



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

FEBRUARY/MARCH 2009

MARKS: 150

TIME: 3 hours

This question paper consists of 16 pages.

INSTRUCTIONS AND INFORMATION

1. This paper consists of SECTION A and SECTION B:
SECTION A (20)
SECTION B (130)
2. Answer ALL the questions.
3. Start EACH question on a NEW page.
4. Number the answers correctly according to the numbering system used in this question paper.
5. Write neatly and legibly.

SECTION A**QUESTION 1**

Choose a term/concept from COLUMN B that matches a description in COLUMN A. Write only the letter (A – R) next to the question number (1.1 – 1.10) in the ANSWER BOOK, for example 1.11 S.

COLUMN A		COLUMN B	
1.1	A text file on information containing the user's preferences and choices regarding a specific website	A	digital divide
		B	Cc
1.2	A feature that prevents users from entering incorrect data in a database table	C	validation text
		D	GHz
1.3	An audio player that can also be used as a storage device	E	server
		F	intranet
1.4	A South African online auction site	G	bidorbuy (Bid or Buy)
1.5	An option in e-mail that allows you to send messages to many recipients without the recipient's name being visible to other recipients of the message	H	Bcc
		I	favourites
1.6	A term referring to the gap between people who have access to technology and those who do not	J	cookie
		K	iPod
1.7	A device that manages network or e-mail access in an institution	L	flash drive
		M	validation rule
1.8	A unit in which the speed of a processor is measured	N	green computing
1.9	A modern concept often associated with a paperless office	O	extranet
		P	template
1.10	A private company network with access limited to employees of the company	Q	eBay
		R	Gb

[10]

QUESTION 2

Various options are provided as possible answers to the following questions. Choose the 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 B.

2.1 Which ONE of the following is a file format associated with sound files?

- A exe
- B jpg
- C mp3
- D pdf

2.2 Which ONE of the following devices is most suitable for backing up data from a networked file server with an 80 GB hard drive?

- A CD
- B DVD
- C Zip disk
- D Portable hard drive

2.3 Which ONE of the following is used to edit and store data in a database?

- A Query
- B Import
- C Report
- D Table

2.4 Proprietary software is software ...

- A without copyright protection.
- B that is completely free.
- C for which a licence needs to be purchased in order to use it.
- D that can be copied from the legal owner of the licence.

2.5 A computer user should be seated comfortably on an adjustable chair. The study of the design of equipment for human comfort is referred to as ...

- A economics.
- B ergonomics.
- C chiropractics.
- D physiotherapy.

2.6 An end-user licence agreement ...

- A gives the user the exclusive right to copy and sell the software to other potential users.
- B is a form of advertising between a software developer and a user.
- C grants the user ownership of the software.
- D is a legal contract between a software developer and the user in terms of distribution, resale and restricted use.

2.7 A feature of many application programs that allows one to quickly locate text in a document:

- A Search
- B Find
- C Locate
- D FAQ

2.8 Another name for a web address:

- A URL
- B http
- C www
- D html

2.9 Software used by the operating system to communicate with peripheral devices such as a printer:

- A Driver
- B Bus
- C Modem
- D Program

2.10 A program that gradually destroys stored data and files:

- A Logic bomb
- B Worm
- C Phishing
- D Spam

(10 x 1) (10)

TOTAL SECTION A: 20

SECTION B**SCENARIO:**

Your school has a recycling project and has appointed a team of learners offering Computer Applications Technology (CAT) to assist. The computers used for this project are linked to the school network. Each team member has a username and password which allows them access to the network. There is also a shared drive that the team members have access to. The team also has Internet access. The team is required to:

- keep records of the recycled material collected by the learners
- communicate with those who collect material that can be recycled
- keep records of payments made/received from the collection companies
- communicate the recycling project to the learners and the community.

QUESTION 3

- 3.1 What type of application program would be most appropriate for each of the following in terms of the above scenario?
- 3.1.1 To keep records of the material collected by the learners (1)
- 3.1.2 To communicate electronically with those who collect material that can be recycled (1)
- 3.1.3 To keep financial records of payments made/received from the collection companies (1)
- 3.1.4 To communicate the recycling project to the learners and the community (1)
- 3.2 Name ONE disadvantage of having all the data available on one network. (1)
- 3.3 Name TWO advantages of linking computers in a network. Ensure that ONE of the advantages relates specifically to this scenario. (2)
- 3.4 Team members need to have a password to gain access to certain common files on the shared drive. Name THREE guidelines for setting up secure passwords. (3)
- 3.5 What is the major difference in terms of licensing between software for a network and software for stand-alone computers? (2)

- 3.6 Information and pictures from the recycling project are placed on your blog. Explain the term *blog*. (2)
- 3.7 What technology can you use to ensure that you automatically get the latest postings and news from several blogs and news sites that interest you? (1)
- 3.8 You find information on recycling on the following two sites:
- A mountainhigh.blogspot.com
B mountainhigh.ac.za
- On which site (A or B) do you think you will get the most reliable information? Motivate your answer. (2)
- 3.9 You used your digital camera to take a photograph of learners collecting items to be recycled. The JPEG photograph was 2 MB in size!
- 3.9.1 To upload this photograph to the Internet it would be preferable to reduce the size of the picture. What type of program would you use to do this? (Do NOT give product or brand names.) (1)
- 3.9.2 Besides JPEG and JPG, name TWO other picture file formats. (2)
- 3.9.3 Besides a digital camera, what other digital device can be used to capture photographic images? (1)
- 3.9.4 Assuming that the computer and camera have the proper hardware/software, name ONE technology that could be used to transfer the images from the camera to the computer without using a cable. (1)
- 3.10 Social networking sites have become very popular recently.
- 3.10.1 Name TWO purposes of a social networking site related to this scenario. (2)
- 3.10.2 Give ONE example of a popular social networking site. (1)
- [25]**

QUESTION 4

4.1 You need to give a computer presentation during the school assembly on how learners should bring in their items for recycling.

4.1.1 What would be the best type of application package to do this?
(Do NOT give a product or brand name.) (1)

4.1.2 For the presentation, you have a choice of using a desktop or a laptop computer. Re-draw the table below (large enough for you to write in) and fill in the missing details based on the scenario.

	Advantages of using a	Disadvantages of using a
Desktop		
Laptop		

(4)

4.1.3 Name a hardware device that can be used to project the information from your computer onto a screen. (1)

4.2 Nzo created a poster at home and brought it to school on a flash disk. The file cannot be opened on the school computers. Give TWO possible reasons for this occurrence. (2)

4.3 You have opened many programs on your computer at the same time and while working, the computer 'froze'.

4.3.1 Suggest TWO ways in which to solve the problem immediately. (2)

4.3.2 Suggest TWO ways to prevent this from happening in the future. (2)

4.4 One of the recycling companies will donate a printer to your school. You are asked to choose between a laser printer and an ink-jet printer.

4.4.1 State ONE scenario/situation where the ink-jet printer would be the best choice. (1)

4.4.2 State ONE scenario/situation where the laser printer would be the best choice. (1)

4.5 One of the new ink-jet printers has run out of ink and this printer is still under guarantee. Beauty suggests that you use ink refills, however, John suggests that you buy new cartridges.

4.5.1 Name ONE advantage and ONE disadvantage of Beauty's suggestion. (2)

4.5.2 Name ONE advantage and ONE disadvantage of John's suggestion. (2)

4.6 Study the two advertisements below.

LAPTOP A R6 999	LAPTOP B R11 990
Amilo (Li 1818) with Intel Pentium Dual Core 1.86 GHz Processor (T2130) <ul style="list-style-type: none"> • 1 GB RAM • 160 GB SATA HDD • Free Microsoft Office Trial and Works 8.5 	Amilo (Xi 2528) with Intel Centrino Duo Core 2 Duo 2.2 GHz Processor (T7500) <ul style="list-style-type: none"> • 2 GB RAM • 2 x 160 GB SATA HDD • Geforce Graphics Card • Firewire • 5-in-1 Card Reader • Free Microsoft Office Trial and Student 2007
All laptops come standard with: Dual layer DVD Writer, WLAN and 56k Modem, Onboard Sound Card, Integrated Speakers, Brilliant View Screen Technology, 12 Month Collect & Return to Customer Premises Warranty	

Built-in webcam with 1.3 megapixels camera

4.6.1 Name ONE application for which you could use the webcam in Laptop B in this scenario. (1)

4.6.2 Which computer would be most preferable for a person who professionally designs websites with **active** content on recycling and green matters? Motivate your answer. (2)

- 4.6.3 Name ONE benefit of the two hard drives in Laptop B. (1)
- 4.6.4 What does the Firewire specification refer to in the Laptop B advertisement? (1)
- 4.6.5 State ONE purpose that the 5-in-1 card reader serves for Laptop B. (1)
- 4.6.6 What is meant by *Trial* in Free Microsoft Office Trial? (1)
- 4.6.7 What is the purpose of the 56k Modem in both laptops? (1)
- 4.7 Besides formatting, state TWO guidelines for creating a clear, understandable and visual slideshow that allows the audience to easily grasp and understand the content. (2)

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QUESTION 5

- 5.1 Mrs Jones is concerned that this is a very large project which requires strict record-keeping. Give TWO reasons why using computers for the project is better than learners keeping records on paper. (2)
- 5.2 People bring materials to the recycle centre. Data of 'who brings what' must be saved. What electronic device, other than a laptop or desktop computer, can be used to collect, process and save this data? (1)
- 5.3 The details of different quantities of materials that were recycled should be available to all learners. How would you save the file in such a way that data can be viewed but not altered? (1)
- 5.4 Ferdie investigated the possible income from the collection. He typed information into the following spreadsheet:

	A	B	C	D	E
1	INCOME				EXPENSE
2		Quantity	Per unit	Total	Containers
3	Bottles	589	0.45	265.05	4.5
4	Paper kg	250	1	250	3.25
5	Cans	12 367	0.05	#VALUE!	10.00
6	Other	1221212	30	#####	5.00
7	TOTAL				18.25

- 5.4.1 What feature is used in row 1 to make the text appear as a single cell in columns A to D? (1)
- 5.4.2 What feature is used in cell C2 to make the text appear as in the example? (1)
- 5.4.3 The quantity in cell D5 (the product of B5 and C5) is not reflected correctly. What can be done to correct the problem? (1)
- 5.4.4 Give ONE reason why the answer in cell D6 does not display correctly. (1)
- 5.4.5 The total in cell E7 should be 22.75. Give ONE possible reason why this total is wrong. (1)
- 5.5 Suneel would need to capture a lot of data for the recycling project. This may require many hours at the computer. Suggest TWO health risks associated with the use of computers and explain how each of these can be overcome. (4)

- 5.6 The group want to burn a DVD for promotional purposes.
- 5.6.1 What does it mean to *burn a DVD*? (1)
- 5.6.2 Can the group use a CD writer for this task? Motivate your answer. (2)
- 5.7 After you have burned a CD you are unable to read it. Suggest TWO ways to solve this problem so that the problem does not occur again. (2)
- 5.8 Give TWO reasons why you would encourage people to use CD-RWs as opposed to using CD-Rs. (2)
- 5.9 The school has a savings account. When the school secretary logs onto the Internet banking website she notices a warning message about 'phishing'.
- 5.9.1 Explain the term *phishing*. (1)
- 5.9.2 Briefly outline ONE way in which phishing attacks occur. (1)
- 5.9.3 Phishing is often linked with identity theft. What does the term *identity theft* refer to? (1)
- 5.10 Banking security is a major issue.
- 5.10.1 Name TWO security measures that banks use to ensure the security of Internet banking transactions. (2)
- 5.10.2 Name TWO ways in which Internet banking users can ensure their own Internet banking safety. (2)
- [27]**

QUESTION 6

- 6.1 Your school has developed a partnership with a school in Nigeria, Africa and another in Texas, USA. Your main form of communication is e-mail.
- 6.1.1 Name TWO advantages of communicating with these schools via e-mail. (2)
- 6.1.2 Name ONE disadvantage of communicating via e-mail. (1)
- 6.2 An interesting article on e-waste appeared in a Nigerian newspaper. The school in Nigeria wishes to send this article to you. List AND evaluate THREE electronic methods by which they could send this article to you. (6)
- 6.3 You and your partners want to create a 'perfect' document on recycling. You need to work together on this document. What Internet feature (not e-mail) would you use to do this? (1)
- 6.4 Ferdie tried to open a games folder while he was working on the project, and the following message appeared:



- 6.4.1 Explain why the message appeared. (1)
- 6.4.2 How can Ferdie legally gain access to this folder? (1)
- 6.5 On occasion you use the Internet to physically talk to your partner schools.
- 6.5.1 What communication protocol makes this possible? (1)
- 6.5.2 Name ONE commonly known program used for this purpose. (1)
- 6.6 Name TWO advantages of using Bluetooth technology compared to infrared technology. (2)

- 6.7 Siphon has deleted a file and realises that he has made a mistake and has no backup. Discuss the retrieval of deleted files from the following:
- 6.7.1 A hard drive (2)
 - 6.7.2 A flash drive (2)
 - 6.7.3 A file server (2)
- 6.8 The computer administrator is concerned about viruses attacking the network.
- 6.8.1 Fully explain what a *computer virus* is. (2)
 - 6.8.2 Discuss ONE precaution that can be taken to prevent viruses from entering the network. (1)
- [25]**

QUESTION 7

7.1 You have considered a career in environmental studies, one of the specialisations being the management of e-waste. You decide to use a search engine to find more information on this subject for an essay to accompany your application to a tertiary institution.

7.1.1 Fully explain what a *search engine* is. (2)

7.1.2 Give ONE example of a search engine. (1)

7.1.3 Discuss TWO ways to determine whether the information on the websites that you access, is reliable or not. (2)

7.1.4 Your essay is on **carbon footprints**. When you search on the Internet, how would you ensure that you get information on **carbon footprints** and not on **carbon** and **footprints** only? (2)

7.1.5 In writing your essay, you want to use most of the information that you have obtained from the Internet. Discuss TWO ways to ensure that you are not guilty of plagiarism. (2)

7.2 You set up a database of all the hotels in your community, some of which are part of your project. It contains the fields below.

FIELD NAME	DESCRIPTION
Hotel_Name	Name of hotel
Address	Hotel's address
Tel_Number	Hotel's telephone number
e-mail_Address	Hotel's e-mail address
Hotel_Manager	Name of hotel manager
Part_of_Project	Whether hotel is part of the project or not
Units_Contributed	Number of recyclable units contributed

7.2.1 Name the field that is most appropriate as a primary key and state why you have chosen this field. (2)

7.2.2 State the most appropriate field type for the **Units_Contributed** field. (1)

7.2.3 State the most appropriate field type for the **Part_of_Project** field. (1)

7.2.4 Beauty suggested that you use an input mask for the **Hotel_Name** field. Give TWO reasons why this is not a practical suggestion. (2)

7.2.5 What feature of a database would you use to generate a list of hotels that are NOT part of the project? (1)

- 7.2.6 Saneel has suggested that you use mail merge to send out letters to hotels, asking them to participate in the project. Give ONE reason why you agree to use mail merge. (1)
- 7.2.7 The Tourist Information Bureau gives you a list of the guest houses in the area. Choose TWO appropriate file formats (from the list below) in which you could request this file. Indicate how each should be formatted so that you can directly import the data into your database. (4)
- Portable document file (pdf)
 - Text file (txt)
 - Word processing file
 - Spreadsheet file
 - Web page/html file
- 7.3 A transport company has offered to collect the recycling material on a weekly basis from the hotels and guest houses.
- 7.3.1 What electronic device or system would be able to assist them to physically locate these hotels and guest houses quickly and easily? (Do NOT give a product or brand name.) (1)
- 7.3.2 How does this electronic device manage to locate geographical positions? (1)
- 7.4 Hotel Bambani is replacing their old computers and has decided to donate these to your school. You wish to install new software on them. Discuss TWO potential problems that you foresee. (2)
- [25]**
- TOTAL SECTION B: 130**
- GRAND TOTAL: 150**