



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2011

COMPUTER APPLICATIONS TECHNOLOGY P2

MARKS: 150

TIME: 3 hours



This question paper consists of 14 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 a term/concept from COLUMN B that best matches the 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 P.

COLUMN A		COLUMN B	
1.1	Abbreviation used to indicate the use of video cameras as a security measure	A	drivers
1.2	The rate at which an image is redrawn on the monitor	B	Defragmentation
1.3	A term used to indicate environmentally friendly computing	C	ergonomics
1.4	Malware that gathers and transmits private information regarding a user's computer habits covertly	D	3G
1.5	A popular program used for communication via VoIP	E	Bcc
1.6	The process where parts of a file are rearranged into continuous areas of the disk	F	Webcam
1.7	Programs such as word processors and spreadsheet applications that are bundled and sold as a package	G	CCTV
1.8	The amount of pixels that can be displayed on the monitor	H	cc
1.9	Software used by the operating system to communicate with peripherals such as printers	I	Green computing
1.10	An option in an e-mail that allows you to send messages to many recipients without the recipient's name being visible to other recipients of the message	J	Resolution
		K	RAM
		L	Spyware
		M	Skype
		N	Refresh rate
		O	Office suite

(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 File extension that is normally associated with a compressed file.
- A .mpeg
 - B .zip
 - C .jpeg
 - D .rtf
- 2.2 A digital directory in an email program is also called.
- A An inbox
 - B An outbox
 - C An address book
 - D Favourites
- 2.3 A service in a public place that allows users to connect to the internet without the use of physical mediums such as cables.
- A Telephone
 - B Hot spot
 - C Phone booth
 - D ATM
- 2.4 Which ONE of the following does NOT logically belong with the others?
- A Inkjet printer
 - B Data projector
 - C Stylus
 - D Speakers
- 2.5 Which ONE of the following hardware components is most likely to affect the speed of a computer?
- A RAM
 - B Laser Printer
 - C LCD monitor
 - D DVD-ROM

- 2.6 Which ONE of the following is a study of the design of equipment to benefit human comfort?
- A Stylus
 - B CCTV
 - C Ergonomics
 - D Data projector
- 2.7 Which ONE of the following is NOT an example of system software?
- A Ubuntu OS
 - B Linux
 - C Microsoft Windows
 - D Pastel
- 2.8 Which ONE of the following prevents users from entering incorrect data in a database?
- A Format
 - B Validation text
 - C Validation rule
 - D None of the above
- 2.9 The most relevant chart type to show a trend for the fluctuation of the Rand/Dollar exchange rate over a period of 6 months.
- A Pie chart
 - B Bar chart
 - C Line chart
 - D Surface chart
- 2.10 ... is an action that you can use on an image or picture to remove unwanted parts.
- A Crop
 - B Cut
 - C Resize
 - D Undo

(10 x 1) [10]

TOTAL SECTION A: 20

SECTION B

Read the scenario below carefully as the questions that follow are based on it.

SCENARIO

A group of former students from your school are in the process of starting a project to help and provide support to students in need at the school. The school would like to help them in this regard, and have allocated computer equipment and a small budget for this project. Your Grade 12 CAT class will be instrumental in this process, using your computer backgrounds.

You have been appointed as the team leader in the school. Your tasks include:

- Give advice with regards to computer equipment you would need.
- Selecting the appropriate software.
- Advise on the installation of a network.
- Providing general support on computer related queries from the team.

QUESTION 3

Study the two advertisements below.

LAPTOP

- Intel Quad Core i7 – 720m processor 1.6 GHz
- 512MB RAM
- 1TB HDD
- LightScribe super multi DVD writer
- 11.6" LED LCD 16:9 (1366x768) HD Glossy
- 10/100 Ethernet
- Windows 7
- Multi-in-1 card reader
- Integrated Bluetooth and webcam
- 3 x USB 2.0 ports
- VGA Port
- Headphone/speaker/line-out jack
- Microphone-in jack
- Logitech wireless optical notebook mouse

R13 999.95

DESKTOP

- Intel E7400 Core 2 Duo 2.8GHZ, 3MB cache
- DDR2 800MHZ
- 1GB DDR2 Graphics Card
- 2GB DDR2 800MHZ RAM
- 250GB Seagate Hard Drive
- 22x LG/Samsung Dual Layer DVD Writer
- Front USB and Sound, 4 USB at back
- PCI-Express x16 Graphics Slot
- Ubuntu OS, Open Office and Nero
- 12 month warranty and is fully upgradable
- Free Digital Camera

R8 999.95

- 3.1 Your group has to decide whether to buy desktops or laptops. Advise them on the best choice by listing TWO advantages of desktops and TWO disadvantages of laptops.

(4)

- 3.2 The above advertisements contain various references to storage devices and different types of memory.
- 3.2.1 Explain to your group the difference between computer storage and memory. (2)
- 3.2.2 Who manufactures the CPU of the laptop? (1)
- 3.2.3 A DVD writer is also included in the advertisement. Will this device be able to read and write a CD? Motivate your answer. (2)
- 3.3 The computers will need access to printers. Name an example of a printer for each of the following scenarios.
- 3.3.1 Printing high quality photographs. (1)
- 3.3.2 A fast monochrome printer for printing flyers. (1)
- 3.4 When deciding on which type of mouse the school needs to buy, they notice TWO terms: optical and infrared.
- Briefly discuss the difference between the TWO terms relating to a mouse. (2)
- 3.5 A free digital camera is provided with the purchase of the desktop computer. The school however already has a conventional film camera.
- Name TWO advantages of using a digital camera instead of a film camera. (2)
- 3.6 In both adverts **Operating Systems** are mentioned.
- 3.6.1 Identify the operating system in both the laptop and the desktop computer. (2)
- 3.6.2 Explain why the decision between these two operating systems can have an impact on the finances of the school. (2)
- 3.7 What is the main difference between a quad core processor and a dual core processor as indicated in the advertisement? (2)
- 3.8 The laptop has 512MB RAM. Would it be a good idea to ask the salesperson for more RAM? Motivate your answer. (2)
- 3.9 In the above advertisement **USB** and **VGA** ports are mentioned.
- 3.9.1 Most of the members have never heard of a USB port. Name TWO advantages of using a USB port. (2)
- 3.9.2 Name TWO devices that you could connect using the VGA port. (2)

- 3.10 One morning you arrive at school and switch on the computer. The computer switches on, but the screen stays blank.
Name TWO possible reasons for this happening. (2)
- 3.11 Conserving paper is every member's duty.
- 3.11.1 Discuss TWO ways of saving paper in the computer centre. (2)
- 3.11.2 Name ONE other way in which users can contribute to the environment by practising 'green computing', over and above paper use. (1)
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QUESTION 4

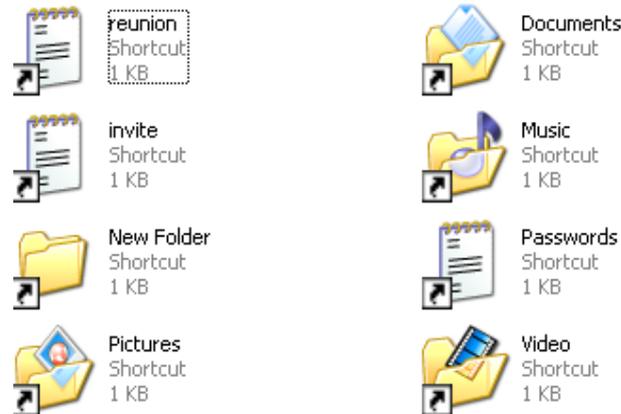
- 4.1 One of the members currently lives in Gauteng. He has difficulty travelling due to a lack of funds. He would like to discuss a cheaper way of communicating with the principal.
- 4.1.1 To save money, you suggest to them the use of video-conferencing.
Explain to them what the term video-conferencing means. (2)
- 4.1.2 Both of them already have computers.
List THREE devices that they will need in addition to the computer to participate in a video conference. (3)
- 4.2 Modern communication methods such as e-mail, online chatting and VoIP can help the members to communicate in an effective way.
- 4.2.1 Name TWO advantages of communicating via e-mail instead of normal snail mail. (2)
- 4.2.2 Some of the members will be going on holiday. List TWO places where they can check their e-mail if they do not have their own laptops with them. (2)
- 4.3 The members of the alumni group would like to see what the school currently looks like. You send them some digital pictures of the school via e-mail.
- 4.3.1 Name TWO netiquette rules regarding attachments such as pictures sent via e-mail. (2)

- 4.3.2 The principal would like you to backup all of the images of the school. List TWO ways in which you can make sure the backup will be safe. (2)
- 4.4 In order for the group to communicate efficiently an internet connection is needed. The school can choose between an ADSL and a dial-up connection.
List THREE advantages of using an ADSL connection. (3)
- 4.5 The group decided to create a blog.
- 4.5.1 What is a blog? (1)
- 4.5.2 Why would they create a blog rather than a website? (1)
- 4.5.3 The group would like the latest headlines from the National Youth Magazine to be displayed on the blog.
Explain to them how this is possible by using RSS. (1)
- 4.6 The group is asked by the team to create a Podcast about their daily activities at school.
- 4.6.1 What is a Podcast? (1)
- 4.6.2 Name TWO advantages of Podcasting. (2)
- 4.7 One of the group members who spends a lot of time on her computer, recently started complaining of sore wrists.
What computer related health problem may be the culprit? (1)
- 4.8 When the principal switched on one of the computers he received the following error message:
"Non system disk error"
Briefly discuss what the possible cause of this error is, and how he can fix it. (2)

QUESTION 5

- 5.1 A local business has indicated that they would like to sponsor the school in order to connect all of the computers in a LAN (Local Area Network). The business will also sponsor a server to use on the network.
- 5.1.1 Name THREE advantages of connecting the computers in a LAN. (3)
- 5.1.2 Except for the computers, name TWO more hardware components that need to be bought to create the LAN. (2)
- 5.1.3 List TWO advantages of connecting the computers in the LAN wirelessly. (2)
- 5.1.4 Explain the difference between a LAN and a WAN to the principal with regards to size. (2)
- 5.2 The principal is very worried about a virus infecting the network. Answer the following questions he has asked.
- 5.2.1 Define the term virus. (3)
- 5.2.2 Name TWO ways in which a virus can infect the network. (2)
- 5.2.3 Name TWO ways in which you can prevent a virus from infecting the network. (2)
- 5.2.4 The principal cannot understand why someone would create a virus. Name ONE possible reason. (1)
- 5.2.5 What does it mean when one says the anti-virus program has been updated? (2)
- 5.3 While browsing the internet, the principal has noticed a few terms he does not understand. Help him with the following questions.
- 5.3.1 What is a pop-up? (2)
- 5.3.2 What is a WIKI website? (2)
- 5.3.3 What is the function of the Youtube website? (1)

5.4 Study the following screenshot.



All the files on your flash disk suddenly change to shortcuts. Most of the files also have a strange .exe file extension added such as:

“E:\invite.txt.viiokipx.exe”.

You decide to search on the Internet to find solution to your problem.

5.4.1 What is a search engine? (2)

5.4.2 Name TWO ways in which the search could be narrowed to produce more relevant results. (2)

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QUESTION 6

6.1 The group is very worried about software costs being too high. You mention the option of using open source programs as they are free.

6.1.1 Excluding the fact that open source software is free, name TWO more advantages of using open source software. (2)

6.1.2 Unfortunately you also need to take into account that there are also certain disadvantages.

Name TWO disadvantages of open source software. (2)

6.1.3 The principal has found a few examples of freeware and shareware on a DVD that came with a magazine.

Briefly explain the difference between freeware and shareware. (2)

- 6.2 The group would like to install the office suite used by the school on their computers.
- 6.2.1 Are they allowed to install the program? Explain to the group when they are allowed to install the program by referring to a type of licence agreement. (2)
- 6.2.2 List TWO examples of information that could be asked from the user when an office suite is installed. (2)
- 6.2.3 What is meant by software piracy? (1)
- 6.3 While installing the new office suite, you notice that the package mentions something called minimum system requirements. Explain what the term means. (2)
- 6.4 One of the alumni has explained that he makes use of PIM software on his smartphone on a regular basis.
- 6.4.1 Define the term PIM. (Do NOT just expand the abbreviation!) (2)
- 6.4.2 Name TWO differences that will distinguish a smartphone from a normal cellular phone. (2)
- 6.4.3 Name an example of an operating system used on a smartphone. (1)
- 6.5 For the final report the group decided to use a PDF format.
- 6.5.1 List TWO reasons for using a PDF. (2)
- 6.5.2 What should people do if they cannot open the document on their computer? (1)

QUESTION 7

7.1 The group would like to use a database to keep a record of the contact details and personal details of everybody involved in the project.

Student_No	Name	Surname	ID_Number	Tel	Age
1244	Sisonke	Grans	92072651115252	0844376687	19
1922	Mvuyisi	Manuel	95101558962147	0835736621	16
4110	Nomphele	Orton	94125487456621	0214667117	17

7.1.1 Which data types would you use for following field names?

- (a) ID Number (1)
- (b) Telephone (1)
- (c) Age (1)

7.1.2 How could you make sure that the age field will always contain an age of over 14? (1)

7.1.3 Select the field most suitable to be a primary key. Motivate your choice. (2)

7.2 The principal would like to add the registration number of each member's car to the database. In this way they can improve security at the entrance to the school.

Write down the input mask to make sure a registration is made up of 3 letters, 3 numbers and EC at the end. (3)

7.3 To launch the project, the school would like to have a huge reunion for all the alumni of the school. They have created a programme for the event, but need some help to finalise it.

7.3.1 Throughout the document the author has used the abbreviation for the school's name. The principal would like to change this to the full name of the school.

Which word processing feature could be used to do this easily? (1)

7.3.2 What would they use the online thesaurus for in a word processing document? (1)

7.3.3 The group would like to create a report about their progress.

What steps must they follow before they automatically create a table of contents? (2)

7.3.4 The group would like to send a programme to each alumni of the school using a mail merge.

Name TWO types of data that can be used as a data source for the mail merge. (2)

7.4 The group would like to organise a fundraiser. They will be using the spreadsheet below for this purpose. Study the screenshot and answer the questions that follow.

	A	B	C	D	E	F	G
1	INCOME						
2	PRODUCT NAME	COST PRICE	PRICE WITH VAT	SELLING PRICE	PROFIT PER ITEM	QUANTITY SOLD	PROFIT MADE
3	Sweets						
4	Cool drinks	\$3.00					
5	Bread	\$5.00					
6	Pie	\$4.00					
7	Chips	\$5.00					
8	Rolls	\$1.00					
9		\$2.00					
10	Total Number	#####					
11	Minimum						
12	Maximum						
13						VAT	14%
14							

7.4.1 Which function would you use in cell C4 to calculate 14% VAT on the price in B4? Use the percentage in cell G13 and absolute cell referencing. (3)

7.4.2 In column B the cost price is indicated with a dollar (\$) sign. Name TWO ways in which you can change this to South African rand (R). (2)

7.4.3 The total in B10 displays the error message #####. How would you solve this problem? (1)

7.4.4 Which function in *Excel* has been used to get the text in row 2 beneath each other within the cells? (1)

7.5 The spreadsheet needs to be printed on one page. When they print it though, it stretches over more than one page.

Name TWO possible ways they can use to make the spreadsheet fit on one page. (2)

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TOTAL: 150