

Computer Applications Technology

Study Opportunities

Grade 11

November 2013

Paper 1 Practical

Time: 3 hours

Marks: 180

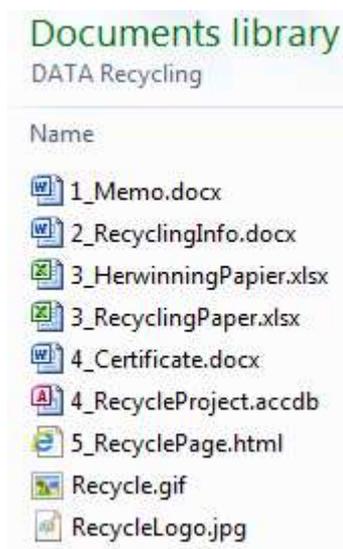
This paper consists of 14 pages (title page included)

Instructions and information

1. Note that you will not be allowed to leave the examination venue before the end of the examination period.
2. Save your work at regular intervals.
3. Read through each question before answering or solving the problem. Do not do more than is required by the question.
4. Note that no printing is required.
5. During the examination you may make use of the help facilities of the programs which you are using. You may not use any other resource material.
6. Note that if data is derived from a previous question that you cannot answer, you should still proceed with the questions that follow.
7. Formulas and/or functions must be used for all calculations in questions involving spreadsheets unless specified otherwise – in other words do not manually calculate and type in the answers!

Please note:

You will receive together with the question paper an examination folder called **DATA Recycling**, which contains the following files:



This folder will be referred to as your *exam folder*.

Theme: Recycling

A number of schools in your area have started and are involved in recycling programmes. Most of these schools have focussed on the recycling of paper, plastic, glass and cans. You need to help with some of the documentation and processing of data for these recycling programmes.

Question 1

Open the word processing file **1_Memo** and carry out the following instructions:

- 1.1 Apply suitable line and paragraph spacing to the green text at the top of the document, to make it easier to read. (2)
- 1.2 Use a multilevel list or outline numbering to renumber the items on the proposed agenda as follows: (5)

The proposed agenda is as follows:

1. Welcome
2. Current Projects
 - 2.1 Paper
 - 2.2 Grade 8 Cans
3. Competitions
 - 3.1 Collect a can
 - 3.1.1 Rules
 - 3.1.2 Prices
 - 3.2 Poster competition
 - 3.3 Slogan competition
4. Containers for class rooms
5. Other sources
 - 5.1 Restaurants
 - 5.2 Outdoor events
 - 5.3 Offices
6. General

Note that there are no full stops after the numbers on the second and third levels (e.g. 3.1 and 3.1.1).

Work on the second page with the 'Proposed Circular to Parents'.

- 1.3 Format the blue text to appear in a single column. (1)
- 1.4 Convert the table under '*What can be recycled?*' to text, and apply the correct left indenting so that the information will appear as shown below. Note that the text must also be indented 3 cm from the right. (3)

<i>What can be recycled?</i>	
Paper:	newspapers, cardboard boxes, cereal boxes, chocolate boxes, toilet roll inners, egg boxes, magazines, etc.
Glass:	all bottles, jam jars, etc.
Metal:	cool drink cans, food cans, lids and tops
Plastic:	water bottles, cooking oil, trays, plastic bags, bubble wrap, shopping bags, ice cream tubs, margarine tubs, foam trays, fast food containers, coat hangers, etc.

(The border surrounding the screenshot is merely to help identify the section, and does NOT mean that you must place a border around your text.)

- 1.5 Format the list under ‘*The following cannot be recycled.*’ so that it will appear as follows: (3)



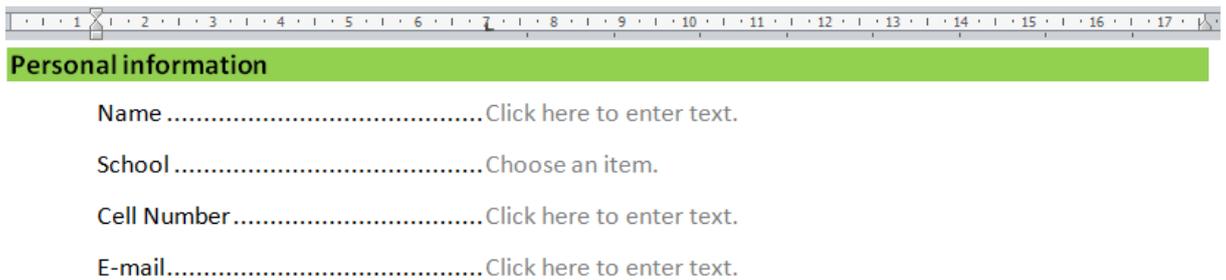
(The border surrounding the screenshot is merely to help identify the section, and does NOT mean that you must place a border around your text.)

Locate the proposed electronic form.

- 1.6 Adapt the electronic form as follows:

Personal information

- 1.6.1 Insert a *text control* that will allow the respondent to enter their name. (1)
- 1.6.2 Set the necessary tab stops with leader lines and spacing to format the items as shown below (look carefully at the settings on the ruler): (3)



Be careful not to remove any of the existing controls.

Involvement

- 1.6.3 Insert a suitable control in the section dealing with involvement (*I would like to be involved with:*) so that users can only choose ONE item from a given list and cannot add any option themselves. The options to choose from are as follows: (3)
- Paper*
 - Plastic*
 - Cans*
 - Glass*
- 1.6.4 A *Combo Box* control has already been inserted next to ‘as well as:’. Make the following changes: (2)
- Remove *Ceramics* as a choice.
 - The options must appear in the following order: *Paper, Plastic, Cans, Glass, Nothing else, thanks.*

Save the document and close it. [23]

Question 2

One of the learners has done some research into recycling and compiled a report. It still needs some rounding off.

Open the document **2_RecyclingInfo**.

- 2.1 Right-align the text in the header and then format this text as shown below:
Let's Reduce, Re-Use, Recycle! (3)
- 2.2 Adjust the Heading 1 style by changing the font colour used to blue. (1)

Paragraph: Introduction

- 2.3 Add a reference to the book below in place of the green shaded text "Insert citation" using the following details:
Author: Alexander, Catherine; Reno, Joshua
Title: Economies of recycling
Year: 2012
City: London
Publisher: Zed Books
The information comes from page 2 of this source. (7)
- 2.4 There is a reference to a source by MacBride at the end of the second paragraph. There is a problem with the details of this source. Sort out the problem with the year and the date. (2)
- 2.5 Add the caption "What is needed" under the diagram on page 1. (2)

Paragraph: Paper

- 2.6 Ensure that all the sub-paragraph headings under the heading 'Paper' have been formatted with the Heading 2 style. (1)
- 2.7 Locate the text 'You cannot recycle:' in the paragraph 'What paper can be recycled?'
- Create a new style to format this text:
Name: Before List
Style type: Paragraph
Style based on: Normal
Set the paragraph spacing of this style to *3 pt After*.
 - Now format the text "You *cannot* recycle": with this new style. (4)

- 2.8 Locate the text 'acid rain' and add a footnote to it as follows:
- The text highlighted in yellow appearing after the text 'acid rain' must be moved and appear as the text for the footnote at the end of the page.
 - Remove the yellow shading.
 - The chemical symbol for nitrogen oxides (NOX) is incorrect. Correct it so that it appears as NO_x.
- (5)

First part of document

- 2.9 Move to the top of the document.
Move the heading 'Introduction' to the top of the next (second) page by adding a Next Page type of Section Break. (2)
- 2.10 Add a Table of Contents at the top of the first page using TWO levels. (2)
- 2.11 Add a Table of Figures directly after the Table of Contents. (1)
- 2.12 Add centred automatic page numbering in the footer. (3)
- 2.13 Make the necessary changes so that the text '*Let's Reduce Re-Use Recycle!*' does NOT appear in the header of the page(s) containing the Table of Contents and Table of Figures. (2)
- 2.14 Insert a Cover Page of your choice. (1)

Save the document and close it. [36]

Question 3

Every Monday the learners at Vista High bring paper to school for recycling. These learners' names, surnames, grades, classes, and the weight of the paper (in kg), are stored in a spreadsheet.

Open the spreadsheet **3_RecyclingPaper**.

Work in the worksheet *Sheet1*.

- 3.1 Change the name of *Sheet1* to *Paper recycling*, and change the colour of this tab to red. (2)
- 3.2 Select the first row and change the row height of *row 1* (only) to 24.
Vertically centre all the column headings in *row 2*. (2)
- 3.3 Freeze the column headings in *row 2*, so that they will remain visible if you scroll down in the worksheet. (1)

- 3.4 Add the following calculations at the bottom of the worksheet, in the cells specified:
- The total number of times paper was brought in for recycling (C214) (2)
 - The average weight of the paper (C215). Use a function to round the average to TWO places after the decimal point. (3)
 - The highest weight (C216) (2)
 - The second highest weight (C217) (3)
- 3.5 Make use of conditional formatting to indicate which weights (column G) are more than 10 kg. Shade the cells with these values any light blue colour. (3)
- 3.6 Use a function in cell B220 to determine the number of times paper recycling was brought in by the Grade 8 learners. (3)
- 3.7 Functions need to be added in cells C220:C224 to calculate the total kg brought in by each of the grades:
- Add a SUMIF function in cell C220 to calculate the total kg brought in by grade 8 learners.
 - Now copy this function for all the other grades (to cells C221:C224), ensuring that it works without you having to change the function. (6)
- 3.8 Add a function in cell C225 to determine the total amount of paper (kg) that was recycled. (1)
- 3.9 All learners who brought in more than 10.5 kg of paper on any single occasion qualify for a prize.
Use suitable functions to display the word 'Prize' in column H if the learner brought in more than 10.5 kg of paper. Nothing must be displayed in column H (it must remain blank) if the learner brought in 10.5 kg or less. (3)
- 3.10 Use a function in cell D227 to determine how many learners qualify for a prize. (3)
- 3.11 The amount that the school receives for every kg of paper is stored in cell J2.
Add formulas in column I to determine the amount of money the school will receive for each contribution of paper. (2)
- Work in the *Graphs* worksheet.
- 3.12 Link the total kg for May (cell B7) with the value in cell C225 in the worksheet *Paper recycling*. In other words, if the value in C225 changes, the value in cell B7 in the *Graphs* worksheet must also change. (2)
- 3.13 Create a suitable chart to compare the amounts of Paper and Glass that were recycled monthly over the last five months, from January to May.
Supply a descriptive chart title and labels for the axes. (4)

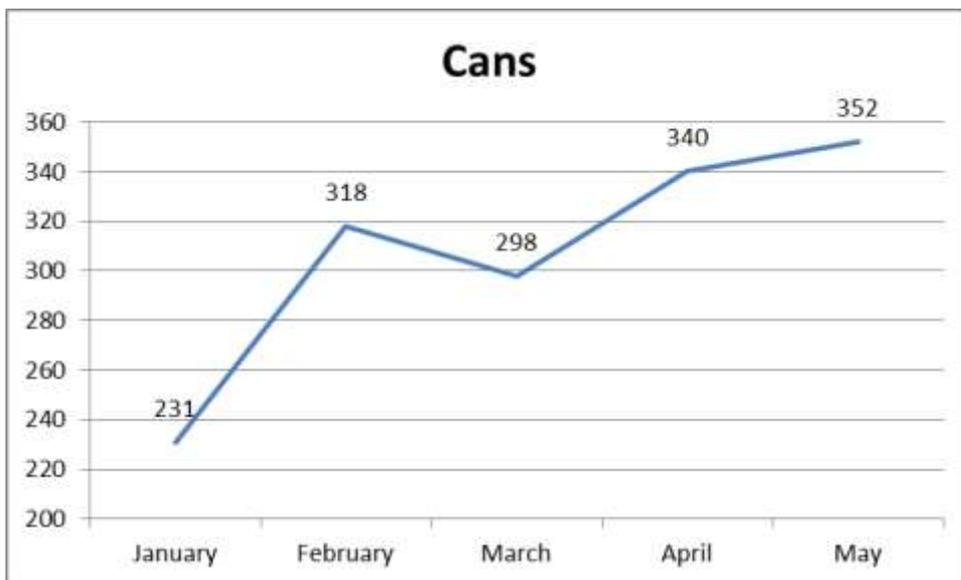
3.14 Create a line chart to display the trend in the recycling of cans from January to May. Supply a descriptive chart title and ensure that no legend appears.

In order to emphasise the trend:

- Set the Y-axis to begin at 200 (minimum value).
- Display at the data points the actual number of cans recycled per month.

Your completed chart should appear similar to the following:

(5)



Work in the *Prizes* worksheet.

3.15 The dates in column E are incorrectly displayed as numbers.

Make the necessary corrections to ensure that the dates will display in the format 2013-05-02.

(2)

3.16 Add suitable functions in column F to generate a random number between 1 and 1000 for each person.

(2)

Save the spreadsheet and close it.

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Question 4

Each of the three schools involved in the recycling project has appointed representatives to act as team leaders or helpers. (All the team leaders have a number of team members who work under them.) The particulars of the team leaders have been stored in a database.

Open the database **4_RecycleProject** and open the table **ListHelpers**.

Note that the values in the field *TypeHelper* indicate or signify the following:

B	B usiness owner
P	P arent
T	T eacher
8 / 9 / 10 / 11 / 12	This indicates a learner, as the number represents the grade of the learner

- 4.1 Make the following changes to the design of the **table**. (Do not change or edit any data in the table.)
- 4.1.1 Set one of the existing fields that is suitable for a key field, as the primary key. (1)
- 4.1.2 Create a Combo Box for the *School* field with the following values:
Driefontein
Sunset
Vista (2)
- 4.1.3 Set a suitable field property for the *TypeHelper* field so that it may not be left blank. (1)
- 4.1.4 Make use of a suitable property to ensure that the user must enter 10 digits in this field when adding a value for the *CellNo* field. (2)
- 4.2 Create a **query** that will display only the names, surnames, cell phone numbers and team sizes of the team leaders from Vista H/S with team sizes of between 6 and 8 members
Use the *ListHelpers* table to base this query on.
Save the query as **VistaTeams**. (6)
- 4.3 Create a **query** that will do the following:
- Show only the fields *Name*, *Surname*, *School*, *TypeHelper* and *CellNo* from the *ListHelpers* table of all the parents, business owners and teachers who are involved in both paper and plastic recycling.
 - Sort the list alphabetically according to the school.
- Save the query as **Paper and Plastic adults**. (6)

4.4 Open the Access **form** *List of Helpers Form*. Change it to appear as follows:

Note the following important aspects of the form:

- The form title is *Recycling helpers* and is formatted with an Impact 20 pt font.
- The image **RecycleLogo.jpg** (provided in your examination folder), appears in the *Form Header*.
- A solid rectangular border is required around the four fields at the top of the *Detail* section.
- There is **no** border around the *Name*, *Surname*, *CellNo* and *Email* fields.
- The fields *InvolvedPaper*, *InvolvedPlastic*, *InvolvedCans* and *InvolvedGlass* are placed at the right, next to the other fields in the *Detail* section.
The font and background of the accompanying labels for these fields is the same as that of the other labels.
- There is an instruction (*Check type of involvement*) to the right of the ‘involved’ fields.

Save the form. (8)

4.5 Create a **report** as follows:

4.5.1 Base the report on the table **ListHelpers** and include the following fields:

Name, Surname, School, TypeHelper, InvolvedPaper, InvolvedPlastic, InvolvedCans, InvolvedGlass, TeamSize. (1)

4.5.2 Group the report first by *School*, and then by *TypeHelper*. (2)

4.5.3 Sort the records according to the surnames. (1)

4.5.4 The report must be in landscape orientation. (1)

4.5.5 Save the report as **List of Helpers**. (1)

4.5.6 The title of the report must be *Let's recycle!* (1)

4.5.7 Make any adjustments, if necessary, to ensure that all headings and details display in full.

Also centre-align the detail in the *TeamSize* field. (2)

4.5.8 Perform the necessary calculations at the end of the report to produce the following statistics:

Total number of team leaders (helpers) listed in the report

Total number of team members, as indicated in the field *TeamSize*

Average number of members per team, rounded to the nearest integer

Add a descriptive label for each calculation. (8)

4.6 It has been decided to award certificates to the Grade 10–12 learners at Vista H/S who have been involved in recycling projects. A query **Certificate Gr10–12** has already been created in the database **4_RecycleProject** to identify the list of recipients.

Open the word processing document **4_Certificate** and perform a mail merge that will enable you to create individualised certificates for the learners concerned.

Note the following:

- Fields must be added to the certificate include the name, surname and grade of the learner, as well as the specific area of involvement (paper, plastic, cans, glass).
- Save the certificate, with the above fields inserted, just *before* you complete the merge, with the same file name (**4_Certificate**).
- You will see in the completed merge that the areas of involvement appear as 'true' (for involvement in an area) and 'false' (for non-involvement in an area). Use a function in your word processor to replace all 'true' values with the word 'Yes!', and all 'False' values with an en-dash (–). For example, the relevant portion of Lisa Adonis' certificate in Graad 12 will appear as follows:

Specific area of involvement:

Paper: –

Plastic: –

Cans: –

Glass: Yes!

Save the completed merge with all the required certificates as **4_Certificate_Merge**. (9)

Save and close all open files.

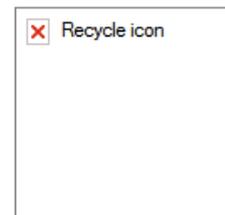
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Question 5

A learner at Vista High offered to put together a basic HTML page on recycling in South Africa. However, certain changes and corrections need to be made before this can be published on the school's website.

Open the document **5_RecyclePage** in your HTML editing program.

- 5.1 Set the title of the HTML document to 'About recycling in South Africa'. (1)
- 5.2 Change the background colour of the page to LightBlue. (1)
- 5.3 Add the necessary tags and attributes in order to display the heading "Recycling Guidelines" formatted in a Heading 1 style. The heading must appear in an Arial, green font. (4)
- 5.4 There is an image of a dustbin with papers that is meant to display to the right of the text in the first paragraph.
When the page is viewed in a web browser, a placeholder similar to the one below is displayed instead of the actual image:



- Correct the HTML code to display the image correctly. (1)
- 5.5 The sentence 'It is important to know ...' in the first paragraph should start on a new line. Add a tag that will achieve this. (1)
- 5.6 After the word 'what' in the first paragraph, all the text in the document appears in italics, instead of just the word 'what'.
Fix this mistake in the code. (1)
- 5.7 The list of four materials we are able to recycle ('Paper' to 'Cans') should be a numbered list, NOT a bulleted list.
Correct the HTML code so that the list displays as a numbered list. (1)
- 5.8 Locate the text 'Here is a list of some of the materials we are able to recycle:'.
Modify the necessary tags to:
- 5.8.1 Display this text in bold. (1)
- 5.8.2 Remove the underlining from the text. (1)

- 5.9 Locate the text 'Reduce # Re-use # Recycle' at the bottom of the document.
- 5.9.1 Centre this text. (1)
- 5.9.2 Insert HTML code that will place a horizontal red line above and below the text 'Reduce # Re-use # Recycle'. (2)
- 5.10 Add a hyperlink at the end of the document (under the second horizontal red line) linking to the website:
<http://treevolution.co.za/guide-to-recycling-in-sa/>.
The 'link text' should display as 'Find out more about recycling here'. (3)

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TOTAL : 180

Appendix A: HTML Tag List

Opening tag	Closing tag
Basic document tags	
<html>	</html>
<head>	</head>
<title>	</title>
<body>	</body>
Heading elements	
<h1>	</h1>
<h2>	</h2>
<h3>	</h3>
...	...
<h6>	</h6>
Text structuring	
<p>	</p>
<hr />	
	
	
	
Text formatting	
	
<i>	</i>
<u>	</u>
	
Graphics	
	
Hyperlinking	
<a>	