



INTERNATIONAL SECONDARY CERTIFICATE EXAMINATION
NOVEMBER 2023

COMPUTER STUDIES: PAPER I

Time: 3 hours

180 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 14 pages and an insert (HTML Tag List and Input Mask Character Sheet) of 2 pages. Please check that your question paper is complete.
2. You may use a text editor, namely Notepad, Notepad++ or WordPad, for the HTML section only.
3. You must answer ALL the questions. Please read the entire question before attempting a solution. Only do what is required by the question.
4. Take note of the mark allocation to ascertain the complexity of the solution required and the amount of time to spend on each question.
5. Save your work 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.docx** document to obtain part marks; you may then leave it out of the spreadsheet or database solution.
7. 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
8. Ensure your Developer Tab is enabled in Word and Excel.
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 created or edited as part of a question, you are only expected to add the border if specifically instructed.
11. All data files listed in Instruction 12 are in an examination data folder allocated to you for this examination. Please note that all solutions must be saved to your examination folder.

12. You have been supplied with an examination folder. Refer to **Figures 1, 2 and 3** below and check that the following folders and files exist in your examination folder.

Figure 1: Examination folder

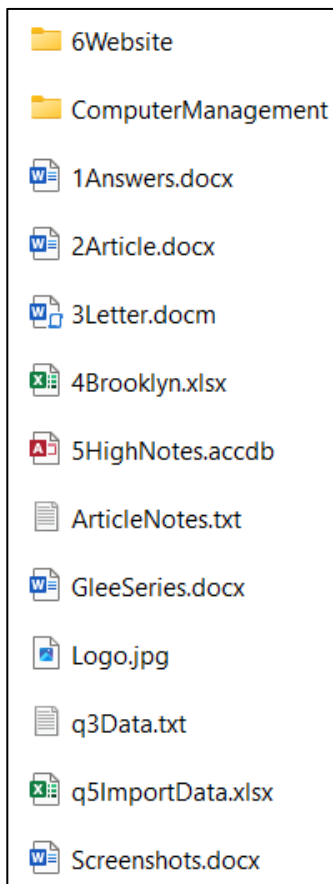


Figure 2: ComputerManagement folder

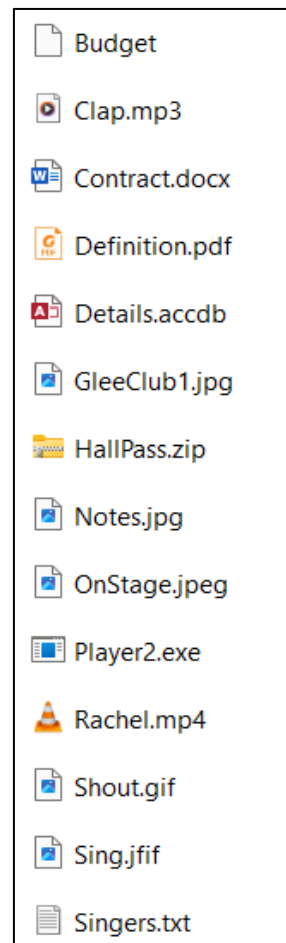


Figure 3: 6Website folder



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

SCENARIO

You have been asked to manage your school's Glee Club¹. Your club has nicknamed themselves *The High Notes*. You will organise events, ticket sales, flights, and general administrative duties.

**QUESTION 1 COMPUTER MANAGEMENT**

Answer the following questions and provide screenshots where necessary. Use only the files provided in the **ComputerManagement** folder to answer this question. Place your answers or screenshots in the **1Answers.docx** file in the spaces provided.

1.1 Add your examination number as the author of the file **1Answers.docx** document. (1)

1.2 Mark the document **Contract.docx** as final.

Capture a screenshot clearly showing the document marked as final and paste the screenshot in the space provided in the **1Answers.docx** document. (2)

1.3 Which file in the **ComputerManagement** folder is an audio-only file?

Type the name of the file in the space provided in the **1Answers.docx** document. (1)

1.4 What camera make (brand) was used to capture the image, **OnStage.jpeg**?

Type your answer in the space provided in the **1Answers.docx** document. (1)

1.5 The Glee Club's financial details are stored in a spreadsheet **Budget** in the **ComputerManagement** folder. It was created in Microsoft Excel; however, it will not open.

Explain why the file will not open **AND** provide detailed steps on how you would open the file in Microsoft Excel.

Type your answer in the space provided in the **1Answers.docx** document. (3)

1.6 View the dates when the files inside the **ComputerManagement** folder were created.

Capture a screenshot clearly showing the creation dates and paste the screenshot in the space provided in the **1Answers.docx** document. (2)

¹ A "Glee Club" is a musical or choir group.

- 1.7 Export the file **Definition.pdf** to Microsoft Word. Save the new file as **DefWord.docx** in the **ComputerManagement** folder.

Capture a screenshot clearly showing the newly created file and paste the screenshot in the space provided in the **1Answers.docx** document. (2)

- 1.8 Unzip the compressed folder **HallPass.zip** to a new folder named **Unzipped**.

Capture a screenshot clearly showing the newly unzipped folder and paste the screenshot in the space provided in the **1Answers.docx** document. (2)

- 1.9 **Player2.exe** is an executable file. Type your answers to the following questions in the spaces provided in the **1Answers.docx** document.

1.9.1 What is an executable file? (1)

1.9.2 Why would this type of file be regarded as a potential threat? (1)

- 1.10 There are times when you may need to uninstall a program. Type your answers to the following questions in the spaces provided in the **1Answers.docx** document.

1.10.1 Provide detailed steps that you would take to uninstall a program. (2)

1.10.2 Provide **TWO** reasons why you might uninstall a program apart from the fact that you no longer need it. (2)

Save and close the document(s) and file(s).

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QUESTION 2 WORD PROCESSING

Open the document **2Article.docx** and make the following changes to the document. Text is highlighted in the document to indicate where changes must be made. **Do not remove the highlighting.**

- 2.1 Modify the title, 'The "Glee" effect: Singing is cool again', at the top of the document as follows:
- 2.1.1 Change the font to All Caps. (1)
 - 2.1.2 Change the font size to 15 pt. (1)
 - 2.1.3 Underline with a double underline style. (1)
- 2.2 Replace the highlighted placeholder, <<Insert File>>, with the file **ArticleNotes.txt**. *The file must be inserted as an object and must display as a link to the file.* (3)
- 2.3 Add an endnote to the text, 'Glee Club', highlighted in the first paragraph. (1)
- 2.3.1 The endnote's numbering format used must be a; b; c. (1)
 - 2.3.2 The endnote's text must read 'A school musical group'. (1)
- 2.4 Add a hyperlink to the text 'click here to read more', highlighted in the second paragraph. The hyperlink must link to the file **GleeSeries.docx**. (2)
- 2.5 Edit the source, '(Chen, n.d.)' at the end of the second paragraph.
- 2.5.1 Remove the grey highlighting. (1)
 - 2.5.2 Add the date 'November 2010' when the article was *created* (**not** the date it was accessed). (2)
- 2.6 The word 'Acting', highlighted in the fourth paragraph on page 1, is not displaying in the Index on page 3. Make the necessary changes to the word *and* the Index so that 'Acting' displays in the list. (2)
- 2.7 Tab stops must be added to the list of performances underneath the bold text, 'Everyone is invited to the following performances:'. The first tab stop is already set at 4 cm (left-aligned). Once the tab stops are set, reformat the text to display as in **Figure 4** on the following page.
- 2.7.1 The second tab stop must be centred, set at 8 cm with a dot leader. (3)
 - 2.7.2 The third tab stop must be a right-aligned tab stop at 12 cm. (2)

Figure 4

Everyone is invited to the following performances:			
29 January 2023	18:00	School hall	R200 pp
18 February 2023	19:00	Brooklyn Theatre	R250 pp
9 March 2023	10:00	Home4Kids	R150 pp

- 2.8 Align the bullets of the bulleted list on page 1 against the left margin. The text should remain indented at 1.27 cm. (2)
- 2.9 Modify the image underneath the heading on page 2, 'Glee: The Series' as follows:
- 2.9.1 Apply the necessary changes to remove the bottom section of the image containing the words 'SEASON 1'. (1)
- 2.9.2 Apply the *Metal Frame* picture style to the image. (1)
- 2.9.3 Set the image width to 4 cm. (1)
- 2.9.4 Position the image using square text wrapping at the bottom right of the page. (2)
- 2.10 *Peer Aström's* name is highlighted in the second paragraph below the heading, 'Glee: The Series'. His surname has been misspelt. Replace the 'o' with an 'ö' character. (1)
- 2.11 Modify the table captioned: 'Table 1 Viewers per season', as follows:
- 2.11.1 Change the column width of the second column to 5 cm. (1)
- 2.11.2 Merge the three columns of the top row of the table containing the heading 'Rankings'. (1)
- 2.11.3 Use a formula to calculate the average number of viewers for all seasons in the shaded cell in the bottom right corner. (2)
- 2.12 Modify the SmartArt diagram below the heading, 'Our Motto' as follows:
- 2.12.1 Insert a new shape between the existing shapes labelled 'Perform'. (2)
- 2.12.2 Add a caption, 'Figure 1 Motto', to the diagram. (2)
- 2.13 Replace the placeholder, <<Works Cited>>, at the bottom of the document with an automatic Works Cited list. (1)
- 2.14 Replace the placeholder, <<Table of Figures>>, at the top of the document with a Table of Figures containing table captions only. (2)

Save and close the document.

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QUESTION 3 WORD PROCESSING

A welcome letter must be sent to new members of the club. Open the file **3Letter.docm** and make the following changes to the document.

- 3.1 Add an item 'Costumes' to the combo box below the text 'Please indicate your art of choice below:'. (1)
 - 3.2 Record a new macro named ***Highlight*** to highlight and italicise any pre-selected text: (1)
 - 3.2.1 Assign the shortcut key ***Ctrl + h*** to the macro. (1)
 - 3.2.2 Ensure the macro is stored in the current document, **3Letter.docm**. (1)
 - 3.2.3 When run, the macro must italicise **AND** highlight any preselected text in bright green. (2)
 - 3.3 Process the following mail merge letter:
 - 3.3.1 Use the document **q3Data.txt** as a data source. (1)
 - 3.3.2 Replace the placeholder, <<Name>> with the Name field. (1)
- Save the document under the same name.**
- 3.3.3 Complete the merge. Save your completed merge as **3Merged.docx**. (2)

Save and close the documents.

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QUESTION 4 SPREADSHEETS

A spreadsheet was created to keep track of the Brooklyn Theatre performance. Open the spreadsheet **4Brooklyn.xlsx**.

All calculations must be done using functions and/or formulas.

Work in the *Tickets* worksheet.

4.1 Modify the headings in the range **B5:F7** as follows. Use **Figure 5** as a guide.

Figure 5

	B	C	D	E	F
5	Grade	Number of tickets per division			Total number of tickets sold (per learner)
6		Gallery	Stalls	Standing	
7		R 250	R 200	R 150	

4.1.1 Vertically align cell **B5** at the top of the cell. (1)

4.1.2 Merge and centre the cells in the range **C5:E5**. (1)

4.1.3 Rotate cell **E6** upright to match cells **C6** and **D6**. (1)

4.1.4 Change the fill colour of the cells in the range **C7:E7** to red. (1)

4.1.5 Make the necessary change to cell **F5** to display all the contents. (1)

4.2 Format the date in cell **B3** to display in the format: dd mmm-yyyy. (2)

4.3 The Brooklyn Theatre venue capacity is 500. The total number of tickets sold is stored in cell **I3**.

Apply a formatting technique to cell **I3** that will automatically make the cell green if the value is less than or equal to 500 or red if the value is greater than 500. (5)

4.4 A formula was used in **column G** to calculate the total value of tickets sold before the discount was applied. The value in cell **G8** appears correct, but when the formula is copied to the rest of the sellers, it displays incorrect values.

Correct the formula inserted in cell **G8** and apply the change to the rest of the range **G9:G28**. (3)

- 4.5 Discounts are given according to the number of tickets each seller sells (**column F**). Refer to the discount table in **Figure 6** below to see how discounts are applied. The discounts are also given in the table in the range **L9:M14**.

Figure 6

Total number of tickets sold	Discount given
0-9 tickets	No discount
10-19 tickets	R 100
20-29 tickets	R 150
30-34 tickets	R 200
35-39 tickets	R 250
40 or more tickets	R 300

Insert a function in cell **H9** that will determine the discount given to Trystan Allan. Ensure that the function works if copied to the rest of the sellers. (5)

- 4.6 In cell **I8**, calculate *Charity England's* total value of tickets sold by subtracting the discount from the total value of tickets sold (before discount). (2)

- 4.7 Apply formatting to the range **I9:I28** to resemble the format applied to **H9:H28**. (2)

- 4.8 Each seller is given a seller number, which consists of the first three letters of their name, followed by their grade. **All letters must be in capital letters.**

Determine *Charity England's* seller number in cell **J8**. Ensure the formula will work if copied to the rest of the sellers. (4)

- 4.9 Calculate the total amount collected (after discount) in cell **I29**. (2)

- 4.10 In cell **B33**, calculate the total number of tickets sold by all the learners in Grade 11. (4)

- 4.11 Create a chart to display the percentage of tickets sold in each division.

4.11.1 Insert a pie chart in cell **L16** using the labels in the range **C6:E6** and the values in the range **C29:E29**. (3)

4.11.2 Give the chart an appropriate title. (1)

4.11.3 Show the chart labels as percentages. (2)

Work in the *Performers* worksheet.

- 4.12 Data validation was used in **column C** to create a combo box, but only 'Singer' and 'Dancer' were added as list items. Add the item 'Actor' to the list. (2)

- 4.13 The current date is displayed in cell **E1 (Date)**. Use a formula in cell **E4** to calculate *Lorelai Allan's* age. Ensure the formula will work if copied to the rest of the performers. (3)

Work in the *PivotData* worksheet.

- 4.14 Create a pivot table to display the number of performers in each grade according to their category, as shown in **Figure 7** below. The pivot table must appear next to the data in the *PivotData* worksheet.

Figure 7

Count of Category		Column Labels					
Row Labels		8	9	10	11	12	Grand Total
Actor		3	1	1	1	1	7
Dancer		2	1	2	3	1	9
Singer		3	7	3		1	14
Grand Total		8	9	6	4	3	30

Save and close the spreadsheet.

(5)

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QUESTION 5 DATABASE

You keep a database of the performers, teachers, and ticket sellers. Open the database **5HighNotes.accdb**.

5.1 Open the table *tblPerformers* in Design View.

5.1.1 Change the data type of the Grade field to Number. (1)

5.1.2 Add validation to the DateOfBirth field so that only dates on or after 1 January 2004 can be entered.
The following message must appear if the incorrect date is entered:
'Only high school learners may perform'. (3)

5.1.3 Change the Teacher field to a list box to look up the TeacherName field from the *tblTeachers* table. (3)

5.2 Open the table *tblTicketSellers*.

Make the following changes in Design View.

5.2.1 Change the format of the SellerName field to transform all text entered to upper case. (1)

5.2.2 Add an input mask to the SellerNumber field that will allow a user to enter the code in the following format:

- THREE compulsory lower case letters; followed by
- ONE compulsory letter or digit; followed by
- ONE optional digit.

Examples: cha11 or pab9 (4)

5.2.3 Set AmountCollected so it is **not** a required field. (1)

5.2.4 Change the data type of the Paid field to a data type that will allow users to select checkboxes. (1)

Make the following changes in Datasheet View.

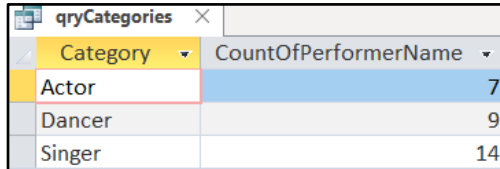
5.2.5 Seller number 12, Julius Lovell, has not sold any tickets. Delete the record from the table. (1)

5.3 Import the file **q5ImportData.xlsx** into a new table *tblVenues*. Note that the first row contains the field headings. Do **not** add a primary key to the table. (3)

5.4 Open the query *qryCategories* in Design View.

Apply the necessary changes to the query so that it displays the following results (as shown in **Figure 8**) when the query is run.

Figure 8



Category	CountOfPerformerName
Actor	7
Dancer	9
Singer	14

(3)

5.5 Open the query *qryCharity* in Design View.

5.5.1 Apply criteria to the query so that only the sellers who have made payment will show. (2)

5.5.2 Do **not** show the Paid field. (1)

5.5.3 An admin fee of R2 000 must be paid to organisers and the rest of the money will be donated to charity.

Add a new calculated field called Donation that subtracts R2 000 from the AmountCollected field. Format the field to Currency. (4)

5.6 Open the query *qryDancers* in Design View. Modify the query so that it shows **all** the dancers. (2)

5.7 Open the form *frmSellers* in Design View.

5.7.1 Insert a button in the Form Header to print the form when clicked. (3)

5.7.2 Insert the image **Logo.jpg** in the Form Footer. (2)

5.8 Open the report *rptSales* in Design View.

5.8.1 Add a Grade Footer to the report. (1)

5.8.2 Add a function in the Grade Footer to add up the total amount collected by each grade. Give your function an appropriate label. (2)

5.8.3 Apply conditional formatting to the AmountCollected field that will change the font colour to red if the amount is greater than 5 000. (2)

Save and close the database.

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QUESTION 6 HTML WEB DEVELOPMENT

A basic website was created for *The High Notes*. You have been asked to make minor changes to the home page. All the files you need are stored inside the folder **6Website**.

Open the document **HomePage.html** in your text editor and make the changes as indicated in the questions below.

Note that comments containing the question number have been inserted where coding needs to be added or changed. Do **not** remove these comments.

- 6.1 Make the necessary changes to add and display the text, 'High Notes', in a tab at the top of the webpage. (2)
- 6.2 Change the background colour of the webpage to the colour code #87CEEB. (1)
- 6.3 The code to add the image **WebLogo.jpg** was added above the h1 tag. Modify the image as follows:
 - 6.3.1 Fix the two errors in the code to display the image correctly. (2)
 - 6.3.2 The text 'Logo' must display if the image cannot be displayed. (1)
 - 6.3.3 Change the width of the image to 100 px. (1)
- 6.4 Bold and italicise the text, 'Don't Rain on my Parade'. (2)
- 6.5 Create an ordered list below the heading, 'Sponsors', using the i, ii, iii numbering format. (2)
- 6.6 Change the font of the heading, 'Glee Season Rankings' to Forte. (2)
- 6.7 Add a border attribute of 1 to the table. (1)
- 6.8 Make the table heading, 'Ranking', stretch across the four rows as shown in **Figure 9** below. (1)

Figure 9

Ranking	Season	Total Viewers
	1	9.77 mil
	2	10.11 mil
	3	8.71 mil

6.9 Modify the horizontal line as follows:

6.9.1 Change the width of the horizontal line to 50%. (1)

6.9.2 Align the horizontal line to the left of the webpage. (1)

6.10 Add tags so that the text, 'Click here to join us', points to the hyperlink, 'https://bit.ly/notesentry'.

Note that the form may not display on your web browser due to not having Internet connectivity. (3)

Save and close the document.

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Total: 180 marks