



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2016

COMPUTER APPLICATIONS TECHNOLOGY P2

MARKS: 150

TIME: 3 hours



This question paper consists of 15 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 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 Q.

COLUMN A		COLUMN B	
1.1	An acronym that describes the fact that incorrect data input will lead to incorrect results being produced	A	RSS
1.2	Computers that provide services or resources to other computers in a network	B	CSV file
1.3	Connects the computer and allows the computer to communicate with the network	C	ISP
1.4	A web feed that provides users with updated content, such as new blog entries and news headlines	D	Cc
1.5	An option when composing 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	E	Txt file
1.6	Adding records to an existing table in a database by importing or copying them into the existing table	F	GIGO
1.7	A text file which uses commas to separate the values in each line	G	Green computing
1.8	A concept often associated with a paperless office	H	CVS
1.9	A company that has a permanent, fast connection to the Internet	I	Server
1.10	A program that is used to search for documents located on the Internet by using keywords or phrases entered by the user when looking for information	J	Append
		K	NIC
		L	Search engine
		M	CTS
		N	Bcc
		O	Digital divide

(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 hardware component that hosts the start-up process.
- A BIOS
 - B CPU
 - C RAM
 - D ROM chip on the motherboard
- (1)
- 2.2 A/An ... is a set of rules which allow for communication and data transfer across a network or the Internet.
- A algorithm
 - B protocol
 - C law
 - D topology
- (1)
- 2.3 Which ONE of the following represents the order of wireless range/ bandwidth from highest to lowest?
- A WiFi; Bluetooth; WiMAX
 - B Bluetooth; WiFi; WiMAX
 - C WiMAX; Bluetooth; WiFi
 - D WiMAX; WiFi; Bluetooth
- (1)
- 2.4 ... is a collection of programs that is designed to infiltrate a computer and gain the highest level of privileges to take control of the infected computer.
- A A trojan horse
 - B A rootkit
 - C Spyware
 - D A worm
- (1)
- 2.5 The most appropriate spreadsheet chart to show a trend such as potato price increase over a period of time.
- A Pie chart
 - B Line chart
 - C Bar chart
 - D Surface chart
- (1)

- 2.6 In a database, a table should include a field that uniquely identifies each record. This field is known as the ...
- A Identity number.
 - B Auto number.
 - C Source code.
 - D Primary key. (1)
- 2.7 ... is an action that you can use on an image or picture to remove unwanted parts.
- A Crop
 - B Cut
 - C Resize
 - D Undo (1)
- 2.8 Which ONE of the following does NOT make use of caching?
- A CPU
 - B Storage
 - C Typing
 - D Web pages (1)
- 2.9 A term used to describe when a person is linked to a group or institution.
- A Affiliation
 - B Accuracy
 - C Audience
 - D Currency (1)
- 2.10 Proprietary software is software that ...
- A is completely free.
 - B needs a licence to be bought in order to use it.
 - C can be copied freely from the legal owner of the software.
 - D can be shared with friends. (1)
- [10]**

QUESTION 3: MODIFIED TRUE/FALSE

Indicate whether the following statements are TRUE or FALSE. Where the statement is false, rewrite ONLY the underlined section to make it true. (You may not simply use the word NOT to change the statement when you rewrite it.)

- 3.1 F5 is the shortcut key to refresh a webpage. (1)
- 3.2 Plagiarism is to use all the work of someone else as your own. (1)
- 3.3 Favorites is the details of a file which can be used to identify it. (1)
- 3.4 UPS is a device used to protect a computer against power surges and spikes. (1)
- 3.5 Cyber-bullying involves unwanted attention towards another person or group of people using cellphones and other methods of electronic communication. (1)

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

SECTION B**QUESTION 4: SYSTEM TECHNOLOGIES**

4.1 Mobile devices will be made available at a local community centre and the centre will include access to digital resources, the Internet and mobile technologies.

4.1.1 Define the term *operating system*. (2)

4.1.2 Which mobile operating system is associated with the terms, Ice Cream Sandwich and Jelly Bean? (1)

4.1.3 Name TWO functions of an operating system. (2)

4.2 A quotation for new computers for the centre with the specifications below has been received.

Intel Core i5 2.6 GHz CPU 2 GB RAM 3 TB HDD

4.2.1 The Intel Core i5 CPU contains multiple cores. Briefly explain why this feature improves the performance of the CPU. (2)

4.2.2 The quotation was rejected because it was too expensive.

Identify the single component in the quotation that could clearly be identified as having an unnecessary high specification level. (1)

4.2.3 Name TWO differences between memory and storage other than their function and typical size or capacity. (2)

4.3 Hardware failure is a sad reality of computing.

4.3.1 Give TWO troubleshooting tips you might try, if you experience problems writing a CD or DVD, apart from using a different drive or disc. (2)

4.3.2 Name TWO common sense precautions that can help prevent hardware failure. (2)

4.4 The centre manager will be given a new laptop computer for office use. The laptop computer is equipped with a fingerprint sensor.

4.4.1 State ONE advantage of the fingerprint sensor on the laptop. (1)

4.4.2 Give another example of a biometric device/system that can be used to uniquely identify individuals. (1)

- 4.5 The manager noticed that the new computers do not come standard with an office suite.
- 4.5.1 Name TWO advantages of using an open source office suite. (2)
- 4.5.2 Unfortunately there are certain problems with your choice. Name TWO disadvantages of using open source software. (2)
- 4.6 The manager has a beautiful desk with a mirror finish as a work surface.
- 4.6.1 Explain to him why this would be problematic with an optical mouse and outline a possible solution. (2)
- 4.6.2 Why would you recommend an ergonomically designed mouse for the manager? (1)
- 4.6.3 Name TWO anti-theft strategies that the centre can use for hardware. (2)
- [25]**

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

- 5.1 The computers at the new centre need to share an Internet connection; therefore the computers will be networked. An access point will be installed to create a wireless network (WLAN).
- 5.1.1 Briefly explain the difference between a *file server* and a *proxy server*. (2)
- 5.1.2 What is the **main advantage** in using a WLAN over a cable-based LAN? (1)
- 5.1.3 One access point is not sufficient for the centre.
Give TWO reasons why more than one access point may be needed. (2)
- 5.1.4 What is an *Intranet*? (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 List TWO advantages of using VoIP software. (2)

5.2.2 Many people make use of an RSS aggregator.

Name ONE disadvantage of an RSS aggregator. (1)

5.2.3 Give TWO reasons why some websites do not display correctly when viewed on mobile devices. (2)

5.2.4 Name TWO categories of media used to transfer data in a network. (2)

5.3 The centre manager wants to read an e-mail message from a certain person. How can he find the message quickly in Microsoft Outlook? (1)

5.4 Why would the centre manager want to store e-mail messages in storage areas such as Folders or Labels? (1) [15]

QUESTION 6: INFORMATION MANAGEMENT

6.1 Knowing what questions to ask during research is very important. Closed questions as well as open-ended questions are both crucial in solving problems and completing tasks.

Consider the following two questions that were asked in a questionnaire and answer the questions that follow:

Planning for the December holidays	
Question 1	How long are the holidays?
Question 2	Should we go away or stay at home?

6.1.1 State which one of the above two questions is an open-ended question, and which one is a closed question. (2)

6.1.2 Briefly explain the difference between open-ended and closed questions in general. (2)

6.2 Consider the following question asked as part of your research for the local community centre.

Indicate your age group with a cross (X):

Under 16	16 – 29	30 – 39	40 – 60	Over 60
----------	---------	---------	---------	---------

6.2.1 Give the disadvantage of using the specified age groupings as indicated, when it comes to analysing the data or performing queries on it (in a spreadsheet or a database). (1)

- 6.3 Give TWO disadvantages, or limitations, of conducting surveys online, i.e. via a website, as opposed to conducting them face-to-face. (2)
- 6.4 Explain what a *delimiter* is by referring to a suitable example. (1)
- 6.5 Whenever you do any writing, you need to indicate the source of any information you refer to or quote from.
Give ONE reason for acknowledging sources. (1)
- 6.6 Why would it be easier to check the quality of the information provided if the author was listed on a website? (1)
- [10]**

QUESTION 7: SOCIAL IMPLICATONS

- 7.1 A person with poor motor control often struggles to use a regular keyboard and a mouse.
- 7.1.1 Give TWO alternative devices for such people to enable them to use a computer effectively. (2)
- 7.1.2 How can sticky keys help them to use the keyboard more effectively? (1)
- 7.2 Explain how the following type of computer crime is committed:
- 7.2.1 Social engineering (1)
- 7.2.2 Name ONE example of social engineering. (1)
- 7.3 Name TWO options one can set in the power settings on a laptop computer in order to preserve battery life. (2)
- 7.4 Name TWO features, other than posting text messages, which a website like Facebook has. (2)
- 7.5 Briefly explain what *spyware* is. (1)
- [10]**

QUESTION 8: SOLUTION DEVELOPMENT

8.1 The following screenshot is an example of a possible database that can be used by your school. It is created in Microsoft Access.

Name	Surname	Age	Male/Female	Team Name	Swimming	Discus throw	Hammer throw
JOHAN	VAN RENSBURG	19	M	Blue	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ELBE	VAN ZYL	19	F	Red	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ROCHELLE	PRINSLOO	16	F	Red	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
WIHAN	ODENDAAL	17	M	Blue	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
STEFAN	PRETORIUS	19	M	Blue	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CHRISTINE	VISAGIE	19	F	Red	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUAN	VAN DER MERWE	16	M	Blue	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ANIKA	BARNARD	17	F	Red	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

8.1.1 Give TWO examples of validation rules that can be applied to this database. (2)

8.1.2 What can you do to prevent spelling errors when entering the team names? (1)

8.1.3 What can you do to ensure that all the names and surnames appear in uppercase? (2)

8.2 The following screenshot is an example of a spreadsheet that can be used by your school. It is created in Microsoft Excel.

	A	B	C	D	E	F
1	Name	Surname	Male/Female	BirthDate	Amount Paid	Team Name
2	Johan	van Rensburg	M	10 March 1995	R 500.00	Blue
3	Elbe	van Zyl	F	06 May 1999	R 400.00	Red
4	Rochelle	Prinsloo	F	06 April 1999	R 500.00	Red
5	Wihan	Odendaal	M	08 July 1998	R 400.00	Blue
6	Rudi	Pretorius	M	11 July 1998	R 300.00	Blue
7	Christine	Visagie	F	22 February 1997	R 200.00	Red
8	Ruan	van der Merwe	M	10 September 1998	R 500.00	Blue
9	Anika	Barnard	F	05 December 1995	R 200.00	Red
10						

8.2.1 Write down the function needed in **Cell A10** to count the number of names starting with a **R**. (2)

8.2.2 What function could you add to **Cell D10** to display the current date? (1)

8.2.3 Column **D** and **E** have been formatted as above. State the format category of column **D** and **E**. (2)

8.3 Name THREE advantages of using a database instead of a spreadsheet. (3)

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

8.5 Which tag will be used to start a new line in an HTML 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

Your neighbour, Patrick, is starting his own bookshop. He would like to handle all of the administration of the bookshop electronically on computers. He has asked you to help him with some technical advice. He has already bought six computers and installed them in the bookshop. The computers are connected in a network.

He would like you to help him streamline the administration of the bookshop by showing him how to use the network and the Internet.

QUESTION 9: INTEGRATED SCENARIO

Patrick would like to buy a laptop for himself. Help him make sense of the specifications the IT technician has sent him:

Lenova 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 Patrick likes to travel and would thus need to buy the above laptop to use while he is away from the bookshop.
- 9.1.1 Name TWO reasons why a laptop is a better option than a desktop computer in this situation. (2)
- 9.1.2 Which operating system does the Lenova Laptop have installed? (1)
- 9.1.3 Describe the purpose of the advertised card reader. (2)
- 9.1.4 Explain the function of RAM in the laptop to Patrick. (2)

- 9.2 Patrick has a problem with one of the computers in the bookshop. It seems to be running slower than usual.
- 9.2.1 A friend suggested to Patrick that he could improve the performance of this computer by running the defragment utility daily to gain more disk space.
- Critically comment on this advice by defining the term *defragmentation*. (3)
- 9.3 Inside the bookshop, Patrick will be making use of a cabled LAN network.
- 9.3.1 What kind of cabling would you suggest they use? List TWO reasons why you will choose it. (3)
- 9.3.2 Name TWO disadvantages of a LAN. (2)
- 9.4 Patrick compiled an Acceptable Use Policy (AUP) document for the bookshop and the document includes a section on green computing.
- 9.4.1 What is the purpose of an AUP document? (1)
- 9.4.2 The AUP states that, where possible, electronic documents should be used instead of printed documents.
- State TWO advantages of using electronic documents. (2)
- 9.4.3 The AUP does not address the disposal of old computers.
- Suggest TWO measures that could be included in the policy to address the disposal of old computers. (2)
- 9.5 Patrick wants to raise awareness regarding digital footprint and privacy when browsing the Internet.
- 9.5.1 When one is browsing the Internet, the web browser stores cookies.
- Explain to Patrick the meaning of a cookie. (2)
- 9.5.2 Modern web browsers offer a privacy mode for users when browsing the Internet.
- Name ONE reason why Patrick would want to use the privacy mode. (1)
- 9.5.3 Why is it crucial for Patrick to install anti-adware software on the computers in the bookshop? (1)

- 9.6 Patrick wants to set up a wiki for the bookshop.
- 9.6.1 How does a wiki differ from other reference resources? (2)
- 9.6.2 Name ONE way in which he can ensure that the information placed on the wiki is of an appropriate standard. (1)
- 9.7 Many hearing as well as visually impaired users will visit the bookshop and they also rely on ICT for better communication.
- 9.7.1 Name the type of application that enables a hearing-impaired learner to follow a lecture or a speech. (1)
- 9.7.2 Explain how an application such as *Google Voice Search* can help visually impaired users. (2)
- 9.8 Patrick wants to computerise all tasks and systems in the bookshop.
- 9.8.1 What does the term *office automation* refer to? (1)
- 9.8.2 Briefly discuss TWO benefits of office automation. (2)
- 9.9 Patrick wants to prevent the loss of data and unauthorised access to data.
- 9.9.1 Name ONE example of human actions which may cause data to be lost. (1)
- 9.9.2 Name TWO techniques that can he can use to protect the bookshop's data. (2)
- 9.9.3 Briefly explain how malware can have an implication on the bookshop in terms of financial costs. (1)
- 9.10 Patrick undertook a project to assist the Grade 11 learners of another school to become computer literate. His mission was to bridge the digital divide that existed.
- 9.10.1 Describe the term *communication software*. (1)
- 9.10.2 Name TWO methods on how digital communication can be increased in impoverished communities. (2)
- 9.11 Patrick has made backup copies of all his files and saved them in a separate folder on the same hard drive.
- 9.11.1 Give TWO reasons why this is not a good idea. (2)
- 9.11.2 Explain the term *archiving*. (2)

9.12 Patrick created a website for his bookshop.

9.12.1 Name ONE language used to create web pages. (1)

9.12.2 Which TWO factors must be considered to make the webpage appealing to the people using it? (2)

9.12.3 Why would he use comments in an HTML document? (1)

9.12.4 Name TWO main elements of an HTML document. (2)

TOTAL SECTION C: 50
GRAND TOTAL: 150

