



# education

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Department:  
Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**COMPUTER APPLICATIONS TECHNOLOGY P2**

**NOVEMBER 2008**

**MARKS: 150**

**TIME: 3 hours**

**This question paper consists of 19 pages.**

**INSTRUCTIONS AND INFORMATION**

1. This question paper consists of SECTION A and SECTION B.
2. Answer ALL the questions.
3. Read ALL the questions carefully.
4. Start EACH question on a NEW page.
5. Number the answers correctly according to the numbering system used in this question paper.
6. Write neatly and legibly.

**SECTION A****QUESTION 1**

Choose an item/word from COLUMN B that matches a description in COLUMN A. Write only the letter (A – O) next to the question number (1.1 – 1.10) in the ANSWER BOOK, for example 1.11 Q.

<b>COLUMN A</b>		<b>COLUMN B</b>
1.1	Another name for a web address	A macro
1.2	A mobile communication device which is often Internet enabled	B spyware
1.3	A small picture that provides a preview of the file without opening the file	C firewall
1.4	Software used by the operating system to communicate with peripheral devices such as printers	D database
1.5	A feature of many application programs that allows one to quickly duplicate or repeat a sequence of keystrokes and/or mouse actions	E icon
1.6	A type of malicious program that gathers information about the user without the user's knowledge	F URL
1.7	A computer application that could be used in a school to maintain details of learners	G microwave
1.8	Term used to check the correctness of the data in a database or spreadsheet application	H Personal Digital Assistant (PDA)
1.9	The most suitable type of network connection for a university where connections need to be made between the different buildings	I web page
1.10	A feature of a word processing application that allows one to create many copies of personalised letters	J thumbnail
		K wizard
		L mail merge
		M wireless
		N validation
		O drivers

**(10 x 1) [10]**

**QUESTION 2**

Various options have been provided as possible answers to the following questions. Choose the most appropriate answer and write only the letter (A – D) next to the question number (2.1 – 2.10) in the ANSWER BOOK, for example 2.11 E.

- 2.1 Which ONE of the following is the MOST essential part of a database application?
- A Table
  - B Form
  - C Query
  - D Report
- 2.2 A survey has been carried out to find the percentage of people who intend to vote for each party in an election. The proportions can best be shown as a ...
- A radar chart/graph.
  - B pie chart/graph.
  - C scatter chart/graph.
  - D line chart/graph.
- 2.3 Software that makes the editing of a scanned document possible:
- A SIMM
  - B OCR
  - C PIN
  - D RTF
- 2.4 Which ONE of the following prevents users from entering incorrect data in a database table?
- A Validation rule
  - B Validation text
  - C Default value
  - D Format
- 2.5 Video conferencing is often not possible when Internet connectivity is used. The most likely reason for this is that ...
- A web cameras do not have enough pixels.
  - B the Internet cannot send moving pictures.
  - C many users do not have broadband connections.
  - D the operating system of many PCs is incompatible with video conferencing.

2.6 A form of technology that will determine your current position or location via satellite :

- A GPRS
- B 3G
- C GPS
- D WAP

2.7 Data from a database needs to be sent as an e-mail attachment and must be read into various database packages. The best file format to use is ...

- A jpg
- B exe
- C pdf
- D txt

2.8 The digital divide refers to ...

- A the use of digital versus analogue technology.
- B access to technology.
- C the use of technology in rural and urban areas.
- D the use of new versus old technology.

2.9 Many schools have restricted the use of cell phones by learners during school time. Which ONE of the following is NOT an applicable reason?

- A Learners are attacked for their phones
- B Distribution of offensive material
- C Noisy disruption of classes
- D Using it as a storage device

2.10 A wireless connection whereby electronic devices communicate with each other over a short distance:

- A Wi-Fi
- B Ethernet
- C 3G
- D Bluetooth

(10 x 1) [10]

**TOTAL SECTION A: 20**

**SECTION B**

Your school is holding a fund-raising event in the form of a variety concert with guest artists. The school has decided to use FIVE computers to make this task easier. Grade 12 CAT learners have been asked to assist with this project. You have been appointed as the team leader. Your tasks will include the following:

- To give advice on the computer systems needed for the project
- To select suitable computer programs to use
- To advise on how networks make the task easier
- To give general support on all computer-related issues

**QUESTION 3**

- 3.1 The team will be working together on the project.  
Discuss TWO advantages of having the five computers linked in a network. (2)
- 3.2 You wish to set some 'rules' for saving files on the network to make it easy for everyone to find and access the files.  
Name ONE way in which you could achieve this. (1)
- 3.3 Jabu has to make sure that work is not lost. He is asked to make regular backups of the team's work. He can choose from the following devices:
- File server
  - CD
  - Flash disk
  - MP3 player
- 3.3.1 Name ONE potential disadvantage of saving on the file server as opposed to saving on the other three devices. (1)
- 3.3.2 Name THREE potential disadvantages of using a CD, flash disk or MP3 player as compared to saving on the file server. (3)

3.4 A list of some of the files from the project are shown below.

Concert.avi	Concert.jpg	Concert.tif
Concert.bmp	Concert.mdb	Concert.txt
Concert.doc	Concert.mp3	Concert.wav
Concert.docx	Concert.pdf	Concert.wks
Concert.dot	Concert.pps	Concert.wmf
Concert.eml	Concert.ppt	Concert.wmv
Concert.htm	Concert.rtf	Concert.xls

- 3.4.1 Concert.dot is a template file. What does that mean? (1)
- 3.4.2 You can open and read all the .doc files but not the Concert.docx file. What is the most likely cause of this? (1)
- 3.4.3 Which ONE of the files is most likely to be a webpage? (1)
- 3.4.4 What is a *text file (.txt)*? (1)

3.5 Many pictures were scanned as bitmaps into a word processing document. You tried to e-mail this document to your home so that you could continue working on it. Every time you wanted to send the e-mail with the attachment you received a message that it could not be sent.

- 3.5.1 Assuming that there is nothing wrong with the e-mail system, give ONE possible reason why this happens. (1)
- 3.5.2 Suggest TWO ways of solving this problem. (2)

3.6 Another learner wishes to join your team and since you only have access to five computers, he offers to bring an old computer from home. The machine runs extremely slowly.

Name TWO critical hardware upgrades that could be done so that the speed of the computer system could be improved. Motivate EACH of your answers. (4)

3.7 One of the team members has a brand new computer, loaded with the latest software, at home. At school he cannot open a word processing document that he has saved and brought from home.

Suggest an action that he could take to solve the problem. (1)

3.8 The team will be spending many hours working on the computers.

Identify TWO possible health risks from spending long hours working on a computer AND, for each, suggest an action that could be taken to help reduce the effect of each.

Copy and complete the table below to answer the question:

POSSIBLE HEALTH RISK	ACTION TO BE TAKEN

(4)

3.9 A member of your team wants to take some work home, but he does not yet have an office suite on his home computer. He now has to choose between a proprietary office suite such as Microsoft Office and an open source office suite such as OpenOffice.

3.9.1 Explain what an *office suite* is.

(2)

3.9.2 Compare these TWO types of office suites in terms of cost and support.

(2)

3.10 During preparation for the concert, you have created and deleted a large number of files. Your computer is now noticeably slower.

Recommend a software utility which can be used to restore the speed of the computers.

(1)

**[28]**



**QUESTION 4**

- 4.1 The guest artists would like video images of themselves shown on a screen on the stage during their performance. You decide to use your laptop for this purpose.
- 4.1.1 Name the hardware device that could be used to project the images of the artists from your computer onto the screen. (1)
- 4.1.2 During the show a message appears on the laptop saying that the laptop is about to hibernate. Explain why:
- (a) the hibernation message appears.
- (b) this is applicable to a laptop AND NOT a desktop. (2)
- 4.1.3 Name ONE advantage and ONE disadvantage (besides hibernation) of using a laptop instead of a desktop computer for the concert. (2)
- 4.2 One of your team members will be taking photographs at the concert.
- 4.2.1 Other than cost and brand name, name TWO specifications that you should consider when choosing a digital camera. (2)
- 4.2.2 Name the most common device used for storage of these pictures on the camera. (1)
- 4.3 Sam captured some photographs of the artists on his cell phone.
- Describe a process you could use to transfer these photographs to your computer. (2)
- 4.4 You need to do some printing for the concert. What would be the best printer to do the following?
- 4.4.1 Print 500 A4 posters advertising the concert (1)
- 4.4.2 Print high quality colour photographs of each of the artists (1)
- 4.5 You decide to burn and distribute CDs containing some of the music that was performed at the concert.
- 4.5.1 Give THREE reasons why CDs are suitable for this purpose. (3)
- 4.5.2 Give ONE legal/ethical reason why you should NOT sell any music other than that which was performed at the concert. (1)

- 4.6      4.6.1      From the following options, select a site where video clips from the concert could be stored on-line for free:
- Amazon.com
  - Google.com
  - YouTube.com
  - Secondlife.com
- (1)
- 4.6.2      Motivate why EACH of the other three options was rejected as a possibility by indicating what you would typically do on EACH of these sites. (3)
- 4.7      Conserving paper is every computer user's duty.
- 4.7.1      Discuss TWO ways of saving paper in the computer centre. (2)
- 4.7.2      Name ONE other way in which users can contribute to the environment by practising 'green computing'. (1)
- [23]**

**QUESTION 5**

- 5.1 You need to communicate with certain individuals/groups. However, due to problems beyond your control, the same method of communication cannot be used for all.

For EACH of the situations below, suggest the most suitable method of communication.

5.1.1 Sending a short invitation to last year's head learner/prefect who is backpacking in a rural area without Internet access (1)

5.1.2 Communicating a sneak preview of the concert to your principal who is in London (1)

5.1.3 A written invitation to another school that does not have Internet access (1)

- 5.2 The date, time and venue of the concert need to be sent out to all past learners. The following communication methods could be used:

- Fax
- E-mail
- SMS


Assuming that all of the above methods are available and accessible, arrange the options above from most expensive to least expensive. (2)

- 5.3 You have decided to use your word processing program to prepare some documents for the concert.
- 5.3.1 John has inserted a picture to be included in the concert programme. He is unable to move the picture from the point at which it was inserted.
- Give the most likely reason for this occurrence AND explain how you would solve this problem. (2)
- 5.3.2 You insert a table into a document for the concert and find that this table is too 'wide' as it flows over the left and right margins.
- Recommend TWO ways in which you could solve this problem without deleting any columns or changing the font size. (2)
- 5.3.3 When you run the Spell Check function you find that the words *programme* and *colour* appear as incorrectly spelt words.
- Propose a solution to this problem. (1)
- 5.4 Sally is unable to use her fingers to type but wants to be part of your team.
- Briefly discuss ONE way in which she can input data with limited use of the keyboard. (2)
- 5.5 Jabu struggles to control the mouse as he finds the movement to be erratic. Suggest how this problem can be solved if:
- 5.5.1 the mouse is a mechanical mouse with a ball inside. (1)
- 5.5.2 the mouse is an optical mouse. (1)
- 5.6 As one of the computer monitors was stolen, a new monitor has to be bought.
- 5.6.1 Give ONE reason for choosing a CRT monitor. (1)
- 5.6.2 Give TWO reasons for choosing a flat panel LCD screen. (2)
- 5.7 The computers are linked in a network. List THREE ways of restricting access to confidential files on the network. (3)
- [20]**

**QUESTION 6**

- 6.1 You plan to have outside vendors selling cold drinks, popcorn, hot dogs, chips and sweets during the interval at the concert. You need to keep data about vendors in a database.

One of the tables is called VENDOR and its structure is as follows:

Field name	Field type	Field size	Example
Vendor_Name	Text	20	Super Cooldrinks
 Cell_Number	Text	6.1.1?	0843332222
Electricity_Supply	Yes/No		✓
Rent	Currency		R70.00
Number_of_Tables	Number		3
Setup_Date	Short Date		16/12/2008

- 6.1.1 Suggest an appropriate field size for the Cell\_Number field. (1)
- 6.1.2 Why is the Cell\_Number field declared as text when it is a number? (2)
- 6.1.3 Why would it not be possible to select a default value for the Vendor\_Name field? (1)
- 6.2 When designing the database (refer to QUESTION 6.1), it was decided to set the cell number as the primary key.
- Briefly explain what a *primary key* is AND suggest why the Cell\_Number field is a suitable primary key. (2)

6.3 You invite many artists to perform at the variety concert. You have saved the following information about each artist in a database:

- |   |
|---|
| <ul style="list-style-type: none"><li>• Name and surname</li><li>• Agent</li><li>• Contact details</li><li>• Photograph</li><li>• Fee per performance</li></ul> |
|---|

6.3.1 The governing body requires a printed report containing the information about the artists in an easily readable format, giving the TOTAL AMOUNT of money needed at the bottom of the report.

Discuss the most effective way of providing the total. (2)

6.3.2 Every time you enter the fee in the database the currency displays as Euro(€).

Suggest a solution for this problem. (1)

6.3.3 Give ONE reason why you would use a database and NOT a spreadsheet program to manage this data. (1)

6.4 One of the team members has a fancy and expensive graphics program on his home computer. He offers to bring the disk to school so that you can load it onto the computers you are using to design the concert programme.

Discuss TWO ethical issues related to this. (2)

6.5 Some learners at school indicated that it was not necessary to have a computer team to help with the concert: 'Everything could have been done the old-fashioned way!'.

6.5.1 Give ONE possible reason to support this statement. (1)

6.5.2 You disagree. Defend your use of computers for this concert.

Support your argument by giving at least TWO relevant examples. (2)

- 6.6 Evaluate the street pole advertisement for the concert below and suggest FOUR ways in which the layout could be improved.

Variety Concert

Date **Come and enjoy**  
16 December 2008

Time  
08:00

Venue Skyview High School

Performing Artists  
Lolo and the pops  
The Queens  
Grotgesigte  
Teen Rockettes  
North Road Choir  
Tincan Jaloppies

(4)  
[19]

**QUESTION 7**

- 7.1 You open your e-mail and notice that you have an e-mail from one of the guest artists. The e-mail contains an attachment called gucx.exe. You are worried that the attachment might contain a virus.
- 7.1.1 Define the term *computer virus*. (2)
- 7.1.2 Give TWO reasons why you would NOT want a computer virus on your computer. (2)
- 7.1.3 Describe how you would check that the attachment is safe to open. (1)
- 7.1.4 Discuss ONE action you would take if the attachment you have checked contains a virus. (1)
- 7.1.5 Apart from the possibility of downloading a virus, name TWO other problems associated with using e-mail. (2)
- 7.2 Your team wishes to use the Internet for up-to-date information about the artists. You tell them to use a search engine.
- 7.2.1 What is a *search engine*? (2)
- 7.2.2 Name TWO ways in which the search could be narrowed or limited to produce more relevant results. (2)
- 7.2.3 Discuss TWO ways to decide whether the information on the websites that you access, is accurate and reliable, or not. (2)
- 7.2.4 You find some surprising information about the artist on a blog. Explain what a *blog* is. (2)
- 7.3 Your team wishes to develop an information sheet about the concert. The team would like to place it on the school's website. You decide to use the pdf format to do this.
- 7.3.1 Give ONE reason for using a pdf format. (1)
- 7.3.2 Predict whether people will be able to open this pdf document on their computers AND suggest a solution to assist those who have a problem in this regard. (2)
- 7.3.3 Suggest another suitable format to which you can convert the document before placing it on the web. (1)
- [20]**



**QUESTION 8**

- 8.1 The team members debate the topic of Internet banking.
- 8.1.1 Identify TWO possible benefits of Internet banking for the school. (2)
- 8.1.2 Identify TWO benefits to the bank if more people were to use the Internet to do their banking. (2)
- 8.1.3 State TWO security measures that will help prevent unauthorised access to the bank account of the school, from the bank or user's side. (2)
- 8.2 Patrons will be required to purchase coupons for snacks in the week before the concert. John wants to print the coupons for the concert. He has sent the print instruction various times but the printer still does not respond.
- Assuming that the printer driver is correctly installed, describe any THREE actions he can take to determine what the problem is. (3)
- 8.3 When Sam tries to print the concert programme the printer prints one line of symbols such as '♦&¥□□\$\*♦&\$\*♦&■\$\*♦&\$\*■' at the top of each page.
- Suggest ONE solution to this problem. (1)
- 8.4 You used a spreadsheet program to capture estimated income from refreshments.

	A	B	C	D	E	F
1	<b>PROJECTED INCOME</b>					
2	<b>Product name</b>	<b>Cost price</b>	<b>Selling price</b>	<b>Profit per item</b>	<b>Quantity sold</b>	<b>Profit made</b>
3						
4	Cool drink	R4.00	R7.50	R3.50	135	R472.50
5	Popcorn	R1.25	R4.00	R2.75	197	R541.75
6	Hot dogs	R5.00	R10.00	R5.00	85	R425.00
7	Chips	R2.00	R5.00	R3.00	178	R534.00
8	Sweets	R3.00	R5.20	R2.20	200	R440.00
9						R2,413.25

- 8.4.1 You are told that the cost price of chips is actually R3.00. The vendor decides to sell them at R5.00. You change the data in cell B7 accordingly.
- Name any TWO cells where the values will automatically change as a result. (2)

8.4.2 The formula listed in one of the cells is: =F9\*\$B\$10

Name and explain the differences between the TWO types of cell references used in the above formula. (4)

8.5 Sam had to keep a running total of all the expenses and hours worked.

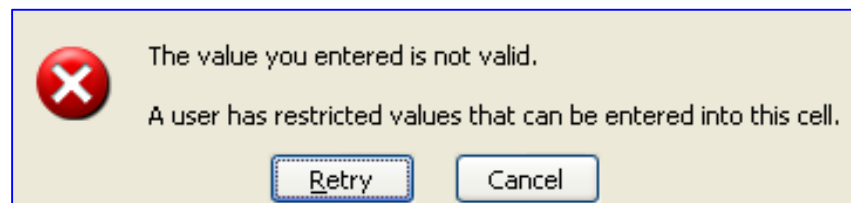
	A	B
1	<b>Running expenses</b>	
2	Paper	R 75.00
3	Coloured Card	R 12.99
4	Envelopes	R 20.00
5	Sellotape	R 5.90
6	Glue	R 4.75
7	Scissors	R 11.99
8	<b>TOTAL</b>	#####
9		
10		
11	<b>Hours worked</b>	
12	John	1,5
13	Peter	4.5
14	Sally	2.5
15	Jabu	5.0
16	Sam	6,5
17		
18	<b>TOTAL</b>	12.0

8.5.1 The total in cell B8 displays #####. Give a solution to this problem. (1)

8.5.2 When the total for the hours worked was checked it was found that it was wrong.

Give ONE possible reason why this total is wrong. (1)

8.5.3 When Sam entered an amount in the expenses column, the following message appeared on the screen:



Give ONE reason for this message appearing. (1)

- 8.5.4 Briefly explain how Sam can prevent anyone else from entering data into this spreadsheet.

(1)  
**[20]**

**TOTAL SECTION B: 130**

**GRAND TOTAL: 150**