## education

Department:
Education
REPUBLIC OF SOUTH AFRICA

## NATIONAL SENIOR CERTIFICATE

## GRADE 12



MARKS: 200
TIME: 3 hours

This question paper consists of 17 pages and an annexure.

## 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. Insert your name and surname 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. If a disk has been issued to you, you must write your name on the label.
4. A copy of the master files will be available from the invigilator. Should you accidentally corrupt the files given to you, you may request further copies from the invigilator.
5. Make sure that you save each document using the file names given. Save your work at regular intervals as a precaution against possible power failures.
6. Read through EACH question before answering or solving the problem. Do NOT do more than is required by the question.
7. At the end of the examination you must hand in the disk given to you by the invigilator with all the answers saved on the disk or make sure that all the files have been saved on the network as explained to you by the invigilator/educator. Ensure that ALL files can be read; if not, request a further copy from the invigilator/educator.
8. Note that NO printing is required.
9. During the examination you may use the help functions of the programs which you are using. You may NOT use any other resource material.
10. Note that if data is derived from a previous question that you CANNOT answer, you should still proceed with the questions that follow.
11. Formulas and/or functions must be used for ALL calculations in questions involving spreadsheets, unless otherwise specified. Absolute cell references must only be used where necessary to ensure that formulas are correct when they are copied to other cells in spreadsheets.
12. In ALL questions involving word processing, the language should be set to English (South African) and the paper size is assumed to be A4 portrait, unless otherwise instructed.
13. All measuring units should be set to cm .

## NOTE:

The data disk that you receive with this question paper, contains the folder Data and the following files. Ensure that you have ALL these files before you begin this examination.

- Cyclist.jpg
- q2addresses.mdb
- q2competition.doc
- q2cruise.doc
- q3scores.xls
- q4payinfo.xls
- q5members.mdb
- q5records.xls
- q6activities.mdb
- q7booklet.doc
- q7cycleRep.doc
- q7finishers.mdb


## SCENARIO:

You belong to the All Stars Sports Club which offers a variety of activities such as the following:

- swimming
- athletics
- gymnastics
- road running
- cycling
- rugby
- soccer
- tennis
- a social club

The club has a few computers which are used by the following people:

- The secretary and an administrative assistant for general administration
- The treasurer to keep the accounting records and to send accounts to members

Each committee has its own laptop which is used to record meeting procedures and to e-mail sporting results to the network server.

The computers have been loaded with all the relevant software, in other words an operating system and Office Suite.

## QUESTION 1

The secretary has created the following folder structure on her computer's hard drive, but needs some help in organising the files and folders. The folder Data can be found on your disk.

1.1 Create a new folder called Backup in the Correspondence folder.
1.2 Help the secretary to search for a file. She remembers working on the file in the last week of April 2007 and that the file contains the word 'canoe'.

Enter the name of the file in the space provided in the file called Question1 in the Data folder.
1.3 Find the oldest file in the Data folder or any of its sub-folders.

Enter the name of the file in the space provided in the file called Question1 in the Data folder.
1.4 Protect the file Bank Recons in the Accounts folder with the password 1234\$ in order to be able to open the file.
1.5 Move ALL the word processing files in the Athletics folder to the folder called Old.
1.6 Create a shortcut to the 2008 folder in the Members folder and place it in the Accounts folder.
1.7 Save the file q2tour.doc in the Data folder as a Rich Text Format file.
1.8 Arrange the files in the folder Athletics in descending alphabetical order.
1.9 Take a screenshot of the full-screen image that shows the folder display as a screen image and paste the image into the file called Question1 in the Data folder.

Remember to save and close the Question1 document.

## QUESTION 2

The club wishes to run a monthly competition in order to raise funds. The secretary has typed out the draft document and asks you to assist by editing it.

Open the file q2competition.doc.
2.1 Change the styles and formatting of the body of the letter (up to the text 'SAVEMORE BANK') to match the style of the first paragraph 'All you need to do ...'
2.2 Change the left margin to 3.7 cm .
2.3 Set the justification of this letter so that the margins are even.
2.4 Set the left tab stop at 11 cm and align each line of the sender's address (top 3 lines of the document).
2.5 Insert today's date against the left margin and two line spaces after the sender's address, so that it will automatically update.
2.6 Centre 'Win a cruise' and change it to WordArt or TextArt, with a font size of 24 pt.
2.7 Copy the picture of the ship from the file q2cruise.doc and place a copy of this picture to the left of the text 'Win a cruise'. Ensure that the picture is in colour and resized to exactly $3 \mathrm{~cm} \times 3 \mathrm{~cm}$.
2.8 Set the line spacing of the body of the letter to 1.5 and 12 pt spacing before each paragraph.
2.9 Insert page number fields in the format 'Page $X$ of $Y$ ' in the footer so that the page numbering starts to appear on the second page.
2.10 Make appropriate use of tabs to format the banking details as follows:

```
SAVEMORE BANK
ACCOUNT HOLDER................................................................. STARS SPORTS CLUB
ACCOUNT NUMBER
2904474747
BRANCH CODE..........................................................................................-3-44-45
```

2.11 Perform a spelling check on the entire document.
2.12 Add a form at the end of the document as shown below. Ensure that the following objects and form controls are displayed:

- Table for name - 20 cells
- Table for a cell phone number - adjust the cell sizes to 0.5 cm
- Checkbox form controls for club activities in front of the activities
- Frame spanning the page width for 'Caption for photo'

The form should appear as shown below:
COMPETITION ENTRY - OCTOBER 2008
NAME


CELL PHONE NUMBER
$\square$

CLUB
ATHLETICS
SWIMMING
BOXING
RUGBY
SOCCER
ROAD RUNNING
TENNIS
$\square$ OTHER

CAPTION FOR PHOTO ENTERED
2.13 Insert a hyperlink to the file called q2prices located in the Data folder on the word q2prices (see the last word in this document).
2.14 Use the current document as a form letter to perform a mail merge using the table (addresses) in the database file q2addresses.mdb as a data source.

- Insert the necessary merged fields where the <......> currently appear.
- The letter must only be sent to recipients who live in Cape Town.
- Save the merged document as q2competitionmerged in the Data folder.

Remember to save and close the document.

## QUESTION 3

The coach of the cricket club requires an analysis of the cricket scores of the latest game with the aim of improving the team's bowling and batting. One of the club members has entered basic details, but the spreadsheet still requires some analysis.

Open the file q3scores.xls.

|  | A | B | C | D | E | F | G | H | I | J |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 | ALL STARS vs | KINGSLE |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  | 1ST 0V |  |  | 2ND 0V |  |  | 3RD | OVER |  |
| 5 |  | BOWLER | KPH |  | BOWLER | KPH |  | BOWLER | KPH | MPH |
| 6 |  | Ashlin | 81.8 |  | Sanjay | 81.5 |  | Alan | 132.1 |  |
| 7 |  |  | 85.6 |  |  | 84 |  |  | 112.5 |  |
| 8 |  |  | 87.7 |  |  | 81.1 |  |  | 77.9 |  |
| 9 |  |  | 96.6 |  |  | 85 |  |  | 113.8 |  |
| 10 |  |  | 91.5 |  |  | 85.6 |  |  | 56.7 |  |
| 11 |  |  | 110.6 |  |  | 82.3 |  |  | 87.2 |  |
| 12 | Average bowling speed |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |  |  |
| 16 | Third slowest bowling speed in | mph |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |  |  |
| 18 | Overall fastest bowling speed kph |  |  |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |  |  |  |

## QUESTIONS 3.1 to 3.6 pertain to the Bowling worksheet.

3.1 Insert a custom footer as follows:

Left section: \begin{tabular}{l}
$\mathrm{km} / \mathrm{h}$ <br>
mph

$\quad$ Centre section: 

kilometres per hour <br>
miles per hour
\end{tabular}

3.2 Split cell A2 into 4 columns.
3.3 The bowler, Alan, wishes to post his bowling speeds on his fan mail list and has asked you to convert his bowling speeds to mph (miles per hour). To convert km/h (kilometres per hour) to mph you need to divide by 8 and multiply by 5 . Insert a formula in cell J 6 which will convert $\mathrm{km} / \mathrm{h}$ to mph . Copy this formula down into the relevant cells.
3.4 Insert a formula in cell C12 to determine the average bowling speed of the bowler Ashlin. ROUND your answer to ONE decimal place. Copy this formula across for the other bowlers.
3.5 Insert a formula in cell J16 that will calculate the third slowest bowling speed in mph for the bowler Alan.
3.6 Insert a formula in cell B18 to calculate the overall fastest bowling speed of ALL bowlers in km/h (in other words the fastest ball bowled).

## QUESTIONS 3.7 to 3.8 pertain to the Batting worksheet.

3.7 Ensure that all labels and text on the worksheet are visible by adjusting the widths of the columns.
3.8 The strike rate is determined by expressing the number of balls as a percentage of the number of runs.

Insert a formula in cell H 5 to determine the strike rate of the batsman Green.

## QUESTIONS 3.9 to 3.11 pertain to Sheet3.

3.9 Rename Sheet3 to Summary.
3.10 Link the Summary (Sheet3) worksheet to the appropriate cells in the Bowling worksheet where cells B4 to B6 reflect the average bowling speeds in km/h.
3.11 Edit the chart in the Summary worksheet as follows:
3.11.1 Change the chart to be a column chart.
3.11.2 Change the minimum on the $y$-axis to 2 .
3.11.3 Label the $x$ - and $y$-axes as Batsmen and Runs respectively.
3.11.4 Replace the numbers on the horizontal axis with the names of the batsmen which are stored in cells B5:B15 on the Batting worksheet. These names should be vertically displayed.

Remember to save your file.

## QUESTION 4

The treasurer of the club presents you with an attendance register of all the coaching that took place during the month of July. You are required to assist with the updating of this attendance register so that it becomes a schedule from which to write out the cheques for the coaches.

Open the file q4payinfo.xls.
A screenshot of part of this file is shown below.

|  | A | B | C | D | E | F | G | H | I | J |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 | Date coached | Activity | Surname | Name | Date appointed | Weekly hours | Rate per hour | Saturday hours | Above/Bel ow |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 | 2-Jul-08 | Athletics | Govender | Ray | 12/29/2007 | 3 | 82 | 3 |  |  |
| 7 | 2-Jul-08 | Tennis | Green | Jasmin | 3/8/2003 | 2 | 67.5 |  |  |  |
| 8 | 3-Jul-08 | Swimming | Bantjies | Jonathan | 7/21/2005 | 4 | 75 |  |  |  |
| 9 | 4-Jul-08 | Hockey | Smith | Tamsin | 2/10/2001 | 2.5 | 65 |  |  |  |
| 10 | 5-Jul-08 | Road Running | Ngubane | Joshia | 5/10/1999 | 5 | 57.5 | 5 |  |  |
| 11 | 6 -Jul-08 | Soccer | Hadebe | Luke | 7/21/2001 | 9 | 73 | 2 |  |  |
| 12 | 9-Jul-08 | Athletics | Govender | Ray |  | 5 | 58 | 3 |  |  |
| 13 | 9-Jul-08 | Tennis | Green | Jasmin |  | 2 | 72 |  |  |  |
| 14 | 10-Jul-08 | Swimming | Bantjies | Jonathan |  | 4 | 80 |  |  |  |
| 15 | 11-Jul-08 | Hockey | Smith | Tamsin |  | 2.5 | 75 |  |  |  |
| 16 | 12-Jul-08 | Road Running | Ngubane | Joshia |  | 5 | 62 | 5 |  |  |
| 17 | 13-Jul-08 | Soccer | Hadebe | Luke |  | 4 | 58 | 2 |  |  |
| 18 | 16-Jul-08 | Athletics | Govender | Ray |  | 4 | 50 | 3 |  |  |
| 19 | 16-Jul-08 | Tennis | Green | Jasmin |  | 1.75 | 65 |  |  |  |
| 20 | 17-Jul-08 | Swimming | Bantjies | Jonathan |  | 3 | 78 |  |  |  |
| 21 | 18-Jul-08 | Hockey | Smith | Tamsin |  | 5 | 84 |  |  |  |
| 22 | 19-Jul-08 | Road Running | Ngubane | Joshia |  | 4 | 58 | 5 |  |  |
| 23 | 20-Jul-08 | Soccer | Hadebe | Luke |  | 2.5 | 56 | 2 |  |  |
| 24 | 23-Jul-08 | Athletics | Govender | Ray |  | 2.5 | 64 | 3 |  |  |
| 25 | 23-Jul-08 | Tennis | Green | Jasmin |  | 2 | 87 |  |  |  |
| 26 | 24-Jul-08 | Swimming | Bantjies | Jonathan |  | 4 | 75 |  |  |  |
| 27 | 25-Jul-08 | Hockey | Smith | Tamsin |  | 2.5 | 58 |  |  |  |
| 28 | 26-Jul-08 | Road Running | Ngubane | Joshia |  | 5 | 65 | 5 |  |  |
| 29 | 27-Jul-08 | Soccer | Hadebe | Luke |  | 9 | 68 | 2 |  |  |
| 30 | 30-Jul-08 | Athletics | Govender | Ray |  | 2 | 72 |  |  |  |
| 31 | 30-Jul-08 | Tennis | Green | Jasmin |  | 5 | 69 |  |  |  |
| 32 | 31-Jul-08 | Swimming | Bantjies | Jonathan |  | 2 | 84 |  |  |  |
| 33 |  |  |  |  |  |  |  |  |  |  |

## QUESTIONS 4.1 to 4.9 pertain to the Payments worksheet.

4.1 Use a FUNCTION to add today's date into cell A2.
4.2 Format all dates to dd-mmm-yy, for example 12-Apr-08.
4.3 Add an additional column between columns H and I . Head this new column Saturday rate.
4.4 The Saturday rate is $30 \%$ more than the hourly rate. Add a suitable formula to calculate the Saturday rate and copy this formula to the relevant cells.
4.5 Insert a pie chart in the Graph worksheet and compare the number of coaches for road running versus swimming. The slices of the pie chart must be labelled as percentages. Your pie chart should resemble the one shown below.

Coaching Comparison


$$
\begin{equation*}
\text { Road Running } \square \text { Swimming } \tag{8}
\end{equation*}
$$

4.6 Format all the monetary (money) values appearing in the spreadsheet South African Currency, to TWO decimal places.
4.7 Calculate the average hourly rate of ALL the coaches. Place this formula in cell G35.
4.8 Insert a formula in cell J6 to display the word 'Below' if the hourly rate for a coach is less than the average for all coaches. If higher than the average, the word 'Above' must be displayed. Copy this formula for ALL coaches.
4.9 Use the facilities provided by your spreadsheet program so that the cells for the weekly hours of those coaches who coached 4 or more hours automatically appear with a red background.

## QUESTIONS 4.10 to 4.12 pertain to the Allowances worksheet.

4.10 Coaches receive the following uniform allowances according to the sport they coach:

| Athletics | 20 |
| :--- | :--- |
| Swimming | 50 |
| Tennis | 70 |
| Walking | 12 |

This table can be found in the Allowances worksheet in the range H19:I22.
Use this information to create a look-up formula to fill in the data for column J.
4.11 The treasurer wants to know the total number of hours coached by ALL the tennis coaches. Insert a formula in cell B40 on the Payments worksheet that will give this information.
4.12 Add a formula in cell K6 of the Allowances worksheet which will display the following:

- 'Valid ID' if the identity number of Jonathan Bantjies is 13 characters long
- 'Too short' if the length of the identity number is less than 13 characters
- 'Too long' if the length of the identity number is more than 13 characters

Copy this formula for all the other coaches.
Remember to save your file.

## QUESTION 5

Open the database called $q 5$ members.mdb.
5.1 5.1.1 Create a database table MemberRec with the following fields:

| Field Name | Data Type | Length/Format |
| :--- | :--- | :--- |
| Member Number | Number | Integer |
| Name | Text | 30 |
| Fees Owing | Currency | Rxxxx.xx |
| Subscription Paid | Yes/No | Yes/No |

5.1.2 Set the Member Number field as the primary key field.
5.1.3 Set a default value of 1200 for the Fees Owing field.
5.1.4 Save the table as MemberRec.
5.2 Create a simple form called MemberForm using ALL the fields from the MemberCopy table in database q5members.mdb on the disk.
5.3 The secretary typed the member data into a spreadsheet. You now need this data in database format. Import the data from the spreadsheet file q5record.xls into the table MemberCopy.

Close the database application.

## QUESTION 6

The chairperson has decided that the club needs a database of all activities offered and all coaches involved with those activities. Open the database called q6activities.mdb and then open the table Coaches.

The fields in this table as are follows:

| FIELD | EXPLANATION |
| :--- | :--- |
| Employee number | The coach's employee number <br> (Primary key) |
| Activity | The name of the activity |
| Name | The coach's name |
| Contact number | The contact number of the coach |
| Gender | F = Female and M = Male |
| Day(s) | The day(s) on which coaching takes place |
| Duration | Fees charged by the coach per hour |
| Fees charged | H (Hourly) or D (Daily) |
| Rate |  |

The following questions refer to the above table.
6.1 Ian Richmond has emigrated. Delete this record.
6.2 Add a validation test to the Rate field.

- The rate must be either H or D only.
- A text message 'Only H for Hourly or D for Daily' must be displayed if an invalid character is entered.
6.3 Create a query as follows:
- Display ALL male coaches whose fees charged are below R100.
- Display only the Name and the Fees charged.
- Sort the list alphabetically.
- Save this query as CoachQuery.
6.4 Create a query called CostQuery which shows the following:
- The names of all those who coach swimming or tennis and who charge hourly.
- Add a field called Cost which calculates the cost of a coaching session for these coaches.
6.5 Create a report called ReportRates according to the criteria given below.
6.5.1 The report must show the Name, Contact number, Fees charged and Rate (in that order).
6.5.2 Sort the records in descending name order.
6.5.3 Change the report header to read Coaches' Rates.
6.5.4 Calculation:
- At the bottom of the report use a function to determine the average fees charged.
- Display the average as currency with no decimal places.
- Supply a suitable caption for the average.
6.5.5 Change the footer to display your name instead of the date/time that appears in the left of the footer by default.

Remember to save the report as ReportRates. Close the database application.

## QUESTION 7

7.1 The club will be hosting the All Africa Club Championships later on in the year. The chairperson has asked you to assist with the design of a booklet about club.

Open the file $q 7$ booklet.doc.
7.1.1 Use the review/track/record changes option to show any changes that were made to the document and accept the changes that were made on page 1 ONLY in this document. Next, disable this function.
7.1.2 Insert a column break just before the sentence that starts with 'The All
Stars Sports Centre is also home to a ...' in the left column on page 1. Stars Sports Centre is also home to a ...' in the left column on page 1.
7.1.3 Insert a page break just before 'About All Stars' on page 1.
7.1.4 Use the function of your word processor to insert a table of contents at the beginning of the document to show ALL the following headings and the page numbers right justified as shown:
ABOUT ALL STARS ..... 2
BOXING ACADEMY ..... 2
GYMNASTICS ..... 3
HOCKEY ..... 3
ALL STARS SOCCER ..... 5
KNOCKOUT FOOTBALL TOURNAMENT .....
TOP 100 ATHLETICS COMPETITION .....  6
RUGBY. ..... 10
SUPER FIFTEENS TOURNAMENT ..... 10
7.1.5 Use the appropriate function to highlight ALL occurrences of the whole word 'sports' in red.
7.1.6 The page that begins with the heading 'Final Athletics Meeting' should appear in landscape orientation and the rest of the document should remain in portrait orientation. Save and close the file.
7.2 The cycling club has been asked to produce a one-page news report, including a picture for the newsletter. The secretary printed the report, but he did not save the latest version of the file and it now needs to be reformatted quickly!

Open the file q7cycleRep.doc.
Reformat the file to match the appearance of the one shown below. The picture of the cyclist has been saved as Cyclist.jpg. The data needed to construct the table with the top ten rankings can be obtained from the $q 7 f i n i s h e r s . m d b$ database. The points system used to determine the cyclists' rankings is as follows:

- 10 points are awarded for every first place obtained
- 5 points are awarded for every second place obtained
- 1 point is awarded for every third place obtained

The cyclist with the highest number of points calculated on this basis is ranked number one, and so forth.

## Refer to the ANNEXURE for a full-size version of the document.



Remember to save the file.

## ANNEXURE

## All Stars Cycling News

## Mollifies excels in Tour de Capo

All Stars' ace rider Jonnie Mollifies showed his great form by winning the third stage of the Tour de Capo and regaining the yellow jersey. Jonnie, renowned as King of the Mountains, showed his strength by pulling away on the climb up Heartbreak Peak.

Jonathan Swift of Gulliver's Cycle Pro team was placed second, some five minutes behind Jonnie. The next stage is another gruelling race and stretches over 192 km from Conning to the Vellum Dam. All we can say is 'Go Jonnie go!'

## Wo This week's cycling tip

Avoid riding head-on into the sun particularly during early-morning and late-afternoon rides and steer clear of roads that point you directly into the sun.

## Vets Excel at Provincia Championships

Three of our vets, Ivan Holman, Jeannette Koenig and Lentando Saluki, excelled by being placed fourth, eighth and tenth in the Provincial Championships held at Girasol last month.
Jeremy Emery from the Armstrong Racing Club showed his class and went on to take line honours. Meanwhile our own Ivan, helped by team-mates Lentando Saluki and Boris Meeker
had put in a big effort to close in on the leading bunch and did brilliantly in a sprint for the line to secure a well-deserved fourth place.

## Latest club rankings

| Top 10 Rankings as at 12 August |  |  |  |
| :---: | :---: | :---: | :---: |
| Position | Surname | Name | Points |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

In the women's race Jeannette Koenig continued her good form from the Argus. Sylvia Harames from Lonsdale cycling club emerged victor, securing a hat trick of titles.

A huge vote of thanks goes to all our volunteers who served as marshals. The next track league event to take place is at the Westbourne Oval on Friday October 10 at 19 h 00.

