



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

NOVEMBER 2013

MARKS: 150

TIME: 3 hours

This question paper consists of 16 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of SECTIONS A and B.
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. Leave a line after EACH subquestion.
6. Do NOT write in the right-hand margin.
7. In general, a 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–S) next to the question number (1.1–1.10) in the ANSWER BOOK, for example 1.11 T.

COLUMN A		COLUMN B	
1.1	A wireless technology commonly used to transfer files from one cellphone to another	A	keylogger
		B	hacking
1.2	A printer used for <u>fast, high-volume</u> printing in a home office	C	firewall
		D	biographical
1.3	All computer input based on the physical characteristics of people	E	copyright
1.4	A term used to describe illegal activities carried out on the Internet	F	download
		G	biometric
1.5	A type of security software that prevents unauthorised access to a network	H	antivirus software
1.6	Images used to represent moods or feelings in electronic messages	I	inkjet printer
		J	Bluetooth
1.7	The term which refers to transferring data or information from the computer to the cloud	K	cyber crime
		L	emoticons
1.8	Software that attempts to capture usernames by tracking and recording keystrokes made by a user	M	laser printer
		N	macro
1.9	The category of applications that includes services such as YouTube and Facebook	O	infrared
		P	social networks
1.10	Laws that protect ownership and rights to intellectual property	Q	dot matrix printer
		R	plagiarism
		S	upload

(10 x 1)

[10]

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

Various options are given 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 D.

- 2.1 Which ONE of the following options is a collection of separate programs used to perform maintenance tasks related to the management of the computer?
- A Operating system software
 - B GUI software
 - C Open-source software
 - D Utility software
- (1)
- 2.2 Which ONE of the following options is a network of networks that connects millions of users all over the world?
- A Intranet
 - B Extranet
 - C Virtualnet
 - D Internet
- (1)
- 2.3 Which ONE of the following options arranges the optical media, listed from the smallest to the largest capacity?
- A Blu-ray, CD, DVD
 - B CD, DVD, Blu-ray
 - C DVD, CD, Blu-ray
 - D CD, Blu-ray, DVD
- (1)
- 2.4 Which ONE of the following options is a technology designed specifically to locate a geographical location?
- A GPRS
 - B UPS
 - C GPS
 - D Wi-Fi
- (1)
- 2.5 Which ONE of the following options is a feature of a database application that will restrict and enforce the format in which data can be entered?
- A Validation rule
 - B Validation text
 - C Default setting
 - D Input mask
- (1)

- 2.6 Which ONE of the following activities would most likely significantly improve the overall performance of a computer?
- A Add a Blu-ray drive
 - B Add a second hard drive
 - C Update the antivirus software
 - D Add more RAM
- (1)
- 2.7 A recorded audio message stored on a website that can be downloaded to a digital device is a ...
- A blog.
 - B podcast.
 - C videoblog.
 - D vodcast.
- (1)
- 2.8 Which ONE of the following terms describes all the ways in which confidential information is obtained by abusing the trusting nature of people?
- A Social engineering
 - B Social networking
 - C Social collaboration
 - D Social management
- (1)
- 2.9 The term *Internet-enabled* mobile device generally refers to technology that allows ... Internet connection.
- A cabled
 - B ADSL
 - C wireless
 - D microwave
- (1)
- 2.10 Which ONE of the following options is NOT associated with green computing?
- A Recycle paper and computer parts.
 - B Replace ink cartridges frequently.
 - C Telecommute whenever possible.
 - D Purchase and use energy-efficient devices.
- (1)
[10]

TOTAL SECTION A: 20

SECTION B

The questions that follow are based on the scenario below.

The CAT teacher at Prestige High School, Ms Cloete, has decided to use a questionnaire to ensure that all the learners at the school have a working knowledge of ICT devices, programs and the impact that ICT has on their lives. As a CAT learner, you are required to assist Ms Cloete by providing answers that will be used as a guide to mark the responses to the questionnaire.

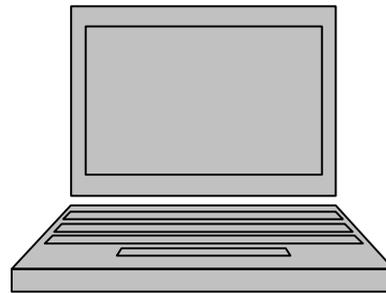
QUESTION 3

Some questions in the questionnaire are based on interpreting an advertisement.

Study the advertisement below before answering the questions that follow.

NOTEBOOK G74SX

- Core i5
- 17.3" full HD 1920 x 1080 LED display
- 8 GB DDR3 RAM
- 750 GB HDD + 160 GB SSD
- Integrated Intel HD3000 graphics
- Blu-ray writer
- Backlit keyboard
- Wireless LAN and Bluetooth
- MS Windows 7 Ultimate 64-bit
- Microsoft Security Essentials



- 3.1 Give the specification in the advertisement that refers to the processor. (1)
- 3.2 The display is specified as a 17.3" full HD 1920 x 1080 LED display.
- 3.2.1 Which specification does 17.3" refer to? (1)
- 3.2.2 Name the specification that the numbers 1920 x 1080 refer to. (1)
- 3.2.3 What does *HD* stand for? (1)
- 3.3 Explain the function of the RAM in a computer. (2)
- 3.4 An operating system is mentioned in the advertisement.
- 3.4.1 Name the operating system mentioned in the advertisement. (1)
- 3.4.2 Name ONE open-source operating system that could be used on this computer. (1)

- 3.5 The advertisement specifies an HDD and an SSD (solid state drive).
- 3.5.1 What is the main advantage of a solid state drive when compared to other drives? (1)
- 3.5.2 What is the main function of the HDD? (1)
- 3.6 The specification 'Integrated Intel HD3000 graphics' appears in the advertisement.
- What does the term *integrated* refer to? (1)
- 3.7 The notebook has a Blu-ray writer.
- Give TWO reasons why some users prefer a Blu-ray format rather than a DVD format. (2)
- 3.8 The advertisement specifies 'Wireless LAN and Bluetooth'.
- 3.8.1 Name the type of network a user can set up and access with the use of Bluetooth within his or her own home. (1)
- 3.8.2 Explain why it is an advantage to have wireless LAN capabilities on the notebook. (1)
- 3.8.3 As the notebook already has a wireless LAN capability, name ONE other device that would be needed to access the wireless LAN. (1)
- 3.9 State the TWO main advantages of using a barcode scanner to enter large amounts of data. (2)
- 3.10 The advertisement does not specifically mention input devices other than the built-in backlit keyboard on the notebook.
- Name TWO input devices (other than the keyboard) that you would expect to be built in in the notebook. (2)
- 3.11 Suggest a way in which a person who cannot use his or her hands, can create a document by themselves. In your answer, include the hardware and software needed. (2)
- 3.12 Losing data when working on a computer can cause much frustration.
- 3.12.1 Name the device that users can connect to their computers that will prevent the loss of data during a power failure. (1)
- 3.12.2 Discuss TWO other ways in which a user could ensure that data is not deleted or altered by mistake. (2)

[25]

QUESTION 4

The second part of the questionnaire requires knowledge of software.

- 4.1 Software is usually divided into two categories, namely application software and system software.
- Which type of system software must be loaded onto a computer to run the application software? (1)
- 4.2 A wide variety of application software is available on the Internet.
- 4.2.1 Name the type or class of software used to access and view web pages on the Internet.
- Do NOT use specific examples or brand names in your answer. (1)
- 4.2.2 State TWO ways in which people can communicate person-to-person using (web) applications on the computer. (2)
- 4.2.3 Name the general term used to describe the illegal use and illegal distribution of software. (1)
- 4.3 Various technologies and software have been developed to assist visually impaired and blind users.
- Name ONE type of program used to assist blind users to interact with the content on the monitor. (1)
- 4.4 Both freeware and open-source software are available free of charge.
- 4.4.1 State TWO restrictions of freeware. (2)
- 4.4.2 State TWO advantages of using open-source software. (2)
- 4.5 The maintenance of a computer includes certain housekeeping tasks.
- 4.5.1 What is the main reason why you would use the Disk Cleanup application? (1)
- 4.5.2 Give TWO reasons why it is NOT a good idea to simply delete unwanted programs from the folder in which they are stored. (2)
- 4.5.3 Name the system application you should use to remove unwanted programs, rather than simply delete them. (1)

- 4.6 Drivers are essential for computers to work properly.
- 4.6.1 What is a *driver*? (1)
- 4.6.2 What is the function of a driver? (1)
- 4.6.3 Why do many plug-and-play devices not ask the user to install a driver? (2)
- 4.7 Spyware and computer viruses are types of malicious software that users must learn to deal with.
- 4.7.1 State TWO ways in which you can prevent a computer from getting a virus other than having updated antivirus software installed and not using the Internet at all. (2)
- 4.7.2 State TWO ways in which spyware is commonly installed on a computer. (2)
- 4.7.3 State THREE ways in which a user will know that his or her computer has a virus. (3)
- [25]**

QUESTION 5

Give answers to the networking part of the questionnaire below.

- 5.1 People are increasingly using networked computers for business, education, communication and entertainment.
- 5.1.1 Give a definition of a *network*. (2)
- 5.1.2 Give TWO reasons for setting up a network at a business. (2)
- 5.2 Name THREE hardware components needed to set up a network. (3)
- 5.3 What is the main difference between a *client computer (workstation)* and a *network server*? (2)
- 5.4 Name TWO services offered by an ISP. (2)
- 5.5 What is the *World Wide Web*? (1)
- 5.6 People who play online games need a high bandwidth and a broadband connection to the Internet.
- 5.6.1 What are the TWO main characteristics of a broadband connection? (2)
- 5.6.2 Explain why online games require a high bandwidth connection. (2)
- 5.6.3 Give TWO examples or types of broadband connections. (2)
- 5.7 Users may become the victims of fraud as a result of their Internet access or e-mail usage.
- State TWO ways in which banks protect users to ensure that transactions carried out over the Internet are secure. (2)
- 5.8 Phishing may lead to identity theft.
- Explain what *identity theft* is. (2)

- 5.9 It is important to install all the necessary patches or updates and service packs on a computer. The main aim of a patch or update is to fix bugs.
- 5.9.1 Explain what a *bug* is in this context. (1)
- 5.9.2 Other than getting a patch or an update from a friend, where are you most likely to obtain it? (1)
- 5.9.3 Give ONE other reason for keeping your software updated besides solving the problem of bugs. (1)
- 5.9.4 What is the main difference between a *patch/update* and a *service pack*? (2)
- [27]**

QUESTION 6

The following section of the questionnaire focuses on the impact of computers and communication technologies.

- 6.1 Information and communications technology (ICT) has made almost instant communication across the world possible.
- 6.1.1 State TWO ways in which ICT has helped to create a global community. (2)
- 6.1.2 State TWO ways in which the capabilities or design of a smartphone may be used to assist illiterate users (people who cannot read) to use it. (2)
- 6.2 Many businesses use computer technology.
- 6.2.1 State TWO ways in which computer technology makes quick and efficient payment for goods and services possible. (2)
- 6.2.2 Explain TWO ways in which ICT can reduce/lessen the running costs of a small business. (2)
- 6.2.3 State TWO possible disadvantages or problems of using computers and other technology for a business. (2)
- 6.3 We are increasingly using technology for most of the day (and even the night) and are constantly connected to other people or institutions by means of this technology.
- State TWO possible negative effects that this constant use of technology and connectivity can have on our lives (other than health issues). (2)
- 6.4 Mobile devices enable people to be in constant contact with others.
- 6.4.1 Name TWO types of messaging services available on mobile devices. Refer to general types of messaging services. Do NOT give specific examples. (2)
- 6.4.2 State TWO ways in which the entertainment world has been influenced by technology. (2)

- 6.5 A massive amount of information is readily available to all learners nowadays. In addition, it is possible to get data from people to find out their opinions and preferences on particular matters.
- 6.5.1 Which instrument is the most effective to obtain specific data on learners' views and opinions? (1)
- 6.5.2 State TWO advantages of gathering information from people online. (2)
- 6.5.3 Name TWO features of a spreadsheet that can be used to process data into useful information. (2)
- 6.5.4 State TWO possible negative effects of so much information being readily available to learners on the Internet. (2)
- 6.6 Billions of computers are used around the world every day, making many demands on the environment.
- 6.6.1 Give the general name of the concept of using technology in a way that does not harm the environment. (1)
- 6.6.2 Suggest TWO ways in which you can help to reduce the negative effect that the use of computers has on the environment.
- Explain how you would achieve this for each of your two suggestions. (4)
- [28]**

QUESTION 7

Ms Cloete has in the past received the following enquiries from parents and learners and has decided to include them in the questionnaire.

7.1 Some of the applications typically used in a small business are:

- Spreadsheet application
- Word processing application
- Database application
- E-mail software
- Web browser software

Choose TWO of the applications from the list above and state the use or function of each of these two applications in a small business. (2)

7.2 Study the spreadsheet below and answer the questions that follow.

	A	B
1	Prizes for the Questionnaire Project	
2		
3	Item	Value
4	7" Tablet	2500,50
5	Notebook Computer	3900,95
6	Digital Camera	8500,20
7	Total	0.00

7.2.1 Suggest a change to the formatting of **cells B4:B7** to automatically display the 'R' symbol for each value. (1)

7.2.2 The screenshot above shows a result of 0.00 in **cell B7** for a correct function that was entered as **=SUM(B4:B6)**.

How must the spreadsheet be changed to obtain the correct result from the function? (2)

7.2.3 Suggest ONE way in which the formatting can be changed to make it easier to read or interpret the spreadsheet. (1)

7.3 Briefly explain how to check whether there is enough space on a flash disk to save a file of 2 GB. (1)

- 7.4 Some parents are concerned about the health of learners who spend a lot of time working on a computer.
- 7.4.1 Name the field of study that relates to the layout and design of the workplace and equipment to ensure the comfort and safety of workers. (1)
- 7.4.2 State TWO ways in which learners can prevent eye strain when they have to spend a long time working on a computer. (2)
- 7.5 Ms Cloete has received several enquiries on hardware issues.
- 7.5.1 One of the learners has many devices that require USB ports.
Name a device that this learner could add to his computer to increase the number of USB ports. (1)
- 7.5.2 One of the parents has a computer that is 12 years old.
Give TWO reasons why she should replace this specific computer rather than try to upgrade it. (2)
- 7.6 Another parent complains that she finds it very difficult to find files on her hard drive.
Give ONE solution that would make it easier to find files. (1)
- 7.7 A learner wishes to send photographs to his girlfriend as an attachment to an e-mail message.
- 7.7.1 The e-mail message remains in the Outbox.
State ONE possible cause and give a solution to this problem. (2)
- 7.7.2 Other than e-mail, state ONE way in which his girlfriend may access and view the photographs on the Internet. (1)
- 7.7.3 The learner wishes to send the photographs to his girlfriend during the CAT lesson using the Internet connection of the CAT centre.
Give TWO reasons why it would be unethical to do this. (2)

- 7.8 A learner has accessed and used a wiki for his History project's research.
- 7.8.1 Explain what a *wiki* is. (2)
- 7.8.2 Why would you NOT recommend that he rely on the wiki alone to provide the correct content for his project? (1)
- 7.8.3 Name the offence the learner would be guilty of if he copied and pasted the content from the wiki into his project without acknowledging the source. (1)
- 7.8.4 Ms Cloete needs to be sure that she does not accept work from learners that is not their own work.
- State TWO ways in which she can check whether the work has been copied from the Internet. (2)
- [25]**
- TOTAL SECTION B: 130**
GRAND TOTAL: 150