



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P1

NOVEMBER 2021

MARKS: 150

TIME: 3 hours

**This question paper consists of 16 pages, an HTML tag sheet,
an input mask character sheet, two pages for planning 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 tasks associated with the examination have been finalised. During the examination, the standard examination rules regarding leaving the examination room apply.
2. If you are working on the network, or the data files have been preloaded on your system, you must follow the instructions provided by the invigilator/educator.
3. At the end of the examination, you must make sure that **ALL** your 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. Ensure that you save each document using the file name given in the question paper. Save your work regularly as a precaution against possible power failures.
10. You may **NOT** use any resource material.
11. Accuracy will be taken into account.
12. Ensure that the regional settings are set to South Africa and 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. Ensure that the Developer tab and Ruler are activated.
15. Ensure that the decimal symbol is set as a full stop ('.') and the list separator is set as a comma (,).
16. 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.
17. You may NOT use a word processing program such as Word to answer the HTML question.
18. The examination data folder 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.

• 1Clean	Image
• 1Health	Word processing file
• 2Marine	Word processing file
• 3Logo	Image
• 3Projects	Spreadsheet
• 4Air	Spreadsheet
• 5Save	Database
• 6_1Clean	HTML file
• 6_1Plastic	Image
• 6_2Pollute	HTML file
• 7Company	Spreadsheet
• 7Date	Spreadsheet
• 7Letter	Word processing file
• 7Picture	Compressed file

SCENARIO

Pollution is one of the biggest environmental concerns currently. Waste products may cause land, water and air pollution. A growing awareness of the negative impact of pollution encourages people to get involved in projects to stop pollution and clean up the environment.

QUESTION 1: WORD PROCESSING

Open the **1Health** word processing document and insert your examination number in the header or footer.

- 1.1 Change the page size of the document to A4. (1)
- 1.2 Change the line spacing of the paragraph starting with 'The following is ...' and ending with ' ... by air pollution.' to be the same as the line spacing of the first paragraph. (1)
- 1.3 Replace all the occurrences of the exact text 'ozone' to appear in Arial Narrow, bold and italic. (3)
- 1.4 Insert a 9 cm high by 8 cm wide text box and move the text that begins with 'Nitrogen dioxide ...' and ends with '... from heart disease.' into the text box.

The text box must display as shown below.

The top position of the text box is relative to the word 'air' and the bottom of the text box is relative to the word 'Ground'.

However, your symptoms may get worse when air pollution reaches the 7–9 (high) or 10 (very high) bands, especially if you are elderly. If this happens, you may need to change your treatment in the usual way. If these steps do not help, consult your doctor.

WHERE DOES AIR POLLUTION COME FROM?

The service reports daily outdoor levels of pollution, mostly from outdoor sources. Different sources are responsible for different pollutants. Road transport is the main source of nitrogen dioxide and carbon monoxide. Power stations and other industrial sources also produce nitrogen dioxide. Industry is the main source of Sulphur dioxide. Particles come from many sources, including road transport, power stations and other industry. The burning of wood or coal for home heating can also be an important source of Sulphur dioxide and particles. Ground level ozone is not emitted directly from any source. Instead it is formed when sunlight acts on nitrogen dioxide and other atmospheric substances close to the ground. The pollutants that cause ground level

Nitrogen dioxide

These gases irritate the airways of the lungs, increasing the Sulphur dioxide symptoms of those suffering from lung diseases.

Particles

Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases.

Carbon monoxide

This gas prevents the normal transport of oxygen by the blood. This can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease.

(4)

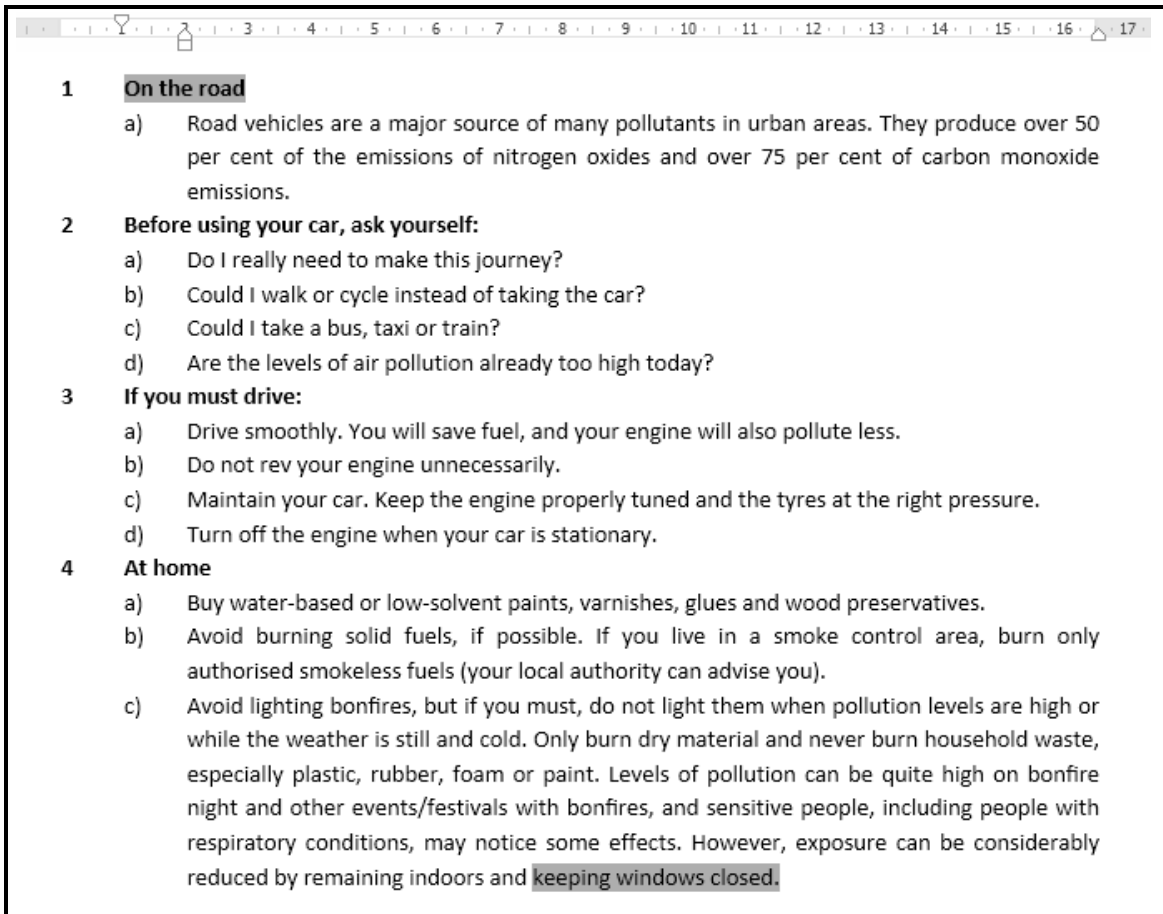
1.5 Find the text that begins with the heading 'DOES IT MAKE A DIFFERENCE WHERE I LIVE?' and ends with '... fuels and vehicles.'

- Change the layout of the text to appear in two columns.
- Set the width of the first column to 8 cm.
- Set the space between the columns to 1 cm.

(3)

1.6 Find the text that begins with the heading 'On the road' and ends with '... keeping windows closed.'

Apply multilevel list numbering to the text to display as shown below.



1 **On the road**

a) Road vehicles are a major source of many pollutants in urban areas. They produce over 50 per cent of the emissions of nitrogen oxides and over 75 per cent of carbon monoxide emissions.

2 **Before using your car, ask yourself:**

a) Do I really need to make this journey?

b) Could I walk or cycle instead of taking the car?

c) Could I take a bus, taxi or train?

d) Are the levels of air pollution already too high today?

3 **If you must drive:**

a) Drive smoothly. You will save fuel, and your engine will also pollute less.

b) Do not rev your engine unnecessarily.

c) Maintain your car. Keep the engine properly tuned and the tyres at the right pressure.

d) Turn off the engine when your car is stationary.

4 **At home**

a) Buy water-based or low-solvent paints, varnishes, glues and wood preservatives.

b) Avoid burning solid fuels, if possible. If you live in a smoke control area, burn only authorised smokeless fuels (your local authority can advise you).

c) Avoid lighting bonfires, but if you must, do not light them when pollution levels are high or while the weather is still and cold. Only burn dry material and never burn household waste, especially plastic, rubber, foam or paint. Levels of pollution can be quite high on bonfire night and other events/festivals with bonfires, and sensitive people, including people with respiratory conditions, may notice some effects. However, exposure can be considerably reduced by remaining indoors and **keeping windows closed**.

(7)

1.7 Change the UK Health Department source to a website source with the URL <http://www.airquality.co.uk>.

(2)

1.8 Add an automatic bibliography below the heading 'Bibliography' at the end of the document.

(1)

1.9 Insert the picture **1Clean** as a watermark to the document. Scale the watermark image to 150%.

(2)

1.10 Inspect the document for issues and remove all hidden text from the document.

(1)

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

[25]

QUESTION 2: WORD PROCESSING

Open the **2Marine** word processing document and insert your examination number in the header or footer.

- 2.1 Change the font of the document title 'UNESCO: Marine Pollution' to Small caps. (1)
- 2.2 Format the headings of the document so that you can insert a table of contents below the heading 'TABLE OF CONTENTS' to appear as shown below.

TABLE OF CONTENTS	
Marine Pollution	2
What is polluting our Oceans?	2
How is this pollution threatening our Oceans?	2
How does this affect me?	3
What can I do?.....	4
What is IOC UNESCO doing?	4

- 2.3 Remove the automatic hyphenation from the document. (1)
- 2.4 Insert a caption to the picture under the heading 'What is polluting our Oceans?'. The caption text can be found in the picture's alternative text. (2)
- 2.5 Remove the hyperlink on the picture by Chris Deacutis. (1)
- 2.6 Restore the picture below the heading 'What can I do?' to its original colour. (1)
- 2.7 Find the text 'Question 2.6' below the heading 'What is IOC UNESCO doing?'.
Replace the text 'Question 2.6' with a cross-reference to the IOC UNESCO picture and only display the page number. (2)
- 2.8 Insert a footnote on the text 'UNEP', found on the last page of the document, as follows:
 - Set the footnote numbering format to A, B, C, ...
 - Set the footnote numbering to restart on every page.
 - Add the footnote text 'Environment Programme'.
(4)
- 2.9 Insert a field below the text 'INSERT HERE' to display the number of words in the document. (1)

2.10 Insert automatic page numbering in the footer of the document as follows:

- Use the Tildes format.
- Ensure that numbering does not appear on the cover page and Table of Contents page.
- Ensure that the number, '~1~,' appears on the page after the Table of Contents.
- Ensure that the page numbering continues on all the pages that follow. (4)

Save and close the **2Marine** 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 it to other cells in a spreadsheet.
- 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 space allocated for this in the spreadsheet data file.

Open the **3Projects** spreadsheet which contains details of clean-up missions that started in 2019, including some projects planned for the future.

Work in the **Sheet1** worksheet.

- 3.1 Insert the **3Logo** picture, found in your examination folder, in **cell A1** so that it covers the entire cell. (2)
- 3.2 Fill **cell A3** to appear the same as **cell A2**. (1)
- 3.3 Rename the worksheet **Sheet1** to **Missions**. (1)
- 3.4 Use a COUNTIF function in **cell F3** to determine how many projects have a budget greater than R 55 000.00 (**column F**). (2)
- 3.5 The data in **column G** incorrectly displays values for recycling air pollution.
Apply a spreadsheet feature to **column G** to fill the cells with a colour of your choice whenever the targeted pollution (**column C**) is indicated as air pollution. (5)
- 3.6 A project is categorised as small, medium or large depending on the number of participants (**column D**) involved in the project.
Insert a suitable LOOKUP function in **cell J6** to determine the project category for the first project, based on the number of participants (**column D**) and the list in the **Categories** worksheet. (4)
- 3.7 The project coordinator will send notifications to prospective participants for projects that will start within the next 60 days (**column E**), inclusive of the current date.
Use a nested IF function/formula in **cell K6** to display the following messages:
- 'Notify' if a project will start within 60 days from the current date, OR
 - '*' if the project starts after 60 days from the current date, OR
 - 'Complete' if the project has been completed.
- Apply the function/formula to the rest of **column K**. (6)

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

[21]

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 it to other cells in a spreadsheet.
- 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 space allocated for this in the spreadsheet data file.

The spreadsheet contains information about the air quality index (AQI) measured at various measuring stations in South Africa, as well as related health incidents from 2012 to 2019.

Open the **4Air** spreadsheet and work in the **Quality** worksheet.

4.1 Insert a function in **cell D3** to determine the second smallest air quality index (AQI) count per year (**column E**). (3)

4.2 Add the option 'Urban' to the existing data validation rule in **cell B7** using the list in **cells J7:J8**. (1)

4.3 The measuring station is given a risk rating (**column G**) depending on the AQI level in **column F**, e.g. an AQI level of L1 would display a risk rating of one exclamation mark (!).

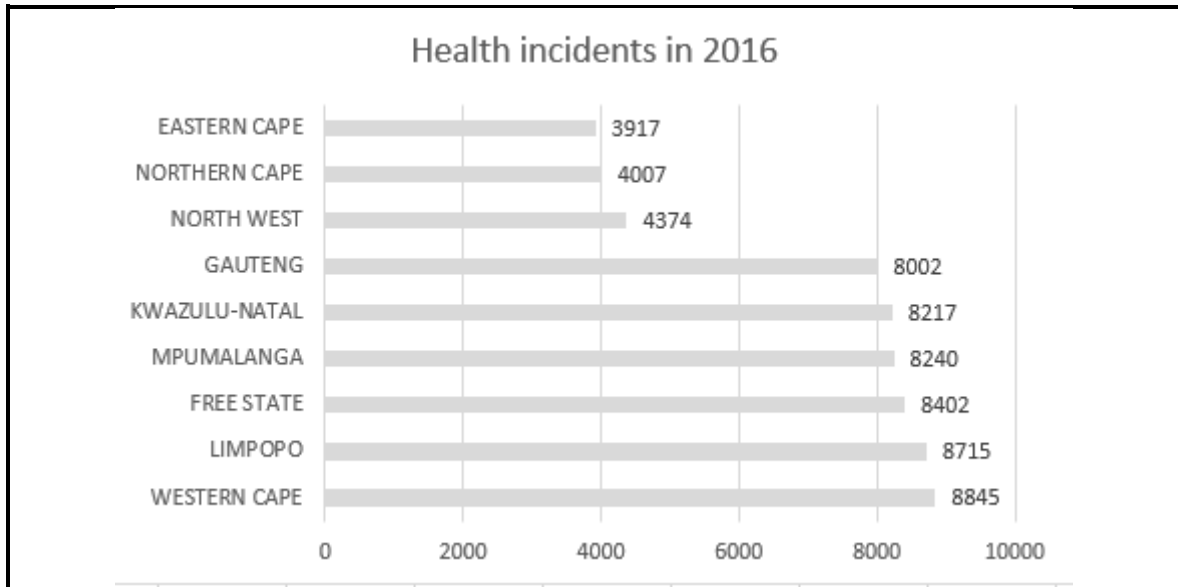
Insert a combination of text functions in **cell G7** to display the number of exclamation marks (!) using the AQI level in **column F** and the data in **cell D4**. (4)

4.4 Set the print area to **cells A6:H40**. (1)

Work in the **Graph** worksheet.

4.5 Use a SUMIFS function in **cell H2** and the data in the **Quality** worksheet to determine the total number of health incidents of all the measuring stations in the Eastern Cape in 2018. (5)

4.6 Create a graph/chart to appear as follows:



(5)

Save and close the **4Air** spreadsheet.

[19]

QUESTION 5: DATABASE

The municipality keeps track of companies contributing to the pollution problem. As part of the effort, they also investigated residents' recycling habits in terms of solving the pollution problem.

Open the **5Save** database.

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

5.1.1 Change the field size of the *Coverage* field to Decimal. (1)

5.1.2 Insert a combo box for the *PollutionType* field with the values Air, Land and Water. (2)

5.1.3 Values entered for the *Level* field must range from 100 to 1 000.
Insert a suitable validation rule to ensure that the data entered is valid. (3)

5.1.4 Insert a field called *Evidence* with a suitable data type so that documents/files with proof of actions can be included in this field. (2)

Save and close the **tbl5_1** table.

5.2 Modify the form called **frm5_2**, based on the **tblData** table, in Design View as follows:

- Change the heading in the form header to 'Survey'.
- Insert a date control in the form footer, so that only the date displays.
- Apply the Ion theme to the form.
- Change the format of the *YearBorn* field to Medium Date.

Save and close the **frm5_2** form. (5)

5.3 Open the query called **qry5_3**, based on the **tbl_Data** table, in Design View.

Display the average number of drop-offs for each type of recycling activity. Ensure that the average will display an integer value.

Save and close the **qry5_3** query. (3)

5.4 Modify the **qry5_4** query, based on the **tbl_Data** table, in Design View.

- Display only the fields *Name*, *Surname*, *YearBorn*, *Knowledge*, *RecyclingActivity* and *DropOff*.
- Sort the query alphabetically by *Surname*.
- Display only the records where residents indicated that they have knowledge of recycling OR where the *RecyclingActivity* field has a value of 'Very active' AND a *DropOff* number of 15.

Save and close the **qry5_4** query.

(7)

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

- Display only the records of people born after 1990.
- Insert a calculated field called *NewDrop* to calculate an increase of 10% in the number of times recyclables were dropped off (*DropOff*).

Save and close the **qry5_5** query.

(5)

5.6 Open the **rpt5_6** report, based on the **qry5_4** query, in Design View and change it to display as shown below. Use any background colour for the report header.

Rpt5_6						
Surname	Name	YearBorn	Knowledge	RecyclingActivity	DropOff	
	Activity					75
Ally	Mohandas	1968-07-12	Yes	Active		5
Aubin	Joanna	1990-11-01	No	Active		1
Bailey	Heather	1972-03-02	No	Active		5
Ballon	Linda	1976-04-29	Yes	Active		4
Batiss	Pat	1992-08-26	Yes	Active		6
Bhengu	Melina	1981-10-03	No	Active		2
Bowlands	Jasmine	1971-12-22	No	Active		2
Bradbury	Henk	1970-09-29	No	Active		9
Branson	Nick	1987-04-22	No	Active		1
Breedt	Mike	1997-08-19	Yes	Active		1

(7)

Save and close the **rpt5_6** report.

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

[35]

QUESTION 6: WEB DESIGN (HTML)**NOTE:**

- You may **NOT** use a word processing program such as Word to answer the HTML questions.
- An HTML tag sheet has been attached for reference.
- All files needed to complete this question can be found in the examination folder.

A website was created to give more information about a possible future without pollution.

6.1 Open the incomplete **6_1Clean** file in a web browser and also in a text/HTML editor.

The Global Crisis of Plastic Pollution

Cleaning up the ocean will require an international agreement on par with the Paris climate accord.



Top three plastic pollution contributors:

Tons per year	China	8.7
	Indonesia	3.2
	Philippines	1.9

A young sperm whale, the largest toothed predator on Earth and an endangered species, washed up on the beach in south eastern Spain in February. Wanting to know what killed it, scientists brought the whale's 5 896 kg body to a lab for a necropsy. They sliced it open and were shocked when they discovered 29 kg of plastic in its stomach. This trash had caused the severe infection that took the whale's life.

Scientists across the globe are increasingly finding wildlife that has been killed after ingesting or becoming entangled in plastic. Ninety per cent of sea birds, for example, have been found to have plastic in their bellies. And the problem is only getting worse: The estimated 19 billion kg of plastic that ends up in the ocean every year is expected to double by 2025. These plastics will not only kill more animals; they will decimate coral reefs, and damage human health as micro plastics enter the food chain. They create more and larger dead zones where nothing can live, harm biodiversity and change ecosystems. There will likely be additional, unknown impacts; researchers have only been studying ocean plastics for less than two decades.

NOTE:

- Use the example on the previous page as a guide when answering this question.
- Question numbers appear as comments in the coding to indicate where you should insert the answer(s). DO NOT delete these comments.

6.1.1 Insert your examination number so that it displays in the tab of the browser. (2)

6.1.2 Change the font colour of the heading 'The Global Crisis of Plastic Pollution' to red. (1)

6.1.3 Modify the code so that the image displays. (2)

6.1.4 Modify the table so that it displays as shown in the image of the web page on the previous page. (3)

Save and close the **6_1Clean** file.

6.2 Open the incomplete **6_2Pollute** web file in a web browser and also in a text/HTML editor.

Complete the web page to look exactly like the example below.

Home Page

Types of pollution

1. Air pollution
 - Ground-level ozone
 - Carbon monoxide
 - Sulphur oxides
 - Nitrogen oxides
 - Lead
2. Water pollution
3. Light pollution
4. Noise pollution
5. Soil pollution

Save and close the **6_2Pollute** file. (6)

ONE mark will be allocated for correctly closing tags and correctly nesting in both the files.

(1)
[15]

QUESTION 7: GENERAL

Pollution is a concern for many companies and the responsibility to control it rests with the management of the companies.

7.1 After monitoring the pollution in a specific area, a letter must be prepared for the companies with a concerning pollution history.

Open the **7Letter** document to be used for a mail merge.

7.1.1 Change the form controls in the letter as follows:

- Change the form field control below the text 'Date:' to display the current date.
- Add the option '14' in the drop-down form field control next to the text 'Reply required within:'.

Save the **7Letter** document, but do NOT close it. (2)

7.1.2 Prepare the mail merge as follows:

- Link the **7Letter** document with the data source, the **7Company** spreadsheet.
- Select only the companies that have a 'high' and 'very high' level.
- Replace the text '<Company>' and '<Level>' to display the 'company' and 'level' from the **7Company** spreadsheet.

Save the **7Letter** document, but do NOT close it.

Complete the mail merge and save the merged document as **7Merge**. (6)

Close the **7Letter** document.

The Pollution Control Board will give certificates to companies with a consistently low level of pollution. The certificates will be presented in the month corresponding with the monitor date.

Open the **7Date** spreadsheet.

Work in the **Monthly** worksheet.

7.2 Complete the function/formula in **cell D3** to display the name of the companies that have a low level (**column B**) of pollution and where the monitor date (**column C**) was in November. (3)

Work in the **7.3** worksheet.

- 7.3 Display an alphabetical list of names of all the companies with a 'Very high' level of pollution and where the monitor date was in 2021. (3)

Save and close the **7Date** spreadsheet.

- 7.4 Extract the image file from the password-protected folder called **7Picture** using the password 'November'. (1)
[15]

TOTAL: 150

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
<u></u>	Creates underlined 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
	Links to an e-mail address
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 "right", "bottom", "top"
<p align="center"></p>	Aligns an image in the "center", can also be "middle"
	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 mark 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)

YOU MAY USE THIS PAGE FOR ANY PLANNING PURPOSES.

YOU MAY USE THIS PAGE FOR ANY PLANNING PURPOSES.

Examination sticker

150**COMPUTER APPLICATIONS TECHNOLOGY P1 – NOVEMBER 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	Microsoft Edge	Other (Specify)

FOLDER NAME _____

Candidate must enter the file name(s) for each answer. Tick if saved and/or attempted.

Question Number	File name	Saved (✓)	Attempted (✓)	Maximum Mark	Mark Achieved	Marker Initial/Code
1	1Health			25		
2	2Marine			20		
3	3Projects			21		
4	4Air			19		
5	5Save			35		
6	6_1Clean			15		
	6_2Pollute					
7	7Letter			15		
	7Merge					
	7Date					
	7Picture					
TOTAL				150		

Comment (For office/marker use only)



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P1

NOVEMBER 2021

MARKING GUIDELINES

MARKS: 150

CENTRE NUMBER																				
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FINAL MARK

EXAMINATION NUMBER																				
-----------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

QUESTION	1	2	3	4	5	6	7	TOTAL
POSSIBLE MARK	25	20	21	19	35	15	15	150
CANDIDATE MARK								
MARKER CODE/ SIGNATURE								
MODERATED MARK								

These marking guidelines consist of 13 pages.

EXAMINATION NUMBER																			
-----------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- Check the accuracy and skill required before awarding a mark throughout.

QUESTION 1

File name: 1Health

Total Q1: 25

No	Criteria	Maximum Mark			Candidate Mark
1.1	Page size • Page size set to A4 ✓	1		1	
1.2	Line spacing: 2nd paragraph – The following ... • Line spacing set to Multiple, 1.15 ✓	1		1	
1.3	Find and Replace: (Expect 5 occurrences) • Only exact/lowercase text 'ozone' replaced ✓ • 'ozone' appears in Arial Narrow font ✓ • 'ozone' appears in <i>Underline</i> ✓	1 1 1		3	
1.4	Text box: Nitrogen dioxide ... from heart disease. • Text box inserted ✓ • Size: 9 cm high by 8 cm wide ✓ • All data <u>moved</u> into text box ✓ (No mark if copied) • Text box top left corner aligned to 'air' ✓ (Inspection)	1 1 1 1		4	
1.5	Columns: DOES IT MAKE ... fuels and vehicles. • Text placed in two columns ✓ • Width of first column set to 8 cm ✓ • Width of space between columns 1 cm ✓	1 1 1		3	
1.6	Multilevel List: On the road ... keeping windows closed. (Note to marker: Mark from ruler) • Multilevel List applied to given text ✓ • Level 1: Format 1, 2, 3 ✓ (No full stop or bracket) • Level 1: Aligned at 0 cm ✓ text indent at 1 cm ✓ • Level 2: Format a), b), c) ✓ • Level 2: Aligned at 1 cm ✓ text indent at 2 cm ✓	1 1 2 1 2		7	
1.7	Source changed: UK Health Department • Type of source: Website ✓ • URL: http://www.airquality.co.uk ✓	1 1		2	
1.8	Bibliography • (Any) automatic bibliography inserted ✓	1		1	
1.9	Watermark • Picture 1 Clean watermark inserted ✓ • Scale: 150% ✓	1 1		2	
1.10	Inspect document • All hidden text removed ✓	1		1	
	Total for QUESTION 1			[25]	

EXAMINATION NUMBER																				
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- Check the accuracy and skill required before awarding a mark throughout.
- Ignore spelling in all cases where it would not have any impact on the answer.

QUESTION 2

File name: 2Marine

Total Q2: 20

No	Criteria	Maximum Mark			Candidate Mark
2.1	Small caps: UNESCO: Marine Pollution • Font changed to Small caps ✓	1		1	
2.2	TOC • Table of Contents inserted ✓ • Heading 1 style: 1st heading: 'Marine Pollution' ✓ • 'Marine Pollution' at top of the next page ✓	1 1 1		3	
2.3	Hyphenation • Hyphenation options: None ✓ OR Paragraph formatting exceptions: Don't hyphenate	1		1	
2.4	Caption: Picture 1: © Malik Naumann Marine Photobank • Appropriate caption ✓ inserted (<i>Alt + F9</i>) • Caption is the picture's Alt text: ✓	1 1		2	
2.5	Hyperlink: Picture 2: © Chris Deacutis • Hyperlink removed from picture ✓ (<i>Right click on image to check if hyperlink is removed</i>)	1		1	
2.6	Image: Picture 4: © NOAA • Restored to original colour ✓ (<i>Not greyscale</i>)	1		1	
2.7	Cross reference (<i>Accept any picture & page no.</i>) • Linked to (any) picture <i>IOC UNESCO</i> ✓ • Only page number displays ✓ (<i>Alt + F9</i>)	1 1		2	
2.8	Footnote • Footnote inserted on <u>UNEP</u> ✓ • Footnote numbering format set to A, B, C, ... ✓ • Footnote set to 'Restart each page' ✓ • Footnote text inserted ✓ (<i>Environment Programme</i>)	1 1 1 1		4	
2.9	Field: NumWords (<i>Alt + F9</i>) {NUMWORDS *MERGEFORMAT} • NumWords field inserted ✓	1		1	
2.10	Page numbering • Automatic page numbering in Tildes format ✓ • Page numbering inserted in footer ✓ • TOC page and cover page not numbered, third page starts as number ~1~ ✓ • Page numbering continues on all remaining pages ✓	1 1 1 1		4	
Total for QUESTION 2				[20]	

EXAMINATION NUMBER																			
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QUESTION 3**File name: 3Projects****Total Q3: 21**

- Mark the questions from the formulae and not the values/answers in the cell.
- Check against candidate's actual work (Cell references may differ, depending on the candidate's response).
- Candidate may use multiple formulae, cells or 'building blocks' to reach answers.
- Named ranges can be used instead of cell references.
- The answers must still be correct even if changes are made to the existing data.

No	Criteria	Maximum Mark			Candidate Mark
Missions/Sheet1 worksheet					
3.1	Cell A1: Picture <ul style="list-style-type: none"> • Picture 3Logo inserted ✓ • Fits cell A1 ✓ (Mark by inspection) 	1 1		2	
3.2	Cell A3: Fill <ul style="list-style-type: none"> • Pattern fill is the same as cell A2 ✓ 	1		1	
3.3	Worksheet renamed <ul style="list-style-type: none"> • Sheet1 worksheet renamed to Missions ✓ 	1		1	
3.4	Cell F3: =COUNTIF(F6:F55,">55000") <ul style="list-style-type: none"> • COUNTIF and range: (F6:F55) ✓ • Criteria: ">55000" ✓ OR ">R55000" OR ">R55 000.00" 	1 1		2	
3.5	Column G: Conditional Formatting = \$C6:\$C55 = "Air" OR =\$C6 = "Air" <ul style="list-style-type: none"> • Formula: ✓ =C6:C55 ="Air" ✓ • Absolute cell referencing not applied to rows: \$C6:\$C55 OR C6:C55 ✓ • Conditional formatting applied to G6:G55 ✓ • Format: Any fill colour ✓ 	2 1 1 1		5	

EXAMINATION NUMBER														
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3.7	<p>Cell K6: =IF(E6<TODAY(),"Complete",IF(E6-TODAY()<=60,"Notify","*")) OR =IF(E6>=TODAY(),IF((E6-TODAY())<=60,"Notify","*"),"Complete") OR =IF(E6<TODAY(),"Complete",IF(E6-TODAY()>60,"*","Notify")) OR =IF(DAYS(E6,TODAY())<0,"Complete",IF(DAYS(E6,TODAY())<=60,"Notify","*"))</p> <div style="text-align: center; margin: 10px 0;"> <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><i>Complete</i> E6<TODAY()</td> <td style="padding: 5px;"><i>Notify</i> E6>=TODAY() and E6-TODAY()<=60</td> <td style="padding: 5px;"><i>*</i> E6>TODAY()+60</td> </tr> <tr> <td style="padding: 5px;">TODAY()</td> <td style="padding: 5px;">TODAY()+60</td> <td></td> </tr> </table> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 15%;">OUTPUT</th> <th style="width: 25%;">Complete</th> <th style="width: 25%;">Notify</th> <th style="width: 35%;">*</th> </tr> </thead> <tbody> <tr> <td>CRITERIA</td> <td>E6 < TODAY()</td> <td>E6 >=TODAY() AND E6-TODAY() <=60</td> <td>E6 > TODAY()+60 OR E6 >= TODAY()+60</td> </tr> <tr> <td>DESCRIP-TION</td> <td>Check E6 for current date and before the current date</td> <td>Check for current date and whether the current date is within 60 days of E6</td> <td>Check whether E6 is over 60 days after the current date</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Function: Nested IF ✓ • First condition ✓ • Output for first condition ✓ • Second condition ✓ • Output for second condition ✓ • Output for third condition ✓ 	<i>Complete</i> E6<TODAY()	<i>Notify</i> E6>=TODAY() and E6-TODAY()<=60	<i>*</i> E6>TODAY()+60	TODAY()	TODAY()+60		OUTPUT	Complete	Notify	*	CRITERIA	E6 < TODAY()	E6 >=TODAY() AND E6-TODAY() <=60	E6 > TODAY()+60 OR E6 >= TODAY()+60	DESCRIP-TION	Check E6 for current date and before the current date	Check for current date and whether the current date is within 60 days of E6	Check whether E6 is over 60 days after the current date	1 1 1 1 1 1		6	
<i>Complete</i> E6<TODAY()	<i>Notify</i> E6>=TODAY() and E6-TODAY()<=60	<i>*</i> E6>TODAY()+60																					
TODAY()	TODAY()+60																						
OUTPUT	Complete	Notify	*																				
CRITERIA	E6 < TODAY()	E6 >=TODAY() AND E6-TODAY() <=60	E6 > TODAY()+60 OR E6 >= TODAY()+60																				
DESCRIP-TION	Check E6 for current date and before the current date	Check for current date and whether the current date is within 60 days of E6	Check whether E6 is over 60 days after the current date																				
	Total for QUESTION 3			[21]																			

EXAMINATION NUMBER																			
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QUESTION 4

File name: 4Air

Total Q4: 19

- Mark the questions from the formulae and not the values/answers in the cell.
- Check against candidate's actual work (Cell references may differ, depending on the candidate's response).
- Candidate may use multiple formulae, cells or 'building blocks' to reach answers.
- Named ranges can be used instead of cell references.
- The answers must still be correct even if changes are made to the existing data.

No	Criteria	Maximum Mark			Candidate Mark
Quality worksheet					
4.1	Cell D3: =SMALL(E7:E153,2) <ul style="list-style-type: none"> • Function: SMALL ✓ • Cell range: E7:E153 ✓ • 2 ✓ 	1		3	
		1			
		1			
4.2	Cell B7: Data Validation <ul style="list-style-type: none"> • Data validation source: \$J\$7:\$J\$8 ✓ 	1		1	
4.3	Cell G7: Text functions =LEFT(\$D\$4,RIGHT(F7,1)) OR =LEFT(\$D\$4,MID(F7,2,1)) OR =RIGHT(\$D\$4,RIGHT(F7,1)) OR =MID(\$D\$4,RIGHT(F7,1)) <ul style="list-style-type: none"> • Combination of text functions ✓ • Function: LEFT/RIGHT/MID ✓ • From the text in cell D4 ✓ • To extract correct number of characters from cell F7 ✓ (Note to marker: Accept other text functions such as REPT and TEXT if used correctly.)	1		4	
		1			
		1			
		1			
4.4	Print area <ul style="list-style-type: none"> • Print area set to cell range: A6:H40 ✓ 	1		1	

NSC Marking Guidelines

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Graph worksheet				
4.5	<p>Cell H10 OR cell H2 =SUMIFS(Quality!H7:H153,Quality!C7:C153,"Eastern Cape",Quality!D7:D153,2018)</p> <ul style="list-style-type: none"> • Sum range: Quality!H7:H153 ✓ • Criteria range 1: Quality!C7:C153 ✓ • Criteria 1: "Eastern Cape" ✓ • Criteria range 2: Quality!D7:D153 ✓ • Criteria 2: 2018 ✓ OR "2018" <p><i>(Note to marker: Accept cell A2 or cell A10 if it refers to "Eastern Cape" and cell H1 if it refers to 2018.)</i></p>			5
		1		
		1		
		1		
		1		
		1		
4.6	<p>Chart/Graph</p> <ul style="list-style-type: none"> • Bar chart/graph created ✓ • Data selected: =Graph!\$A\$2:\$A\$10,Graph!\$F\$2:\$F\$10 ✓ OR =Graph!\$A\$1:\$A\$10,Graph!\$F\$1:\$F\$10 • Bars display from smallest to largest ✓ • Chart title: Health incidents in 2016 ✓ • Data labels appear on outside end of each bar ✓ 			5
		1		
		1		
		1		
		1		
		1		
		1		
Total for QUESTION 4				[19]

EXAMINATION NUMBER																			
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QUESTION 5

File name: 5Save

Total Q5: 35

No	Criteria	Maximum Mark			Candidate Mark
Table: tbl5_1					
5.1.1	Field: Coverage • Field size changed to Decimal ✓	1		1	
5.1.2	Field: PollutionType • Display control: Combo Box ✓ • Row Source: 'Air', 'Land', 'Water' ✓	1 1		2	
5.1.3	Field: Level Validation rule: Between 100 And 1000 OR >=100 and <=1000 OR >99 and <1001 • 100 and above ✓ • And ✓ • 1000 and below ✓	1 1 1		3	
5.1.4	Field inserted • Field name: <i>Evidence</i> ✓ • Field type: Attachment, Hyperlink ✓	1 1		2	
Form: frm5_2					
5.2	• Form heading changed to 'Survey' ✓ • Only date ✓ appears in form footer ✓ • Ion theme applied to the form ✓ • <i>YearBorn</i> field format changed to Medium Date ✓	1 2 1 1		5	
Query: qry5_3					
5.3	• Group by <i>RecyclingActivity</i> ✓ • Function AVG in <i>DropOff</i> ✓ • Average value displays no decimal places ✓	1 1 1		3	
Query: qry5_4					
5.4	• Only <i>Name</i> , <i>Surname</i> , (<i>YearBorn</i> ,) <i>Knowledge</i> , <i>RecyclingActivity</i> , <i>DropOff</i> fields display ✓ • Sorted by <i>Surname</i> ascending ✓ • <i>Knowledge</i> field criteria: 'Yes' ✓ • OR ✓ • <i>RecyclingActivity</i> field criteria: 'Very Active' ✓ • AND ✓ • <i>DropOff</i> field criteria: 15 ✓ (Expected number of records: 113)	1 1 1 1 1 1 1		7	

NSC Marking Guidelines

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Query: qry5_5				
5.5	<ul style="list-style-type: none"> • <i>YearBorn</i> field criteria: >#1990/12/31# ✓ OR >=#1991/01/01# OR YEAR([<i>YearBorn</i>])>1990 • Calculated field: <i>NewDrop</i>: [<i>DropOff</i>]*10/100+[<i>DropOff</i>] OR [<i>DropOff</i>]*110/100 OR [<i>DropOff</i>]*1.1 OR [<i>DropOff</i>]+[<i>DropOff</i>]*0.1 <ul style="list-style-type: none"> • <i>NewDrop</i>: ✓ • [<i>DropOff</i>] ✓ • * ✓ • 10/100 + [<i>DropOff</i>] OR 110/100 OR 1.1 ✓ <p>(Expected number of records: 58)</p>	1		5
		1		
		1		
		1		
		1		
Report: rpt5_6				
5.6	<ul style="list-style-type: none"> • <i>DropOff</i> field inserted and moved to correct position ✓ • Grouping inserted on <i>RecyclingActivity</i> ✓ • Any colour applied to the page header ✓ • Sorted by <i>Surname</i> ✓ • Function inserted in group header ✓ • = COUNT ✓ (*) ✓ OR any other field 	1		7
		1		
		1		
		1		
		1		
		1		
		2		
	Total for QUESTION 5			[35]

EXAMINATION NUMBER																			
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QUESTION 6**File name: 6_1Clean, 6_2Pollute****Total Q6: 15**

- This question should be marked from the HTML code.
- Numerical attribute values and single words do not need to be in inverted commas.

No	Criteria	Maximum Mark		Candidate Mark
6_1Clean				
6.1.1	Title tags <code><title>12345678</title></code> <ul style="list-style-type: none"> • Title tags ✓ • Examination number inserted ✓ between two tags 	1 1		2
6.1.2	Font colour: Heading: The Global Crisis ... <code><h1>The Global Crisis of Plastic Pollution </h1></code> <ul style="list-style-type: none"> • Font set to a red colour ✓ 	1		1
6.1.3	Picture <code></code> <ul style="list-style-type: none"> • Attribute scr changed to src ✓ • File extension png changed to jpg ✓ 	1 1		2
6.1.4	Table: rowspan <code><table border="5" width="300" cellpadding="10"></code> <code><tr></code> <code> <td rowspan="3">Tons per year</td></code> <code> <td>China</td></code> <ul style="list-style-type: none"> • Only column inserted <code><td...>...</td></code> ✓ • Text 'Tons per year' inserted in first column ✓ • Rowspan="3" ✓ 	1 1 1		3

EXAMINATION NUMBER														
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6_2Pollute					
6.2	<pre> <body>
 Home Page <h2>Types of pollution</h2> <hr size="5" color="Black"/> Air pollution <ul type="square"> Ground-level ozone Carbon monoxide Sulphur oxides Nitrogen oxides Lead Water pollution Light pollution Noise pollution Soil pollution </body> </pre> <ul style="list-style-type: none"> • Hyperlink <ul style="list-style-type: none"> • Tag for hyperlink correctly inserted ✓ • Horizontal line <ul style="list-style-type: none"> • Horizontal rule tag ✓ • size="5" ✓ (Accept any size larger than "1") • Unordered list <ul style="list-style-type: none"> • ... tags ✓ • Type="square" ✓ • Lead ✓ 			6	
	<ul style="list-style-type: none"> • Closing tag(s) or triangular brackets and nesting correctly used. ✓ 	1		1	
	Total for QUESTION 6			[15]	

EXAMINATION NUMBER																			
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QUESTION 7

File names: 7Letter, 7Merge, 7Date, 7Picture

Total Q7: 15

No	Criteria	Maximum Mark			Candidate Mark
7Letter, 7Merge					
7.1.1	Form controls <ul style="list-style-type: none"> Form field set to Current Date ✓ (<i>Alt + F9, Form text Date</i>) '7' and '14' options appear in drop-down form field control ✓ 	1		2	
		1			
7.1.2	Mail merge (<i>Expect 21 letters</i>) <ul style="list-style-type: none"> 7Letter linked to 7Company ✓ spreadsheet Recipients' list is filtered to <ul style="list-style-type: none"> Level = very high ✓ Or ✓ Level = high ✓ Merge fields inserted for <i>Company name</i> and <i>Level</i> ✓ Mail merge completed ✓ <p>(<i>SELECT * from 'Sheet1\$' WHERE 'Level'='very high' OR 'Level'='high'/'Level' LIKE '%high%'</i>)</p>	1		6	
		1			
		1			
		1			
		1			
		1			
		1			
7Date: Monthly worksheet					
7.2	Cell D3: =IF(AND(B3="Low",MONTH(C3)=11),A3," ") <ul style="list-style-type: none"> Criteria: Test if the level is low ✓ Criteria: Test if the month ✓ is 11 ✓ 			3	
		1			
		2			
7.3 worksheet					
7.3	Filter <ul style="list-style-type: none"> Filtered on column A: Very High ✓ Filtered on column B: 2021 ✓ Names sorted alphabetically ✓ 	1		3	
		1			
		1			
7Picture					
7.4	7Picture file extracted ✓	1		1	
				[15]	
				150	
				TOTAL	