

COMPUTER APPLICATIONS TECHNOLOGY: PAPER I

Time: 3 hours







































180 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 16 pages and an insert (HTML Tag List and Input Mask Character Sheet) of 2 pages (i–ii). Please check that your question paper is complete.
2. The examination consists of 5 sections and 7 questions. All questions in all sections must be answered. **However, in Question 5.18 you may choose to answer either Question 5.18.1 or Question 5.18.2.**
3. You must use a text editor for the HTML section. Acceptable applications are Notepad, Notepad++ or WordPad.
4. Please read the entire question before attempting a solution. Do not do more than is required by the question.
5. Use functions and/or formulas to calculate answers, unless otherwise instructed.
6. Take note of the mark allocation to ascertain the complexity of the solution required and the amount of time to spend on each question.
7. Save your work regularly.
8. If you are unable to get a formula/function to work correctly: open the **Student_Screenshots** document; indicate the question number; paste a screenshot showing the issue and provide a brief explanation to obtain part marks; you may then leave it out of the spreadsheet or database solution.
9. Unless other instructions are given, all word-processing documents should be set up as follows:
 - The default for measuring units – centimetres (cm)
 - Language – English (South Africa)
 - Page size – A4
 - Margins – 2,54 cm
10. You may use the *offline* help function, if available, in each application.
11. 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.

12. Before you begin, rename your data folder to your examination number.

The contents of your exam *Data Files* folder and sub-folders are as follows:

Data Files	Question1	Question2
<ul style="list-style-type: none">  Question1  Question2  Question3  Question4  Question5  Question6  Question7  Student_Screenshots.docx 	<ul style="list-style-type: none">  ComputersOnFire.mp3  gaming.gif  Luccas_Neto.jpg  Q1_Answers.docx  Q1_BecomeYouTuber.docx  Q1_Stats.xlsx  tyler.mp4  Youtube-full-color.svg  youtube-popular.png  YTDocs.zip  YTLogo.png 	<ul style="list-style-type: none">  Finalthoughts.txt  Q2_How to Become a YouTuber.docx  Ultimate.png
Question3	Question4	Question5
<ul style="list-style-type: none">  Q3a_Important_Information.docx  Q3b_Vlogging.docx  youtube-icon.jpg 	<ul style="list-style-type: none">  Q4_Marketing.docx 	<ul style="list-style-type: none">  Q5_Stats.xlsx  YouTubeLogo.jpg
Question6	Question7	Question 7 (files subfolder)
<ul style="list-style-type: none">  TotesZA.accdb  YTLogo.png 	<ul style="list-style-type: none">  files  images  index.html 	<ul style="list-style-type: none">  register.pdf
		Question 7 (images subfolder)
		<ul style="list-style-type: none">  comingsoon.png  James.jpg  james-signature.png  totesza.png

Make sure to check each folder and ensure that every file/document/folder is accessible.

Contextual Scenario



James West is a Matric student who dreams of becoming rich and famous on YouTube. He has decided that, after he completes his Matric, he is going to start up a channel called **Totes-ZA**. He is going to vlog while travelling all around South Africa and hopes to gain many sponsors and subscribers. You are going to help him by researching and formatting various documents that he can read in preparation for his venture.

SECTION A FILE AND FOLDER MANAGEMENT**QUESTION 1**

Open and work only in the folder named **Question1**.

- 1.1 Ensure that file name extensions are visible.
 - 1.1.1 Arrange all files in the folder according to file type, descending. Take a screenshot of the contents of the folder showing the arranged files. (1)
 - 1.1.2 Insert the screenshot in the document named **Q1_Answers**. (1)
 - 1.1.3 Crop and resize the image to only show all the column headings and the arranged files. (1)
- 1.2 Answer the following questions in the document named **Q1_Answers**:
 - 1.2.1 Identify the size of the largest file and write down the answer, in KB, in the **Q1_Answers** document. (1)
 - 1.2.2 How many multimedia (video/audio/graphics) files can be found in the **Question1** folder? (1)
 - 1.2.3 Who is the author of the file named **Q1_Stats.xlsx**? (1)
 - 1.2.4 How many words are there in the **Q1_BecomeYouTuber.docx** file? (1)
 - 1.2.5 Change the metadata of the file named **Q1_BecomeYouTuber.docx** so that the Title property of the file reads: "How to become a YouTuber". (2)
- 1.3 Unhide the hidden folder called **media**. (1)
- 1.4 Copy all video and audio files only into the **media** folder. If you were unable to unhide the hidden **media** folder, then create and use a folder called **Multimedia**. (2)
- 1.5 Extract the contents of the **YTDocs.zip** file to the **Question1** folder. (1)
- 1.6 Create a shortcut, in the **Question1** folder, to the Microsoft Word application on your computer. (2)

15 marks

SECTION B WORD PROCESSING**QUESTION 2**

Open and work only in the folder named **Question2**.

Open the document named **Q2_How to Become a YouTuber.docx**.

Note: In this document, page numbers and/or the location of paragraphs given in the questions may change due to formatting or editing of content in other parts of the document. For example, a paragraph at the bottom of page 3 may shift to the top of page 4.

Page 1

- 2.1 Format the text "How to Become a YouTuber..." on the first line, as follows:
- Font face: Arial.
 - Font Weight: Bold.
 - Font size: 16 pts.
 - Alignment: Centred horizontally. (1)
- 2.2 Create a style called **MyHeading** using the formatted text from Question 2.1. (2)
- 2.3 Under the heading, replace the text **{image here}** by inserting the image **Ultimate.png**. (1)
- 2.4 Format the image **Ultimate.png** as follows:
- 2.4.1 Image height is 8cm exactly. (1)
 - 2.4.2 Image width is 15cm exactly. (1)
 - 2.4.3 Centre the image horizontally. (1)
 - 2.4.4 Add a 3pt, dashed, border of any colour, other than black. (3)
 - 2.4.5 Change the colour saturation of the image to 0%. (1)

Page 3 (dependent on previous question formatting)

- 2.5 Format all headings (shaded with Orange backgrounds) to the Heading 1 style. Note that headings continue after Page 3. (2)
- 2.6 Insert the text "<https://www.youtube.com/user/unboxtherapy>" as a footnote at the end of the text "Lewis Hilsenteger of Unbox Therapy". (1)

Page 4 (dependent on previous question formatting)

2.7 Format the image in the "Assess Your Equipment" section as follows:

2.7.1 Ensure that text wraps around the image. (1)

2.7.2 Add a caption "Vlogging equipment" beneath the image. (1)

Page 5 (dependent on previous question formatting)

2.8 Format the text "Snappa" as a hyperlink to *https://snappa.com*. The text "Visit Snappa" should also display as a ScreenTip when the mouse hovers over the text. (2)

2.9 Insert the contents from the **Finalthoughts.txt** file under the heading "Final Thoughts". (2)

Page 2

2.10 Create an automatic table of contents showing first level headers only. (2)

2.11 Export the Word document as a PDF with the file name **BecomeAYouTuber.pdf**. (2)

2.12 Save the Word document so that it opens as a *read-only* document. (1)

Save and close the document.

[25]

QUESTION 3

Open and work only in the folder named **Question3**.

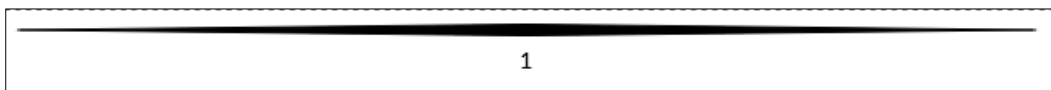
Open the document named **Q3a_Important_Information.docx**.

- 3.1 Change the page orientation to portrait. (1)
- 3.2 Set the page margins as 2cm all around. (1)
- 3.3 Set the paragraph spacing for "Facts about YouTube" to 12pts before and 18pts after. (2)
- 3.4 Read and implement the changes suggested in the various comments in the document. Mark each comment as "Resolved" after making the suggested change. (3)
- 3.5 Format all text from "YouTube is the ..." up to "... or the elevator" as follows:
- 3.5.1 Convert all text to a bulleted list. (1)
- 3.5.2 Use the image called **youtube-icon.jpg** as the bullet. (2)
- 3.5.3 Set the line spacing of the bulleted list to 1.5 lines. (1)
- 3.6 Correct any spelling errors found in the document. (2)

Save and close the document.

Open and edit the document named **Q3b_Vlogging.docx**.

- 3.7 Underneath the heading "Essential vlogging equipment", convert the text to a table consisting of six rows and two columns. (2)
- 3.8 Format the footer of the document as follows:
- 3.8.1 Insert automatic page numbering. (1)
- 3.8.2 Use the thick line style as shown in the example below. (1)



- 3.9 Ensure that the title "Who Invented Vlogging?" (end of page 3) and the associated paragraphs beneath it are not broken up across pages. Do not use a manual page break. (2)
- 3.10 Use the information given in the green text box near the end of the document to add sources and create a bibliography for the document. Insert the bibliography at the end of the document. (2)

Save and close the document.

[21]

QUESTION 4

Open and work only in the folder named **Question4**.

Open the document named **Q4_Marketing.docx**.

Page 2

4.1 Create a bookmark at the word *Headset*. Name the bookmark "hset". (No quotations.) (2)

Page 1

4.2 Link the text "1. Headset" to the bookmark on page 2. (1)

Page 3

4.3 Set Page 3's orientation to landscape. All other pages must remain portrait. (3)

Save and close the document.

[6]

52 marks

SECTION C SPREADSHEETS**QUESTION 5**

Open and work only in the folder named **Question5**.

Open and edit the document named **Q5_Stats.xlsx**.

Worksheet: Categories

- 5.1 Change the colour of the Categories tab to any of the standard colours. (1)
- 5.2 Merge and centre cells **A1:C1**. (1)
- 5.3 Provide a thick outside border and yellow fill for cells **A1:C1**. (2)
- 5.4 The text in **C3** is spilling over into the next cell. Correct this without resizing **Column C** or changing the font size. (1)

Worksheet: Category Earnings

- 5.5 Create a drop-down list in cell **A4** to list the names of YouTubers found in **Column A** of the *TopEarners* worksheet. (2)
- 5.6 Use a function in cell **B4** to automatically display the estimated monthly earning, found in the *TopEarners* worksheet, for any chosen YouTuber based on the name selected in cell **A4**. If you were unable to create the drop-down list of names in Question 5.5, you can still test this by manually typing in a name from the list of names in the *TopEarners* worksheet. (4)

Worksheet: Countries

- 5.7 In **Column A**, use a feature of Excel to number all countries, starting at 1 in cell **A4**. (1)
- 5.8 In **Column C**, use functions to remove the country code and space before each country name (as seen in **Column B**) so that only the country name is displayed. (4)
- 5.9 **Column G** contains text and numerical data. Remove the text data but leave the numerical data. (3)
- 5.10 Format **Column G** to show currency in US Dollars. (1)
- 5.11 The conversion rate of US Dollars to Rands is found in cell **H1**. Use this information to convert from US Dollars in **Column G**, to South African Rands in **Column H**. Start in cell **H4** and copy down for all countries. Format **Column H** to show South African Rands. (3)
- 5.12 Use conditional formatting in **Column H** to highlight any cells that do not contain a monetary value and are displaying an error message instead. You may choose any colours and/or highlighting of your choice. (2)

- 5.13 Make use of a function to calculate, in cell **C192**, the number of countries in the list. (2)
- 5.14 In cells **C194:C203**, use a suitable function to work out how many Category counts there are for each category. (3)
- 5.15 In cells **D194:D203**, calculate the total number of subscribers per category using an appropriate function. (4)
- 5.16 Format **D194:D203** so that the figures display with appropriate spacing (as seen in **Column F**) and with no decimals. (2)
- 5.17 Sort the entire worksheet in descending order by Subscribers (**Column F**). Do **NOT** include **Column A** in the sorting. (2)

Worksheet: ByCategorySUB or ByCategoryPIVOT

- 5.18 You may choose to work in either **ONE** of the following worksheets: *ByCategorySUB* or *ByCategoryPIVOT*. **DO NOT DO BOTH**. (4)
 - 5.18.1 If you choose *ByCategorySUB*: Use the Subtotal feature in Excel to determine the total number of subscribers in each category. Your result should mirror the one in the example image, Figure 1, below.

	A	B	C	D
1	Top YouTubers in Various Countries			
2				
3	Country	YouTuber	Category	Subscribers
6			Autos Total	1 200 000
10			Beauty & Style Total	25 000 000
27			Comedy Total	20 000 000
33			Education Total	2 000 000
106			Entertainment Total	100 000 000
132			Gaming Total	100 000 000
151			How To Total	50 000 000
167			Kids Total	100 000 000
173			Music Total	1 000 000
176			Nature Total	2 000 000
180			News Total	1 000 000
195			People & Blogs Total	50 000 000
199			Sports Total	2 000 000
204			Tech Total	500 000
205			Grand Total	1 000 000 000
206				

Figure 1: Subtotal example for Question 5.18.1

OR

5.18.2 If you choose *ByCategoryPIVOT*: Create a Pivot table showing the Categories and average number of subscribers per Category (sorted from lowest to highest according to Subscribers). Your result should resemble the one in the example image, Figure 2, below.

Row Labels	Average of Subscribers
Tech	119400
Music	370280
News	635933
Autos	655750
Education	1399700
Sports	1705267
How To	2261494
Nature	2421500
People & Blogs	3171364
Comedy	4908650
Gaming	5161908
Entertainment	8316784
Kids	9688533
Beauty & Style	10770000
Grand Total	5837669

Figure 2: Pivot table example for Question 5.18.2

Worksheet: Channels

5.19 Use the information to produce a chart with the following features:

5.19.1 Chart type and design: Funnel. (1)

5.19.2 Chart title: "Most Popular YouTube Channels in October 2020". (1)

5.19.3 Legend "Millions" added to bottom of the chart. (1)

5.19.4 Y-Axis YouTuber names: Bold, 10pts. (1)

5.19.5 Chart background image: **YouTubeLogo.jpg**, 90% transparency. (2)

5.20 Move the chart to its own location on a new sheet called *CHART*. (2)

See Figure 3 on the next page for an example of the chart.

Save and close the workbook.

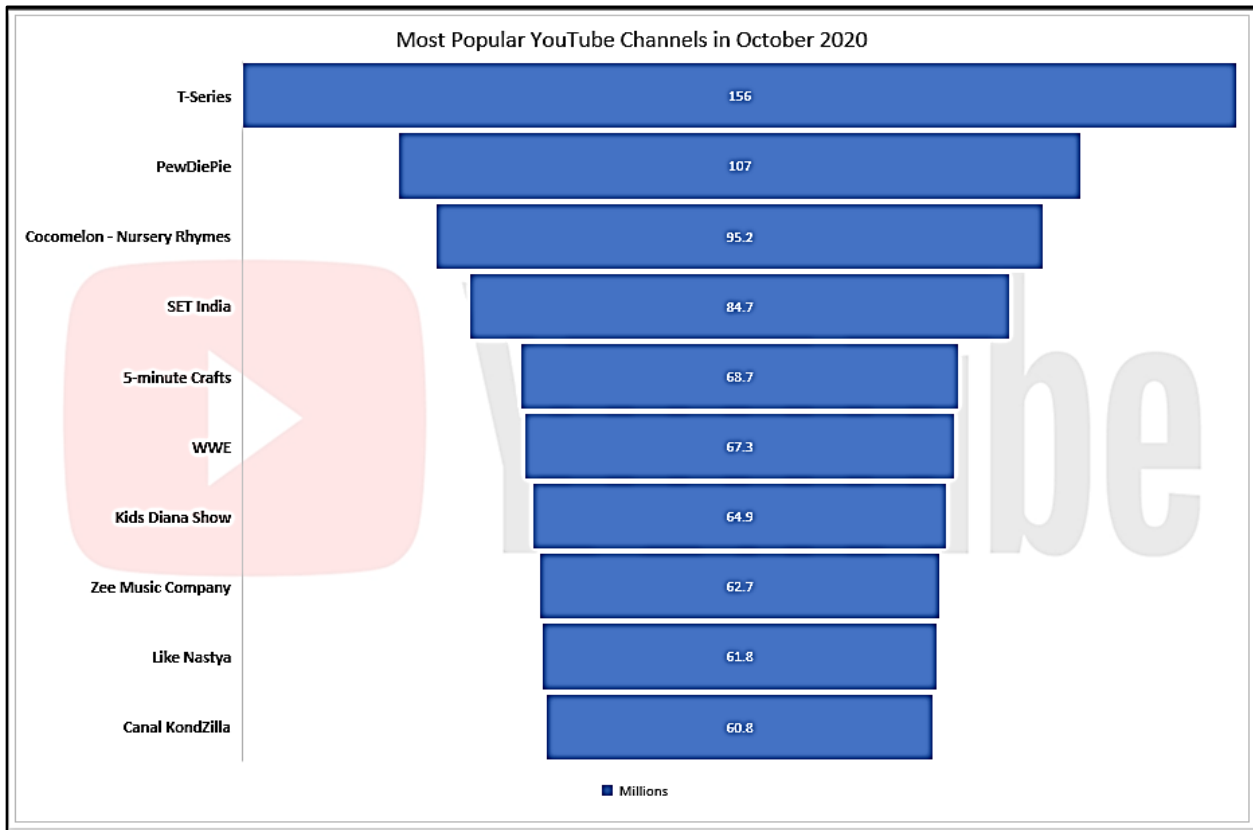


Figure 3: Example of Funnel chart for Question 5.20

50 marks

SECTION D SOLUTION DEVELOPMENT**QUESTION 6 DATABASE**

James has built up a database of people who have pledged to support his new YouTube Channel. Some have become monthly or premier members of his channel and made monetary donations. Others have chosen to simply support him by becoming subscribers to his channel.

Open and work only in the folder named **Question6**.

Open the MS Access database named **TotesZA.accdb**.

Table: *tblContacts*

- 6.1 This table has no primary key. Select the most appropriate unique field and make it a primary key. (1)
- 6.2 Ensure that only the letters "M" or "F" (without quotes) can be entered in the Gen field. Provide an appropriate message for the user if an error occurs. (2)
- 6.3 Format the Birthdate field to show as 07/02/21 (day, month, year). (2)
- 6.4 Format the Phone field as follows:
- 6.4.1 Only 10 numeric characters can be entered into the field. (1)
- 6.4.2 All numbers entered must follow this example: (077) 123 0123 (1)
- 6.5 The Level field must obtain its values from the *tblMembershipLevels* table and present as a dropdown list when clicked on in datasheet view. (2)
- 6.6 Format the Donated field to display as Currency. (1)
- 6.7 Change the data type for the Contributor field so that it utilises a checkbox instead of text. Note: If you receive a warning message from Access about data loss, you may ignore it and click the **Yes** button to continue. (1)

Queries

- 6.8 James wants to see the top ten highest donations and who they belong to. Create a query called *qryTopTen* that will always display the ten highest donations. Show the Surname and FirstName of those people. Sort descending by the amounts donated. (4)
- 6.9 A mailing list is being put together to go to everyone who is a Premier Member of the *TotesZA* channel. Premier members are those who have donated more than R500 to the channel. Create a query showing all Premier members' Surnames and FirstNames who have also opted to become a Contributor to the channel. Sort ascending by Surname. Save the query as *qryPremierContributors*. (5)

- 6.10 James is interested to know the age breakdown of his potential fanbase. In a query called *qryAgeGroups*, show the name, surname, gender and age of all members. Calculate the age in a new field called Age. There should be no decimals in the Age field. (5)

Reports

- 6.11 Create a Report, *rptMembersPerLevel*, with the following requirements: (1)
- 6.11.1 Report Title: Members per Level. (1)
 - 6.11.2 Includes Level, Surname, FirstName, Gen and Donation. (1)
 - 6.11.3 Group the report by Level. (1)
 - 6.11.4 In the footer of each group, calculate the average donation amount, formatted as currency. (4)
 - 6.11.5 Insert the image **YTLogo.png** (in the **Question6** folder) into the Header of the report. Align the image to the right of the page. (3)

Forms

- 6.12 Create a form titled *frmMemberCapture*: (1)
- 6.12.1 Include all fields from the **tblContacts** table. (1)
 - 6.12.2 Set the Tab Order to start with the Level field, followed by the Donated field and then Contributor. (2)
 - 6.12.3 Insert a button in the header of the form to close the form when clicked. (3)

43 marks

SECTION E SOLUTION DEVELOPMENT

QUESTION 7 WEB DEVELOPMENT (HTML DESIGN)

Open and work only in the folder named **Question7**.

Open the file **index.htm** in your text-based HTML editor. Edit the file as per the instructions below.

- 7.1 Set the title of the document to **Totes-ZA. New Channel Coming Soon!**. (1)
- 7.2 Set the body background colour to #DD2727. (1)
- 7.3 Remove the border from the table. (1)
- 7.4 Make the table size 70% of the width of the screen. (1)
- 7.5 Format the heading "TOTES-ZA" as follows:
 - 7.5.1 Arial font, white, size 24. (2)
 - 7.5.2 Apply a Heading 1 tag. (1)
 - 7.5.3 Centre the heading horizontally. (1)
- 7.6 Create a bulleted list using the three points below "My reasons for choosing this adventure: ...". (3)
- 7.7 Convert the text "Register your interest ..." to a hyperlink that links to the **register.pdf** file in the **files** sub-folder. (3)
- 7.8 Insert the image **James.jpg** in the correct location, as shown in Figure 4. The width of the image should be 150 pixels. (2)

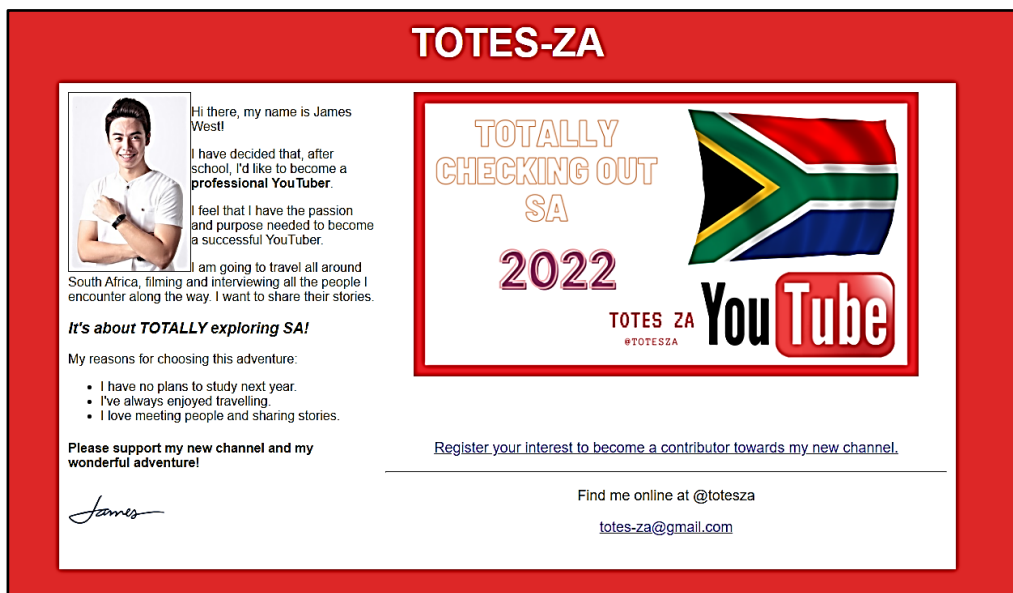


Figure 4: Example layout for Question 7.5

- 7.9 When the mouse moves over James' signature, text reading "Signature" should appear as a tool tip over the image. (2)
- 7.10 Create a solid line, 1px in height, underneath "*Register your interest ...*" (2)

20 marks

Total: 180 marks