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Department:
Basic Education
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SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

COMPUTER APPLICATIONS TECHNOLOGY P1

2021

MARKS: 180

TIME: 3 hours

**This question paper consists of 18 pages, an HTML tag sheet,
an input mask character sheet and a separate information sheet.**

INSTRUCTIONS AND INFORMATION

1. Owing to the nature of this practical examination, it is important to note that, even if you complete the examination early, you will NOT be permitted to leave the examination room until all the administrative functions associated with the examination have been finalised. During the examination, the normal rules regarding leaving the examination room apply.
2. If you are working on the network, or the data files have been preloaded, you must follow the instructions provided by the invigilator/educator. Alternatively, the invigilator will give you a CD/DVD/flash drive containing all the files needed for the examination. If a CD/DVD/flash drive has been issued to you, you must write your examination number and centre number on the CD/DVD/flash drive.
3. At the end of the examination, you must hand in the CD/DVD/flash drive given to you by the invigilator with ALL your answer files saved onto the CD/DVD/flash drive, OR you should make sure that ALL the answer files are saved on the network/computer as explained to you by the invigilator/educator.
4. Make absolutely sure that all files can be read. Do NOT save unnecessary files/folders and **do NOT hand in duplicate answer files/folders. Do NOT delete any original files that you did not work on.**
5. The information sheet that has been provided with the question paper **MUST BE COMPLETED AFTER THE THREE-HOUR EXAMINATION SESSION.** Hand it to the invigilator at the end of the examination.
6. A copy of the master files will be available from the invigilator. Should there be any problems with a file, you may request another copy from the invigilator.
7. This question paper consists of SEVEN questions. Answer ALL the questions.
8. Read through each question before answering or solving the problem. Do NOT do more than is required by the question.
9. Read the question carefully as accuracy will be taken into account.
10. Ensure that you save each document using the file name given in the question paper. Save your work at regular intervals as a precaution against possible power failures.
11. You may NOT use any resource material.
12. Ensure that the regional settings are set to South Africa and that date and time settings, number settings and currency settings are correctly set.

13. In all questions involving word processing, you should set the language to English (South Africa). The paper size is assumed to be A4 Portrait, unless instructed otherwise. Use centimetres as the unit of measurement.
14. Formulae and/or functions must be used for ALL calculations in questions involving spreadsheets. Use absolute cell references only where necessary to ensure that formulae are correct when you copy them to other cells in a spreadsheet.
- NOTE:** All formulae and/or functions should be inserted in such a manner that the correct results will still be obtained even if changes are made to the existing data.
15. You may NOT use a word processing program such as Word to answer the HTML question.
16. The examination folder/CD/DVD/flash drive that you receive with this question paper contains the files listed below. Ensure that you have all the files before you begin with this examination.

• 1Review	Word processing file
• 2History	Word processing file
• 3Countries	Spreadsheet
• 3Open	Compressed folder
• 4Donate	Spreadsheet
• 5Rescue	Image
• 5Support	Database
• 6_1Picture	Image
• 6_1Sierra	HTML file
• 6_2Progress	Image
• 6_2Wash	HTML file
• 7Distribute	Word processing file
• 7Prospects	Spreadsheet
• 7Reorder	Spreadsheet

SCENARIO

Médecins Sans Frontières (MSF), translated as Doctors Without Borders, is an independent international organisation that provides medical and humanitarian assistance to people who face extreme hardships.

QUESTION 1: WORD PROCESSING

Open the **1Review** word processing document, which contains information about the operations of the Médecins Sans Frontières (MSF) organization, and enter your examination number in the header or the footer.

1.1 Change the heading 'Year in Review' as follows:

1.1.1 Modify the text to a WordArt object with a:

- Green fill
- 'Wave 2' transformation

(3)

1.1.2 Modify the WordArt to appear as in the example below:

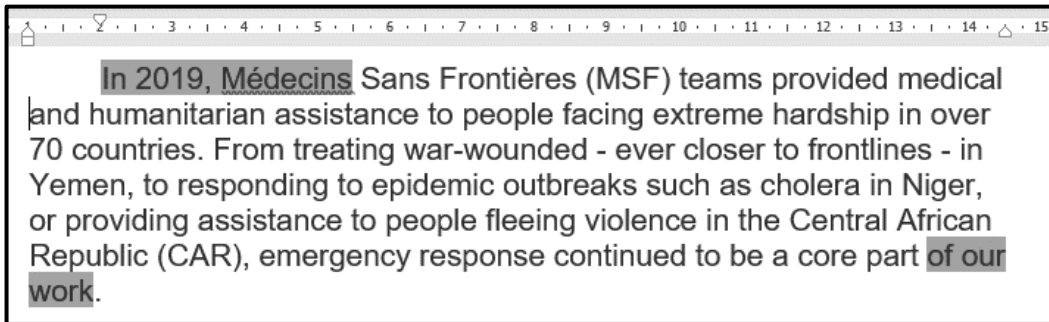


(2)

1.2 Change the endnote that appears after the text 'Directors of Operations' to appear at the bottom of the page on which the reference appears.

(1)


1.3 Use the ruler settings to display the text as shown below.



(3)

1.4 Place the cursor on the text 'Here' at the bottom of the page. Create a new style called 'Display', formatted to expanded character spacing.

(3)

1.5 Replace all occurrences of the word 'care' with the ambulance symbol, , (Webdings character code 104). Do NOT change parts of words that contain the text 'care'.

(4)

1.6 Use a word processing feature to replace the word 'intercepted' in the paragraph starting with 'In the Mediterranean, ...' with a synonym suggested by the computer.

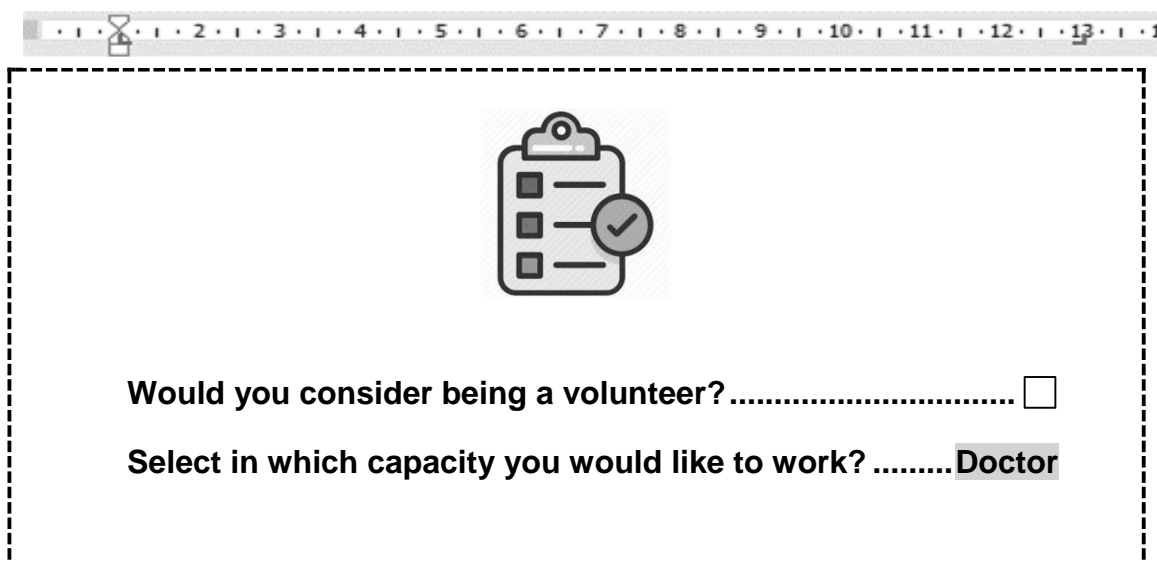
(1)

1.7 Find the text starting with 'PEOPLE OUT OF ...' and ending with '... missing to date.' and edit it as follows:

- Display the text in TWO columns with a vertical line between the columns.
- Ensure that the heading 'MEDICAL ACHIEVEMENTS ...' will always appear at the top of the second column.

(3)

1.8 Modify the text and the picture found on the last page of the document to display as shown below.



NOTE:

- The display of the clipboard image
- The Tab settings
- The Form Controls
- The user must be able to select from the options:
 - Doctor
 - Nurse
 - Surgeon
- The line surrounding the text and image

(10)

Save and close the **1Review** document.

[30]

QUESTION 2: WORD PROCESSING

Open the **2History** word processing document which contains the interesting history of Doctors Without Borders. Enter your examination number in the header or the footer.

- 2.1 Find the text 'Doctors Without Borders' below the heading 'Introduction' and create a hyperlink on the text to the 'Legends' bookmark. (2)
- 2.2 Create a new source to reference the report titled 'Year in Review', which was written by the corporate authors of MSF. (3)
- 2.3 Find the table below the heading '1970s - Events that took place' and do the following:
- Use a table feature to separate the last three rows from the main table, so that the 1980s data appears in a separate table below the 1970s table.
 - Insert a new row above the first row in the new table.
 - A sponsor will donate €15,00 for every patient treated by MSF. Modify the formula in the table (last row, second column) to calculate the total funding that the organisation will receive for the 1980s.
 - Format the total funding amount as currency. Change the currency symbol to € (euro), shortcut key: Alt+Ctrl+E. (6)
- 2.4 Modify the automatic page numbering in the whole document as follows:
- Page numbering must NOT appear on the first page.
 - Change the page numbering on the second page to start at 1.
- NOTE:** The page numbering will not appear on the last page. (3)
- 2.5 The table of figures does not show the 10 images found in the document.
Make the necessary changes to solve the problem. (4)
- 2.6 Insert any page border of your choice to only the last page. (2)
- Save and close the **2History** document. [20]

QUESTION 3: SPREADSHEET**NOTE:**

- Use formulae and/or functions for ALL calculations in the spreadsheet.
- Use absolute cell references ONLY where necessary to ensure that formulae are correct when you copy them to other cells in the same column (copy down).
- Insert formulae and/or functions in such a manner that the correct results will still be obtained even if changes are made to the existing data.
- Should you need to use building blocks, use the allocated space in the spreadsheet.

Open the **3Countries** spreadsheet, which contains information about the services provided to people in the different countries, and work in the **Services** worksheet.

3.1 Change the border around **cell C2** to a thick red border. (2)

3.2 Insert a function in **cell P9** to display the average number of outpatients (**column C**) treated. Format the cell to display the result with NO decimals. (3)

3.3 The services offered by MSF are listed from **column C** to **column L**. If no value appears in a cell, then that service is not available in that country.

Insert a function in **cell P11** to determine how many different kinds of services are available for use by the people in the DRC (**row 20**). (2)

3.4 Insert a function/formula in **cell P13** to determine how many countries were first helped in the 1980s (**column B**). (6)

3.5 Apply data validation to **cell range M5:M75** so that only the values: Disastrous, Critical or Moderate (**cell range O5:O7**) can be entered. (3)

3.6 The treatment of DR-TB is indicated in **column H**.

Insert a formula in **cell P15** to calculate which percentage of people with DR-TB were treated by MSF in India (**row 32**). (3)

Do NOT close the **3Countries** spreadsheet.

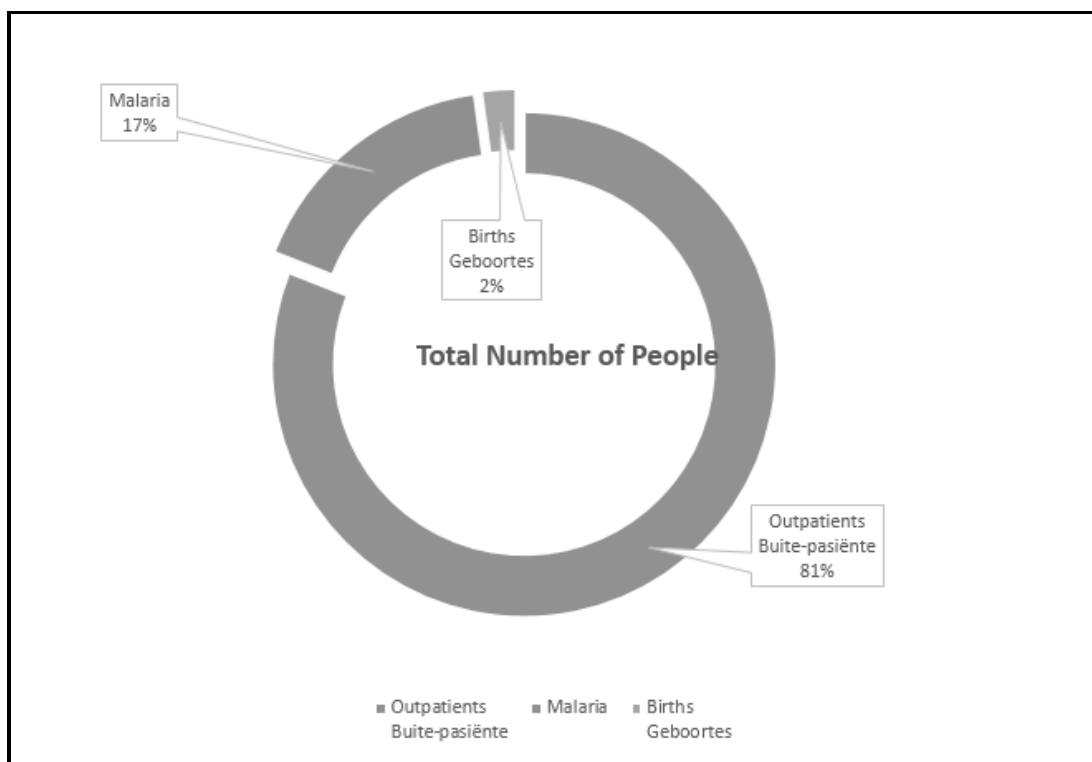
3.7 Open the password-protected folder **3Open** with the password: 2021.

How many spreadsheets are found in the **3Open** folder? Insert your answer in **cell P17**. (1)

3.8 Find the chart/graph at the bottom of the **Services** worksheet. The chart displays the total number of people (**row 76**) assisted by some of the services provided.

Carry out the following instructions to change the chart/graph to display as shown below:

- Display only the services indicated in the example.
- Change the data labels to display the names of the services and the associated percentages.
- Set the doughnut explosion to 5%.
- Move the chart to the worksheet called **ServiceChart**.



(5)

Save and close the **3Countries** spreadsheet.

[25]

QUESTION 4: SPREADSHEET**NOTE:**

- Use formulae and/or functions for ALL calculations in the spreadsheet.
- Use absolute cell references ONLY where necessary to ensure that formulae are correct when you copy them to other cells in the same column (copy down).
- Insert formulae and/or functions in such a manner that the correct results will still be obtained even if changes are made to the existing data.
- Should you need to use building blocks, use the allocated space in the spreadsheet.

The details of sponsors and their donations are stored in a spreadsheet. As sponsors may make a single or monthly donation, the card numbers from which payments are made, is recorded.

Open the **4Donate** spreadsheet and work in the **Details** worksheet.

4.1 Insert a function in **cell F3** to determine the value that appears most often in **column D**. (2)

4.2 Several sponsors donated the same highest amount (**column D**).
Insert a function/formula in **cell F4** to determine the total value of the highest amount donated. (4)

4.3 Change the SUMIFS function in **cell F5** to determine the total amount of the single donations (**column C**) that were made in 2019 (**column E**). (4)

4.4 MSF will use the data in **column C** to determine which type of message should be sent to the sponsors.

NOTE: A bank card has expired if the expiry date (**column G**) is before the date in **cell H4**.

Use the donation type (**column C**) and the expiry date (**column G**).

Insert a function/formula in **cell H8** to display the following:

- The word 'Expired' if the bank card of a monthly sponsor has expired **OR**
- The word 'Remind' if the bank card of a monthly sponsor is still valid and a transaction will take place **OR**
- A '#' character if the card was used for a single donation as he/she will not receive a message

Ensure that the correct results will display if the function were to be copied to the rest of the column. (7)

Work in the **Code** worksheet.

- 4.5 MSF allocates a code to each country to keep track of how many donations come from each country.

The code is created by moving the first two characters of the name of the country to appear as the last two characters of the name.

Example: China will be displayed as 'inaCh'.

Insert a combination of functions in **cell C3** to display the code for Argentina using this coding system. (8)

Save and close the **4Donate** spreadsheet. [25]

QUESTION 5: DATABASE

A database containing the details of individuals that volunteer their services was created. The database also contains information about the countries in which these volunteers work.

Open the **5Support** database.

5.1 Open the **tbl5_1** table in Design View and change it as follows:

5.1.1 Insert a new field, *RegionId*, as follows:

- Place the new field *RegionId* as the first field.
- Set a primary key on the new field.
- Set the data type of this field to assign an automatic number to the field.
- Change the 'New Values' property of this field to assign random numbers to the field.

(5)

5.1.2 Study the data in the *RegionCode* field in the Datasheet View to determine the format of the data in the field.

In the Design View, change the *RegionCode* field as follows:

- Set the field size to match the data.
- Create an input mask to ensure that the user must insert a code in the required format.

(5)

5.1.3 Change the *StaffAvailable* field to automatically display the value 10 in all new records.

(1)

Save and close the **tbl5_1** table.

- 5.2 Create a form called **frm5_2** based on the **tblVolunteers** table to display in Form View as shown below.

frm5_2	
Name	Ross
Surname	Allen
CountryToVolunteer	Sri Lanka
MedicalService	TB
StartingDate	2020/10/31
NumberofWeeks	1
Volunteer	<input checked="" type="checkbox"/>
ReturnVolunteer	<input type="checkbox"/>

- Insert an appropriate control to the form header and enter your examination number in this control.
- Change a property setting of the control containing your examination number, so that the examination number will not display in Form View. (The examination number must remain visible in the Design View.)
- Change the *CountryToVolunteer* field text box to a combo box linked to the **tblCountry** table.

Save and close the **frm5_2** form.

(5)

- 5.3 Open the **qry5_3** query based on the **tblVolunteers** table in Design View and do the following:

- Display only the records where the volunteers are return volunteers and are willing to help for 20 weeks or more.
- Display the records alphabetically according to the surnames.

Save and close the **qry5_3** query.

(4)

- 5.4 Open the **qry5_4** query based on the **tblVolunteers** table in Design View and do the following:

- Display only the *Name*, *Surname*, *CountryToVolunteer* and *MedicalService* fields.
- Display only the records of volunteers who volunteer for any treatment, excluding HIV/Aids, **AND** only volunteer for Zimbabwe or Angola.

Save and close the **qry5_4** query.

(6)

5.5 Open the **qry5_5** query based on the **tblVolunteers** table in Design View.

Modify the query so that it displays 17 records as shown below:

SumOfNumberofWeeks	MedicalService	StartingDate
1	Birth Assist	2022-08-31
1	Cholera	2022-01-01
11	Cholera	2022-01-29
5	Hepatitis C	2022-01-29
1	Hepatitis C	2022-03-31
9	HIV/Aids	2022-03-31
1	HIV/Aids	2022-05-01
8	Malaria	2022-05-01
18	Malaria	2022-12-31
4	Mental Health	2022-05-31
1	Mental Health	2022-10-01
20	TB	2022-01-29
3	TB	2022-05-01
1	TB	2022-05-31
1	TB	2022-07-01
20	TB	2022-08-31
20	TB	2022-10-31

Save and close the **qry5_5** query.

(5)

5.6 Open the **rpt5_6** report based on the **tblVolunteers** table in Design View and edit as follows:

- Insert the **5Rescue** image found in your examination folder, in the report header. Resize the image box to 1.6 cm high and 2 cm wide. The whole image must fill the image box.
- Add another grouping to the report on the *ReturnVolunteer* field.
- Insert a function in the *MedicalService* group footer to determine the number of volunteers per medical service.
- Insert a suitable label for the function.

Save and close the **rpt5_6** report.

(9)

Save and close the **5Support** database.

[40]

QUESTION 6: WEB DESIGN (HTML)

You may NOT use a word processing program such as Word to answer the HTML question.

MSF does humanitarian work in Sierra Leone, Africa.


NOTE:

- An HTML tag sheet is attached for reference.
- All files needed to complete this question are found in the examination folder.

ONE mark will be allocated for the correct closing of all tags and the correct nesting for both the web pages. (1)

6.1 Open the incomplete **6_1Sierra** web page in a web browser and also in a text/HTML editor (NOT a word processing program such as Word).

NOTE: Question numbers appear as comments in the coding to guide you where to insert the answer(s). DO NOT delete these comments.



Sierra Leone - Angels Help

Learning from the past, preparing for the future

See Status Report

2018 Status

There was no separation of medical waste, which was a big problem, as it meant that potentially dangerous items like needles were not disposed of correctly. The deadly Ebola outbreak of 2014-2015 led to many medical staff either fleeing or falling victim to the disease.

2019 Status

Staff had some proper protective equipment in case of the emergence of highly contagious diseases. The team was well on the way to finishing the replacement of water pipes feeding the MSF-supported medical structures to supply clean water and reduce waste. There were 48 trained hygienists working in the structures.

2020 Status

The waste management area had been completed and waste was being separated and disposed of correctly. They were directly injecting chlorine into all the water supply to ensure that it was suitable for drinking. For vector control, that limits the spread of disease by mosquitoes, rats, dogs and so on, there was also progress. Each bed had a mosquito net - there were screens on the windows to prevent the mosquitoes from entering the wards. Most importantly, there were no more goats and dogs inside the buildings!

2018 Status	No clean water and outbreak of Ebola. WASH project implemented
2019 Status	Proper protective equipment used and hand-washing strategies implemented
2020 Status Pending!	

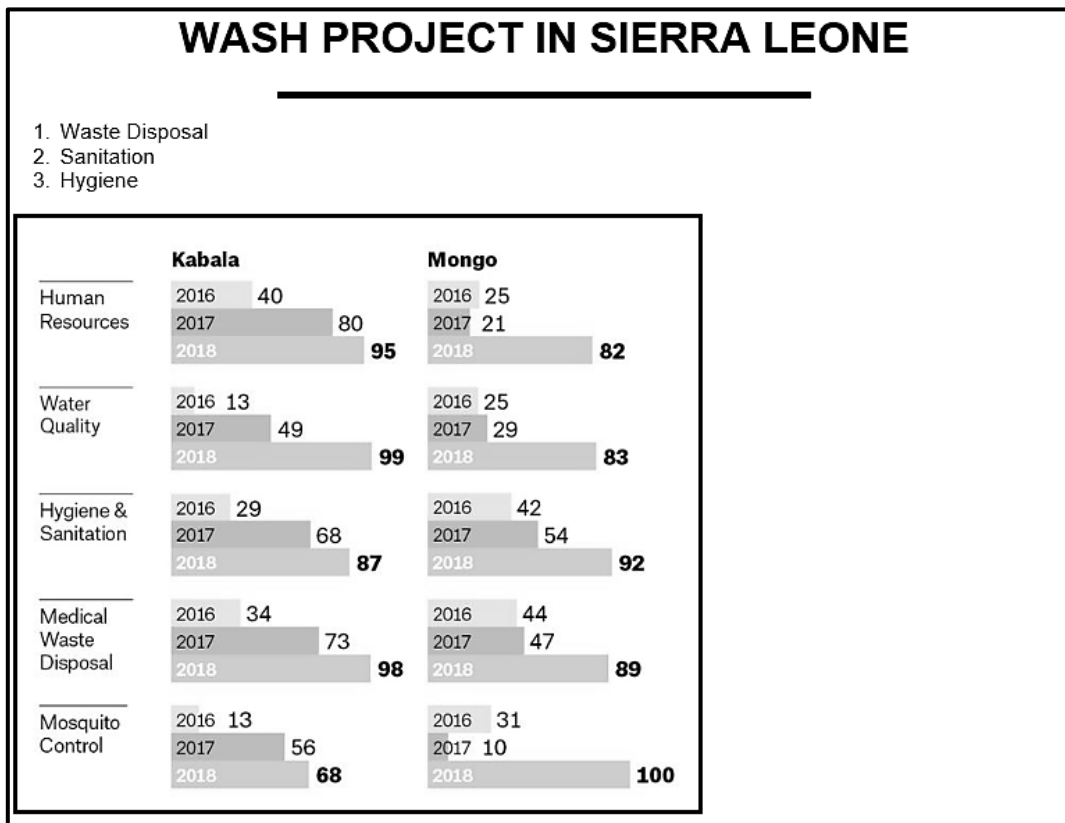
NOTE: Use the example on the previous page as a guide for doing this question.

- 6.1.1 Change the background colour of the web page to 'linen'. (1)
- 6.1.2 Display only the word 'Ebola' found in the first paragraph below the heading '2018 Status' in a red colour. (1)
- 6.1.3 Create a link on the heading '2020 Status' to link to a target location that has been created in the document. (3)
- 6.1.4 Format the table as shown in the example on the previous page: (4)
 - Insert a last row with the text '2020 Status Pending!'
 - Centre the text in the last row.

Save and close the **6_1Sierra** document.

6.2 Open the incomplete **6_2Wash** web page in a web browser and also in a text/HTML editor (NOT a word processing program such as Word).

Your final web page should appear as shown in the example below.



NOTE:

- The line below the heading is set to 50% of the width of the screen.
- The image **6_2Progress** can be found in your examination folder.
- The height of the image is 500.
- The image has a thick border. (10)

Save and close the **6_2Wash** document.

[20]

QUESTION 7: GENERAL

Various lists and statistics are required to make informed decisions.

- 7.1 The managing director requested a directory table that contains the names of some prestige sponsors.

Open the **7Distribute** word processing document and enter your examination number in the footer.

- 7.1.1 Create a mail merge as follows:

NOTE: Select the **Directory** option when you start the mail merge.

- Link the **7Prospects** spreadsheet as a data source for the **7Distribute** mail merge document.
- Edit the data source recipient list to include **ONLY** the data of those members who have a 'Yes' Prestige_Aansien status AND contributed an amount greater than or equal to 800.
- Enter the merged field *Surname_Van* in the first cell of the table.
- Enter the merged field *Name_Naam* in the second cell of the table.

Save the **7Distribute** document, but do NOT close it. (5)

- 7.1.2 Complete the merge and save the document as **7Directory**. Save and close all documents. (3)

- 7.2 Open the **7Reorder** spreadsheet.

Work in the **Subtotal** worksheet.

The SUBTOTAL feature displays the total amount donated per category.

- Change the SUBTOTAL feature to determine the number of countries in each category. (3)

7.3 Continue working in the **7Reorder** spreadsheet.

7.3.1 Work in the **Stock** worksheet.

Use an appropriate lookup function in **cell D4** to determine the minimum number of items that should be in stock using the data in the **Order** worksheet.

Ensure that the correct results will display if the function were to be copied to the other cells. (4)

7.3.2 Work in **Order** worksheet.

Use an IF function in **cell C5** to display the quantity of the stock item that must be reordered, e.g. 74 764 Drips.

NOTE:

- The reorder quantity is the number of items that must be ordered if the number of items in stock (**Stock** worksheet) is less than the minimum of items required.
- Display the result of the function with the quantity required, followed by a space, followed by the name of the item. (5)

Save and close the **7Reorder** spreadsheet. [20]

TOTAL: 180

HTML TAG SHEET

Basic Tags	
Tag	Description
<body></body>	Defines the body of the web page
<body bgcolor="pink">	Sets the background colour of the web page
<body text="black">	Sets the colour of the body text
<head></head>	Contains information about the web page
<html></html>	Creates an HTML document – starts and ends a web page
<title></title>	Defines a title for the web page
 	Inserts a line break
<!-- -->	Comment
Text Tags	
Tag	Description
<h1></h1>	Creates the largest heading
<h6></h6>	Creates the smallest heading
	Creates bold text
<i></i>	Creates italic text
	Sets size of font, from "1" to "7"
 	Sets font colour
	Sets font type
Links Tags	
Tag	Description
	Creates a hyperlink
	Creates an image link
	Creates a target location in the document
	Links to a target location created somewhere else in the document
Formatting Tags	
Tag	Description
<p></p>	Creates a new paragraph
<p align="left">	Aligns a paragraph to the "left" (default), can also be "right" or "center"
	Creates a numbered list
<ol type="A","a","I","i","1">	Defines the type of numbering used
	Creates a bulleted list
<ul type="disc","square","circle">	Defines the type of bullets used

Formatting Tags continued	
Tag	Description
	Inserted before each list item, and adds a number or symbol depending on the type of list selected
	Adds an image
	Aligns an image: can be "left", "right"; "bottom", "top", "middle"
<align="center">	Aligns an image to the "center"
	Sets the size of the border around an image
	Sets the height and width of an image
	Displays alternative text when the mouse hovers over the image or when the image is not found
<hr/>	Inserts a horizontal line
<hr size="3"/>	Sets size (height) of a line
<hr width="80%"/>	Sets the width of a line, in percentage or absolute value
<hr color="ff0000"/>	Sets the colour of the line
Table Tags	
Tag	Description
<table></table>	Creates a table
<tr></tr>	Creates a row in a table
<td></td>	Creates a cell in a table
<th></th>	Creates a table header (a cell with bold, centred text)
<table width="50">	Sets the width of the table
<table border="1">	Sets the width of the border around the table cells
<table cellspacing="1">	Sets the space between the table cells
<table cellpadding="1">	Sets the space between a cell border and its contents
<tr align="left">	Sets the alignment for cell(s) ("left", can also be "center" or "right")
<tr valign="top">	Sets the vertical alignment for cell(s) ("top", can also be "middle" or "bottom")
<td colspan="2">	Sets the number of columns a cell should span
<td rowspan="4">	Sets the number of rows a cell should span

INPUT MASK CHARACTER SHEET

CHARACTER	DESCRIPTION
0	Digit (0 to 9, entry required, plus [+] and minus [-] signs not allowed)
9	Digit or space (entry not required, plus [+] and minus [-] signs not allowed)
#	Digit or space (entry not required; spaces are displayed as blanks while in Edit mode, but blanks are removed when data is saved; plus [+] and minus [-] signs allowed)
L	Letter (A to Z, entry required)
?	Letter (A to Z, entry optional)
A	Letter or digit (entry required)
a	Letter or digit (entry optional)
&	Any character or a space (entry required)
C	Any character or a space (entry optional)
. , ; - /	Decimal placeholder and thousand, date and time separators (The actual character used depends on the settings in the Regional Settings Properties dialog box in the Windows Control Panel.)
<	Causes all characters to be converted to lower case
>	Causes all characters to be converted to upper case
!	Causes the input mask to display from right to left, rather than from left to right. Characters typed into the mask always fill it from left to right. You can include the exclamation point anywhere in the input mask.
\	Causes the character that follows to be displayed as the literal character (e.g. \A is displayed as just A)

Examination sticker

180

COMPUTER APPLICATIONS TECHNOLOGY P1 – 2021

INFORMATION SHEET (to be completed by the candidate AFTER the 3-hour session)

CENTRE NUMBER _____

EXAMINATION NUMBER _____

WORK STATION NUMBER _____

SUITE USED (Mark appropriate box with a cross (X))	Microsoft Office 2013	Microsoft Office 2016	Microsoft Office 2019	Office 365
WEB BROWSER USED (Mark appropriate box with a cross (X))	Mozilla Firefox	Google Chrome	Internet Explorer	Other (Specify)

FOLDER NAME _____

File names have been entered for each answer. Tick if saved and/or attempted.

Question number	File name	Saved (✓)	Attempted (✓)	Maximum Mark	Marker	SM	CM	IM/EM
1	1Review			30				
2	2History			20				
3	3Countries			25				
4	4Donate			25				
5	5Support			40				
6	6_1Sierra			20				
	6_2Wash							
7	7Distribute			20				
	7Prospects							
	7Reorder							
TOTAL				180				

Comment (for office/marker use only)
