



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2017

COMPUTER APPLICATIONS TECHNOLOGY: PAPER II

Time: 3 hours

180 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 12 pages and an HTML Tag List insert of one page. Please check that your question paper is complete.
2. You may only use text-based editors for the HTML section, namely Notepad, Notepad ++, WordPad and Komodo text editor.
3. You must answer ALL the questions. Please read the entire question before attempting a solution. Do not do more than is required by the question.
4. Take note of the mark allocation to ascertain the solution required and the amount of time needed to be spent on each question.
5. It is in your best interest to get into the habit of saving regularly.
6. If a formula/function such as a complicated *if* statement does not work, indicate the question number, give a brief explanation, and paste a screenshot of the spreadsheet or database into the **Screenshots** document to obtain part marks; you may then leave it out of the spreadsheet or database program.
7. It is recommended that you make a backup copy of all database files **before** you start your examination.
8. All word processing documents should be set up as follows (unless other instructions are given)
 - The default for measuring units – centimetres (cm)
 - Language – English (South Africa)
 - Page size – A4
 - Margins – 2,54 cm
9. Note that you may use the *offline* help function available in each application.

10. Figures in the question paper have a border. When a figure is provided as part of a question, you are not expected to add the border unless specifically instructed to do so.
11. All data files listed in Instruction 12 can be found on the network drive that has been allocated for this examination. Please note that all solutions must be saved to your examination folder on this network drive.
12. You have been supplied with one subfolder and 21 files in your examination folder. Refer to **Figure 1** below and check that the following folders and files exist in your examination folder:

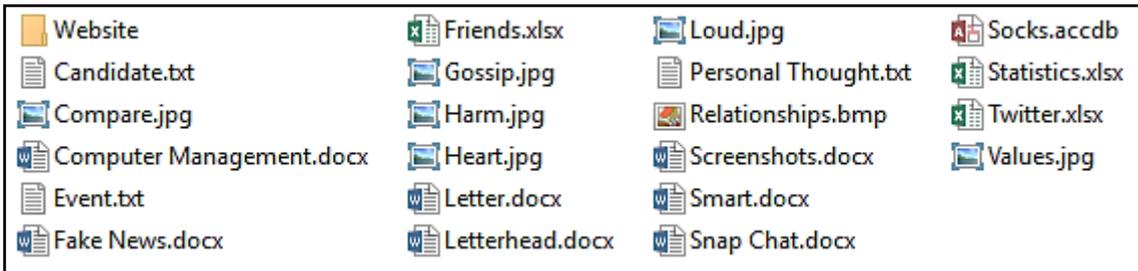


Figure 1

The **Website** subfolder contains 2 files and 1 subfolder. Refer to **Figure 2** below.

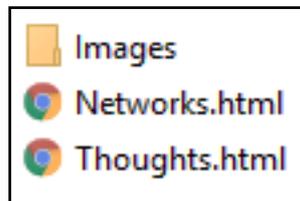


Figure 2

The **Images** subfolder within the **Website** folder contains 2 files. Refer to **Figure 3** below.



Figure 3

Read the scenario below that describes the background to the practical tasks you are required to perform.

SCENARIO

You are worried about the effect social networking and media is having on your younger sibling.

QUESTION 1

- 1.1 Set the file **Personal Thought** to be hidden. (1)
- 1.2 Modify the word processing document **Letterhead** to be a document template. (2)
- 1.3 Organise your preloads as follows:
- 1.3.1 Create a folder called **Archive**. (1)
- 1.3.2 Move all files that were **modified** in the year 2015 or earlier into this folder. (2)
- 1.4 Rename the file **Candidate** to your examination number. (1)

Open the word processing document **Computer Management** and answer the following questions in the appropriate section:

- 1.5 Provide the brand name and version of the operating system you are using. (2)
- 1.6 Modify your examination folder's view as follows:
- Change the view to details.
 - Order by type descending.
 - Capture a screenshot of this view and paste it into the correct place in the **Computer Management** document. (3)
- 1.7 Provide the following information regarding the file **Heart.jpg**.
- 1.7.1 Author (1)
- 1.7.2 File size (1)
- 1.8 Provide a screenshot of the html editor you will be using for this examination and paste it into the correct place in the **Computer Management** document. (1)
- 1.9 Your sibling's computer's disk space is full; provide instructions on how to run a disk clean-up. Place your answer in the correct place in the **Computer Management** document. (3)
- 1.10 Capture a screenshot of the disk space your system drive has left on your machine and paste it into the correct place in the **Computer Management** document. (2)

Add your Examination Number to the header of the document.

Save and close the document **Computer Management**.

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QUESTION 2

Open the document **Fake News** and make the following changes:

- 2.1 Modify the page margins as follows:
- 2.1.1 Set the Top, Bottom, Left and Right margins to be 3 cm. (1)
 - 2.1.2 Set the gutter to be 1 cm. (1)
- 2.2 Add a border around the whole document as follows:
- 2.2.1 Add a shadow border around the whole document. (2)
 - 2.2.2 Set the border width to be 3 pt. (1)
- 2.3 Insert an automatic table of contents directly after the title 'Fake News'. (2)
- 2.4 Modify the header and footer of the document as follows:
- 2.4.1 Set it so that the document has a different header and footer on the first page. (1)
 - 2.4.2 Add your examination number to the header of the first page. (1)
 - 2.4.3 Add an automatically updating date in the right of the footer in the section of the document starting on the second page of the document. (2)
- 2.5 Create a new character style in the document as follows:
- 2.5.1 Name the new character style **Reference**. (2)
 - 2.5.2 Set the font family to *Verdana*. (1)
 - 2.5.3 Set the font effects to be *subscript*. (1)
 - 2.5.4 Set the font colour to be *red*. (1)
 - 2.5.5 Apply the style to the text '[howstuffworks.com on 2017/02/01]' at the top of the second page. (1)
- 2.6 Modify the *Heading 2* style as follows:
- 2.6.1 Set the paragraph to have a 12 pt before spacing. (1)
 - 2.6.2 Set the shading to *grey*. (1)
- 2.7 Add a link back to the top of the document as follows:
- 2.7.1 Insert the text 'Back to top' at the end of the document. (1)
 - 2.7.2 Hyperlink this text to the top of the document. (2)

Save and close the document **Fake news**.

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QUESTION 3

You decide to create a poster for your neighbourhood on promoting wise use of digital platforms.

Open the document **Smart** and make the following changes:

3.1 Modify the page setup as follows:

3.1.1 Set the *orientation* of the document to portrait. (1)

3.1.2 Set the *paper size* of the document to A3. (1)

3.2 Add a footnote to the text 'compare' that displays the words: 'People only post the best of themselves'. (2)

3.3 Set the font size of all text to 32. (1)

3.4 Add a Drop Cap to each of the two sentences. (2)

3.5 Insert an image as follows:

3.5.1 Insert the image **Gossip** below the last line of text. (1)

3.5.2 Set the paragraph alignment to right. (1)

3.5.3 Set it to **NOT** lock the aspect ratio. (1)

3.5.4 Set the height to *25 cm* and the width to *18 cm*. (1)

3.5.5 Add a double red frame around the picture. (2)

Add your Examination Number to the header of the document.

Save and close the document **Smart**.

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QUESTION 4

You want to create a letter for all your friends with younger siblings, so that they can also look after their brother and sisters.

Open the word processing document **Letter** and make the following changes:

- 4.1 Modify the table as follow:
 - 4.1.1 Merge the two cells in the first row. (1)
 - 4.1.2 Set the first row to have a light blue shading. (1)
 - 4.1.3 Modify the border of the table to have a 3 pt double outer border and no lines within the table. (2)
- 4.2 Add a comment to the text '201 Facebook Friends' that displays the words 'Few, if any, teens have met that many people in person'. (2)
- 4.3 Create a right-aligned tab stop at 15 cm with a dotted leader for all text from after 'Proposed wisdom to share' to 'Block the person'. The first part of each line must be at the left margin. (3)
- 4.4 Merge the document as follows:
 - 4.4.1 Link the document to the data source **Friends** using the sheet named *Data*. (2)
 - 4.4.2 Apply a filter to the data source so that it will only use records where the Younger sibling field is 'Yes'. (2)
 - 4.4.3 Replace the text 'friend' with the two merge fields First name and Last name separated by a space. (2)

Add your Examination Number in the header of the document.

Save and close the document **Letter**.

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QUESTION 5

You have gathered some statistics on friends in your social network, and now need to add formatting and calculations to the data to improve the usefulness of the data.

Open the spreadsheet **Statistics** and note that the workbook consists of seven worksheets, namely *Posts*, *Summary*, *Users*, *Pages*, *Adverts*, *Q 5.17* and *Posts 2*.

Note that all the changes below must be applied to the worksheet labelled *Posts*.

5.1 Set the width of Columns A, B, C, D and E to 13. (2)

5.2 Format cell ranges A1:E1 as follows:

- Set a double border at the bottom of the cells
- No other border
- Bold
- Yellow Fill (4)

5.3 Add the page number field to the right of the footer section. (2)

5.4 Replace all occurrences of the word 'celebration' with the word 'Celebration'. (2)

5.5 Sort all the data by Topic ascending and then by User descending. (3)

5.6 Filter the data so that only messages with the topic 'Relationships' that are over 150 characters are displayed. (3)

5.7 Apply conditional formatting to column B as follows:

- Anger should have a *red* fill
- Mourning should have a *blue* fill
- Bored should have a *yellow* fill (3)

Note that all the changes below must be applied to the worksheet labelled *Summary*.

5.8 Insert a calculation in B2 to determine the average number of characters per post in the worksheet labelled *Posts*. (2)

5.9 Insert a calculation in B3 to determine the median number of characters per post in the worksheet labelled *Posts*. (2)

5.10 Insert a calculation in B4 to determine the number of posts in the worksheet labelled *Posts* per the gender given in A4. Expand this calculation down to B5. (3)

Note that all the changes below must be applied to the worksheet labelled *Users*.

5.11 A user's formal name consists of their title, followed by a space, followed by the first letter of their first name, followed by a full stop and space, followed by their surname.

For example, Mr Neil Patrick's formal name would be Mr N. Patrick.

In column E (Q 5.11) insert a function to determine the user's formal name. *Expand the calculation so that all users' formal names will be determined.* (5)

5.12 In column G (Q 5.12) insert a function to determine the age the user will be turning this year. *The age should automatically update each year. Expand the calculation so that all users' ages will be calculated.* (3)

Note that all the changes below must be applied to the worksheet labelled *Pages*.

5.13 Format the values in Column E to be percentage. (1)

5.14 In column F, insert a calculation to determine the number of visits that are return visits.

$$\text{Return Visits} = \text{Visits} \times \text{Return visitors}$$
Expand the calculation so that all pages' return visits pm (per month) will be calculated. (3)

5.15 By utilising the data in cells A1:C5 on the *Pages* worksheet, recreate the following chart exactly as given on a new sheet, refer to Figure 4. (4)

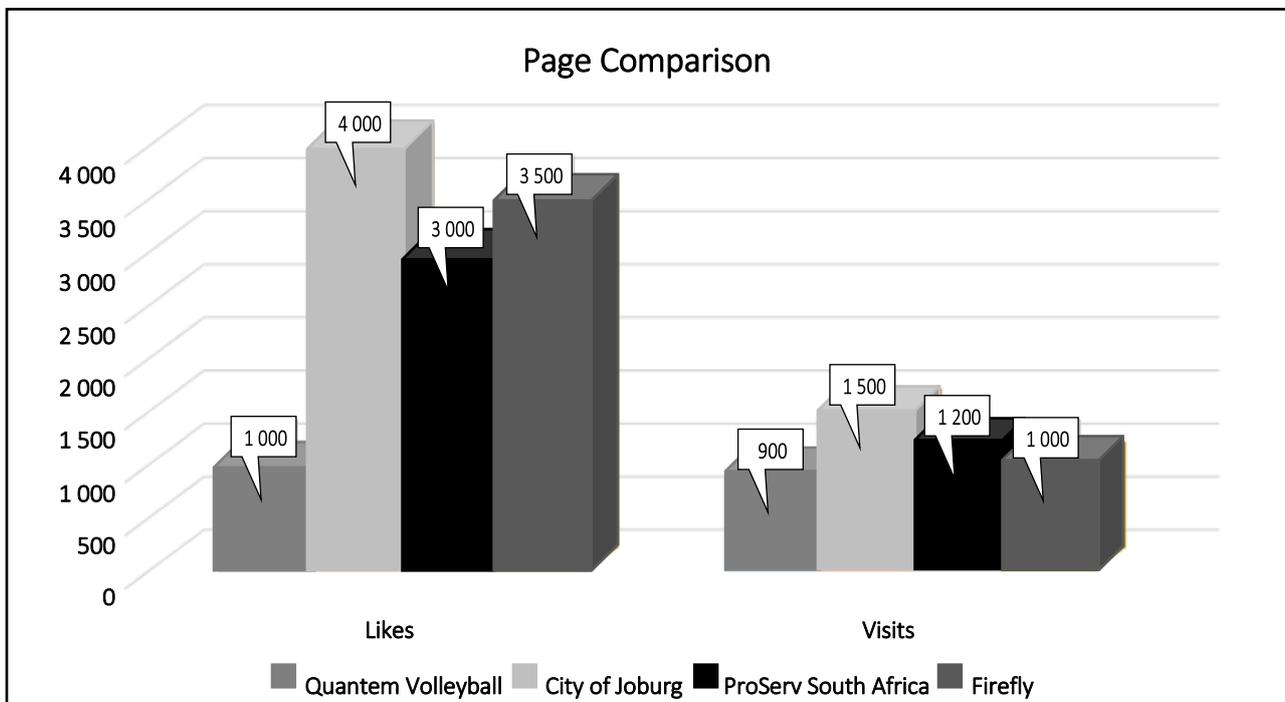


Figure 4

Note that all the changes below must be applied to the worksheet labelled *Adverts*.

- 5.16 The cost of an advert differs depending on the type of organisation indicated in column B (Type). If an organisation is an NPO, the cost is 100, otherwise it is 600. In column C (Q 5.16), insert a function to determine the organisation's cost per advert. *Expand the calculation so that all organisations' costs will be determined.* (3)

Note that all the changes below must be applied to the worksheet labelled Q 5.17.

- 5.17 Insert a calculation in cell B1 to determine which user had the most posts from the *Posts 2* sheet. *You may add any appropriate data and calculations to the rest of this worksheet and/or the Posts 2 worksheet to achieve this.* (5)

Add your Examination Number in the header of each worksheet.

Save and close the workbook **Statistics**.

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QUESTION 6

You design your own social media system called **Socks** where people are friends with everyone subscribed.

Open the database **Socks** and apply the following changes:

6.1 Import data from the text file called **Event** into the *Event* table. (2)

6.2 Apply the following changes to the table *Page*:

6.2.1 Set the field page_id to be the primary key field. (1)

6.2.2 Set the type field to look up from the values Sport, Relationship, Corporate and Academic. (3)

6.2.3 Add a field called Admin, which will look up the field user_name from the table *User*. (3)

6.3 Apply the following changes to the table *User*:

6.3.1 Ensure the Gender field has accurate input from the user as follows:

- Set the field size to 1
- Add a validation rule to only allow 'M' or 'F' (3)

6.3.2 Add an input mask to the phone field to ensure a phone number is entered in the format as in the example (072) 555-1234 and all numbers must be entered. *Please refer to Figure 5 for a list of characters that define input masks.* (3)

Char	Explanation	Char	Explanation	Char	Explanation
0	User must enter a digit (0 to 9)	9	User can enter a digit (0 to 9)	#	User can enter a digit, plus or minus sign.
L	User must enter a letter	?	User can enter a letter	A	User must enter a letter or a digit
a	User can enter a letter or a digit	&	User must enter either a character or a space	C	User can enter characters or spaces.
.,;:;/	Decimal and thousands placeholders, date and time separators.	>	Converts all characters that follow to uppercase.	<	Converts all characters that follow to lowercase.
!	Causes the input mask to fill from the left to right.	\	Characters immediately following will be displayed literally	“”	Characters enclosed in double quotation marks will be displayed literally.

Figure 5

6.4 Create a new table called *Advert* as follows:

6.4.1 Create a primary key field called Advert_id of an appropriate data type. (3)

6.4.2 Create a field called title of the text data type and the format to ensure capital letters. (2)

6.4.3 Create a field called cost of a currency data type and set it to be required. (2)

6.5 Create a form as follows:

6.5.1 Create a form called *User_post* using only the user_name, first_name and last_name fields from the table *User* and only the post and Likes fields from the table *Post*. Ensure the form is grouped by the *User* table, and that the subform is called *Post Subform*. (3)

6.5.2 Edit the label in the form header to 'Users with their posts' and include your examination number. (1)

6.5.3 Set the *Default View Property* of the *Post Subform* to Single Form. (1)

6.5.4 Open the *Post Subform* separately and add a button to the subform containing the posts, which will delete the current post. The caption of the button should be 'Delete'. (3)

6.6 Create queries as follows:

6.6.1 Create a query called *Academic*, which will display only the page title field of all records in the table *Page* with the type 'Academic'. (3)

6.6.2 Create a query called *Popular*, which will display all fields from the table *Post* where the user was 'OneLiner' and with the Likes over 40. (4)

6.7 Create a report as follows:

Create a report called *Posts*, using all fields from the table *Post* and grouped by the field user. (3)

Save and close the database **Socks**.

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QUESTION 7

You have been asked to update the Networks and Thoughts pages of a website promoting good social networking practices.

Open **Networks.html** in the subfolder **Website** and apply the following changes:

- 7.1 Add a title to the page to read 'Good practice' and include your Examination number. (2)
- 7.2 Set the background colour of the table to be green. (2)
- 7.3 Edit the first cell in the first row as follows:
 - 7.3.1 Span the cell over two columns. (2)
 - 7.3.2 Set the cell to have a horizontal alignment of *center*. (2)
- 7.4 Set the width of the first cell on the second row to 250. (2)
- 7.5 Hyperlink the text 'Next page' to the web page **Thoughts.html**. (2)

Save and close **Networks.html**.

Open **Thoughts.html** in the subfolder **Website** and apply the following changes:

- 7.6 Add a heading as follows:
 - 7.6.1 Add a level 1 heading of 'Thought-provoking events'. (2)
 - 7.6.2 Set the font colour to be *red*. (2)
- 7.7 Add an image to the page as follows:
 - 7.7.1 Add the image **Harambe.jpg** located in the subfolder called **Images** within the **Website** folder. (2)
 - 7.7.2 Set the width and height of the image to 250. (2)

Save and close **Thoughts.html**.

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Total: 180 marks