



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

(THEORY)

NOVEMBER 2010

MARKS: 150

TIME: 3 hours

This question paper consists of 15 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 device that adds more ports to a computer for devices such as a mouse, printer, keyboard and flash disk	A	UPS
		B	tweet
1.2	The component responsible for the processing of all data and instructions on a computer	C	stylus
		D	touch pad
1.3	A way of sending messages and attachments via a computer network	E	application software
		F	4 GB
1.4	A program that allows one to have conversations via a network, such as the Internet	G	RAM
		H	CPU
1.5	A device that can be used as a temporary source of power for computers if there is a power failure	I	driver program
		J	Skype
1.6	A text file containing information about the user's preferences and choices regarding a specific website	K	USB hub
		L	surge protector
1.7	Software that manages and controls all the activities and resources on a computer	M	e-mail
		N	operating system
1.8	A short message sent via Twitter	O	MMS
1.9	A small touch-sensitive device often used on laptop computers as an alternative to a mouse	P	cookie
		Q	300 KB
1.10	The size of a typical mp3 file	R	network

(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 Which ONE of the following would typically be the best device or medium to use to backup an entire hard drive?
- A Flash disk
 - B DVD
 - C SD card
 - D External hard drive
- 2.2 The reason for using a modem is that it ...
- A acts as a firewall.
 - B allows the computer to send and receive data via a telephone line.
 - C acts as a power source to the computer.
 - D allows multiple devices to be connected to a personal computer.
- 2.3 The URL of a website refers to ...
- A the relative ranking of the website by a search engine.
 - B the password needed to access the website.
 - C an address that identifies a website on the Internet.
 - D the e-mail address of the webmaster of the website.
- 2.4 Which ONE of the following files does NOT have a file format that has been compressed?
- A mpeg
 - B zip
 - C jpeg
 - D rtf
- 2.5 Which ONE of the following components will probably improve the performance of a PC the most?
- A Increasing the refresh rate of the monitor
 - B Adding a DVD drive
 - C Installing antivirus software
 - D Adding more memory (RAM)

2.6 Which ONE of the following may NOT be used as a data source in a mail merge?

- A A worksheet in a spreadsheet
- B A report in a database
- C A table in a word processing document
- D A query in a database

2.7 Which ONE of the following would be the most suitable example of a good, secure password?

- A AD12
- B Mary
- C Q4%61y9!
- D 0825545612

2.8 Which ONE of the following fields in a table in a database containing records of clients would be the best example of a field where an input mask could be used?

- A The surname of a client
- B The address of a client
- C The web address of a client's company
- D The cellphone number of a client

2.9 For which ONE of the following websites would the screen display be improved, should the user use a good graphics card?

- A Yahoo!
- B YouTube
- C Twitter
- D Wikipedia

2.10 Which TWO of the following spreadsheet functions will always give the same answer, irrespective of the values in the cells in the range A1:D8?

- (i) =MAX(A1:D8)
- (ii) =COUNTA(A1:D8)
- (iii) =LARGE(A1:D8,1)
- (iv) =MODE(A1:D8)

- A (ii) and (iii)
- B (i) and (iv)
- C (ii) and (iv)
- D (i) and (iii)

(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

You are part of a team of Computer Applications Technology (CAT) learners that have set up a helpdesk in the local community centre to solve any computer-related problems. Your team (Lindi, Pete, Tiffany, Shannon, Mpho and Zinhle) has five computers available to administer the helpdesk. Some of the computers will need to be upgraded.

QUESTION 3

- 3.1 Give THREE reasons why one would want to or need to upgrade the hardware on a computer. Assume that the current hardware is still working. (3)
- 3.2 Consideration is being given to purchasing two laptop computers.
Name THREE possible disadvantages of a laptop computer compared to a desktop PC, other than the price. (3)
- 3.3 Small netbook computers are also being considered as an alternative to laptop computers.
Name ONE possible disadvantage of netbook computers compared to laptop computers. (1)
- 3.4 Lindi, one of the team members, was given a memory card with photographs on it, but none of the computers have a built-in slot to read the card.
Name TWO ways in which she can save the photographs on her computer. (2)
- 3.5 Some of the older PCs are running very slowly. Someone suggested that the PCs must be defragmented to free up disk space.
- 3.5.1 Briefly explain what is meant by the term *disk fragmentation* and why a fragmented disk can slow down a computer. (2)
- 3.5.2 Do you agree that defragmentation of the hard disk will free up hard disk space?
Motivate your answer by explaining what happens when a disk is defragmented. (2)

- 3.5.3 Fragmentation is not the only reason why a PC may become slower and slower.
Give TWO examples where software may cause a PC to become slower. (2)
- 3.6 Some members of the community have difficulties in terms of their sight and hearing.
Name TWO accessibility features that usually come as part of an operating system which can assist these particular members of the community in using a computer. (2)
- 3.7 Lindi mentioned that when a volcano erupted in Iceland, causing many overseas flights to be cancelled, her father's company made use of video conferences.
- 3.7.1 Briefly explain what is meant by the term *video conference*. (2)
- 3.7.2 Name TWO hardware peripheral devices that one will need to take part in a video conference (other than a computer). (2)
- 3.8 Some learners downloaded photographs of the volcano in Iceland from the Internet for a Geography project.
- 3.8.1 Are learners allowed to use these photographs as is, if they 'came from Google'? Briefly motivate your answer. (2)
- 3.8.2 Zinhle noticed that the resolution of the downloaded photographs was much lower than those taken by digital cameras.
Give TWO reasons why this may be the case. (2)
- 3.8.3 One of the learners wants to crop and alter some of the photographs that she downloaded.
Name the class or type of software that she can use to do this.
(NOTE: Specific brand names or product names will NOT be accepted as an answer.) (1)
- [26]**

QUESTION 4

- 4.1 Microsoft Office 2000 was installed on all the computers at the helpdesk. Shannon has a copy of Microsoft Office 2010 and suggests that they install it on all the computers.
- 4.1.1 Microsoft Office is a popular form of software known as an office suite.
Name ONE advantage of using an office suite, besides the actual programs available in the suite. (1)
- 4.1.2 Give TWO reasons, from a hardware point of view, why it may not be possible to install and run Microsoft Office 2010 on all the computers. (2)
- 4.1.3 Give TWO further reasons (other than any of your answers to QUESTION 4.1.2) why the users may not want to switch to a newer version of Microsoft Office. (2)
- 4.1.4 May the team install Shannon's copy of the newer version of Microsoft Office on all the computers, seeing that they are not using them to make a profit?
Briefly motivate your answer. (2)
- 4.2 The team wants to set up either a website or a blog where they can answer users' questions and discuss users' computer-related problems.
Name TWO ways in which a blog may be more suitable than a website for this particular task. (2)
- 4.3 Probably the most common request to the helpdesk is to assist in identifying and removing malware such as viruses, spyware and adware.
- 4.3.1 Viruses try to negatively impact on a computer's performance and to bypass security measures.
Name THREE possible signs that you may have a virus on your computer. (3)
- 4.3.2 Explain what *spyware* is and what its general aim is. (2)
- 4.3.3 How does *adware* differ from *spyware*? (1)
- 4.3.4 Name TWO possible signs that you have spyware on your computer. (2)

- 4.3.5 One of the users was very angry when he was told to update his antivirus software as he felt that he had already bought it and was not prepared to spend more money on it!
- Explain in detail why he should update his antivirus software by briefly referring to how antivirus software works. (3)
- 4.4 While doing some research on the Internet on the impact of ICT on rural communities, Mpho came across an article in which the following was stated:
- 'Africa is a continent with a large gap between communities who have access to and can make effective use of ICT technologies, such as smart phones, and those that do not.'
- 4.4.1 What phrase is often used to describe this ever-widening gap between communities that have access to technology and those that do not? (1)
- 4.4.2 Name TWO practical ways, other than providing additional funding, to make this gap smaller. (2)
- 4.4.3 What is the main or essential difference between a *smart phone* and a *normal cellphone*? (1)
- 4.5 Mpho suggested to his uncle, who is a manager on a local game farm looking after wild animals, that they use Google Earth to determine the GPS coordinates of the game farm and to publish them on the website of the game farm.
- 4.5.1 What type of communication technology or medium do GPS systems use? (1)
- 4.5.2 Why would it be a good idea to place the GPS coordinates of the game farm on the website? (1)
- 4.5.3 Give ONE more application of GPS technology that the game farm can make use of (other than your answer to QUESTION 4.5.2). (1)
- [27]**

QUESTION 5

- 5.1 The team feels that it is important to connect their computers and computer equipment in a LAN or local area network. A new computer has been bought to act as a file server for the network.
- 5.1.1 Name THREE broad advantages of using a LAN, other than computer games. (3)
- 5.1.2 Name TWO possible disadvantages of using a LAN. NOTE: This excludes any problems related to Internet connectivity. (2)
- 5.1.3 Name TWO possible advantages of connecting the computers using wireless technology. (2)
- 5.1.4 Name ONE possible disadvantage of connecting the computers using wireless technology. (1)
- 5.1.5 Name ONE possible hardware specification where a file server may differ from a normal computer by briefly referring to the role of a file server in a network. (2)
- 5.1.6 Backing up the entire file server takes a long time.
Name TWO practical ways in which the number and size of files that have to be backed up each time can possibly be reduced. (2)
- 5.2 Shannon has been asked to find out what the best, most affordable broadband Internet connection may be for the helpdesk. She contacts several ISPs in this regard.
- 5.2.1 Briefly explain what an *ISP* is. (NOTE: The meaning of the abbreviation is NOT required.) (2)
- 5.2.2 Name the TWO main features or characteristics of a broadband connection compared to those of a dial-up connection. (NOTE: Cost factors should NOT form part of your answer.) (2)
- 5.2.3 One of the broadband packages Shannon investigates is advertised as 'uncapped'.
Briefly explain what *uncapped* means by referring to the concept of a cap in broadband connections. (2)
- 5.2.4 Why do some ADSL packages give two different speed specifications? (1)

- 5.3 Tiffany loves reading and has decided to order some digital or e-books online. However, she is worried about identity theft because she has heard many stories about it.
- 5.3.1 Name the generic device specifically designed and dedicated to allowing one to read an e-book. (NOTE: Brand names are NOT required.) (1)
- 5.3.2 Explain TWO advantages of e-books compared to printed versions of books. (NOTE: Cost factors should NOT form part of your answer.) (2)
- 5.3.3 Briefly explain what the term *identity theft* refers to in the context of Internet usage. (1)
- 5.3.4 Besides making use of updated antivirus and security software, name TWO ways in which one can reduce the risk of becoming a victim of identity theft. (2)
- [25]**

QUESTION 6

6.1 Study the e-mail below that you have received.

To ...	Tomcat@telkomsa.net
Cc ...	ZinhleSapuka@mweb.co.za ; ShannonB@polka.co.za
Bcc ...	Mpho007@gmail.co.za
Subject:	Yo!
Attach:	Logo.bmp (2.7 MB); Plan.docx (212 KB); Budget.xls (1 MB)
<p>HI GUYS</p> <p>PLEASZE FIND ATTACHED THE LAETEST LOGO. LET ME KNOW WHAT YOU THINKS. PLZ JUST SCAN FOR A VIRUS BEFORE OPENINING IT AS MY ANTI-VIRUS PROGRAM IS OUT OF DATE.</p> <p>SOL</p>	

- 6.1.1 Briefly describe what an *attachment* is in the context of an e-mail message. (1)
- 6.1.2 Name the largest attachment in the e-mail shown above. (1)
- 6.1.3 Name TWO ways in which the size of the attachment *Logo.bmp* could have been reduced. (2)
- 6.1.4 Give TWO examples of poor netiquette in the e-mail above, other than the size of some of the attachments. (2)
- 6.1.5 Name the free Internet-based e-mail service used by one of the recipients in the e-mail above. (1)
- 6.1.6 Explain the difference between adding the name of a recipient in the Cc field as opposed to the Bcc field of an e-mail message. (2)
- 6.1.7 Explain why a large-sized attachment may make the recipient of the e-mail angry if he/she uses a dial-up connection. (1)
- 6.1.8 Explain why a large-sized attachment may make the recipient of the e-mail angry if he/she uses a broadband connection. (1)

- 6.2 Pete wants to send a newsletter to all the people who have made use of the helpdesk and who have e-mail facilities.
- Briefly explain how he can quickly add all the recipients' e-mail addresses to the e-mail without having to manually add them each time. (1)
- 6.3 The team has discovered that many people do not have e-mail addresses and make use of websites such as Facebook and MySpace instead.
- 6.3.1 What is the general or generic name used to describe sites such as Facebook and MySpace? (1)
- 6.3.2 Name ONE possible advantage of sending out messages to the same group of people using a website like Facebook, instead of using e-mail. (1)
- 6.3.3 Name TWO possible disadvantages of sending out messages to the same group of people using a website like Facebook, instead of using e-mail. (2)
- 6.3.4 Name TWO potential dangers or disadvantages of belonging to and using a website such as Facebook. (NOTE: This excludes any answers you gave to QUESTION 6.3.3.) (2)
- 6.3.5 Name TWO features, other than posting text messages, which a website like Facebook has. (2)
- 6.4 Pete was trying to make a copy of his projects by writing it to CD, when an error message appeared and the process stopped.
- Give Pete TWO suggestions on how he can try and solve this problem so that he can write the CD. You may assume that the CD drive is not faulty. (2)
- 6.5 Many people have different opinions about whether there are any benefits in allowing children to play computer games.
- 6.5.1 Name TWO possible benefits or advantages that playing computer games has for children. (2)
- 6.5.2 Name TWO possible disadvantages that playing computer games has for children. (2)
- [26]**

QUESTION 7

- 7.1 The team at the helpdesk has prepared a 10-page document in portrait format that deals with FAQs concerning word processing, spreadsheets and databases.
- 7.1.1 Briefly explain what an *FAQ* is. (NOTE: Do NOT just give the meaning of the abbreviation as your answer.) (2)
- 7.1.2 When they used the feature to automatically generate a table of contents, the team found that some of the headings did not appear in the document.
- Briefly explain why this occurred and how to solve the problem. (2)
- 7.1.3 Briefly explain the difference between *landscape* and *portrait format/orientation* of a document. (2)
- 7.1.4 Describe the process one will need to follow to change only the second page of the document to landscape format, and not the whole document. (2)
- 7.1.5 The electronic version of the document has become corrupted and there is no backup copy; only a printed version of the document is available.
- Describe how the team can get this document back in an electronic format so that they can make changes to it, without having to retype the whole document. (2)
- 7.2 Lindi has used a word processing table, with simple formulas, to keep track of the budget for the helpdesk.
- Give TWO reasons why it will be better to use a spreadsheet to do this. (2)
- 7.3 The following formula is used in a spreadsheet by one of the team members:
- =14%*\$E\$5**
- 7.3.1 What term is used to describe the cell addressing where a part of or the whole cell address includes dollar signs, for example \$E\$5? (1)
- 7.3.2 Why is the type of addressing referred to in QUESTION 7.3.1 needed or used in a spreadsheet? (2)
- 7.3.3 Predict how the formula in this cell will change if it is copied to the cell immediately below it. (1)

- 7.4 Shannon created a database with the contact details of people who made use of the helpdesk, as well as the type of help they needed. She created a report in the database showing some of these details:

Surname	Name	Gender	Request
Anadulkar	Shani	f	Training
Plaatjies	Ursulaf	f	Troubleshooting
Mavula	Nkosi	f	Internet research
Smith	Johann	m	Internet research
Truman	Mary	f	TRAINING
TOTAL			

- 7.4.1 Which of the four fields shown (Surname, Name, Gender, Request) would be suitable to apply a default value to?
Briefly motivate your answer. (2)
- 7.4.2 Shannon wants to add a function to total the number of entries 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)
- 7.4.3 Describe clearly how she will need to change this report to show an alphabetical (sorted) list of the details of the males and females separately in the same report. (2)
- 7.4.4 Pete suggests that they use numerical codes to represent the different types of requests, for example *Training* can have a code of 10 and *Internet research* can be represented by a code of 11.
Give TWO reasons why it may be a good idea to have each of the types of requests represented by a code instead of the actual 'name' of the request type or service. (2)
- 7.5 Explain what a *primary key* is in terms of a table in a database. (2)

[26]

TOTAL SECTION B: 130
GRAND TOTAL: 150