



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

(THEORY)

FEBRUARY/MARCH 2011

MARKS: 150

TIME: 3 hours

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of SECTION A and SECTION 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.

SECTION A**QUESTION 1: MATCHING ITEMS**

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 popular handheld, wireless device designed for providing e-mail, text messaging, telephone and Internet access	A	GPS
		B	hard copy
		C	broadband
1.2	A technology associated with displaying images on flat screen monitors	D	cloud computing
1.3	Using ICT in a way that does not harm, or tries to reduce the damage to, the environment	E	touch screen
		F	database administrator
1.4	The person responsible for the security and smooth running of all the electronic record systems in a large corporation or institution	G	LCD
		H	Blackberry
		I	RAM
1.5	ADSL and 3G are both examples of this type of Internet connection	J	server
1.6	A word processing feature where changes made by different people to the same document can be viewed, accepted or rejected	K	flash disk
		L	MySpace
1.7	A permanent form of output on paper	M	green computing
		N	track changes
1.8	A social networking site which restricts you to posting short text messages	O	webmaster
1.9	A small, portable computer which usually does not have a built-in DVD or CD drive	P	Twitter
		Q	footnotes
1.10	A device that can act as both an input and an output peripheral device	R	netbook

(10 x 1)

[10]

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

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 E.

- 2.1 Upgrading the hardware of your computer will be the best choice when your ...
- A computer will not switch on.
 - B antivirus software must be updated.
 - C hard drive has been defragmented.
 - D computer is too slow to run newer software.
- 2.2 Which ONE of the following word processing features should be used to indicate and acknowledge sources or information from the Internet?
- A Bookmarks
 - B Table of contents
 - C Fields
 - D Footnote
- 2.3 The main function of the CPU is to ...
- A convert signals from analogue to digital and vice versa.
 - B temporarily store programs and data waiting to be processed.
 - C act as a firewall.
 - D process data and instructions.
- 2.4 A GPS navigation device ...
- A must be attached to your computer before it will work.
 - B uses satellite technology to create a route map to a specific location.
 - C can only be used in the evening when satellites are visible from earth.
 - D will only work in cities and not in remote areas.
- 2.5 A circle/pie graph will be the best choice of graph to use when trying to show the ...
- A comparison of values across a range.
 - B trend of, for example, the petrol price over a period of time.
 - C contribution each part makes to the whole.
 - D comparison of pairs of values.

- 2.6 The more megapixels a digital camera has, the better, because it ...
- A improves the quality of the image.
 - B needs less storage space on the memory card.
 - C allows you to transfer images to a computer.
 - D automatically provides stable pictures.
- 2.7 Which ONE of the following is the best option to choose if you think the web page you are viewing is outdated (old)?
- A Change to a different ISP
 - B Refresh the web page
 - C Change to a 3G connection
 - D Update your antivirus software
- 2.8 To make sure a new game will work on your computer, you should first check that ...
- A you understand how the game works.
 - B the hard drive of your computer has been defragmented recently.
 - C your computer meets the system requirements of the game.
 - D the operating system is an open source operating system.
- 2.9 Which ONE of the following ports is the best choice to use to download videos from a video camera to a PC?
- A PS2
 - B USB
 - C Parallel
 - D Firewire
- 2.10 Which ONE of the following will NOT help to reduce the number of errors a user might make when capturing records into a database table?
- A Setting the maximum size of text fields
 - B Setting validation rules
 - C Preventing the user from changing data once it has been captured
 - D Making use of input masks

(10 x 1)

[10]**TOTAL SECTION A:****20**

SECTION B

Read the scenario below carefully as the questions that follow are based on it.

SCENARIO

A group of Computer Applications Technology (CAT) learners (Ben, Xolani, Tersia, Tasneem and Keshnee) set up a computer club with some new and old computers in a room at their school. Members of the club allow other learners to access the Internet and play games, and also answer any computer-related queries for a small fee. Some of the old computers must either be upgraded or replaced.

QUESTION 3

- 3.1 Give the THREE main hardware components of a computer whose specifications you should know when purchasing a new computer.
(NOTE: This excludes any peripheral devices and a graphics card.) (3)
- 3.2 The group is considering raising funds to purchase two laptop computers.
Name TWO possible advantages of a laptop compared to a desktop PC. (2)
- 3.3 When buying a laptop, name TWO specifications and accessories that you will need to find out about that are specific to laptops as opposed to desktop computers. (2)
- 3.4 Some of the monitors have to be replaced and the older types of CRT monitors are no longer available, so flat-screen monitors will need to be bought.
- 3.4.1 Name TWO specifications that the team should look at when purchasing flat-screen monitors (excluding the choice between CRT and flat-screen monitors). (2)
- 3.4.2 Besides the fact that CRT monitors are virtually impossible to source and buy, name TWO advantages of flat-screen monitors compared to CRT monitors. (2)
- 3.5 Users often tend to overlook the importance of using a good quality mouse and keyboard. Ergonomic considerations also need to be taken into account.
- 3.5.1 Briefly explain what is meant by the term *ergonomics*. (2)
- 3.5.2 Name TWO features of an ergonomically designed keyboard. (2)
- 3.5.3 How does a cordless mouse communicate with a PC? (1)
- 3.5.4 Name TWO possible disadvantages of using a cordless mouse. (2)

- 3.6 The team needs to look at purchasing a new printer.
- 3.6.1 What type of printer will be the best option to use if they need to print 500 A4 black and white posters for the school's sports day? (NOTE: Do NOT give specific models or brand names as an answer.) (1)
- 3.6.2 What type of printer will be the best option to use if they need to print high-quality colour photos of the five team members? (NOTE: Do NOT give specific models or brand names as an answer.) (1)
- 3.6.3 Name THREE factors or specifications to look at when purchasing a printer, besides the cost of buying the printer.

(Assume that you have already chosen the type of printer best suited to your specific needs.) (3)
- 3.7 Many flash disks now come with built-in fingerprint recognition features.
- 3.7.1 What is the general or generic name given to the device that can identify and make use of the physical characteristics of a person? (1)
- 3.7.2 What will be the purpose of having fingerprint recognition features on a flash disk? (1)
- 3.7.3 Other than finger print recognition, name ONE other way a system can identify users by their physical characteristics. (1)
- [26]**

QUESTION 4

- 4.1 The team are considering upgrading all the computers to Windows 7. Xolani wants to know why they need to even have Windows as they only make use of office applications. Ben suggests that they consider using an open-source operating system.
- 4.1.1 Give THREE reasons why the computers cannot work without an operating system such as Windows 7 by referring to the functions of an operating system. (3)
- 4.1.2 Give THREE reasons why it may not be possible or desirable to upgrade the operating system, other than cost issues. (3)
- 4.1.3 What is the main difference, other than cost, between software that is open source and software that is not open source? (1)
- 4.1.4 Name a popular open-source operating system for use on a PC. (1)

- 4.2 When a computer is connected to the Internet the operating system may automatically download and install patches and updates for software installed on the computer including the operating system.
- 4.2.1 What is the advantage of having the operating system download and install updates automatically, other than any value the updates may themselves provide? (1)
- 4.2.2 How can one prevent the updates from being downloaded and installed automatically? (1)
- 4.2.3 Give TWO reasons why these updates and patches may be necessary or useful to have. (2)
- 4.2.4 Give TWO reasons why one may NOT want to have the updates downloaded and installed automatically. (2)
- 4.3 Viruses and types of malware, such as spyware, are a big concern especially in a network environment.
- 4.3.1 Give a detailed definition of a *virus* and how it functions in general. Do NOT simply give a list of indications or symptoms of viruses. (3)
- 4.3.2 Give THREE tips on how to prevent computers from being infected by viruses. (3)
- 4.3.3 Tersia feels that computers will not get affected by viruses if they are not connected to the Internet.
- Do you agree with her? Briefly motivate your answer. (2)
- 4.4 Keshnee wants to remove a game she installed from her PC. Tasneem says she cannot simply delete the folder in which it has been stored, as it can cause problems.
- Name ONE safe way of removing the game from the PC. (1)
- 4.5 Xolani cannot open a file called *Prices.docx* that he received as an attachment to an e-mail.
- Name TWO ways in which he may be able to open the document. (2)
- 4.6 Ben bought a 'home' edition of a popular photo editing program.
- What is the difference between *home editions* and *professional editions* of software, other than cost? (1)
- [26]**

QUESTION 5

- 5.1 The team feels that the next logical step will be to connect their computers and computer equipment in a LAN using cables. There are, however, some concerns about security and privacy.
- 5.1.1 What is the main difference between a *LAN* and a *WAN*? Give a suitable example of a *WAN* to illustrate your answer.
(NOTE: Do NOT just expand the acronyms/abbreviations.) (2)
- 5.1.2 What additional hardware will each PC need to have to be able to connect to a LAN? (1)
- 5.1.3 Name ONE way in which access to other users' files can be prevented in a network environment. This excludes restricting physical access to the computers themselves. (1)
- 5.1.4 Name TWO things that the team may notice as being 'different' compared to when they worked on computers that were not connected to the network. (2)
- 5.2 The team wants to upgrade their dial-up connection to the Internet to a broadband connection.
- 5.2.1 Name TWO factors, other than cost, that must be taken into account when choosing a broadband package. (2)
- 5.2.2 Explain the difference between how Internet usage is charged with a broadband connection as opposed to a dial-up connection. (2)
- 5.3 Upon investigation, the team discovers that many schools ban the use of websites, such as FaceBook and YouTube.
- 5.3.1 Briefly describe the function or purpose of the YouTube website. (1)
- 5.3.2 Briefly explain how the school can prevent the learners from accessing these websites. (1)
- 5.3.3 Give a technical reason why schools may choose to ban sites, such as FaceBook and YouTube. (1)
- 5.3.4 Give TWO other reasons (other than the answer you gave in the previous question) why schools may choose to ban sites, such as FaceBook and YouTube. (2)
- 5.3.5 Explain how the History teacher can make content from the YouTube website accessible for all her learners if the school does not allow learners access to the site. (2)

- 5.4 Xolani is a sports fanatic and spends a lot of time at home accessing the latest sports news and results on the Internet.
- 5.4.1 Often the same web page on his home computer seems to have older, outdated scores and results compared to when he accesses it at school.
- Briefly explain to him why this may be happening and how to solve the problem. (2)
- 5.4.2 Someone suggests that he makes use of RSS feeds to make it easier for him to get the latest scores and news from the websites he visits.
- Briefly explain what an *RSS feed* is and how it will make it easier for Xolani to access the information in all these sites. (2)
- 5.5 Ben cannot remember the URL of a website that he recently visited. He uses a search engine to try and find the site but is still unsuccessful.
- 5.5.1 Explain what a *URL* is. The meaning of the acronym/abbreviation is NOT required. (1)
- 5.5.2 Name TWO features of a web browser that Ben may use to find his way back to the specific site without using a search engine. (2)
- 5.5.3 Briefly describe the function of a search engine. (2)
- [26]**

QUESTION 6

6.1 The school secretary received the following e-mail:

Dear Standard Bank Customer

We are sending you this e-mail to inform you that we have had a major server update without prior notice

therefore you will need to logon to your online bank account and update some informations to continue using this service

We are sorry for any inconvenience this may cause but we are dedicated to bring you the best possible service we can and this maens keeping you safe

Please click the following link to update your account

<https://www.standardbank.co.za/updates/internet-banking/>

Sincerely, Standard Bank

- 6.1.1 The web address given in the e-mail starts with *https*. Briefly explain what the *https* usually refers to or signifies. The actual meaning of the acronym/abbreviation is NOT required. (1)
- 6.1.2 Give TWO reasons that will make you cautious or suspicious of this e-mail. (2)
- 6.1.3 Name TWO ways in which you can confirm that this e-mail is fraudulent (not 'genuine'). (2)
- 6.1.4 What is the generic or general name given to this type of activity? (1)
- 6.1.5 Name TWO ways you can make sure you do not become a victim of this type of activity. (2)
- 6.2 The school librarian wants to buy some books for the library from an online book store.
- 6.2.1 Name TWO potential advantages of shopping for books online. (2)
- 6.2.2 Name TWO benefits for the shop of selling their books online as opposed to selling from a conventional store. (2)
- 6.2.3 State TWO measures that banks use to ensure that customers do not become victims of crime or fraud when they pay for goods online. (2)

- 6.3 The librarian complains to the team that since she has been working on the Internet, she has been receiving large volumes of spam.
- 6.3.1 Briefly explain what *spam* is. (1)
- 6.3.2 Name TWO possible ways in which the librarian can reduce the amount of spam she is receiving. (2)
- 6.4 Ben downloaded a 20-page pdf document containing bursary application forms for Grade 12 learners. He sent it to a printer on the network but nothing was printed.
- 6.4.1 Give TWO reasons why electronic documents are often distributed using a pdf format. (2)
- 6.4.2 Someone suggested he check the printer queue. Briefly explain why he should do this by explaining what a *printer queue* is. (2)
- 6.4.3 Ben did not find anything in the printer queue.
- Assume that the printer is correctly installed and switched on. Give TWO other possible reasons why the document did not start to print. (2)
- 6.5 The librarian asked the team to help to prepare a poster giving learners tips on how to check if information used in their projects, is correct or not.
- Give THREE tips on how to check that information sourced from the Internet is in fact correct and reliable. (3)
- [26]**

QUESTION 7

- 7.1 Tasneem complains that the word processing program highlights words that she is sure are correct, as being spelt wrongly. For example every time she runs the spell check it suggests that she changes the word 'colour' to 'color'.
- Briefly explain why this problem occurs and indicate how it can be solved. (2)
- 7.2 Xolani says that sometimes when he edits a word processing document he finds that the existing text is replaced by the new text he is typing.
- Briefly explain why this problem occurs and indicate how it can be solved. (2)
- 7.3 Keshnee has typed a very long project and complains that she struggles to find her way to specific places in the document.
- Name TWO features of a word processing program which will make it easier to move to specific places in the document. (2)

- 7.4 The secretary asks you to look at the following sentence she typed in a contract for one of the staff.
'You **June** leave work earlier on the first Friday of every month.'
This error occurs because the word 'may' is replaced with 'June' with the Find and Replace function of the word processor.
Explain how to ensure that the word 'may' is only changed when it refers to the month of May. (1)
- 7.5 Tasneem has discovered that the word processing program she uses has a feature that automatically allows you to add captions to pictures, graphs or tables.
Give TWO reasons, other than saving time, why it is better to use this feature than to have to do it manually. (2)
- 7.6 Spreadsheet applications have a wide variety of functions which can be used. Write down the name of the spreadsheet function that you will use for each of the examples below:
- 7.6.1 Add up a series of numbers in a range. (1)
- 7.6.2 Determine how many cells in a range have a value of 100 or more. (1)
- 7.6.3 Find the number of cells in a range that contain numbers. (1)
- 7.6.4 Extract the first two characters from a cell containing text. (1)
- 7.6.5 Find the most frequently occurring value in a range of values. (1)
- 7.7 When Ben prints a spreadsheet containing the club's budget, it prints on two pages instead of just one as he wants.
Give TWO possible solutions for this problem, without altering the range of data needed to be printed or the font sizes. (2)
- 7.8 Xolani has created a database for the club which contains the names, cellphone numbers and addresses of all the people who use the club's computers. He used a wizard to create a form to use to input the records.
- 7.8.1 Briefly explain what a *wizard* is by referring to its function. (2)
- 7.8.2 Name TWO advantages of using a form to enter records into a database instead of adding them directly to the table. (2)
- 7.8.3 Xolani is advised to use a text type instead of a numerical type for some of the fields.
Explain why it is a good idea to make the field that stores cellphone numbers, a text field. (1)

7.8.4 The following criteria was used in a query performed on the database:

<=1 and >10

Will these criteria produce any records? Briefly motivate your answer. (2)

7.9 The following function was placed in the report footer of a report:

=Count(*)

7.9.1 Explain what this function will display. (2)

7.9.2 Explain what the difference will be if the same function is placed in a group footer as opposed to the report footer. (1)
[26]

TOTAL SECTION B: 130
GRAND TOTAL: 150