



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2019

COMPUTER APPLICATIONS TECHNOLOGY P1

MARKS: 180













TIME: 3 hours

This question paper consists of 17 pages, including an input mask character sheet, an information sheet and an HTML tag sheet.

INSTRUCTIONS AND INFORMATION

1. Owing to the nature of this three-hour examination, it is important to note that you will NOT be permitted to leave the examination room before the end of the examination period.
2. Insert your surname and name in the header of EVERY document that you create or save.
3. The invigilator will give you a disk containing ALL the files needed for the examination OR you will be told where the files can be found on the network or computer. If a disk has been issued to you, you must write your centre number and examination number on the label. If you are working on the network, you must follow the instructions provided by the invigilator.
4. 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.
5. This question paper consists of SIX questions.
6. Answer ALL the questions.
7. 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.
8. Read through each question before answering or solving the problem. Do NOT do more than required by the question.
9. At the end of the examination you must hand in the disk given to you by the invigilator with ALL the files saved on the disk, OR you should make sure that ALL the files are saved on the network/computer as explained to you by the invigilator/teacher. Make absolutely sure that ALL files can be read.
10. During the examination you may make use of the help functions of the programs which you are using. You may NOT use any other resource material.
11. If data is derived from a previous question that you cannot answer, you should still proceed with the questions that follow.
12. Unless instructed otherwise, you must use formulae and/or functions 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.

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.
14. In Annexure A the HTML Tag sheet is provided.
15. The examination folder/data disk that you receive with this question paper will contain the folder and files listed below. Ensure that you have the folder and all the files before you begin this examination.

Name	Date modified	Type	Size
 1LandPollution.docx	2019/04/21 11:28 ...	Microsoft Word D...	424 KB
 2Bullet.jpg	2019/03/11 10:56 ...	JPG File	15 KB
 2LandPollution.jpg	2019/03/11 10:33 ...	JPG File	13 KB
 2LandPollutionBrochure.docx	2019/04/13 03:57 ...	Microsoft Word D...	15 KB
 3Land Pollution.xlsx	2019/04/21 03:54 ...	Microsoft Excel W...	16 KB
 4LandPollution.accdb	2019/05/04 09:20 ...	Microsoft Access ...	576 KB
 4LandPollution.jpg	2019/03/17 09:59 ...	JPG File	15 KB
 5Land Pollution.html	2019/05/04 09:32 ...	HTML Document	2 KB
 5LandPollution.jpg	2019/03/15 08:58 ...	JPG File	15 KB
 6Data.xlsx	2019/04/21 04:21 ...	Microsoft Excel W...	9 KB
 6Letter.docx	2019/04/21 04:21 ...	Microsoft Word D...	151 KB
 6Poster.docx	2019/04/21 08:27 ...	Microsoft Word D...	206 KB

SCENARIO

Land pollution is a serious problem that impacts on humans, animals and the earth. Without taking measures now to reduce pollution levels, permanent changes to the land can occur. The adverse changes to the environment due to land pollution are subtle, but the problem is much bigger than it appears. It is therefore important to Save our Land. The school asked the Grade 12 learners to assist in a campaign to promote sustainable living.

QUESTION 1: WORD PROCESSING

A document was created to give an insight about what land pollution is. Edit the document as requested.

Open the **1LandPollution** word processing document.

- 1.1 Insert a cover page in the document. The cover page must display the following:
 - 1.1.1 A “Facet” cover page at the beginning of the document. (1)
 - 1.1.2 Type Land Pollution in the title field, Save our Land in the subtitle field and landhighschool@ecdept.gov.za in the email field. Delete the abstract field. (3)
- 1.2 Insert an automatic table of contents below the heading “Table of Contents” as follows:
 - 1.2.1 Use the “Title” style for the level 1 headings. (1)
 - 1.2.2 Use the “Heading 1” style for the level 2 headings. (1)
 - 1.2.3 Use the “Heading 2” style for the level 3 headings. (1)
- 1.3 Apply automatic page numbering to the document as follows:
 - 1.3.1 Insert the Accent Bar Right page numbers in the document. (1)
 - 1.3.2 Start the page numbering from the second page of the document, numbering the pages from page 1 onwards. (2)
- 1.4 Format the first paragraph under the heading “Land Pollution”, starting with the text “What’s beneath ...” and ending with “... closer look”. as follows:
 - 1.4.1 Change the paragraph spacing to 6 pt before and 6 pt after the paragraph. (1)
 - 1.4.2 Change the line spacing to exactly 16 pt. (2)
 - 1.4.3 Expand the character spacing by 1.5 pt. (1)
- 1.5 The word “Contaminate” appears twice in this document. Replace the two occurrences of this word with the word “infect”. (2)

- 1.6 Locate the word 'In factories and offices' in the text under the heading 'Waste disposal'.

Add a hyperlink to this text as follows:

- The hyperlink must link to the website www.explainthatstuff.com/land-pollution.html.
- The text "HowStuffWorks" must display when the mouse hovers (is moved) over the hyperlink. (3)

- 1.7 Attach a footnote to the word "Radioactive Waste" under the heading "Waste Disposal". Use the symbol (Wingdings character 83) as a custom symbol and type in 'by-product of nuclear power' as the footnote text. (3)

- 1.8 Justify and automatically hyphenate the whole document. (2)

- 1.9 Add the source displayed at the end of the document to the other sources of the document. (3)

- 1.10 The bibliography at the end of the document does not display any records. Format the bibliography so that it shows at least ONE source. (1)

- 1.11 Insert a field next to the text "Date Created" to display the date that this document was created. (1)

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QUESTION 2: WORD PROCESSING

You are requested to modify the brochure that was created in Word. This brochure will be distributed to people as a form of awareness.

Open the **2LandPollutionBrochure** word processing document and modify it as follows:

- 2.1 Change the page orientation to landscape. (1)
- 2.2 Place a 2¼ pt wide, red double-line page border around the document. (3)
- 2.3 Place the highlighted text of the document into three columns. (4)
- Insert a 1 cm/0.39 inches space between the columns.
 - Insert a line between columns.
 - Headings must be at the top of each column.
- 2.4 Change the heading “What is land pollution?” by using a WordArt with a gold colour Accent 4 Soft Bevel. (4)
- 2.5 Locate the bulleted list under the heading “How to prevent land pollution?”. (4)
- Change the format of the bullets to the picture **2Bullet.jpg** found in the data folder.
 - Set the indentation of the bullets at 0 cm and the paragraphs must be hanging at 1.5 cm.
- 2.6 Insert an Oval Callout Shape at the bottom of the first column with the text “Save Our Land!” (3)
- 2.7 Use the image **2LandPollution.jpg** as a watermark WITHOUT any washout effect and set the scaling to 120%. (4)

[23]

QUESTION 3: SPREADSHEET

A spreadsheet file containing results of the event has been stored in the **3_LandPollution** spreadsheet.

Open the **3_LandPollution** spreadsheet and work in the **Stats per Province** worksheet.

3.1 Format the worksheet as follows:

3.1.1 Change the tab colour of the **Stats per Province** worksheet to any colour other than the original. (1)

3.1.2 Merge and centre cells from cell **A1** to cell **T1**. (1)

3.1.3 Apply a thin diagonal stripe pattern style fill effect with a red colour to the merged cell. (2)

3.1.4 Format **Row 4** so that all contents is visible without enlarging the cells. (1)

3.2 Freeze the pane in **column A** so that all columns display when you scroll right. (2)

3.3 The date the land pollution report was created is stored in cell **A3**. Format the date to display as follows: **(28)-(02)-(2019)**. (3)

3.4 Use suitable functions to create a code in cell **A5**. The code is created by combining the following: (5)

- First two letters of the province.
- A hyphen (-).
- Number of characters of the province.
- All these in capital letters.

3.5 Insert a function in cell **C3** to determine the position of the space in the name 'Eastern Cape' in cell **B5**. (3)

3.6 Use a spreadsheet feature to force the user to enter a whole number that cannot be greater than 999 999 in **column D**. Add a suitable error message that the user will receive if invalid data is entered. (4)

3.7 Some provinces are densely populated than others; this creates a lot of land pollution.

Insert a function in cell **E3** to determine the number of provinces that are bigger than 100000 (Square metres) (**column D**) AND whose population density is less than 55 (**column E**). (5)

- 3.8 The population density of each province is recorded in **column E** and is expressed in percentages. The percentages can be translated as follows:

Population Density	Density
<51	Less Dense
51 to 100	Dense
>100	Highly Dense

Insert a suitable function in cell **F5** to determine the density of the Eastern Cape. (4)

- 3.9 In **column O**, daily inflows per province are recorded. Use an appropriate spreadsheet feature to apply a red data bar to represent the value in the cell. The higher the value, the longer the bar. (3)

- 3.10 Insert a function in cell **Q15** to determine the total budget of all the “Cape” provinces. (4)

- 3.11 The amount budgeted by each province is in **column P** and expenditure in **column Q**. Calculate in cell **R5** the amount that is left after the expenditure of the province has been paid. Copy the result for all provinces. (3)

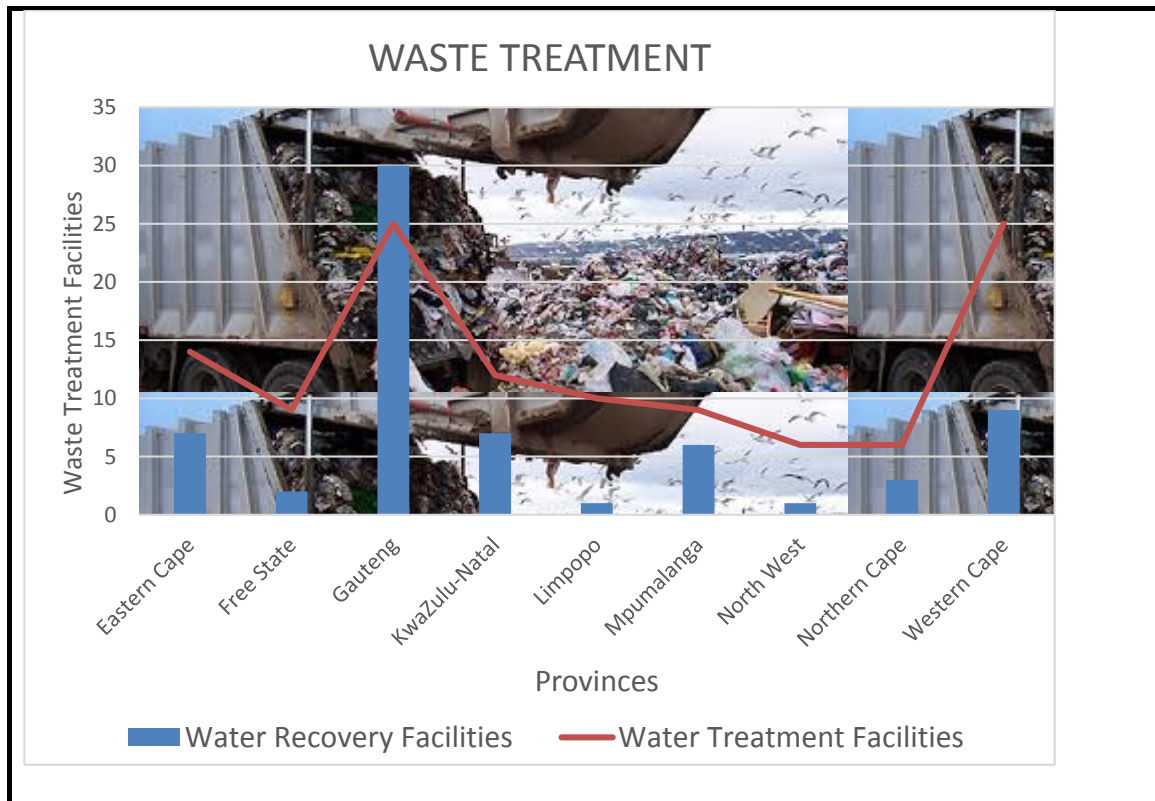
- 3.12 Some provinces used their whole budget for Waste Management. Some have money left in their budget. Use a function in cell **S5** to determine whether the province(s) need a Top Up or not. Insert “Top Up” for those provinces that need Top Up and leave cell blank for province(s) that do not need a Top Up. Copy the answer to the rest of the **column C**. (4)

- 3.13 A town per province was identified for the study of land pollution. These towns are stored as worksheet **Towns**.

Insert a function in cell **T9** to identify the town in the province of Limpopo. (5)

Work in the Graph worksheet.

- 3.14 Create a graph using the data in the **ranges B5:B13; L5:L13 and M5:M13**. The chart/graph must resemble the chart/graph below. Adhere to the instructions that follow.



- The graph must have two series points plotted correctly.
- Series 1 (Waste Recovery Facilities) must be a column graph and Series 2 (Waste Treatment Facilities) must be a line graph.
- Legends must be correctly placed and edited.
- Both axes must be renamed.
- Format chart area to picture.
- Use a spreadsheet feature to move the chart to the **graph** worksheet.

(7)
[57]

QUESTION 4: DATABASE

A database of all waste management facilities is created. **Modify the database and work in the design view.**

Open the **4_LandPollution** database.

4.1 Edit the Waste Pollution table as follows:

4.1.1 Remove the ID field. (1)

4.1.2 Add a new field named *Image* after the province field:

- This field must be able to store a picture.
- Provide the field with an appropriate data type. (3)

4.1.3 Set the primary key to a more appropriate field type. (1)

4.1.4 Change the field properties of Hazardous Waste field so that the user is forced to enter a value. (1)

4.1.5 Change the Own refuse dump field so that:

- The user can only enter values greater than 2 or less than 99.
- Appropriate validation text is inserted. (3)

4.1.6 Set the default value of the Budget field to R10 000. (1)

4.2 Create the form **frm4_2** based on the LandPollution table.

- Insert only the following fields: Province; Hazardous Waste; Budget and Expenditure.
- Change the background colour of the form header to red.
- Change the content of the label in the form header to Waste.
- Insert the date as a field in the header of the form.
- Insert a calculation in the form footer to determine the total number of provinces. (7)

4.3 Open the query **qry4_3** and modify it as follows:

- Edit the **qry4_3** to show only Province, Population served by Municipality and Own Refuse dump.
- Only show those who are 50% and above of population served by municipal waste collection.
- Also show those who have a Hazardous Waste.
- Sort them from smallest to biggest of the Own Refuse Dump field. (5)

4.4 Open query **qry4_4**.

Modify the query so that it displays the total of the provinces whose budget for waste management is R50 000 and more, as shown below.

Province	SumOfBudget
Eastern Cape	R 105 740.00
Free State	R 50 314.00
Gauteng	R 236 324.00
KwaZulu-Natal	R 209 726.00
Western Cape	R 291 920.00

(3)

4.5 Open query **qry4_5**.

Create a calculated field called Balance in the query **qry4_5**. Calculate which province(s) spend more than their budget and have a Hazardous Waste.

(6)

4.6 Create a report from the LandPollution table.

- Show all fields other than the ID field.
- Group according to the Licensed facilities and then by Hazardous Waste.
- Sort from the smallest to the biggest budget.
- Page orientation must be landscape.
- Calculate the total amount used in the Licensed Facilities footer.
- The total amount must be in a suitable format.
- Insert the picture **4LandPollution.jpg** in the header of the report.
- Save as Report.

(10)
[41]

QUESTION 5: WEB DESIGN (HTML)

A web page has been created to create an awareness about land pollution.

Open the incomplete **5_LandPollution.html** web page in a web browser and in a text editor e.g. Notepad.

NOTE:

- Question numbers are inserted as comments in the coding as guidelines to show approximately where the answer(s) should be inserted.
- An HTML tag sheet has been attached for reference.

Your final web page should look like the example below.

Land Pollution


What is Land Pollution?

Land pollution is the deterioration (destruction) of the earth's land surfaces, often directly or indirectly as a result of man's activities and their misuse of land resources.

Sources of Land Pollution

- I. Agricultural sources.
- II. Ashes.
- III. Mining sources.
- IV. Sewage treatment.
- V. Garbage or waste.

Types of Land Pollution

Type of Land Pollution	Cause	Area found
Agricultural Land Pollution	Use of Fertilizers	Farms
Non-biogradable Solid Waste	waste that doesnot decompose fast	Homes, school, hospitals etc
Industrial Waste	Use of Chemicals	Industries
		

Solutions to Land Pollution

1. Make people aware about the concept of Reduce, Recycle and Reuse.
2. Reduce the use of pesticides and fertilizers in agricultural activities.
3. Avoid buying packages items as they will lead to garbage and end up in landfill site.
4. Ensure that you do not litter on the ground and do proper disposal of garbage.
5. Buy biodegradable products.
6. Do Organic gardening and eat organic food that will be grown without the use of pesticides.
7. Create dumping ground away from residential areas.

[Home](#)

- 5.1 Insert tags to ensure that the text “Land Pollution” displays in the browser tab. (1)
- 5.2 Adjust the heading “Land Pollution” as follows:
- The heading “Land Pollution” must be centred.
 - Change font colour to brown. (2)
- 5.3 Change the size of the horizontal line under the heading “Triathlon” to 7 and colour red. (2)
- 5.4 Change the information under the heading “Sources of Land Pollution” to a bulleted list by using capital Roman figures as shown in the example of the website. (3)
- 5.5 A table has been created but does not show correctly. Correct it as follows:
- Change the first row as table headings.
 - Set the table border to 2.
 - Set the space between text and the cell borders to 25.
 - The heading row must be shaded in pink colour.
 - Merge the cells in the last row of the table and insert the picture **5LandPollution**.
 - The picture height must be 200 and width 300.
 - The picture must be in the centre of the cell.
 - The word “Dump” must show if the picture does not display. (9)
- 5.6 Insert a link on the word **Home** below the table, to link to the Top of the website. (3)

[20]

QUESTION 6: GENERAL

A community member of Waterfall Park has written a letter to the mayor of the city to complain about the land pollution.

Open and edit the file **6Letter.docx**.

6.1 The following changes must be done to the letterhead:

- 6.1.1 There are two pictures in the letterhead. Use a word processing feature to combine the two pictures to appear as one. Move the picture below the heading "Waterfall Community". (2)
- 6.1.2 Add a cross reference next to the highlighted "my" in first paragraph that links to the endnote found in the letter. (2)
- 6.1.3 The graph created had an error where the values of the Plastic pollutants were swapped with Broken Metal pollutants. Correct the graph to show the correct percentages. (2)
- 6.1.4 Use a paragraph setting to ensure that the lines in the paragraph starting with "There" and ending with "earth" will stay together and not split if the paragraph runs over to another page. (2)
- 6.1.5 A poster called **6Poster.docx** has been created to educate people about land pollution.

Insert **6Poster.docx** as an icon in the space provided in the letter. (2)
[10]

TOTAL: 180

ANNEXURE A – HTML TAG SHEET

Basic Tags		Formatting Tags continued	
Tag	Description	Tag	Description
<body></body>	Defines the body of the web page		Inserted before each list item, and adds a number or symbol depending upon the type of list selected
<body bgcolor="pink">	Sets the background colour of the web page		Adds an image
<body text="black">	Sets the colour of the body text		Aligns an image: can also be "right", "center"; "bottom", "top", "middle"
<head></head>	Contains information about the document		Sets size of border around an image
<html></html>	Creates an HTML document – starts and ends a web page		Sets the height and width of an image
<title></title>	Defines a title for the document		Displays alternative text when the mouse hovers over the image or when the image is not found
<!-- -->	Comment	<hr/>	Inserts a horizontal line
Text Tags		<hr size="3"/>	Sets size (height) of line
Tag	Description	<hr width="80%"/>	Sets width of line, in percentage or absolute value
<h1></h1>	Creates the largest heading	<hr color="ff0000"/>	Sets the colour of the line
<h6></h6>	Creates the smallest heading	Table Tags	
	Creates bold text	Tag	Description
<i></i>	Creates italic text	<table></table>	Creates a table
	Sets size of font, from "1" to "7"	<tr></tr>	Creates a row in a table
	Sets font colour	<td></td>	Creates a cell in a table
	Sets font type	<th></th>	Creates a table header (a cell with bold, centered text)
Link Tags		<table width="50">	Sets the width of the table
Tag	Description	<table border="1">	Sets the width of the border around the table cells
	Creates a hyperlink	<table cellpadding="1">	Sets the space between the table cells
	Creates an image link	<table cellspacing="1">	Sets the space between a cell border and its contents
	Creates a target location	<tr align="left">	Sets the alignment for cell(s) (can also be "center" or "right")
	Links to a target location created somewhere else in the document	<tr valign="top">	Sets the vertical alignment for cell(s) (can also be "middle" or "bottom")
Formatting Tags		<td colspan="2">	Sets the number of columns a cell should span
Tag	Description	<td rowspan="4">	Sets the number of rows a cell should span
<p></p>	Creates a new paragraph		
<p align="left">	Aligns a paragraph to the "left" (default), can also be "right", or "center"		
 	Inserts a line break		
	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		

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 to right. You can include the exclamation point anywhere in the input mask.
!	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 (for example, \A is displayed as just A)

COMPUTER APPLICATIONS TECHNOLOGY P1 – SEPTEMBER 2019**INFORMATION SHEET** *(to be completed by the candidate AFTER the 3-hour session)*

SCHOOL: _____

NAME: _____

WORK STATION NUMBER: _____

SUITE USED (Mark appropriate box with a cross (X))	Microsoft Office 2010	Microsoft Office 2013	Microsoft Office 2016	Office 365
WEB BROWSER USED (QUESTION 6) (Mark appropriate box with a cross (X))	Mozilla Firefox	Google Chrome	Internet Explorer	Other (Specify)

FOLDER NAME: _____

Tick if saved and/or attempted.

Question Number	File name	Saved (✓)	Attempted (✓)	Maximum mark	Maximum achieved	Marker	HOD	Cluster	EM
1	1_1Land Pollution			29					
2	2_2LandPollution-Brochure			23					
3	3_LandSheet			57					
4	4_LandPollution			41					
5	5_MyWebsite			20					
6	6Letter.docx			10					
TOTAL:				180					

Comment (for marker use only)
