

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2016

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	(25 marks)
SECTION B	(75 marks)
SECTION C	(50 marks)
2. Answer ALL the questions.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. Do NOT write in the right-hand margin.
6. Leave a line between each sub-question.
7. In general, one mark is allocated per fact. A 2-mark question would therefore require TWO facts, et cetera.
8. Write neatly and legibly.

SECTION A**QUESTION 1: MATCHING ITEMS**

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

COLUMN A		COLUMN B
1.1	Computer software or computer hardware that can intercept and log traffic passing over a network	A CMYK
1.2	Parallel ports which are most frequently used to connect the personal computer to a printer	B IF
1.3	The authoring language used to create documents on the WWW	C Input mask
1.4	Software program that acts as an add-on to a web browser so it can display additional specialised content like video and animation	D Packet sniffer
1.5	Term associated with the colour abilities of printers	E CMOS
1.6	A computer worm that steals information of users on Facebook and uses a user's profile to distribute videos containing viruses	F Validation rule
1.7	A function in a spreadsheet that allows a user to choose between two values, depending on the criteria	G Plug-in
1.8	A malicious program that enables an attacker to take full control of your computer from a remote location	H BIOS
1.9	A type of microchip that keeps the data also when the electricity is switched off	I LPT
1.10	It simplifies data entries in a database by controlling the data that is required in a field and the way the data is to be displayed	J Cookie
		K HTML
		L GUI
		M COUNTIF
		N Koobface
		O HTTP
		P Rootkit

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

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

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 The following is an option in an 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)
- 2.2 Which ONE of the following files DOES NOT have a file format that has been compressed?
- A mpeg
 - B zip
 - C jpeg
 - D rtf
- (1)
- 2.3 A blueprint of a document used to create similar documents:
- A Template
 - B Letter
 - C Report
 - D Worksheet
- (1)
- 2.4 This is a video content sharing web site:
- A Yahoo
 - B YouTube
 - C Telkom
 - D Google
- (1)
- 2.5 The main network protocol which is used for uploading or downloading of files:
- A VoIP
 - B RSS
 - C HTML
 - D FTP
- (1)
- 2.6 This function allows you to keep paragraphs on a page together:
- A 6 pt before and after
 - B Widow control
 - C Keep with next
 - D Keep lines together
- (1)

- 2.7 Which ONE of the following statements is a great advantage of sending an e-mail?
- A It is faster than postal mail.
 - B You can transfer money by e-mail.
 - C It cannot be infected by viruses.
 - D It makes the computer faster. (1)
- 2.8 This type of computers are commonly used in big hospitals and in huge companies because they can process bulk data:
- A Mini computers
 - B Personal computers
 - C Super computers
 - D Mainframe computers (1)
- 2.9 The name given to injuries resulting from fast, repetitive actions:
- A Ergonomics
 - B RSI
 - C Carpal Tunnel Syndrome
 - D Epicondylitis (1)
- 2.10 Which ONE of the following is an HTML tag that can be used to insert an image?
- A <applet>
 - B
 - C
 - D <image> (1)

[10]**QUESTION 3: TRUE/FALSE ITEMS**

All of the following statements are FALSE. Change the underlined word to make the statements TRUE. (You may not simply use the word 'NOT' to change the statement.)

- 3.1 The CPU is a large circuit board inside the computer containing slots and connections for all the components of a computer. (1)
- 3.2 OMR is a technology that enables a machine to read characters such as bank numbers on a cheque. (1)
- 3.3 Gumtree is the largest Internet auction web site in South Africa. (1)
- 3.4 Phishing redirects users to false web sites without them even knowing it. (1)
- 3.5 A bookmark is a numbered label that you can add to a table, figure or item. (1)

[5]**TOTAL SECTION A: 25**

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

- 4.1 Scrapbooking is your mother's hobby. She wants to edit some of your matric farewell photos by cropping them and reducing them in size. She does not want to spend a lot of time or money doing this. Some of your friends told her that she can just use Paint while others told her that she should use Photoshop.
- 4.1.1 Which ONE of the two programs do you think your mother should use under these circumstances? (1)
- 4.1.2 Give TWO reasons to support your choice of program. (2)
- 4.2 She uses her desktop computer to create designs for her scrapbook. All the graphic files that she creates take up a lot of the hard drive space.
- 4.2.1 Name TWO ways how she can free space on the hard drive. (2)
- 4.2.2 You suggest that she buys an external hard drive. Name TWO advantages of external hard drives. (2)
- 4.2.3 Name TWO reasons why it is critical for her to back up her files on a regular basis. (2)
- 4.3 She notices that her computer freezes when she works in Microsoft Word 2013 and she cannot exit from it. To exit Word, she needs to open the Task Manager.
- 4.3.1 Which keys on the keyboard would she use to access the shortcut to the Task Manager? (1)
- 4.3.2 Explain the steps that should be taken after opening the Task Manager to close the frozen program. (2)
- 4.4 Your mother wants to buy a new printer.
- 4.4.1 Which printer will be suitable for printing high quality photos? (1)
- 4.4.2 The printer just stopped after printing ten pages. Name TWO possible reasons for this. (2)
- 4.5 While she was designing labels for her scrapbook, she was listening to music. All of a sudden the music just stopped playing. Mention ONE possible reason for this. (Note: The sound card was not the reason.) (1)

- 4.6 When your mother connected to the Internet to download photos, the operating system automatically downloaded and installed patches and updates for the software installed on the computer including the operating system.
- 4.6.1 How can she prevent that updates are downloaded from the Internet and installed on her computer? (1)
- 4.6.2 Name TWO reasons for not wanting automatic downloads installed on her computer. (2)
- 4.7 Your mother and her friend often exchange photos via e-mail. Your mother's e-mail address is jjsenekal@yahoo.com.
- 4.7.1 Is this a web-based or computer-based e-mail program? Motivate your answer. (2)
- 4.7.2 Name ONE disadvantage of using this type of software. (1)
- 4.8 Why is it not recommended that your mother take digital photos at the maximum resolution possible of the digital camera? (1)
- 4.9 Your mother spend most of her time working on the computer moving the mouse around and carrying out various mouse actions.
- 4.9.1 Why would you recommend an ergonomically designed mouse for your mother? (1)
- 4.9.2 Give ONE reason why you would prefer a wireless mouse over a cabled mouse. (1)
- [25]**

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

- 5.1 Your mother uses the Internet every day to communicate, to do business as well as to shop for her scrapbooking hobby.
- 5.1.1 When choosing an Internet connection, your mother prefers a broadband package. Name ONE reason for her decision. (1)
- 5.1.2 One of the broadband packages your mother investigated was advertised as “*unshaped*”.
- Briefly explain what “*unshaped*” means in this context. (1)
- 5.1.3 Why will downloading movies and music files affect the cap and not the downloading of files? (1)
- 5.1.4 Explain to your mother why some ADSL packages give two different speed specifications. (1)
- 5.2 The Internet enables us to communicate with one or more people in Real-time using text, voice or video.
- 5.2.1 What is the major difference between Real-time messaging and e-mail communication? (2)
- 5.2.2 List TWO advantages of using VoIP software. (2)
- 5.3 You told your mother to become part of an extranet network.
- 5.3.1 What is an extranet network? (1)
- 5.3.2 How can she benefit by doing this? (1)
- 5.4 Your mother says that her computer used to automatically go to Google when she opens her web browser. Now it goes to some weird sites, advertising all sorts of products.
- 5.4.1 What is the most likely cause of this? (1)
- 5.4.2 Give TWO ways for your mother to check whether she is on a secure site when doing business on the Internet. (2)
- 5.5 Your mother wants to read an e-mail message from a certain person. How can she find the message quickly? (1)
- 5.6 Why would your mother want to store e-mail messages in storage areas such as Folders or Labels? (1)
- [15]**

QUESTION 6: INFORMATION MANAGEMENT

- 6.1 Your mother typed the search phrase *scrapbooking* into Google and got hundreds of 'hits'.
- 6.1.1 Explain what a 'hit' is in this context by referring to how a search engine functions. (1)
- 6.1.2 Give TWO ways to produce fewer, but more relevant results with a web search in general. (2)
- 6.2 Explain to your mother what the term *information overload* refers to. (1)
- 6.3 Name TWO indicators that will help your mother to determine whether a web page is authentic and reliable. (2)
- 6.4 Briefly describe how scrappers can benefit from marketing their scrapbook kits on the Internet. (2)
- 6.5 Your mother received a file Scrapbook.docx from her friend via e-mail. She tried to open the file in Word 2003 and experienced problems.
- 6.5.1 Explain to her what the problem is. (1)
- 6.5.2 Indicate ONE way in which the problem can be solved so that she can open the file in Word 2003. (1)
- [10]**

QUESTION 7: SOCIAL IMPLICATIONS

- 7.1 Your mother uses a web site on the Internet to purchase a scrapbook.
- 7.1.1 Mention ONE advantage and ONE disadvantage of on-line shopping. (2)
- 7.1.2 Name TWO ways in which you can protect yourself when shopping online. (2)
- 7.2 Explain to your mother how the following types of computer crime is committed:
- 7.2.1 Intellectual property (1)
- 7.2.2 Phishing (1)
- 7.3 Your mother has discovered that many people do not have e-mail addresses and make use of websites such as Facebook and MySpace instead.
- 7.3.1 What is the general or generic name used to describe sites such as Facebook and MySpace? (1)
- 7.3.2 Name TWO features, other than posting text messages, which a website like Facebook has. (2)
- 7.4 Explain what crippleware is. (1)
- [10]**

QUESTION 8: SOLUTION DEVELOPMENT

- 8.1 Your mother creates a database with the contact details of all the nearby scrapbooking shops. She created a report in the database showing some of these details.

NAME OF SHOP	ADDRESS	TELEPHONE
Scrapbook Nook	152 Main Road	#####
I-Scrap	244 Cape Road	#####
Atmosphere Crafts	15 Chelmsford Road	#####
Arts and Crafts	150 Main Road	#####
Creative Arts	123 Lincoln Road	#####
Total		

- 8.1.1 She wants to add a function to total the number of shops in the report so that it is displayed automatically at the end of the report.

Name the function she will use to do this and explain exactly where in the report she needs to place this function.

(2)

- 8.1.2 Explain to your mother what the cause of the hash signs (#####) in the telephone field is and how she can fix it.

(2)

- 8.1.3 What feature of a database can your mother use to ensure that every phone number consists of 10 digits?

(1)

- 8.2 Your mother wonders whether it would not have been a better idea to use a spreadsheet instead of a database to capture the details of the different shops.

- 8.2.1 Give TWO advantages of using a database to store the information, opposed to using a spreadsheet.

(2)

- 8.2.2 If she decided to use a spreadsheet instead, would she have to type all the information in again? Motivate your answer.

(2)

8.3 Your mother used the following formula in a spreadsheet:

=14%*\$B\$3

8.3.1 What term is used to describe the cell addressing where a part of the cell address includes dollar signs, for example \$B\$3? (1)

8.3.2 Why is this type of addressing referred to in QUESTION 8.3.1 needed or used in a spreadsheet? (1)

8.4 Your mother wanted to print the last two pages of a 300 page instruction manual. While it was spooling, she realised that she had actually sent all 300 pages to the printer queue.

How can she prevent the entire 300 page manual from printing? (1)

8.5 You asked your mother and her friends to read your PAT assignment and to make suggestions and alterations.

8.5.1 Describe TWO facilities in Word that will allow them to share and work on this assignment electronically without deleting each other's work. (2)

8.5.2 Explain what you understand by the term: accessibility of a document. (1)

[15]

TOTAL SECTION B: 75

SECTION C

Read the scenario below carefully as all the questions in SECTION C are based on it.

SCENARIO

The Governing Body of your school wants to expand the computer department by adding a reading and research center. They need the help of the CAT learners to provide technical advice. The school is interested in buying new computers for this new reading and research lab and has to choose between one of the following computers listed below.

QUESTION 9: INTEGRATED SCENARIO

Study the following specifications for a desktop and a laptop computer in order to answer the questions that follow.

COMPUTER A	COMPUTER B
All in one desktop Intel Pentium dual core J2900 2.4 GHz CPU 4 GB RAM 500 GB HDD Bluetooth 4.0 Windows 8 12 Month on-site warranty	Lenovo Laptop AMD E1-6010 processor 2GB DDR 3 RAM Webcam, card reader Wireless LAN, HDMI, Numeric keypad, DVD Writer, 15.6" HD LCD screen, Bluetooth 500 GB HDD, Windows 8.1 1 year warranty on selected parts

9.1 The Governing Body of your school has to decide whether to purchase the desktop computers (Computer A) or the laptops (Computer B). Help them by answering the following questions.

- 9.1.1 Which company made the CPU listed in Computer A? (1)
- 9.1.2 What is the capacity of the hard drive listed in Computer A? (1)
- 9.1.3 Which operating system does Computer A have installed? (1)
- 9.1.4 Describe the purpose of the advertised card reader in Computer B. (2)
- 9.1.5 Explain the function of DDR RAM in Computer B to the customer. (2)
- 9.1.6 Name TWO functions of an operating system. (2)
- 9.1.7 Explain to the Governing Body the meaning of *hot swapping*. (2)

- 9.2 If the Governing Body decide to buy Computer B, they will make use of a wireless broadband Internet connection.
- 9.2.1 Name TWO advantages of using a wireless Internet connection. (2)
- 9.2.2 Name TWO features built into recent versions of Windows that try to increase computer security. (2)
- 9.3 Many of the learners will make use of a number of easy-to-use online file sharing and storage tools such as Google Drive to store and share files online in the cloud and to help synchronise their files.
- 9.3.1 Give TWO **other** examples of this type of site or service. (2)
- 9.3.2 How would the learners share a file with other learners using this type of facility? (2)
- 9.3.3 Explain to the learners what it means to synchronise files and how synchronisation occurs using these systems. (2)
- 9.4 The learners have been warned to be very careful about plagiarism and to be very careful about checking the accuracy of some *wiki* sites and *blogs* while doing research.
- 9.4.1 Explain the term: *plagiarism*. (2)
- 9.4.2 Explain to the learners why the information obtained from a blog may not always be accurate. (1)
- 9.4.3 Give TWO reasons why parents and learners might prefer to receive news from the principal about the reading and research lab as a podcast instead of in the usual newsletter way. (2)
- 9.4.4 Name TWO **other** typical applications of wikis besides creating reference sites (like an encyclopaedia such as Wikipedia). (2)
- 9.4.5 One of the learners mentioned that the principal “blogs in Word”. How is this possible? (2)
- 9.4.6 Explain how some people make a living as “bloggers”, if blogs are generally free to view. (1)
- 9.5 The school wants to use VoIP to communicate with an Australian school.
- 9.5.1 Which VoIP program is most commonly used? (1)
- 9.5.2 Name any ONE VoIP provider that can be used by the school. (1)
- 9.5.3 The Governing Bodies of the two schools plan a video conference. Which TWO hardware devices must be connected to your principal’s computer to facilitate this service? (2)

- 9.6 The school wants to communicate with schools in disadvantaged areas and part of the research in the lab will be to find ways to reduce the digital divide between your school and the schools in the disadvantaged areas.
- 9.6.1 What are the best TWO ways in which the digital divide can be narrowed? (2)
- 9.6.2 Digital communications are easy to use and can actually save money. Give TWO reasons why you think more use is not made of digital communications in South Africa. (2)
- 9.7 In which TWO ways can the school contribute to green computing? (2)
- 9.8 The Governing Body is preparing two documents for the principal regarding their choice of computers for the new lab. However, they have a few questions and problems. Help them by answering the following word processing and spreadsheet questions.
- 9.8.1 The document that they created is very long. Name ONE feature of a word processing program which will make it easier to move to specific places in the document. (1)
- 9.8.2 The Governing Body could not create a table of contents. List to them the steps that they must follow before they can automatically create a table of contents. (2)
- 9.8.3 Discuss the difference between splitting a window and freezing a window in Excel. (2)
- 9.9 Many hearing-impaired users also rely on ICT for better communication.
- 9.9.1 Name the type of application that enables a hearing-impaired learner to follow a lecture or speech. (1)
- 9.9.2 How can videos on YouTube be made accessible for deaf users? (1)
- 9.9.3 Explain how an application such as Google Voice Search can help visually impaired users. (2)

TOTAL SECTION C: 50
GRAND TOTAL: 150

