COMPUTER APPLICATIONS TECHNOLOGY: PAPER II

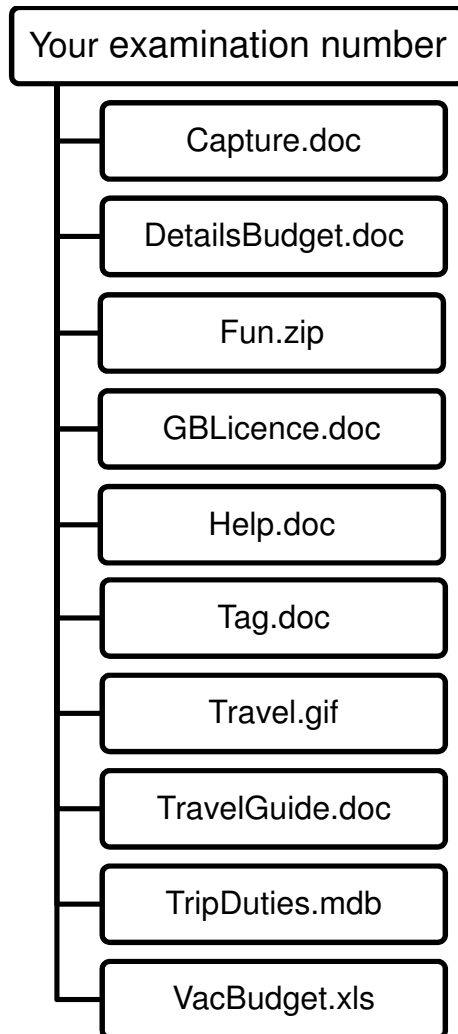Time: 3 hours   150 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1.   This paper consists of 10 pages. Please check that your question paper is complete.

2.   You must attempt to answer ALL of the questions. Please read the entire question before attempting a solution. Do not do more than is required by the question.

3.   Take note of the mark allocation to ascertain the solution required and the amount of time needed to spend on each question.

4.   To assist yourself, get into the habit of saving regularly.

5.   Make sure that your examination number appears on every task and on every document that you print out.

6.   Follow the printing instructions carefully. Arrange your output in the correct order before submitting.

7.   If a formula/function, such as a complicated *if* statement does not work, you may leave it out of the spreadsheet or database program, and write it down in a suitable place on the printout or copy and paste it to a suitable place in the screenshots document to obtain part marks.

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.   All data files listed in Instruction 11 can be found on the network drive that has been allocated to you for this examination. Please note that all solutions must be saved to your examination folder in this network drive.

11.   You have been supplied with a total of 10 files in your examination folder. Refer to **Figure 1** below and check that the following files exist in this folder:

Figure 1


```
Your examination number
├── Capture.doc
├── DetailsBudget.doc
├── Fun.zip
├── GBLicence.doc
├── Help.doc
├── Tag.doc
├── Travel.gif
├── TravelGuide.doc
├── TripDuties.mdb
└── VacBudget.xls
```

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

SCENARIO

One of the most exciting events of the Grade 12 year is going on holiday with friends and classmates after the stressful final examinations. A group of Grade 12 friends from one school decide to plan and budget for their end of year holiday called **Matric Vac**. As you are the most organised and computer literate of the group, they delegate the planning and financial duties to you.

QUESTION 1

You decide to create a help guide to keep track of certain file management tools.

Record the answers to the following questions in the word processing document **Help.doc**.

1.1   Creating shortcuts for quicker access to files can be a useful file management tool.

      1.1.1   Create a shortcut of your examination folder. Place the shortcut on the desktop of your computer. (2)

      1.1.2   Capture a screenshot of the shortcut created in Question 1.1.1 above and paste it into the document **Help**. (1)

1.2   One of the Treasurers in the Grade 12 group has misplaced a file on her computer which includes the word *quotation* in the filename. You recommend that she should use the search feature to locate the missing file.

      1.2.1   Provide ONE tip that the Treasurer can use to improve her search. (1)

      1.2.2   List ONE advantage of using a wildcard to locate the missing file. (1)

      1.2.3   Give ONE example of a suitable search phrase that could be used to locate the file. (1)

1.3   Compression software is another valuable tool for an efficient file management system.

      1.3.1   Extract only the image **Skating.jpg** from the compressed folder **Fun.zip** into your examination folder. *Note that the image must be extracted and appear as a file in your examination folder*. (2)

      1.3.2   Find and compare the sizes of the compressed AND extracted **Skating.jpg** image. Record the size of each file and discuss the relevance of the size of the compressed AND extracted files. (3)

1.4   You are unsure how to delete a macro you created in a spreadsheet. Open a new spreadsheet and use the Help function to search for information on deleting a macro. Copy the instructions displayed in the Help window into the document **Help**. (3)

1.5   Save to update the changes applied to the document **Help**.

                                                    [14]

QUESTION 2

Jenna, a Grade 12 learner from your school, has asked you to compile a travel guide. The travel guide will include what items to pack, activities while on holiday and tips for holidays at the beach.

Open the word processing document **TravelGuide.doc** and apply the following changes:

2.1   Insert a blank page/title page at the beginning of the document and make the following changes: (1)

      2.1.1   Include a title labelled *Travel Guide for Matric Vac 2011* on the first page of the document.   (1)

      2.1.2   Insert the image **Travel.gif** below the title created in Question 2.1.1 above.   (2)

2.2   Insert a field aligned to the right in the footer which automatically updates the current date. *Note that the footer should only appear on the first page.*   (3)

2.3   Your friends, Rob and Sam have helped you with the editing of the document **TravelGuide**. Use track changes to edit the document further. Reject all the changes suggested by Rob and accept all the changes suggested by Sam.   (3)

2.4   Make the following formatting changes to the automatic Table of Contents on page two:

      2.4.1   Locate the heading *Lifeguards* on page five of the document and apply the same heading style as applied to other sub-headings in the document that fall under the heading *"Tips for holidays at the beach"*.   (2)

      2.4.2   Update the Table of Contents to include the heading *Lifeguards*.   (1)

2.5   Set tab stops with leader dots at specific positions for all the text below the sub-heading *Bring along*. Refer to **Figure 2** below.   (4)

Figure 2

2.6   Switch off the track changes in the final document **TravelGuide** and print the document. Save and close the document **TravelGuide**.   (2)

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QUESTION 3

Since a group of classmates are travelling together with one bag each, you decide to design a tag for each person's bag.

3.1   Process a mail merge using the word processing document **Tag.doc** as the template for the *label* and the table **tblLearnerInfo** in the database file **TripDuties.mdb** as the data source.   (3)

3.2   Replace the text ***<<NICKNAME>>*** with the merge field **Nickname** in the correct position in the document **Tag**. *Note that the text indicated between brackets << >> represents the position of the field that must be inserted.* Refer to **Figure 3** below.   (2)

Figure 3

3.3   The label which includes the inserted field should be saved as **Tag2**.   (1)

3.4   Arrange the labels so that all the records from the field **Nickname** in the table **tblLearnerInfo** are displayed. *Note: The Mail Merge is correct if all labels fit onto one page and all the records in the table are included.*   (2)

3.5   Complete the mail merge and save the merged document as **Tag3**.   (2)

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QUESTION 4

As the financial planner for the **Matric Vac**, you keep track of all the costs for the trip in a spreadsheet. Apply the following updates to the spreadsheet for the month of October:

Open the file **VacBudget.xls** and note that the spreadsheet consists of four worksheets, i.e. **F** (Food costs), **T** (Travel costs), **A** (Accommodation costs), and **G** (Graphs).

4.1   Select the **F** tab to apply the following changes to the **Food costs** worksheet:

    4.1.1   Refer to the column entitled **Grocery items** and replace the *XXX* with the letters *GL*, e.g. **GL1** or **GL22**.   (2)

    4.1.2   Format the headings in cells A26 to A29 so that the text fits on multiple lines in each cell.   (2)

    4.1.3   Sort the data for all the grocery items according to the **Price** column to group the prices by symbol. *Note that any order can be selected for the symbols.*   (3)

    4.1.4   Insert a formula in cell E4 to calculate the **Total cost per item** by multiplying the **Quantity** by the **Price**. Expand the formula to cell E25.   (3)

    4.1.5   Determine the **Total grocery costs** in cell E26 by adding up all the amounts in the **Total cost per item** column.   (2)

4.1.6   Determine the **Total cost per person** in cell E27 by inserting a formula to determine the amount each Grade 12 learner must contribute to the food costs. *Note that there are twenty Grade 12 students going on the trip.*   (2)

4.1.7   Insert a function in cell E28 to find the price of the **Second most expensive grocery item**.   (3)

4.1.8   Insert a function in cell E29 to determine the **Percentage of meat costs for all groceries**.   (6)

4.2   Select the **T** tab to apply the following changes to the **Travel costs** worksheet:

4.2.1   Insert a row between rows 1 and 2 and insert the following text in cell B2 in the newly inserted row: *1 tank of fuel equals 40 litres*.   (3)

4.2.2   The drivers would like to know how many litres of fuel each vehicle will require to determine the number of times they need to stop for refuelling. Insert an IF-statement in cell C10 to determine the **Total *litres* of petrol/diesel** required for the Polo Vivo Hatch 1.4 for the trip. *Note that the petrol and diesel prices in cells B5 and B6 respectively must be used as absolute cell references in the solution*. Expand the function to cell C14.   (5)

4.2.3   Derive a formula in cell F10 to determine the **Number of hours driven by each driver**. Expand the formula to cell F14.   (2)

4.3   Select the **A** tab to apply the following changes to the **Accommodation costs** worksheet:

Note that the document DetailsBudget will be used to save screenshots of specific tasks in this question.

4.3.1   Data validation has been attempted on cell B5. Edit the data validation by restricting the dates to between the 10th and 20th of December. Expand to cell B8.   (3)

Capture a screenshot clearly showing the data validation restricted to the dates between the 10th and 20th of December.

4.3.2   Insert a formula in cell C5 that will determine the number of days for which each chalet will be booked. **Hint:** Use B2 in your answer and subtract the **Departure date** from the **Return date**. Expand the formula to cell C8. *Note: If you are unable to perform the task, simply type in the correct number of days to continue with the rest of the questions, however, it will not count for marks.*   (3)

Copy the formula from cell C5 and paste it into the document DetailsBudget.

4.3.3   In cell D5, insert a VLookup function that will look up the discount applicable to each chalet based on the number of days' accommodation. **Hint**: The **Discounts applicable** table must be referred to in the function. Expand the function to cell D8. *Note: If you are unable to perform the task, simply type in the correct discount to continue with the rest of the questions, however, it will not count for marks.*   (6)

Copy the function from cell D5 and paste it into the document DetailsBudget.

4.3.4   Insert a formula in cell E5 to determine the **Total accommodation cost per person**. **Hint**: (**Cost per person per night** * **Number of days**) – **Discount** * (**Cost per person per night** * **Number of days**). B3 should be used as an absolute cell reference in your solution. Expand the formula to cell E8.   (3)

Copy the formula from cell E5 and paste it into the document DetailsBudget.

4.4   Select the **G** tab to apply the following changes to the **Graph** worksheet:

4.4.1   Edit the line graph as follows:

(a)   Convert the line graph representing the **Total costs** to a graph that constitutes a whole.   (2)

(b)   Insert the following title: Analysis of Total Costs.   (1)

Copy the Total costs graph and paste it into the document DetailsBudget.

4.4.2   Edit the column graph as follows:

(a)   Include the column **Accommodation cost per person (excluding discount)** in the data range.   (1)

(b)   Locate the data point with the lowest amount and show the value for the lowest data point only.   (2)

Copy the Accommodation cost graph and paste it into the document DetailsBudget.

Save to update the changes to the spreadsheet **VacBudget**.

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QUESTION 5

A one-to-many database has been set up to match each Grade 12 learner with a specific duty in preparation for the trip.

Note that the document Capture will be used to save screenshots of specific tasks from this question.   (2)

Open the database **TripDuties.mdb** and apply the following changes:

5.1   Open and edit the table **tblLearnerInfo** as follows:

5.1.1   Delete the records for the matrics **James Platt** and **Nkosi January** as they are no longer going on the trip.   (2)

Capture a screenshot of the table tblLearnerInfo in Datasheet View showing only 18 records.

5.1.2   Update the field **Email address** to an appropriate data type that will allow you to send an email automatically by clicking on the email address.   (1)

Capture a screenshot showing the updated data type of the field Email address in Design View.

5.1.3   Convert the field **Preference** to a combo box. Limit the entries to the choices in the list. Include the following options in the combo box: *SMS*, *BBM*, *MXit*, *Email* and *Facebook*.   (4)

Capture a screenshot showing the field Preference as a combo box in Design View AND Datasheet View showing all the various options.

5.1.4   Insert a new field labelled **Proof of licence**. Select the most appropriate data type that will allow files to be added in the field. Add the document **GBLicence** to the record **Gabriella Botes**.   (4)

Capture a screenshot of the field Proof of licence included in Design View AND Datasheet View.

5.1.5   Apply an appropriate validation rule that will force the field **Cellphone number** to include an entry. Include the following validation text: *Contact number must be included for each record!*   (3)

Capture a screenshot of the field Cellphone number showing the data validation and validation text in Design View.

5.1.6   Two of the Grade 12 learners, Kimberley and Dominique share a birthdate, i.e. 1994/06/29. Edit the field **DOB** to allow duplicates in the Index.   (2)

Capture a screenshot of the field DOB in Design View clearly showing the Index.

5.1.7   Limit the field sizes for the fields **Cellphone number** to 10 and **Name** to 15.   (2)

Capture a screenshot of the fields Cellphone number and Name in Design View showing the limited field sizes.

5.1.8   If a filter was applied on the field **Amount paid** to show only the amounts between R2 000 and R3 000:

*Record the answers to the following questions in the document **Capture** in the correct positions.*

(a)   How many records will be displayed in the table?   (1)

(b)   How many records will not be displayed in the table?   (1)

Using both tables tblLearnerInfo and tblDuties complete Questions 5.2 and 5.3:

5.2   Develop a query labelled **qryLicence**. Display only the fields **Name** and **Drivers licence**. Insert criteria that will find all the learners who have duties as a Treasurer and have a Drivers licence.   (5)

Capture a screenshot of the query qryLicence in Design View showing the criteria to find all the learners who have duties as a Treasurer and have a Drivers licence.

5.3   Use the fields **Name** and **Amount paid** to develop a query that will determine the outstanding amount owed by each learner. *Note: The total amount for the trip is R3500 per person*. Insert a new field labelled **Amount owing** for the calculation. Save the query as **qryOwe**.   (6)

Capture a screenshot of the query qryOwe in Design View showing the new field Amount owing and the calculation.

Use the table tblLearnerInfo to complete Questions 5.4 and 5.5:

5.4   Design a report labelled **rptContact** and include the fields **Learner ID**, **Name** and **Email address**. Sort the report by **Name** and format the orientation to landscape.   (4)

5.5   Generate a report labelled **rptCom** and show the fields **Learner ID**, **Name** and **Preference**. Group the report by **Preference**. Formulate a calculation in the **Preference** header to determine the *Total number of records per communication method*.   (6)

Capture a screenshot of the report rptCom in Design View clearly showing the summary calculation to determine the Total number of records per communication method.

5.6   Design a form labelled **frmMain** according to the following requirements:

   5.6.1   Include all the fields from the table **tblLearnerInfo**.   (1)

   5.6.2   Format the background colour of the detail section to any colour shade.   (1)

   5.6.3   Add a control to show the **Duty Description** and **Resources Required** fields from the table **tblDuties** as a drop-down menu. The value selected should be stored in the **Duty ID** field. Label the control: **Duties**.   (4)

   5.6.4   Include a command button in the detail area to open the query **qryBirthDec**. Label the command: *Birthdays celebrated during trip*.   (4)

Capture a screenshot of the form frmMain in Form View clearly showing all the fields and command buttons.

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Total: 150 marks

PRINTOUTS

Produce the following output, ensuring that your examination number is displayed on each printout.

QUESTION 1

• Print the document **Help**.

QUESTION 2

• Print the final document **TravelGuide** without the track changes.

QUESTION 3

• Print the document **Tag2** showing the inserted field names.

• Print the tags from the merged document **Tag3**.

QUESTION 4

• Print the following worksheets from the spreadsheet **VacBudget**:
  F (Food costs) worksheet clearly showing all formulae.
  T (Travel costs) worksheet clearly showing all formulae.

• Print the document **DetailsBudget**.

QUESTION 5

• Print the document **Capture**.

• Print the report **rptContact** from the database **TripDuties**. *Remember to insert your examination number in the header.*