add conditional formatting to the cell range D2:D19 so that any value greater than or equal to 5 is highlighted green, and any value less than or equal to 1 is highlighted red.   (3)

5.11   A lecturer's level of exercise is determined by the number of days he/she exercises, given in Column D (Lec Q1). Use the table of the days and relative level that are given in cells H1:I9. In Column E (Q 5.11) insert a function to determine the lecturers' level of exercise. *Expand the calculation so that all lecturers' level of exercise will be determined.*   (4)

Note all the changes below must be applied to the worksheet labelled *Lecturer Summary*.

5.12   Insert a calculation in B1 to determine the number of lecturers in the worksheet labelled *Lecturer*.   (2)

5.13   Insert a calculation in B2 to determine the median days of exercise of lecturers in the worksheet labelled *Lecturer*.   (2)

5.14   Insert a calculation in B3 to determine the percentage of lecturers in the worksheet labelled *Lecturer* who would make use of the juice bar.   (3)

5.15   Insert a function in B4 that will return the most frequently occurring number of times a lecturer exercises a week.   (2)

Note all the changes below must be applied to the worksheet labelled *Student*.

5.16   In column C (**Q 5.16**) insert a calculation to determine a student's date of birth. A date of birth can be determined using the ID, with the first 6 characters being the date of birth in the format YYMMDD. The resulting date of birth should be in a date format and displayed DD month YYYY, i.e. 21 August 1996. *Expand the calculation so that all students' date of birth will be calculated.*   (5)

5.17   Format column D to Currency with 0 decimal places.   (2)

Note all the changes below must be applied to the worksheet labelled *Student Summary*.

5.18   Insert a calculation in cell B1 to determine the average monthly disposable income of students in the worksheet labelled *Student*.   (2)

5.19   Create a pie chart based on the table A2:B6 representing the number of students with each fruit as their favourite. The chart should be on the same sheet, have a meaningful title and the biggest slice should be highlighted in some way.   (4)

Add your Examination Number in the header of each worksheet.

Save and close the workbook **Feasibility Study**.

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QUESTION 6

Open the database **Nutrition** and apply the following changes:

6.1   Import data from the Excel workbook called **Flavouring** into the *Flavouring* table.   (2)

6.2   Apply the following changes to the table *Ingredients_Flavouring*:

6.2.1   Set the data type of the field *FlavouringID* to the most appropriate data type for a field that will uniquely identify a record.   (1)

6.2.2   Set the field *FlavouringID* to be a primary key field.   (1)

6.2.3   Add a field called *FlavouringFK*, which will look up the field *Flavour* from the table *Flavouring*.   (3)

6.3   Apply the following changes to the table *Ingredients_Produce*:

6.3.1   The ingredient with the *IngredientsID* of 4 should have a **quantity** of 0.5. Modify the data field size to allow and display values of this type. Update the *Quantity* field of this ingredient to 0.5.   (3)

6.3.2   Set the caption of the *IngredientsID* field to 'ID'.   (1)

6.4   Create a form as follows:

6.4.1   Create a form called *Ingredients* using all fields from the *Drink* table and only the *ProduceFK* and *Quantity* fields from the *Ingredients_Produce* table. Ensure the form is grouped by the *Drink* table.   (4)

6.4.2   Add a button with the text 'Goodbye', which will close the form.   (3)

6.5   Create queries as follows:

6.5.1   Create a query called *HowToSmash*, which will display all produce used to make the drink 'The Hulk'. Only the *ProduceFK* field should be displayed.   (2)

6.5.2   Create a query called *StockUp*, which will display only the *DrinkFK* field from the table *Ingredients_Produce* of all ingredients that require more than two quantities in any drink.   (2)

6.5.3   Create a query called *NoProductsPerDrink* to display the name of the drink and the number of different produce items that are added to the drink.   (3)

6.5.4   Create a query called *StopTheCold*, which should display the total amount of Vitamin C for each drink. The field displaying the total amount of Vitamin C should be named *AntiCold*.   (6)

6.6   Create a report as follows:

      6.6.1   Create a report called *Recipe* based on all fields from the table *Drink*, and only the *ProduceFK* and *Quantity* fields from the *Ingredients_Produce* table. Ensure the report is grouped by the *Drink* table.   (3)

      6.6.2   Add your Examination Number to the header of the report.   (1)

      6.6.3   Add a textbox to the footer of the *Drink* table grouping that will add the total of the *Quantity* field for that drink. Ensure this textbox has an appropriate label indicating its contents.   (3)

Save and close the database **Nutrition**.

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QUESTION 7

You have been asked to update the home and FireFly pages of the juice bar's website.

Open **Index.html** in the subfolder **Website** and apply the following changes:

7.1	Add a title to the page to read 'The Juice Bar – Your Examination Number'.	(2)
7.2	Add a border of size 2 to the table.	(2)
7.3	Set the first cell in the first row of the table to span across two columns.	(2)
7.4	Set the logo image to be aligned centre of the cell.	(2)
7.5	With the image of **Hulk**:	

7.5.1	Display the text 'Smash' if the picture does not show.	(1)
7.5.2	Set the pictures width to 250 and height to 350.	(2)
7.5.3	Hyperlink the image to **Hulk.html**.	(3)

Save and close **Index.html**.

Open the file **FireFly.html** and apply the following changes:

7.6	Add a heading as follows:	

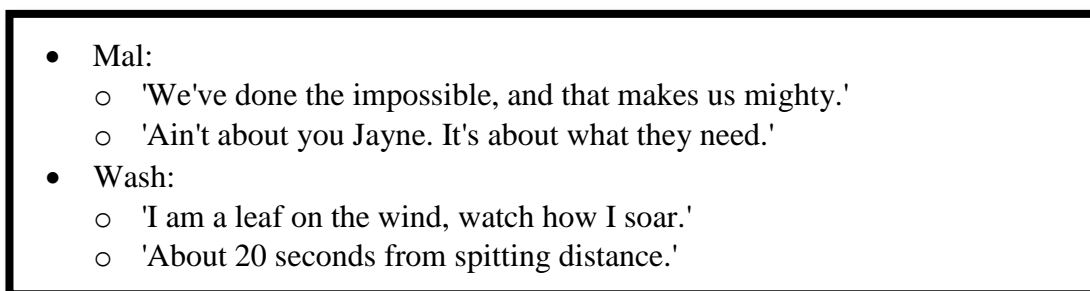|		
7.6.1	Add heading text of 'Quotes' at the beginning of the page before the image of **Firefly**.	(2)
7.6.2	Set the font colour to blue.	(1)
7.7	Convert the text below the image of the ship to a multiple level list; refer to **Figure 6** below.	(4)

- Mal:
  - 'We've done the impossible, and that makes us mighty.'
  - 'Ain't about you Jayne. It's about what they need.'
- Wash:
  - 'I am a leaf on the wind, watch how I soar.'
  - 'About 20 seconds from spitting distance.'

Figure 6

Save and close **FireFly.html**.

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Total: 180 marks