GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION

COMPUTER STUDIES SG
(First Paper: Practical)

TIME: 3 hours

MARKS: 150

INSTRUCTIONS:

- This paper consists of 12 pages. Check that your paper is complete.

- You will receive an examination disk with a label on it and a folder from the invigilator. Write your examination number clearly on the label and complete the cover page of the folder.

- ALL questions are COMPULSORY.

- Save your work on a regular basis – every 10 minutes – on the given disk.

- You may use the full allocated time (3 hours) to answer the questions. Additional time will be allowed for printing. No changes may be made to any document during printing time.

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  > Diligently follow the instructions at the end of each question in connection with the handing in of printouts and the files that need to be saved on the examination disk. The files and the printouts that need to be handed in are indicated at the end of each question in a frame similar to this one.

- Arrange your printouts according to the question numbers. Ensure that your examination number is written or printed on each page. Place all the pages in the given folder and staple them to the top left-hand corner on the inside of the folder, with the pages on the inside of the flap that folds in.

- Place your disk in the pocket inside the front page of the folder and secure it by stapling the pocket, next to the disk, to the front page. BE CAREFUL NOT TO STAPLE THE DISK AND DAMAGE IT IN THE PROCESS.

QUESTION 1
WORD PROCESSING

The local gymnasium aims to make high school learners more health conscious. They would like to establish a fitness club at the school.

Load your word processing program and open the existing file **Q1** on your examination disk.

1.   Carry out instructions 1.1 – 1.13 and change the document to look as follows:

PHYSICAL ACTIVITY

What is physical activity?

Physical activity covers excercises like jogging, swimming, cycling, aerobics, but also being more physically active by, for example, using the stairs rather than the lift.

Advantages of physical activity
- It can reduce the risk of heart disease while prolonging your life.
- It improves your metabolism, making you feel more energetic.
- It improves your mental health and state of mind.
- It helps you to cope with stress.
- Regular physical activity helps you to control your weight and stay fit.

How much physical activity is required?
Thirty minutes of physical activity most days of the week. (You should strive to exercise at least 3 days per week.)

Moderate physical activity:
Dancing
Golf
Swimming (leisurely)
Cycling (leisurely)
Brisk walking

Vigorous physical activity:
Spinning
Aerobics
Tennis, Rugby, Hockey, Netball
Cycling (fast)
Running

Suggestions:
Set simple goals.
Start slowly, once or twice per week and build up gradually.
Keep a diary.
Persevere.

<u>How to determine your heart rate:</u>
To calculate your maximum heart rate, subtract your age
in years from 220. To calculate a given percentage,
multiply your maximum heart rate by 0,6 (for 60%), 0,7
(for 70%) etc. For example: a 20-year-old person has a
maximum heart rate of 200 beats per minute (220 – 20).
When exercising at 70% his heart rate will be 140 beats
per minute.

		HEART RATE			
		100%	90%	80%	70%
AGE	16	204	184	163	143
	17	203	183	162	142
	18	202	182	162	141
	19	201	181	161	141

For each of the following, refer to the example on pages 3 and 4:

1.1   Change the font type of the whole document to Arial.   (1)

1.2   Change the heading **"PHYSICAL ACTIVITY"** as follows:

- Centre the heading.
- Bold the heading.
- Change the font size to 14 pt.   (3)

1.3   Underline the subheadings: "What is physical activity?", "Advantages of physical
       activity.", "How much physical activity is required?", "Suggestions:", and "How to
       determine your heart rate:".   (2)

1.4   Change the line spacing of the first paragraph "**What is physical activity?**" to 1.5
       and fully justify the paragraph.   (2)

1.5   Change each of the bullets • under the heading "Advantages of physical activity."
       to an arrow, e.g. õ.   (2)

1.6 Place a border around each of the headings "**Moderate physical activity:**" and
    "**Vigorous physical activity:**". (2)

1.7 Put the moderate physical activities and vigorous physical activities, with their
    headings, into two columns. Draw a vertical line between the two columns. (3)

1.8 Insert a page break before the last paragraph "**How to determine your heart
    rate**:". (1)

1.9 Number the pages at the top of the page in the centre. Do not show the number
    on the first page. (3)

1.10 Change the last paragraph "**How to determine your heart rate**:" as follows
     (table not included):

   • Change the background of the whole paragraph to blue.
   • Set the left indentation of the paragraph at 2 cm and right indentation at 2 cm. (3)

1.11 Change the table at the bottom of the document as follows:

   • Merge cells as indicated.
   • Change the text direction of AGE to vertical.
   • Change AGE and HEART RATE to bold.
   • Draw a border as indicated on page 4 in the examination paper (width 3 pt).
   • The height of all the rows must be 1 cm.
   • Centre all the text in the cells horizontally and vertically. (10)

1.12 Use the word processing function to insert the current date on the **left** and the
     time on the **right** in the footer. (3)

1.13 Type your examination number in the header. (1)

Save the changed document as a word processing file on your examination disk as
Q1XXXX *where XXXX represents the last 4 digits of your examination number.*

Make a printout of Q1XXXX **[36]**

QUESTION 2
WORD PROCESSING

To advertise the fitness club the gymnasium hosts a biathlon.

Use your word processing program and design the following flyer (size A4) to be distributed at the school. Use the undermentioned as a guide. Marks are allocated for the design of the flyer and for typing the correct information.   (5)

- Use different font types and font sizes.   (2)

- Select a suitable name for the biathlon – use WordArt.   (2)

- Use the two pictures saved on your examination disk as "run" and "cycle". Place each picture in a border as indicated.   (3)

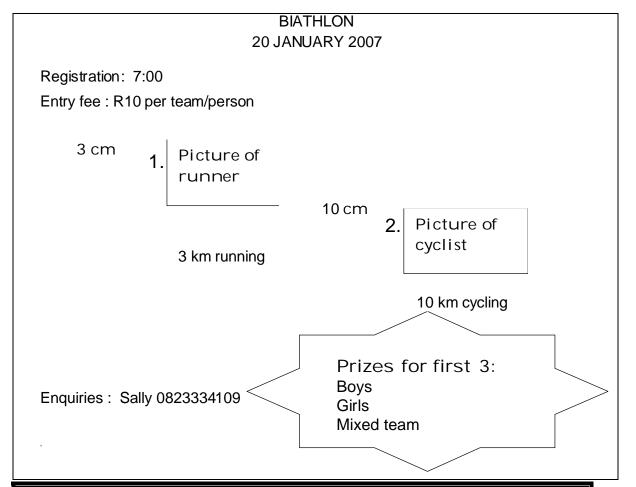- Colour the background of the star autoshape green and change the line around the autoshape to a double red line.   (3)

Type your examination number in the header.

This question will be marked on the computer.

BIATHLON
20 JANUARY 2007

Registration: 7:00

Entry fee : R10 per team/person

3 cm

1. Picture of runner

3 km running

10 cm

2. Picture of cyclist

10 km cycling

Enquiries : Sally 0823334109

Prizes for first 3:
Boys
Girls
Mixed team

*Save your document as **Q2XXXX** where XXXX represents the last 4 digits of your examination number. **Make a printout of Q2XXXX.***   **[15]**

QUESTION 3
SPREADSHEET

Load the existing file **Q3** from your examination disk into your spreadsheet program.
The spreadsheet contains data of learners that belong to the fitness club.

Make the following changes:

3.1   Change the page orientation to landscape.   (1)

3.2   Give the spreadsheet the heading GRADE 10 – 12 GIRLS in Row 1.
        Font size 16 pt.   (2)

3.3   Centre the column heading FAT PERCENTAGE across Columns H and I.   (1)

3.4   Change all the column headings to bold and text wrap the column headings in
        Cells C3 – G3 to show the words as follows:

NAME	GRADE	BIRTH DATE	AGE	HEIGHT (metre)	MASS (Kg)	BODY MASS INDEX (BMI)	JAN	NOV

                                                                                       (4)

3.5   Adjust the column widths to make all the data clearly legible.   (1)

3.6   Change the row heights from Row 4 to the end of the spreadsheet to a height of
        15.   (1)

3.7   Use the date in Cell F1 as an absolute cell reference and determine the age of
        each girl in Column D. The age is the difference between the date in Cell F1 and
        the birth date divided by 365.

        Round off the age to the next integer. E.g. 17.4 becomes 18.   (4)

3.8   Add a column between Columns G and H and supply it with the heading
        "COMMENT".   (1)

        Use an IF-statement and print "NORMAL" in this column if the BMI in Column G
        is from 20 to 25, print "UNDERWEIGHT" if the BMI is below 20 and print
        "OVERWEIGHT" if the BMI is more than 25.   (7)

3.9   Sort the spreadsheet alphabetically according to the grade.
        Insert an open row after each grade.   (4)

3.10 Use functions to determine the following at the bottom of the spreadsheet: Add suitable captions.

- The number of girls that joined the fitness club (2)

- The average mass of all the girls, rounded off to 2 decimal places (3)

- The number of girls that are overweight (2)

- The height of the tallest girl (2)

The spreadsheet must fit onto one page.

3.11 Type your examination number in the header. (1)

3.12 Create a line graph as a new worksheet in the same workbook showing the names and fat percentages in JAN and NOV of all the grade 10 – 12 girls. Name the worksheet **GRAPH.** (2)

Give the graph the heading: **FAT PERCENTAGES** (1)

- Name the axes as follows: X-axis: NAME
                               Y-axis : PERCENTAGE (2)

- The series (*"legend"*) must clearly indicate that the fat percentages are those for JAN and NOV. (1)

- The scale on the Y-axis must be 2. (1)

- All the names must be displayed and the graph must fit onto one page. (2)

- Determine from the graph the girl with the biggest change in fat percentage and type her surname and name as a comment in the top right corner of the graph. (2)

3.13 Copy the name and BMI of all the grade 12 girls to a new worksheet in the same workbook. Name the worksheet **Gr 12.** (2)

Save the changed document as a spreadsheet file on your examination disk as **Q3XXXX** *where XXXX represents the last 4 digits of your examination number.*

- Make a printout of the spreadsheet with formulae shown on one page in landscape. Use Ctrl ~.

- **Make a printout of the line graph GRAPH.**

- **Make a printout of the worksheet Gr 12** **[49]**

QUESTION 4
INTEGRATION

Load the existing file **FORML** from your examination disk into your word processing program. Use the data in the spreadsheet file Q4 on your examination disk to send a form letter to each learner. The form letter must contain the name and body mass index of the learner. (4)

*Save the form letter as **FORMLXXXX** where XXXX represents the last 4 digits of your examination number. **Make a printout for any learner**.* **[4]**

QUESTION 5
DATABASE

Load the existing file **Q5** from your examination disk into your database program. The tables GIRLS and BOYS respectively contain the data of the girls and boys that belong to the fitness club.

The tables GIRLS and BOYS have the following fields:

Name:	Text field	The surname and name of the club member
Grade:	Numerical field	The club member's grade
Tel. num:	Text field	The club member's telephone number
Club fee:	Numerical field	Club fee paid
Aerobics:	"Yes/No" field	Participates in the activity?
Spinning:	"Yes/No" field	Participates in the activity?
Pilates:	"Yes/No" field	Participates in the activity?

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

5.1   Change the name of the table (*"rename"*) GIRLS to **GIRLSXXX** where XXX represents the last three digits of your examination number. (1)

5.2   Change the column CLUB FEE to show the currency in Rand. (2)

5.3   Add a validation test to the field GRADE.
         GRADE may only be 8 - 12. (Existing data must not be tested for validity.)

         A text message "**Only 8 - 12**" must be displayed when an invalid number is typed in. (4)

5.4 All the girls attend the AEROBICS activity. Set the default value of the field as YES. (Existing data must not be tested for validity.) (2)

5.5 Use a query to calculate the outstanding club fees if the club fee is R500 per year. The column heading must be OWING. Columns NAME , GRADE and OWING must be displayed.

*Save the query **OWINGXXXX** where XXXX represents the last 4 digits of your examination number and complete the query on the answer sheet to look the same as your query.* (5)

5.6 5.6.1 Create a query to determine which grade 11 girls are club members.

Only the columns NAME and TEL NUM must be displayed.
The names must be sorted alphabetically. (5)

*Save the query **GR11XXXX** where XXXX represents the last 4 digits of your examination number and complete the query on the answer sheet to look the same as your query.*

5.6.2 Use the query created in Question 5.6.1 and compile a report of these Gr 11 girls.

- The report must contain the NAME and TEL NUM. (2)

- Give the report the heading GRADE 11 GIRLS. (1)

- Add your examination number as a page footer. (1)

- Use a function at the bottom of the report and determine the number of grade 11 girls. Add the caption "NUMBER:". (3)

- Insert one of the pictures "run" or "cycle" that is saved on your examination disk on the report. (2)

*Save the report as **GRADE 11-GIRLS**.*
Make a printout of the report.

5.7 Use a query to determine which girls participate in more than one activity. Only the NAME must be displayed.

*Save the query as **ACTIVITYXXXX** where XXXX represents the last 4 digits of your examination number and complete the query on the answer sheet to look the same as your query.* (5)

5.8 Create a form that can be used to enter new information in the table GIRLS. Give the form the heading : INPUT OF DATA (3)

This form must indicate the following clearly:

- The name must be input in the format : Surname first, then name. (1)

- The grade must be from 8 to 12. Place a combo box on the form where the grade can be selected. (2)

Save the form as **FORMXXXX** *where XXXX represents the last 4 digits of your examination number.*

5.9 Create a new table **MEMBERS** with the same fields as the table GIRLS.

The table must have a primary key that automatically numbers the records from 1. (3)

- Copy all the data from the table GIRLS, as well as all the data from the table BOYS to the new table MEMBERS. (2)

- Sort the table MEMBERS alphabetically. (2)

Make a printout of the table MEMBERS.

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[46]

TOTAL: 150

ANSWERSHEET / *ANTWOORDBLAD*

CANDIDATE'S NUMBER / *KANDIDAAT SE NOMMER*:

☐☐☐ ☐☐☐☐☐ ☐☐☐☐

5.5   Query **OWING** _____ **/** *Navraag* **VERSKULDIG**____

Field:			
Table:			
Sort:			
Show:	☐	☐	☐	☐
Criteria:			
or:			

5.6.1 Query **GR 11**____ / *Navraag* **GR11**___

Field:			
Table:			
Sort:			
Show:	☐	☐	☐	☐
Criteria:			
or:			

5.7 Query **ACTIVITY**____ / *Navraag* **AKTIWITEIT**___

Field:			
Table:			
Sort:			
Show:	☐	☐	☐	☐
Criteria:			
or:			

END / *EINDE*