



Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

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COMPUTER APPLICATIONS TECHNOLOGY – SECOND PAPER

MARKS: 150

TIME: 3 hours



This question paper consists of 15 pages.

INSTRUCTIONS AND INFORMATION

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

SECTION A:**QUESTION 1**

Identify the correct answer for each question. Write only the letter of the answer next to the question number for example: 1.11 D.

- 1.1 The technology that is used to get information from different websites automatically is called ...
A. RSI.
B. EULA.
C. RSS.
D. FAT. (1)
- 1.2 Which ONE of the following is the correct string to use in order to specify all MPEG-1 Audio Layer 3, sound files?
A. ?? .mp3
B. Sound*.*
C. *.mp3
D *.* (1)
- 1.3 Which ONE of the following websites does not logically belong with the others?
A. Facebook
B. Amazon
C. Twitter
D. My Space (1)
- 1.4 The following is an option in e-mail that allows you to send a message to many recipients without a recipient's name being visible to other recipients of the same message.
A. To
B. Bcc
C. Forward
D. Cc (1)
- 1.5 Which ONE of the following statements regarding backups is NOT true?
A. Backups should preferably be kept on the hard drive of your computer and on a second storage device that can be removed from the venue.
B. A backup is a copy of a file saved in another place.
C. One should make regular backups.
D. Backups are not automatically made by the computer. (1)

- 1.6 A public location where wireless Internet access can be obtained for mobile computers is called a ...
- A. Wi-Fi.
 - B. Hot spot.
 - C. MySpace.
 - D. Cyber café.
- (1)
- 1.7 Which ONE of the following is a file format not associated with media files?
- A. JPG
 - B. BMP
 - C. MP3
 - D. txt
- (1)
- 1.8 A code in Access which forces data capturers to enter data in a specific format is known as a ...
- A. validation rule.
 - B. primary key.
 - C. input mask.
 - D. validation text.
- (1)
- 1.9 Which ONE of the following statements concerning increasing the performance of the computer is FALSE?
- A. Upgrading the power supply
 - B. Defragging the flash drive
 - C. Upgrading the CPU
 - D. Adding more RAM
- (1)
- 1.10 Instructions that are stored on a special memory chip to start up the computer is called ...
- A. RAM.
 - B. BIOS.
 - C. CPU.
 - D. FAT.
- (1)

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QUESTION 2

Match the most appropriate terms/concepts in COLUMN B with each of the descriptions in COLUMN A. Write only the question number and the letter of your choice, for example: 2.1 P.

COLUMN A	COLUMN B	
2.1 Software that converts a scanned image into editable text.	A	CPU
2.2 A feature in Word that helps you to move directly to a specific place in the same document.	B	Google
2.3 The extension of a file of which the content cannot be changed.	C	EXE
2.4 Malware that facilitates unauthorised access to the user's computer.	D	Ergonomics
2.5 An example of a web browser.	E	Intranet
2.6 The term referring to the gap between people who have access to technology and those who do not.	F	HTTPS
2.7 A table used internally by the operating system to record the actual physical location of files on a disk.	G	Motherboard
2.8 A connection that allows high speed transfer between peripheral devices and the computer.	H	PDA
2.9 The hardware component of the computer that executes all the instructions of programs.	I	Trojan Horse
2.10 An example of a portable type of computer.	J	Digital Divide
	K	FAT
	L	OCR
	M	WAP
	N	Internet Explorer
	O	Keylogger
	P	PDF
	Q	FireWire
	R	Bookmark

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SECTION B**SCENARIO**

After repeated problems with stray cats and dogs on the school campus, the Interact Club of your school decided to get involved with the SPCA. They decide to launch a “Care for your Pet” project to alert all learners of the responsibility that goes with having a pet.

You serve on the Interact Committee. Knowing that as a CAT learner, you have more computer skills, they have asked you to assist them with the administrative work involved in the project. Your tasks will include the following:

- giving advice on the computer systems needed for the project,
- selecting suitable computer programs to use,
- advising on how networks make the task easier and giving general support on all computer-related issues.

QUESTION 3

The Interact committee decided to donate a new computer to the local SPCA. After doing some research they managed to buy a computer with the following specifications at a discounted price:

Intel Dual Core E5300 CPU 2.6 GHz
320GB HDD
2 GB DDR 800MHZ RAM
DVDRW dual layer drive
Integrated memory card reader
Realtek® ALC662 10/100 LAN Adapter
6 USB 2.0 ports
NVidiaGT210 with 512 MB dedicated video RAM
Viseo 190W LCD
Ergonomic Keyboard
Optical Mouse
HP 3 in 1 Printer
Windows 7 Home Premium edition included

3.1 Respond to the following questions, posed by the manager of the SPCA regarding the specifications of the new computer.

3.1.1 Explain the term *dual core*. (2)

3.1.2 The LAN is listed as *integrated* in the specification. What does this mean? (1)

- 3.1.3 What would the *Realtek® ALC662 LAN Adapter* be used for? (1)
- 3.1.4 The computer is supplied with an LCD monitor. Name TWO reasons why buying this monitor is better than a CRT monitor. (2)
- 3.1.5 The DVD writer is listed as having a dual layer drive. What does this mean? (1)
- 3.1.6 What is the capacity of the secondary memory on the computer? (1)
- 3.1.7 The computer comes with an optical mouse. What is the difference between an optical mouse and a mechanical mouse? (2)
- 3.1.8 The printer is listed as being a 3 in 1 printer. This of course refers to the fact that the printer can be used for two other functions over and above printing. Name ONE of these functions. (1)
- 3.1.9 What needs to be added to the above mentioned computer before it can be used by the SPCA? (1)
- 3.2 The SPCA has 2 outdated computers which they need to upgrade.
- 3.2.1 Explain the term *upgrade*. (2)
- 3.2.2 List the TWO main components that can be upgraded in order to increase the speed and storage capacity of the computers. Also indicate how these upgrades will improve the performance of the computers. (4)
- 3.3 The manager decided to buy his own computer to use at home. He finds it difficult to make a decision between a desktop and a laptop.
- 3.3.1 Give TWO reasons why you would advise him to purchase the desktop computer instead of the laptop. (2)
- 3.3.2 He decided to follow your advice. Explain to him how he could use the same data at home and at the office. (1)
- 3.4 As a group of animal lovers, the staff of the SPCA is also very protective of the environment. Give TWO examples of how to help them practice *green computing* in each of the following cases:
- 3.4.1 Buying new hardware (2)
- 3.4.2 Using their printer (2)

- 3.5 The SPCA needs a camera to place photos of the animals they have for adoption onto the Internet. One of the staff members saw the following advertisement in the local newspaper:

Canon Powershot A480
10.0 Megapixels
3x optical zoom
Motion detection

INCLUDES:

FREE camera bag!
FREE 4GB SD Memory Card



- 3.5.1 What does the 10.0 megapixels in the advertisement refer to and of what significance is it when buying a digital camera? (2)
- 3.5.2 To which port of the computer will the camera be connected when downloading pictures from the camera by means of a cable? (1)
- 3.5.3 Taking the specifications of their computer into consideration, why will it not be necessary to download the photos to the computer by means of a cable? (1)
- 3.6 It often happens that the staff of the SPCA have to work long hours on the computers and the manager is aware of the possible health risks.
- 3.6.1 Suggest TWO ways to reduce the possible health risks. (2)
- 3.6.2 Which hardware component in the specifications above is designed to reduce the effects of RSI? (1)

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QUESTION 4

You have explained to the Manager of the SPCA that having access to the Internet will be of great benefit to them for various reasons e.g. Internet banking, buying food for the animals and advertising animals to be adopted online.

- 4.1 The manager seems very interested in connecting to the Internet. Assist him to make an informed decision between a dial-up or a permanent connection by naming one advantage and one disadvantage of each. Draw a table as shown below in your answer book to answer this question:

	ADVANTAGE	DISADVANTAGE
DIAL-UP		
PERMANENT		

- 4.2 While browsing through the options, the manager came across the term *broadband*. Explain to him what this term means. (2)
- 4.3 The SPCA decided to go with the ADSL line. They have never had anything to do with an ADSL line and have some questions they would like you to answer.
- 4.3.1 The manager heard that in order to connect to the Internet they would need an ISP. Explain what the function of an ISP is. (2)
- 4.3.2 The SPCA were donated the use of an *uncapped* ADSL line by a local business. What does the term *uncapped line* mean? (1)
- 4.4 Communication via telephone calls has become a financial headache for the SPCA. You have told the manager that now that they are connected to the Internet, they could make use of VoIP to save money.
- 4.4.1 Explain to him what VoIP is. (2)
- 4.4.2 Name a popular software program that can be used to communicate using VoIP. (1)
- 4.4.3 What other advantage does the use of the above mentioned program have if your computer is equipped with a web camera? (1)
- 4.5 After he visited a few websites, the manager confronted you with the idea of creating a website for the SPCA. List TWO factors that will influence web surfers to visit a website again. (2)

- 4.6 You have encouraged the secretary to make use of a *blog* and *podcasting* to help promote the work of the SPCA.
- 4.6.1 Explain what a *blog* is. (1)
- 4.6.2 Explain the term *podcasting* and briefly outline how it could benefit her to promote the work of the SPCA. (3)
- 4.7 The manager is very concerned about the threat of viruses now that they are connected to the Internet. A technician warned him however that spyware is becoming an even bigger threat and advised him to install a firewall as well as an anti-spyware program.
- 4.7.1 Explain what *spyware* is. (2)
- 4.7.2 Explain what the purpose of *spyware* is. (1)
- 4.7.3 Clearly explain what is meant by the term *firewall*. (2)
- 4.7.4 After the technician installed Norton Internet Security Suite, he warned the manager that it must be updated regularly. Give TWO reasons why this would be necessary. (2)
- 4.8 The manager is also very concerned about the computers of the SPCA being misused by the staff. You suggest that a policy on computer usage, by staff members, should be in place.
- Name TWO ways in which the staff at the SPCA may be restricted with regards to computer usage. (2)
- 4.9 The SPCA decided to make use of Internet banking facilities because it is so convenient and saves a lot of time.
- 4.9.1 When the manager logged onto the Internet banking site he saw a warning about *phishing*. Briefly explain what *phishing* is by referring to a practical example. (2)
- 4.9.2 Name TWO security measures used by banks to improve the security of Internet banking transactions. (2)

QUESTION 5

The SPCA will be using more than one computer in their office to handle all of the administrative work. For this reason they will need certain software programs, specific licences and preferably a network.

- 5.1 While researching what software they will need, the manager noticed that all the programs had a GUI interface. Briefly explain what this means. (2)
- 5.2 You recommend the use of a software suite, like Microsoft Office, to be used at the SPCA office.
- 5.2.1 Explain what an *Office suite* is. (2)
- 5.2.2 Name TWO advantages of buying a software suite instead of buying programs separately. (2)
- 5.3 The manager is currently using MS Office 2007 at his home and MS Office 2003 at the office. He tried to open a document which he completed and saved at home on the computer at the office, but with no success. Explain to him what he should do to solve this problem. (2)
- 5.4 When the secretary wanted to install the software on the computer, she saw that two different specifications are listed on the box.
- Explain to her the difference between “*Minimum System Requirements*” and “*Recommended System Requirements*”. (2)
- 5.5 The manager complained to a friend about the high cost of legal software, who then recommended that the SPCA use *Open Source* software instead of MS Office. You immediately disagreed when the manager approached you. Name TWO disadvantages of using Open Source software to motivate your recommendation. (2)
- 5.6 Because they now have four computers in the office and the work of the SPCA is growing fast, you recommend that they install a network. The manager does not know how a network operates. He therefore requested advice on the following:
- 5.6.1 Name TWO ways in which installing a network will benefit the SPCA. (2)
- 5.6.2 All FOUR computers have the same operating system installed on them. They will be connected to a switch, fixed IP addresses will be given to them and they will be part of the same workgroup. What type of network will this be: serve-centric or peer-to-peer? Motivate your answer. (2)
- 5.6.3 Explain what a *server* is. (2)

5.6.4 Name ONE advantage of a wireless network compared to a cabled network. (1)

5.6.5 The manager is worried that confidential information may leak out with the use of a network. Give TWO ways of restricting access on a network. (2)

5.7 Most programs request a license agreement in order to install them legally. The SPCA has a choice between a *site license* and a *multi-user license*. Explain briefly what the difference is between the two. (2)

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QUESTION 6

Thanks to your hard work and support, the administration of the SPCA is now computerised and the network is running. Unfortunately they are encountering some hardware problems because of the older computers they are using. As inexperienced computer users, they request your help once again.

6.1 After a power failure, one of the computers does not want to boot. The error message “Non-system disk error” is displayed.

Give TWO possible reasons for this error message. (2)

6.2 The manager notices that one of the old computers keep on freezing in Word and he cannot exit from it. To exit Word he needs to open the *Task Manager*.

6.2.1 Which keys on the keyboard would you use to access the shortcut to the *Task Manager*? (1)

6.2.2 Explain the steps that should be taken after opening the *Task Manager* to close the frozen program. (2)

6.3 After installing a new application program, the manager’s computer kept on freezing. When he finally got the computer to reboot, Windows gave him the option of booting in *safe mode*. He did not understand this at all.

6.3.1 Explain to him what it means to boot a computer in *safe mode*. (2)

6.3.2 Why would the computer give you the option of booting in *safe mode*? (1)

- 6.4 One of the computers in the office has been very slow lately. Increasing the RAM could be a solution but the manager felt that there is not enough money at this stage to buy new hardware. The manager confronted you with the problem and the only other solution you could think of was:
- 6.4.1 Fragmentation can cause a computer to slow down. Explain why it slows down a computer by referring to what fragmentation is. (2)
- 6.4.2 What can be done to solve this problem? (1)
- 6.4.3 Name TWO other ways in which a computer can be speeded up without replacing any hardware. (2)
- 6.5 The secretary complained that the printer took very long to respond when she wanted to print a 40 page manual on Pet Care that she typed. You explained to her that it can be the result of *printer spooling*.
- 6.5.1 Explain to the secretary the concept of *printer spooling*. (1)
- 6.5.2 Name TWO advantages provided by *printer spooling*. (2)

[16]**QUESTION 7**

Once they started working in the application programs that have been installed on the computers, the manager and secretary encountered quite a few problems. They need your assistance with the following:

- 7.1 The SPCA decided to launch a dog competition to raise money. While preparing a flyer to promote this competition, the secretary encountered the following challenges. For each case, explain to her what was wrong and tell her how to fix it.
- 7.1.1 She inserted a table with the different categories and times of the competition. She decided to thicken only the outside border of the table. After she had done this, she saw that all the inside lines of the table were gone. (2)
- 7.1.2 While working on this document, she realised that she accidentally left out a sentence. When she wanted to insert the sentence, the existing text started to disappear as she typed. (2)
- 7.2 The manager compiled a manual on basic pet care. He would like to create a table of contents for this document. He heard that Word can automatically create a table of contents.
- 7.2.1 What steps must be taken before he can automatically create a table of contents? (2)
- 7.2.2 After he created the table of contents, he added a few paragraphs of information which he accidentally left out. How can he add this new heading to the existing table of content? (1)

- 7.3 The SPCA created a spreadsheet to keep record of donations received from the public. Study the following extract from the spreadsheet and answer the questions that follow:

	A	B	C	D	E	F	G
1	SPCA - SPONSORS						
2	NO	NAME	SURNAME	CELL NO	REFERENCE	AMOUNT	GRADING
3	20101	Deon	Meyer	721081054	DM20101	R 500.00	1
4	20102	John	Singeni	822167543	JS20102	R 1,000.00	2
5	20103	Martie	Bekker	721081079	MB20103	R 1,500.00	3
6	20104	Xhabisa	Boto	841451943	XB20104	R 750.00	2
7	20105	Dalenka	Oslo	761815432	DO20105	R 3,500.00	4
8							

- 7.3.1 Which function (only the name) will you use to determine the results in:

- (a) Column E (Reference numbers made up of Columns A – C). (1)
- (b) Column G (Grading determined by amount donated). (1)

- 7.3.2 Write down the function you would enter in cell F8 if you wanted to determine how many sponsors donated more than R1 000? (2)

- 7.4 You created a spreadsheet for the SPCA to calculate the wages of the workers. The formula listed in one of the cells is: =G15*\$B\$2. The manager did not understand the dollar signs used, as the workers are not being paid in dollars!

Name the cell reference and explain when this is used in a spreadsheet. (2)

- 7.5 While entering data and formulas in one of his spreadsheets, an error message appeared that stated: “Circular cell reference used in spreadsheet.”

What does his message indicate and how can the error be rectified? (2)

- 7.6 The SPCA started an Animal Clinic, as a service to the public, every Saturday. The manager wanted to keep record of the animals brought to the clinic, by using a spreadsheet.

Explain to him why it is better to have all this information in a database. Give TWO reasons. (2)

- 7.7 He decided to accept your advice and to set up a database which contains the following fields:

FIELD NAME	DESCRIPTION
Pet No	Identity number given to each pet
Name	Name of pet
Type	Type of animal
Gender	Gender of animal
Colour	Colour of animal
Vaccinated	Is pet vaccinated or not
Owner	Name and surname of owner
Tel No	Cellphone number of owner

- 7.7.1 Which field will be the most appropriate as a primary key? Motivate. (2)

- 7.7.2 State the most appropriate data type for the following fields:

- (a) Vaccinated (1)

- (b) Tel No (1)

- 7.8 The municipality requested a list of all the dogs that were brought to the clinic, which were not vaccinated. The following information is needed: Name, Owner and Tel No.

The secretary created the following query:

Field	Name	Type	Vaccinated	Owner	Tel No
Table	Animal	Animal	Animal	Animal	Animal
Sort	Ascending				
Show	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria			<>		
or		"Dog"			25.

- Give TWO reasons why this query will not give the desired results. (2)

- 7.9 The manager found that quite a lot of errors were made when the data was captured.

Name TWO features of a database which can help prevent errors being made when data is captured. Explain how each one can be applied by referring to a typical example.

(4)
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TOTAL: 150

