

# **Computer Applications Technology**

## **Study Opportunities**

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**Grade 12**

**September 2014**

**Paper 1 Practical**

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*Time: 3 hours*

*Marks: 180*

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This paper consists of 17 pages (title page and HTML Tag list included)

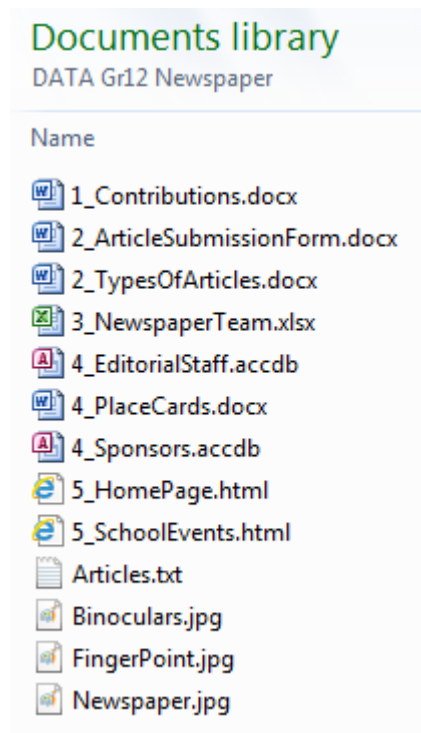
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## Instructions and information

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 which 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 Gr12 Newspaper**, which contains the following subfolders and files:



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

## **Theme: School Newspaper**

*It has been decided to start a school newspaper. Certain pupils will serve on the editorial team, and anyone will be able to submit articles for publication. The school will depend on sponsorships and advertisements to cover the costs. Information on the newspaper will naturally also be available on the Web.*

### **Question 1 – Word processing**

*A document has been drawn up containing guidelines and other assistance for pupils who are interested in contributing to the school newspaper. The document needs to be edited before it can be distributed.*

Open the document **1\_Contributions**.

- 1.1 Format the heading at the top of the document ('Contributions to the school paper') with the *My Title* style. (1)
- 1.2 Format the shaded paragraph under the heading as follows:
  - 1.2.1 Indent the paragraph by 3 cm on the left and 2 cm on the right. (2)
  - 1.2.2 Change the line spacing to Multiple 1.3. (1)
- 1.3. Locate the track change under the heading 'Introduction' on page 2. Reject the proposed change. (1)
- 1.4 Locate the numbered list on page 2, and format this to appear as follows (without the border) using a multilevel list:

1. First plan the general layout
  2. Type in and format all the text
  3. Pictures
    - 3.1 Insert pictures
    - 3.2 Resize if needed
    - 3.3 Supply captions
  4. Fix any mistakes
    - 4.1 Perform a spell check
    - 4.2 Proofread for errors
  5. E-mail your final article to the editor
- Carefully note the number formats used and their positions. (3)
- 1.5 Locate the comment on page 2. Carry out the instruction contained in the comment and then delete the comment. (2)

1.6 Page numbers have already been inserted at the bottom right of the pages. Ensure that the page number does *not* appear on the first page, but starts with 2 from page 2 onwards. (1)

1.7 Locate the text '*YOU MIGHT WANT TO MENTION*' at the bottom of page 2.

1.7.1 The text has been formatted with the *Bullet Intro* style. Modify this style as follows:

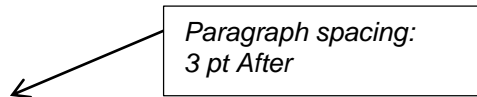
- Font effect: All caps (1)

1.7.2 Use a paragraph option to ensure that the text '*YOU MIGHT WANT TO MENTION*' and the first bulleted paragraph below it, will always be displayed together on the same page. (1)

1.8 Locate the yellow shaded text in the third bullet section under the heading 'Articles about sports matches'.

Format this text like the text in the two previous bullet sections, by removing the shading and making it appear as follows: (4)

- what the best moments were.



Were any points or goals scored (or blocked) in interesting ways? For example, was the winning goal scored in the last few seconds? Or did the ball roll around the top of the basket for a while before finally dropping in? Or was there some excellent strategy involved?

1.9 Locate the section shaded light pink on page 3.

Format these three paragraphs as an indented bulleted list that will appear as follows:

- dis anyone, ever.

- ☒ Don't dis the other school (or team), their players, facilities or spectators. That's just mean, and it can get our newspaper or even our school in serious trouble.
- ☒ Don't dis the ref. *EVER*. That can have comebacks next time, man!
- ☒ Don't dis any moms or dads who made fools of themselves. Sure, it's hilarious when a parent rants at the ref or runs onto the field weeping with joy when their precious child scores a goal, but the kid does *not* want the whole school to be reminded of that. Be nice!

*Please note:*

- Use Wingdings 2, character code 81, for the bullet symbol (☒). (2)

1.10 Locate the two paragraphs of green text on page 4.

- Format this text to be displayed in two columns of equal width, with a line between the columns.
- Use a column break to ensure that the heading 'Basement Ghost caught!' appears at the top of the second column. (3)

- 1.11 Locate the heading 'WARNING' and the paragraph below it, on page 5.  
Change the formatting of the paragraph so that it will appear as shown below.  
Note that the width of both the left and the right paragraph borders is 6 pt. (2)

### **WARNING**

If you find out about something bad going on in the school, like drug abuse or corruption, you have to report it to the relevant authorities first, before you send us your article. The principal has given us his promise that he will never sweep anything bad under the carpet or ruin your 'scoop' by announcing it before the article comes out. He might just want to take some kind of action before it is published: for example, if the article is about a local drug dealer, he might want to get the police to arrest that drug dealer first – after all, we wouldn't want the drug dealer to read the article and make a run for it! The principal might also insist on seeing the article first, for example, to make sure that the learners involved are not named if that could lead to legal trouble, etc. After the authorities have handled the bad situation, we will let you publish the article if the article is good.

- 1.12 Locate the heading 'Reviews' on page 5.
- Copy the whole section on Reviews, including the heading, the introductory paragraph and the two bullet lists, to a new *Word* document.
  - Save the new *Word* document in your exam folder with a **.doc** extension and the file name **ReviewsInfo**.
- Close the document **ReviewsInfo** and continue with the document **1\_Contributions**. (3)

- 1.13 Locate the text '10 cm x 10 cm' highlighted in green on page 6.  
Ensure that all the characters '10 cm x 10 cm' will always remain together and never be split by word-wrapping over two lines. (1)

- 1.14 A cartoon image has been inserted in the section under the heading 'Comics and cartoons' on page 7. Locate this image and do the following:
- Wrap the text around the left side of the image, so that all the text will be visible. (Do not move or resize the image itself.)
  - Add the following caption, to appear below the image:
- Example 2: Cartoon on Spam** (3)

- 1.15 Locate the grey highlighted sentence under the heading 'Competitions and puzzles' on page 7, and insert a citation to the source 'The Mammoth Book of Sudoku' at the end of the sentence. (1)

1.16 Locate the list under the heading 'School Events' on page 8 and use tab settings to change it to look as follows:

Date	Event	Teacher
5 Sept	Mother and daughter high tea (fundraiser)	Mrs R Barnard
6 Sept	Sidewalk drawing competition	Ms L Antelme
8 Sept	Gr 10 field trip to Groenkloof nature reserve	Ms S Daya
12 Sept	Home economics class brownie competition	Ms M Bronkhorst
12-14 Sept	Gr 11 prefects camp	Mr L Memani
17 Sept	Water Fight Wednesday	Mr F Swanepoel
19 Sept	Birds of prey presentation	Ms Eleen Strydom
26 Sept	Gr 9 Career Day	Mrs S Viegas

Use three different types of tabs at 2 cm, 7 cm and 12 cm respectively. (4)

1.17 Finalise a bibliography for the document by doing the following:

1.17.1 Edit the source 'A Complete Guide to Scouting Skills' by entering the name of the publisher: Random House Group. (1)

1.17.2 Insert an automatic bibliography under the heading 'Bibliography'. (1)

1.18 Locate the Appendix on page 9.

- Centre the entries in the left column of the table vertically in their cells.
- Sort the table by the name of the App (left column).
- Change the margins of page 9 only to fit the Appendix table on a single page. (Note that the margins of all *other* pages must remain unchanged, namely top/bottom: 2 cm and left/right: 2.5 cm). (4)

1.19 Insert an automatic Table of Contents on page 1 under the heading 'Table of Contents'.

- Display only one level. (2)

**Save and close the document.**

**[44]**

## Question 2 – Word processing

A document has been created to enable pupils to submit their articles electronically and to capture other useful information.

Open the document **2\_ArticleSubmissionForm**.

2.1 Insert a Drop Cap on the first letter of the paragraph under the heading.

The position and size (lines to drop) of the Drop Cap must be as in the example shown below. (2)



2.2 Replace the yellow shaded placeholder at 'Surname' with a text form field (legacy). (1)

2.3 Change the format of the form field at 'Date submitted' so that it will display the current date in the format 'Sep 9'. (2)

2.4 Change a property of the check box form field at 'Photo included', so that the check box will appear checked every time the document is opened. (1)

2.5 Locate the form field at the text 'Number of words'.

Add a solid tab leader, to display between the form field and the text, similar to the other tab leaders on the form. (1)

2.6 Move the image into the position as shown:

**Please complete the fields below:**

Name: \_\_\_\_\_

Surname: \_\_\_\_\_

Grade: \_\_\_\_\_


Title of article: \_\_\_\_\_

Date submitted: \_\_\_\_\_

Number of words: \_\_\_\_\_

Photo included: \_\_\_\_\_  (Uncheck the box if NO photos are included)

E-mail your completed form, together with your article, to [ChiefEd@gmail.com](mailto:ChiefEd@gmail.com)



**Note:**

- The spacing of the text on the left has not been changed in any way.
- The image has been resized and rotated. (3)

- 2.7 A summary of the types of articles is contained in the document **2\_TypesOfArticles**.  
 • Insert the document **2\_TypesOfArticles**, as an object, in the space provided in the document **2\_ArticleSubmissionForm**.  
 • The document must be displayed as an icon. (2)
- 2.8 Remove the name of the author from the properties of the file. (1)
- 2.9 Restrict editing of the document to the filling in of forms. Do NOT add a password. (1)
- Save and close the document.** [14]

### Question 3 – Spreadsheet

Each learner wanting to become involved in the newspaper has completed a form to indicate the following:

- The amount he/she will contribute towards sponsoring a page – Page Sponsorship
- How interested the learner will be in certain types of articles – Articles of Interest
- Editorial Post
- Favourite social networking site

Open the spreadsheet **3\_NewspaperTeam** and work in the **Respondents** worksheet:

- 3.1 Merge and centre the cells A1:C1. (1)
- 3.2 Format the column headings in the cells G2:J2 to appear as follows: (1)

<b>School News</b>	<b>Sport Results</b>	<b>Movie/Book Reviews</b>	<b>Competitions &amp; Games</b>
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- 3.3 The amounts sponsored and the amounts already paid, are stored in columns D and E, respectively.
- 3.3.1 Use conditional formatting in column D to shade the cells which contain sponsorship amounts of R50 or more, in a light colour of your choice. (2)
- 3.3.2 Add formulas in column F to calculate the amount outstanding for each of the pupils. (2)
- 3.3.3 Format the amounts as Currency, in Rands. (1)
- 3.4 Calculate the following statistics at the bottom of the worksheet:
- 3.4.1 The number of pupils who are NOT sponsoring a page (cell G41). (2)
- 3.4.2 The total amount paid in so far (cell G42). (2)
- 3.4.3 The highest amount that was sponsored (cell G43). (2)



- 3.4.4 The post for which each pupil applied is stored in column K.
- Add a function in cell G44 to calculate the total number of pupils who wish to serve on the editorial team. (2)
  - Add a function in cell G45 to calculate the number of pupils who wish to serve as a *photographer* on the editorial team. (3)
- 3.5 The total amount sponsored is stored in cell G47. However, only R250 of this will be needed for the initial printing costs. The balance (amount not used) will be used for two other projects, namely the planting of a tree in the school quad (25% of the balance, cell F49), and painting the cloakrooms (75% of the balance, cell F50).  
Enter a formula in cell G49 to calculate how much money will be available for the tree-planting project. (3)
- 3.6 Pupils earn house points for sponsoring. Each R5 sponsored by a pupil earns 2 points for his/her house.  
Add a function in cell J42 to calculate the total number of points earned for the Red school house, based on the sponsored amounts in column D.  
(*Note: all sponsored amounts are strictly in multiples of 5.*) (6)
- 3.7 The language proficiencies of the pupils are stored as percentages in column L. A pupil can serve as a proofreader only if he/she has a language proficiency of at least 80%.  
Use a NESTED IF function to display the word "Yes" in column M if a pupil wishes to be a proofreader (indicated in column K) and has the necessary language proficiency of 80%; otherwise nothing must be displayed in the cell (it must remain empty). (7)
- 3.8 The first edition of the newspaper will feature an article on pupils' favourite social networking sites.  
Use a VLOOKUP function to display the names of the social sites in column O, based on their codes in column N. The lookup table is stored in the **Social Sites** worksheet. (4)
- 3.9 A 'code' must be generated for each learner. These codes will be used by the school bursar and must be made up as follows:  
the first three letters of the pupil's surname,  
followed by an underscore character ( \_ ),  
followed by his/her class.  
Use text functions to create the codes in column P.  
For example: The code for **Stander JJ**, in class **10C**, will be **Sta\_10C**. (5)

3.10 The cut-off date for handing in the forms was 31 May 2014 (stored in cell R1), but many forms were returned after that date.

- Use formulas in column R to calculate how many weeks late the forms were returned by each of the pupils. Use absolute cell referencing where required.
- Use the ROUNDUP function to ensure that the result will be rounded up to the next whole number and that any fraction of a week will thus count as a full week.
- *Note that negative values will indicate early hand-in dates.*

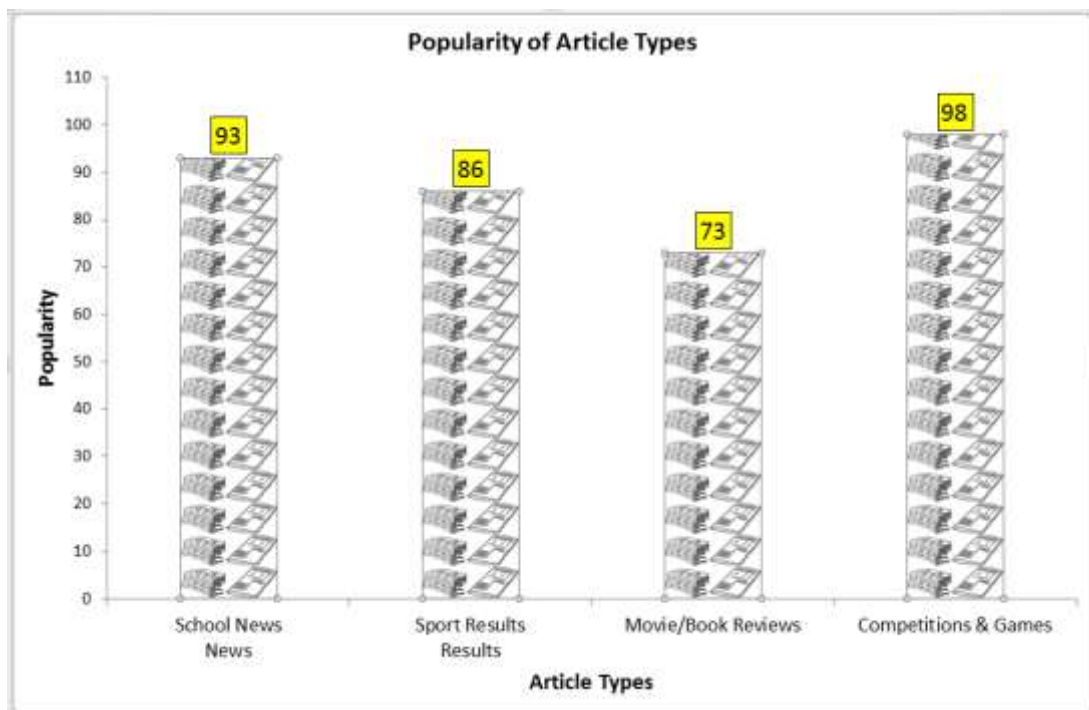
(4)

3.11 The chart on the worksheet **Respondents** is intended to compare pupils' preferred articles of interest, as summarised in cells G38:J38.

Do the following:

- Move the chart to a new worksheet, called **Chart1**.
- Two series have been charted by mistake. Remove the incorrect series.
- Convert the line chart to a Clustered Column chart.
- Fill the data series with stacked images of the file **Newspaper.jpg** (in your exam folder).
- Change the major unit of the Y-axis to 10.
- Add a rotated Y-axis title, called 'Popularity'.

Your completed chart should appear as follows:



(6)

Save and close the spreadsheet.

[53]

## Question 4 – Database and Mail Merge

4.1 Your help is needed in customising a database of pupils who have applied to serve on the newspaper's editorial team.

Open the database **4\_EditorialStaff** and make the following changes to the design of the table **Staff**:

4.1.1 Add an AutoNumber field called *Admin* as the first field in the table. Make this field the primary key. (3)

4.1.2 Make it compulsory for a user to enter a value for the field *SurnameInitials* when entering a new record in the table. (1)

4.1.3 Change the size of the field *House* to 5 characters. (1)

4.1.4 The values in the field *Class* contain three characters and are used to describe the classes of the pupils (only grades 10–12).

Create an input mask that will force users to enter data in this field in the following format:

- Two compulsory digits followed by
- One compulsory upper case character. (3)

4.1.5 The most popular main interest of the pupils is 'Competitions / Games'. Set the default value of the field *MainInterest* to 'Competitions / Games'. (1)

4.1.6 Create a validation rule on the field *LanguageScore*, to ensure that only values from 3 to 9 will be accepted.

A suitable error message should be displayed if the user attempts to enter a value that is not in the range specified. (2)

Make the following change to the content of the table **Staff**:

4.1.7 The favourite social site of the pupil E. Smith is Pinterest, not Facebook. Correct the record of E. Smith accordingly. (1)

**Save and close the table (but do not close the database).**

4.1.8 Export or copy the information retrieved by the query *Photographers* to a word processing file in rich text format (RTF).

Save this file as **Photographers** in your exam folder. (2)

4.1.9 Import the records from the file **Articles.txt** into a **NEW** table in the database **4\_EditorialStaff**.

*Note that:*

- The data in the text file is in delimited format (delimiter = *tab*).
- The first row of the text file contains the field names.
- Let Access add a primary key.
- The name of the new table must be **ArticleTable**.

(2)

**Close the database.**

4.2 *A database has been created to keep record of the involvement of parents, members of the community and businesses in sponsoring the newspaper.*

Open the database **4\_Sponsors** and use the table **Finance** to do the following:

4.2.1 Create a query as follows:

- Display only the fields *Surname, FirstName, Cell\_No* and *Category*.
- Include in the query only the following sponsors:
  - Sponsors who are parents of Grade 12 learners

**AS WELL AS**

  - Sponsors in the Business category who are NOT advertisers.
- Sort the records by the *Category* field.
- Save the query as **QuerySponsors**.

(6)

4.2.2 A request will be made to certain sponsors, requesting a 15% increase in their sponsorship.

Open the query **IncreaseRequest**.

- Change the criteria of the query, to extract the records of sponsors in the *Community* category who sponsored an amount of R100 or more.
- Create a new calculated field called **IncreaseAmount**, that will display a 15% increase in the amount sponsored.
- Save the query.

(5)

4.2.3 Open the form **SponsorForm** and change it as follows:

The screenshot shows a form titled "Sponsors" with a red heading. In the top right corner, there is an image of a newspaper and a mobile phone. The form contains the following fields and values:

- ID: 1
- Surname: Akker
- FirstName: Tshepise
- Cell Number: 0733615004
- Advertiser (Y/N):
- No of Adverts: 0
- Category: Parent (dropdown menu)
- Grade: 12

Below the main form area, there is a field for "Amount Sponsored" with the value "R 50.00". To the right of this field, there is a red instruction: "Enter Amount Sponsored only for NON-Advertisers!".

- Change the font colour of the heading 'Sponsors' to red.
- Insert the image **Newspaper.jpg** in the Form Header.
- Swop the position of the fields *Cell\_No* and *Amt\_Sponsored*, together with their respective labels, so that they will be displayed as shown.
- The Combo Box next to *Category* only contains the values 'Parent' and 'Community'.

Add the value 'Business' to the Combo Box.

(4)

4.2.4 The bursar has requested a report of all sponsors who are parents in the school.

Create a report based on the query **ParentSponsors**, that contains all the fields except *Category*.

- Group the records by *Pupil\_Grade*, AND then sort them by *Surname* within each group.
- Display the report in landscape orientation.
- Calculate and display at the bottom of each *group* the number of sponsors in the grade.
- Calculate and display at the bottom of the report the average amount sponsored.

Format the amount as Currency.

- Supply a descriptive label for each of the calculations.
- Save the report as **ParentReport**.

(13)

**Close the database.**

4.3 Certain sponsors have been invited to a thank-you luncheon and place cards need to be printed. The basic layout of the cards has already been created.

Open the document **4\_PlaceCards**.

- Use your word processor's mail merge facility to produce the necessary cards, for the advertisers only. Replace the placeholders with the corresponding fields of the table **Finance** in the source database **4\_Sponsors**.
- Save the document, with the appropriate fields inserted, just *before* you complete the merge. Use the same file name **4\_PlaceCards**.
- Save the completed merge as **4\_PlaceCards\_Merge**. (5)

**Save and close both documents.**

**[49]**

### **Question 5 – Web design (HTML)**

*A member of the editorial team has created a basic website to advertise and promote the school newspaper. A few changes need to be made before it will be ready for publishing on the school's intranet.*

Open the file **5\_HomePage** in your HTML editing program and do the following:

- 5.1 Add HTML code so that the title 'School Times' will be displayed in the tab or title bar of your browser. (2)
- 5.2 Add HTML code to insert the image **NewsPaper.jpg** directly below the heading 'Welcome to The School Times'. (2)
- 5.3 Locate the paragraph under the heading 'Read all about it!'.
  - 5.3.1 Split the single paragraph into two paragraphs. The second paragraph should start with the sentence 'Best news of all . . .'. (1)
  - 5.3.2 Format the text 'BIG BIG INTERNET' in bold. (1)
- 5.4 Locate the table under the heading 'Types of Articles we would like to publish'.
  - 5.4.1 Locate the image of a pointing finger in the left column.  
Add HTML code so that the text 'Image of pointing finger' will be displayed, if a browser is unable to display the image. (1)
  - 5.4.2 Convert the numbered list in the second column to a bulleted list. (1)
  - 5.4.3 Add the item 'Sports matches' as the first item in the list. (2)
  - 5.4.4 Remove the borders from the table. (1)

- 5.5 Insert a horizontal line across the full width of the page, between the table (whose borders you removed in question 5.4.4 above) and the heading 'Upcoming School Events'. (1)

**Save and close the file 5\_HomePage.**

Open the file **5\_SchoolEvents** in your HTML editing program and do the following:

- 5.6 Change the font type of all the body text to Comic Sans MS. (1)

- 5.7 Locate the image of the pair of binoculars below the heading 'School Events'.  
Change the position of the image, so that it will be displayed on the left side of the page. (1)

- 5.8 Locate the table on the page.

- 5.8.1 Change the background colour of the table to lightgreen. (1)

- 5.8.2 Add HTML code to change the distance between the cell borders of the table to 10 pixels. (1)

- 5.8.3 Format the text 'Event' (at the top of the second column) as a table header element, so that it will display correctly as a column heading. (1)

- 5.9 Hyperlink the text 'Groenkloof nature reserve', in the fourth row of the table, to the URL: <http://www.footprint.co.za/groenkloof.htm>. (3)

**Save and close the file 5\_SchoolEvents.**

**[20]**

**TOTAL : 180**

## HTML Tag Sheet

Structural / Basic tags	
<body> </body>	Defines the body of web page
<body bgcolor="pink">	Sets the background color of web page
<body text="black">	Sets the colour of the body text
<head> </head>	Contains information about document
<html> </html>	Starts and end a web page
<title> </title>	Defines a title for the document
<!-- -->	Comment
Formatting Tags	
<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
<ol></ol>	Creates a numbered list
<ul></ul>	Creates a bulleted list
<li></li>	Inserted before each list item, and adds a number or symbol depending upon the type of list selected
Text Tags	
<h1></h1>	Creates the largest heading
<h6></h6>	Creates the smallest heading
<b></b>	Creates bold text
<i></i>	Creates italic text
<font size="3"> </font>	Sets size of font, from 1 to 7
<font color="green"> </font>	Sets font color
<font face="Times New Roman"> </font>	Sets font type
Graphics Tags	
	Adds an image
	Aligns an image: can be left, right, center; bottom, top, middle
	Sets width of border around an image
	Sets the height and width of an image
	Displays alternative text when the mouse hovers over the image
<hr/>	Inserts a horizontal line
<hr size="3"/>	Sets size (height) of line
<hr width="80%"/>	Sets width of line, in percentage or absolute value
<hr color="Red"/>	Sets the colour of the line



<b>Links Tags</b>	
<code>&lt;a href="URL"&gt; link text &lt;/a&gt;</code>	Creates a hyperlink displaying the link text
<code>&lt;a href="URL"&gt; &lt;img src="name"&gt; &lt;/a&gt;</code>	Creates an image link
<code>&lt;a name="NAME"&gt; &lt;/a&gt;</code>	Creates a target location
<code>&lt;a href="#NAME"&gt; &lt;/a&gt;</code>	Links to a target location created somewhere else in the document
<b>Table Tags</b>	
<code>&lt;table&gt;&lt;/table&gt;</code>	Creates a table
<code>&lt;tr&gt;&lt;/tr&gt;</code>	Creates a row in a table
<code>&lt;td&gt;&lt;/td&gt;</code>	Creates a cell in a table
<code>&lt;th&gt;&lt;/th&gt;</code>	Creates a table header (a cell with common bold, centered text)
<code>&lt;table border="1"&gt;</code>	Sets the width of the border around the table cells
<code>&lt;table cellspacing="1"&gt;</code>	Sets the space between the table cells
<code>&lt;table cellpadding="1"&gt;</code>	Sets the space between a cell's border and its contents
<code>&lt;table width="50%"&gt;</code>	Sets width of table, in percentage or absolute value
<code>&lt;tr align="left"&gt;</code>	Sets alignment for cell(s) (left, can also be center, or right)
<code>&lt;tr valign="top"&gt;</code>	Sets vertical alignment for cell(s) (top, can also be middle, or bottom)
<code>&lt;td colspan="2"&gt;</code>	Sets number of columns a cell should span
<code>&lt;td rowspan="4"&gt;</code>	Sets number of rows a cell should span