basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P1

NOVEMBER 2010

MARKS: 200

TIME: 3 hours

This question paper consists of 16 pages and a separate information sheet.

INSTRUCTIONS AND INFORMATION

1.   Owing to the nature of this three-hour examination, it is important to note that you will NOT be permitted to leave the examination room before the end of the examination period.

2.   Type your examination number in the header of EVERY document that you create or save.

3.   The invigilator will give you a disk containing all the files needed for the examination OR you will be told where the files can be found on the network or computer. If a disk has been issued to you, you must write your centre number and examination number on the label. If you are working on the network, you must follow the instructions provided by the invigilator.

4.   A copy of the master files will be available from the invigilator. Should there be any problems with a file, you may request another copy from the invigilator.

5.   This question paper consists of SEVEN questions.

6.   Answer ALL the questions.

7.   Ensure that you save each document using the file name given in the question paper. Save your work at regular intervals as a precaution against possible power failures.

8.   Read through each question before answering or solving the problem. Do NOT do more than is required by the question.

9.   At the end of the examination you must hand in the disk given to you by the invigilator with ALL the files saved on the disk, OR you should make sure that ALL the files are saved on the network as explained to you by the invigilator/teacher. Make absolutely sure that all files can be read.

10.   The separate information sheet which has been provided with this question paper **MUST BE COMPLETED AFTER THE THREE-HOUR EXAMINATION SESSION.** Hand it to the invigilator at the end of the examination.

11.   During the examination you may make use of the help functions of the programs which you are using. You may NOT use any other resource material.

12.   If data is derived from a previous question that you could not answer, you should still proceed with the questions that follow.

13.   Unless instructed otherwise, formulae and/or functions must be used for ALL calculations in spreadsheet questions. Absolute cell references must be used only where necessary to ensure that formulae are correct when they are copied to other cells in the spreadsheet.

14.   For all word processing questions, the language should be set to English (South Africa). The paper size is assumed to be A4 Portrait, unless instructed otherwise.

15.   The examination folder/data disk that you receive with this question paper will contain the folder and all the files listed below. Ensure that you have the folder and all the files before you begin this examination.

A folder called **Question1_Vraag1**

and files called:

• 2Facts_Feite	Word processing file
• 3Form_Vorm	Word processing file
• 3Patient_Pasiënt	Picture/Image file
• 4Jun	Spreadsheet file
• 5Sep	Spreadsheet file
• 6Clinic_Kliniek	Database
• 7Cap	Spreadsheet file
• 7Data	Spreadsheet file
• 7Form_Vorm	Word processing file
• 7Import_Invoer	Database
• 7Records_Rekords	Spreadsheet file

SCENARIO

A few CAT learners got involved in a community project and offered their computer skills to the local health clinic. The clinic assists people on a daily basis and also has a facility where patients can stay over.
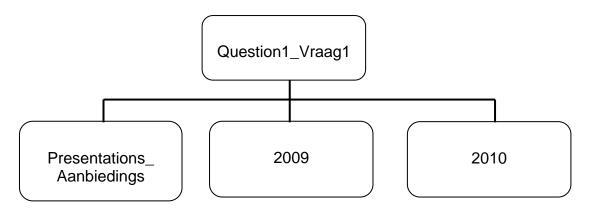
All data and information have been computerised and the CAT learners will assist with the following:

- Creating any documents needed
- Setting up spreadsheets
- Maintaining a database of the patients and medicines
- Communicating with the community

The computers have been loaded with all the relevant software, namely an operating system and an office application suite.

QUESTION 1

The folder structure below has been created.

```
                        ┌─────────────────────┐
                        │  Question1_Vraag1   │
                        └─────────────────────┘
                  ┌───────────────┼───────────────┐
        ┌──────────────────┐ ┌──────────┐ ┌──────────┐
        │  Presentations_  │ │   2009   │ │   2010   │
        │   Aanbiedings    │ │          │ │          │
        └──────────────────┘ └──────────┘ └──────────┘
```

Work in the folder **Question1_Vraag1** to answer all the questions below, unless specified otherwise.

1.1 Delete the **2009** folder. (1)

1.2 Move all the presentation files from the **Question1_Vraag1** folder to the **Presentations_Aanbiedings** folder. (2)

1.3 Add the password R5 to the file **Payment_Betaling**. (2)

1.4 Change the format of the text file **Choices_Keuses** to Rich Text Format. (2)

1.5 Change the author property of the **Chair_Stoel** file to your **examination number**. (1)

1.6 Save the graphics file called **GroupTherapy_Groepterapie** as a jpeg file. (1)

1.7 Create a shortcut (in the **Question1_Vraag1** folder) to the PDF file in the **2010** folder. (2)

1.8 Rename the word processing template file as **Data**. (1)

[12]

QUESTION 2

The clinic asked the team to format a fact sheet concerning the potential risks of using cellphones.

Open the file **2Facts_Feite**.

Type your examination number in the header of the document.

2.1   Remove the hyperlink from the web address given in the first line of the document.   (1)

2.2   Format the second line of text (*'Fact sheet No. 193'*) so that it appears as WordArt/Text Art/Fontwork with the following specifications:

- Any style may be used.
- It must have a shadow effect.
- The font size must be set to 24 pt.
- The width must be scaled by 200%.   (4)

2.3   Insert today's date after the text *Date/Datum* so that it updates automatically.   (2)

2.4   Modify the existing style *FactHead* so that the font appears in red and all text formatted with this style is automatically updated.   (2)

2.5   Insert an automatically generated table of contents on page 2 under the heading *'Table of Contents/Inhoudsopgawe'* according to the following specifications:

- Only the first two levels of entries must appear.
- The first level of entries are those formatted with the *Heading 1* style.
- The second level of entries are those formatted with the *FactHead* style.

The table of contents should have the following appearance (page numbers may differ):

(4)

2.6   Insert diamond-shaped bullets to the four points listed under the heading *'Key facts'* on page 3.   (2)

2.7   Change the order of the two highlighted paragraphs (starting with *'Mobile or cellular phones …'* and *'Given the large …'*) on page 3.   (1)

2.8   Correct any spelling errors in the document by performing a spell check on the document.   (1)

2.9   Replace all occurrences of WHO (in capital letters) with the text 'World Health Organisation' to appear in italics.   (3)

2.10   Place the text beginning with *'Short-term effects …'* and ending with *'… adolescents are underway'* on page 4 into two even columns with the text fully justified.

        Make sure that the text *'Long-term effects'* will always start at the top of the second column.   (3)

2.11   Insert automatic page numbering in the footer to appear in the format 'Page X of Y' so that it appears from the second page onwards.   (4)

2.12   Insert a horizontal line across the page just *before* the heading *'References'* at the end of the document.   (1)

2.13   Remove the superscript effect from the number 2 in the second item in the reference section at the end of the document so that it would appear in the same format as the previous number (the '1').   (1)

2.14   Locate the text *'For more information contact:'* at the end of the document. This heading and the text below it needs to be added to a text box as follows:

        • Size of the text box is 3.05 cm/1.2" high and 9.5 cm/3.74" wide.
        • The border line of the text box must be a 2 pt dotted line.
        • The text box must be filled with a textured fill style.

        The text box will have the following type of appearance:

        For more information contact:

        Media centre
        Telephone: +4122 791 2222
        E-mail: enquiries@worldhealthorganisation.int
                                                                                              (5)

2.15   The first page of the document needs to be prepared as a cover page.

        2.15.1   Select all the text on the front page and centre the text both vertically and horizontally on that page. The alignment for the rest of the document must remain unchanged.   (3)

        2.15.2   Insert any page border only on the first page of the document.   (2)

2.16   Add a watermark with the text 'WHO' to the whole document.   (1)

        Save **2Facts_Feite** and close the document.   **[40]**
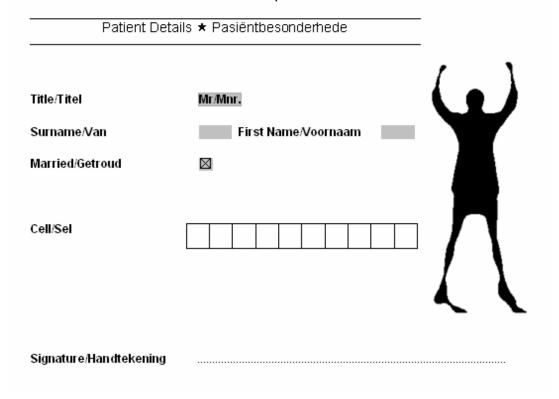
QUESTION 3

Open the file **3Form_Vorm**.

Type your examination number in the header of the document.

The clinic needs to create a form to assist in capturing patients' details. Look at the example below and follow the instructions to complete the form.

3.1   Change the paper size of the document to A4 and the page orientation to portrait.   (2)

3.2   Insert the 5-point star symbol (★) between the text *'Patient Details'* and *'Pasiëntbesonderhede'*. The symbol is in the Wingdings character set.   (1)

3.3   Use paragraph borders to place a line above and below the heading on the first line of the form as shown.   (2)

3.4   Change the line spacing throughout the document to 1½ line spacing with 12 pt spacing after every paragraph in the document.   (2)

3.5   Locate the drop-down control opposite the *Title/Titel* label and add the options Mr/Mnr., Ms/Me., Dr/Dr.   (1)

3.6   Add a check box control for the *Married/Getroud* option, using a tab setting to align the control at 6 cm as shown.   (2)

3.7 Change the properties of the form field used to enter the surname so that a maximum of 30 characters can be entered. (1)

3.8 Add a table to allow the cell number of the patient to be added as shown:

- It must consist of 10 columns.

- The width of the columns must be set to automatically fit the contents of the cells.

- The row height must be set to 0.9 cm/0.35". (4)

3.9 Add a tab stop with a tab leader to provide space for the signature of the patient, as shown. (2)

3.10 The image needed for the form is the graphic character **3Patient_Pasiënt.jpg**.

3.10.1 Insert the image **3Patient_Pasiënt.jpg** in the document. (1)

3.10.2 Change the image to a black-and-white (not greyscale) image. (1)

3.10.3 Crop the image on either side so that only the figure of the person remains. (1)

3.10.4 Move the image to the top right-hand side of the document, as shown. Make sure that none of the controls or text are moved or hidden. (2)

Do NOT lock the form before you save it.

Save **3Form_Vorm** and close the document. **[22]**

QUESTION 4

The clinic keeps a record of patients admitted each month, as well as their medications and levies.

Open the spreadsheet **4Jun** which contains some patient records for the month of June.

Work on the **Data** worksheet.

Key in your examination number in cell C1 on the **Data** worksheet.

4.1	Merge cells A1:B2.	(1)
4.2	Wrap the headings in row 3.	(1)
4.3	Add borders around each cell in the range A3:L16.	(1)
4.4	Add the name of the spreadsheet as a field in the footer.	(2)
4.5	Format the dates in column F in the dd-MMM-yy format. A date in this format would display as follows: 01-Oct-10 or 01 Oct 10.	(1)
4.6	The clinic needs to report their monthly VAT to SARS.	

4.6.1   Add a formula or function in cell G17 to calculate the total medicine costs in column G. Adjust column width if necessary to correctly display the total. (2)

4.6.2   Add a formula in cell H18 to calculate the total VAT (charged at 14%) of the total levy (in cell H17). (2)

4.7   Add a function in cell F21 to determine the ID number of the second oldest person. Hint: The first two digits (numbers) of an ID number represent the year in which a person was born. (2)

4.8   Add a function in cell F22 to determine the average cost of all medicines (found in column G). Round your answer off to the nearest whole number. (4)

4.9   Add a function in cell F23 to calculate the total cost of medicines (found in column I) for Clinic 4 (as indicated in column J). (4)

4.10 A local NGO subsidises the patients visiting the clinics. The amount paid *per patient* differs from clinic to clinic.

For example, cell D8 in the **Clinics** worksheet contains the subsidy per patient for Clinic 7.
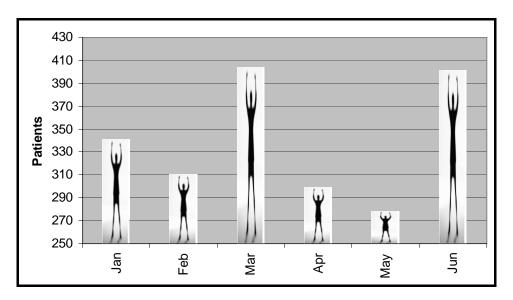
Add a suitable function in cell F24 of the **Data** worksheet to calculate the total subsidy that will be paid for patients visiting <u>Clinic 7</u>. (Hint: The total subsidy for Clinic 7 is calculated by multiplying the subsidy for Clinic 7 by the number of patients that visit Clinic 7.) (4)

4.11 Draw a column chart in the **Graph_Grafiek** worksheet. This graph will show patients visiting a clinic for the <u>first 6 months</u> of the year. Use the data given in the **Graph_Grafiek** worksheet.

Note the following:

- The graph must be inserted below the data in the worksheet.

- Your graph must be formatted using the formatting and layout options shown in the diagram below.

- Add labels to the X- and Y-axes of the graph, as shown in the diagram below.

- Use intervals of 20 on the Y-axis with a minimum of 250.

- No title for the graph is required.

- The graphic used to create the fill effect is stored as **3Patient_Pasiënt.jpg**.

(7)

Save and close **4Jun**. **[31]**

QUESTION 5

The clinic keeps a record of patients admitted as well as their medications and levies.

Open the spreadsheet **5Sep** which contains some patient records for the month of September.

Work on the **Data** worksheet.

Key in your examination number in cell C1 on the **Data** worksheet.

5.1	Patients with a code of *4 000 or less* will stay at the clinic overnight and the others will be day patients. Format the codes of the overnight patients in column A so that these codes automatically appear in a font colour different to that of the rest of the patient codes.	(3)
5.2	Add IF-functions in column D to display a "Y" if the patients are staying overnight (with a code of *4 000 or less)*. Column D should remain blank if they are 'day patients' (not staying overnight).	(3)
5.3	Add IF-functions in column H to determine the levy which is calculated as 15% of the cost of the medicine in column G, for patients with a medical aid, which is indicated with a "Y" in column E. Patients who do not belong to a medical aid do not pay a levy and a zero should therefore be displayed for these patients.	(3)
5.4	Use IF-functions in column I to calculate the *'Total/Totaal'* by adding the cost of the medicine in column G to the levy in column H. Add the amount in cell F1 <u>only</u> if the patient stayed overnight.	(4)
5.5	Use a lookup function in cell K4 to determine the name of the clinic. Use the code in column J and the table in the **Clinics** worksheet for the lookup function.	(5)
5.6	Add formulas in column L to produce the NHS codes. These codes are created by taking the first 8 numbers of the ID number (column C) and the initial of the patient. For example, the NHS code for the patient Silumesi, **A** (with ID number **48060275**72074) would be: 48060275A.	(6)

Save and close **5Sep**.   **[24]**

QUESTION 6

6.1 Open the database called **6Clinic_Kliniek** and go to the **Patients_Pasiënte** table.

Make the following changes to the **Patients_Pasiënte** table:

6.1.1 Change the data type of the **Photo_Foto** field as it will be used to store a photo of the patient. (1)

6.1.2 Change the data type of the **Notes_Notas** field as it is going to store a page of notes about the patient. (1)

6.1.3 Add a new text field called **Doctor_Dokter** which stores a maximum of 26 characters. This field must appear immediately before the **Photo_Foto** field. (3)

6.1.4 Set a default value of 1 for the **Visits_Besoeke** field. (1)

6.1.5 Make sure that the user has to enter a value for the **Visits_Besoeke** field when entering a new record in the table. (1)

6.1.6 Set a validation rule to prevent the user from entering any value greater than 100 for the **Visits_Besoeke** field. Suitable validation text must be used. (3)

6.1.7 Create an input mask for the **Code_Kode** field. This code consists of two capital letters (upper case) followed by a number and another optional number. Valid codes would therefore be AB18 or CD5. (4)

6.1.8 Ensure that the user cannot enter a duplicate value (one that has already been used) in the **Code_Kode** field. (1)

Save the **Patients_Pasiënte** table.

6.2 Open the form called **frmData** which is based on the **Stock_Voorraad** table and make the following changes to the form:

6.2.1 Add the date as a field in the footer of the form. (2)

6.2.2 The **Schedule_Skedule** field does not appear on the form currently. Add a list box control on the form to allow the user to choose from the values *S1*, *S2*, *S3*, *S4* and *S5* for the **Schedule_Skedule** field. A suitable label must be added to the list box.

Format the label to match the other labels on the form. (5)

6.3   Edit the query **Q1** so that the same fields are shown, but only for those records with a price of R5 000 or more. Sort the records in ascending order firstly according to the **Schedule_Skedule** and then according to the **Code_Kode** of the product.   (3)

6.4   Edit the query **Q2** by making the following changes:

    6.4.1   All the existing fields must remain in the query but the contents of the **Schedule_Skedule** field should not be displayed when the query is run.   (1)

    6.4.2   The only records that should be displayed are those:

- from **Schedule_Skedule** S3 or S4 **and**

- that have a **Date_Datum** in 2010 or later **and**

- in which the **Ingredient_Bestanddeel** ends in the word 'acid'. e.g. Alendronic acid.   (3)

    6.4.3   A calculated field called *Item Cost* must be added. It is calculated by dividing the **Price_Prys** by the **Size_Grootte** fields. No formatting is required.   (4)

6.5   Create a report called *rep1* which must be as follows:

- Based on the existing query called **qRep**

- Show only the **Ingredient_Bestanddeel**, **Code_Kode**, **Size_Grootte** and **Schedule_Skedule** fields (in that order)

- Sorted according to the **Ingredient_Bestanddeel** field

- Landscape format   (5)

6.6   Open the existing report called *repData*.

    6.6.1   Replace the date field in the page footer with a label with your examination number.   (2)

    6.6.2   The formula used in the report footer is supposed to display the <u>average</u> price of all the products that appear in the report.

           Edit and format this formula so that it displays the correct answer formatted in currency format with *no decima*ls shown, e.g. R1 345.   (4)

    6.6.3   Edit the report so that the total number of products for each category of product in the **Format_Formaat** field e.g. *'TAB'* or *'CAP',* is automatically displayed with a suitable label.   (4)

Save **Clinic_Kliniek** and close the database.   **[48]**

QUESTION 7

7.1　Open the spreadsheet **7Records_Rekords**.

　　Work on the **Graph_Grafiek** worksheet.

　　Key in your examination number in cell A1. Locate the graph in the **Graph_Grafiek** worksheet and answer the following questions.

　　7.1.1　Change the properties of the graph so that all 9 months of the year ('Jan' – 'Sep') are displayed.　(1)

　　7.1.2　Format the column that represents the largest value in a colour different from the rest of the columns of the graph.　(1)

　　7.1.3　Display the numerical value for each month.　(1)

　　7.1.4　Remove the horizontal gridlines of the graph.　(1)

　　7.1.5　Save the graph as a jpeg file called **7Graph_Grafiek**.　(2)

　　　　Save and close **7Records_Rekords**.

7.2　Import the data from the **7Data** spreadsheet only for those patients born *after 1950* (that is from 1951 onwards) into a new table called **Data** in the database **7Import_Invoer**.

- No primary key should be added.
- All data should display correctly.　(5)

7.3　Open the document **7Form_Vorm**.

　　This document will be used as part of a mail merge.

　　Key in your examination number in the header of the file.

　　7.3.1　Copy the graph from the **Graph_Grafiek** worksheet in the **7Records_Rekords** spreadsheet and paste it under the heading *Graph/Grafiek* in the document **7Form_Vorm**.

　　　　The graph must automatically update in the current document if any changes are made to the original graph in the spreadsheet.　(2)

7.3.2   Prepare the document as a form letter for a mail merge. Use the data from the **Data** worksheet in the spreadsheet **7Records_Rekords.**

- Add the merge fields **Name_Naam** and **Cost_Koste** as indicated in the document.

- Select only those records where the **Cost_Koste** value is R900 or more.

- Sort the records in descending order of the **Cost_Koste** value.

- Save this document <u>before</u> running the mail merge.   (5)

7.3.3   Perform the mail merge and save all the merged letters as **7Memo**.   (1)

Save and close any open files.

7.4   Open spreadsheet **7Cap** and key in your examination number in cell A1.

Edit this spreadsheet so that the only items that remain meet the 'criteria' listed below. All other items must be deleted from the spreadsheet (the headings in row 3 may be kept).

- The items must be schedule 1 ('S1').

- The items must be in capsule format ('CAP').

- The date for the items must be any date in 2010.   (4)

Save and close any open files.   **[23]**

TOTAL: 200