basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

(THEORY)

FEBRUARY/MARCH 2013

MARKS: 150

TIME: 3 hours

This question paper consists of 17 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 blank 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–T) next to the question number (1.1–1.10) in the ANSWER BOOK, for example 1.11 U.

COLUMN A		COLUMN B	
1.1	A device that serves as both an input and an output device	A	keylogging
1.2	Free software that allows one to make use of voice and video communication via a network, such as the Internet	B	convergence
		C	phishing
1.3	Software that can be used to convert documents to a format that can be read with Adobe Reader	D	disk clean-up
		E	Twitter
1.4	A device used to determine one's geographical position	F	encryption
		G	digital handshake
1.5	The trend where computers and other mobile devices increasingly have the same functions	H	GIGO
		I	ROM
1.6	The process that arranges the order in which hard copies will be produced from an output device	J	GPS
		K	tablet
1.7	A utility that rearranges files on a disk	L	touch screen
1.8	Input of incorrect or invalid data into a computer system that will produce incorrect or meaningless results	M	MXit
		N	FIFO
1.9	Attempts to trick users into giving out confidential data, such as passwords	O	GPRS
		P	Skype
1.10	Scrambling data into a format that cannot be read by users who don't have the right to access or read the data	Q	PDF writer
		R	printer queue
		S	BIOS
		T	disk defragmenter

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

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

Various options are given 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 D.

2.1   Which ONE of the following acronyms refers to a type of network that one would find in a community centre?

      A   GPS
      B   LAN
      C   ISP
      D   NIC   (1)

2.2   Which ONE of the following refers to video or audio files that can be downloaded to a portable media player or computer, which a user can then listen to or view?

      A   Blog
      B   Portal site
      C   Chat
      D   Podcast   (1)

2.3   Which ONE of the following is a function of plug-and-play technology?

Plug-and-play ...

      A   will automatically play all the multimedia files on a flash disk when it is plugged into a PC.
      B   is used to detect, configure and install new hardware added to a PC.
      C   updates all the drivers located on the PC via the Internet.
      D   loads all additional software needed to play games that require a high resolution.   (1)

2.4   Safe mode is ...

      A   used to prevent unauthorised users from gaining access to confidential files.
      B   the mode the computer is set to after a full virus scan.
      C   a method of loading an operating system with basic drivers and settings.
      D   activated when you press Ctrl+Alt+Delete.   (1)

2.5   While viewing a page on Facebook, you were asked to install a plug-in. Which ONE of the following refers to the function of a plug-in in this context?

A plug-in ...

     A   adds more support and functions for multimedia effects on the page.
     B   creates a new virtual port to plug in a flash drive.
     C   automatically upgrades the drivers for your graphics card.
     D   enables the plug-and-play capabilities of your operating system.   (1)

2.6   Which ONE of the following components forms an integral part of the motherboard?

     A   DVD ROM
     B   DIMM slots
     C   USB drivers
     D   HDD (hard disk drive)   (1)

2.7   Which ONE of the following is a wild card character that can be used when searching for a file using an operating system utility?

     A   %
     B   #
     C   *
     D $ (1)

2.8   Which ONE of the following is software and/or hardware that checks information coming from the Internet or network, and then either blocks it or allows your computer to access it?

     A   A password
     B   Spyware
     C   Encryption
     D   A firewall   (1)

2.9   Which ONE of the following refers to a work arrangement where employees work away from their offices and communicate with the office via the Internet?

     A   Telecommuting
     B   Green computing
     C   Groupware computing
     D   Virtual computing   (1)

2.10   Which ONE of the following acronyms refers to a device that gives the user limited time to save and close documents on a computer when a power outage occurs?

A   GPS
B   UPS
C   PDF
D   USB   (1)
[10]

TOTAL SECTION A: 20

SECTION B

The scenario below sets the scene for the questions that follow.

The Computer Applications Technology (CAT) learners have been asked to work with Mr Nda to set up a computer centre at the local community hall.

QUESTION 3

Mr Nda sees the following advertisements for a desktop computer and a notebook (laptop) computer:

DESKTOP COMPUTER	NOTEBOOK COMPUTER
Intel Core2Duo E7400 1.8 GHz	1.16 GHz dual core CPU
320 GB Seagate SATAII HDD	15.4" BrightView LCD
2 GB DDR2 800 MHz RAM	2 GB DDR2 memory
512 MB GeForce 9500GT graphics	250 GB hard drive
LG 22X DVD writer	DVD writer
Intel Pearl Creek G31 MBD	Built-in webcam
Wireless mouse	Wireless networking
Ergonomic keyboard	Windows 7 Home Basic
Chassis with front USB and 350W PSU	One year collect-and-return warranty
Extras: PCI-Express slot	

3.1   What is the speed of the notebook computer's processor?   (1)

3.2   Both computers have DVD writers, but Mr Nda has many CDs.

Give TWO reasons for buying a DVD writer rather than a CD writer.   (2)

3.3   The desktop computer has a high-end graphics card as opposed to the standard graphics controller that comes with the notebook computer.

Name TWO uses or applications where a high-performance graphics card would be needed or used.   (2)

3.4   The desktop computer includes a wireless mouse.

State ONE disadvantage of having a wireless mouse.   (1)

3.5   Mr Nda needs your advice on choosing either desktop or notebook computers. Refer to the community centre and the given advertisements when answering the questions below.

    3.5.1   Name ONE feature of the notebook computer in the advertisement that would encourage him to buy it.

        In your answer, include a suitable motivation for the feature you give, in terms of using this computer in the community centre.   (2)

    3.5.2   State ONE advantage of a desktop computer over a notebook computer.

        In your answer, include a suitable motivation for the advantage you give, in terms of using the computer in the community centre.   (2)

3.6   Mr Nda has heard that people do not like to work on slow computers.

    Name TWO common hardware components that can be upgraded to increase the performance of a computer, excluding any peripheral devices.   (2)

3.7   Somebody gave Mr Nda a laser printer for the community centre.

    3.7.1   Mr Nda tried to print to the printer which was switched on, but the printer did not print.

        Name TWO of the checks he must carry out before calling in a technician.   (2)

    3.7.2   What can Mr Nda do with the used toner cartridges so that the environment will not be damaged?   (2)

3.8   Mr Nda wishes to scan documents.

    State TWO advantages of buying a multifunction device rather than a scanner on its own.   (2)

3.9   Mr Nda wishes to buy a digital camera for the community centre. In an advertisement, he saw that the camera resolution was incorrectly listed as 12 dpi.

    3.9.1   Name the correct unit to measure the resolution of images taken by a digital camera.   (1)

    3.9.2   Give an example of where dpi is used as a specification.   (1)

    3.9.3   What effect does a low resolution have on a digital image?   (1)

3.10   Many members of the community who use cellphones to take photos do not have the necessary cables to plug their cellphones into a USB port to download the pictures.

        Solve this problem by suggesting TWO other ways in which they could download photos from a cellphone or smartphone to a notebook computer.   (2)

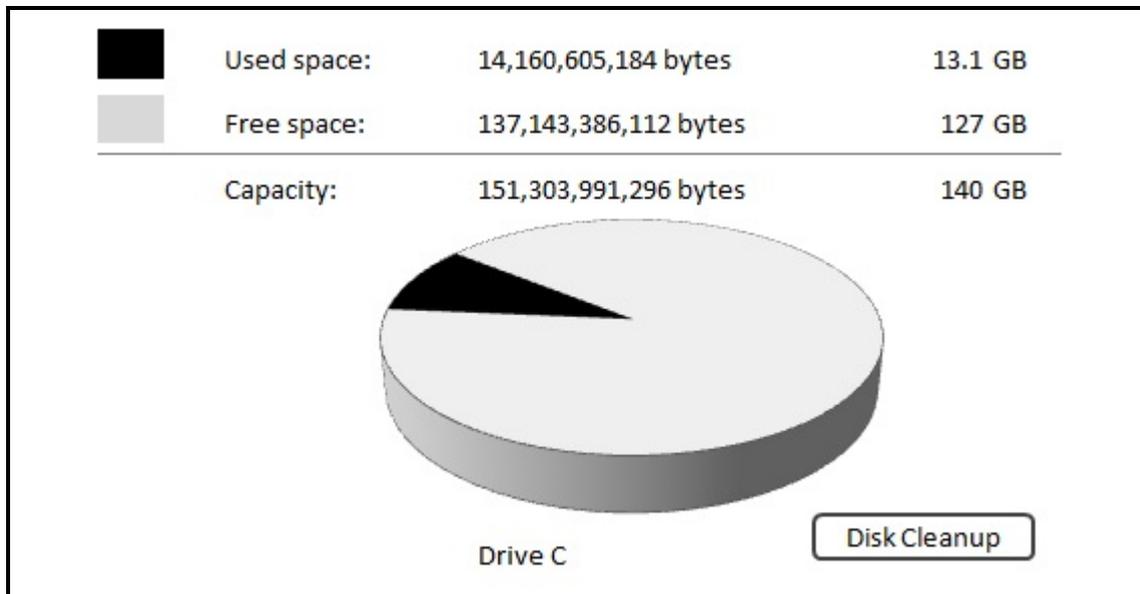3.11   A donor has donated two iPads to the community centre.

        State TWO advantages that tablets such as an iPad would have over notebook computers for the users of the community centre.   (2)

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QUESTION 4

4.1   Mr Nda has heard that computers cannot work without an operating system.

        4.1.1   State TWO functions of an operating system.   (2)

        4.1.2   Name ONE operating system used in a smartphone.   (1)

4.2   Mr Nda needs advice on licensing the software that will be used in the community centre, as he will not be able to use the normal 'home' license.

        4.2.1   Name the type of licence Mr Nda will need for the community centre.   (1)

        4.2.2   Explain how the licence needed for the community centre differs from the licence a person usually gets for home use.   (2)

4.3   Mr Nda has heard that one can install shareware completely free of charge.

        Explain why this statement is NOT entirely true by referring to the legal use of shareware.   (2)

4.4   Mr Nda has not installed antivirus software on the computers.

        Persuade him to install antivirus software by naming THREE typical actions that antivirus software performs.   (3)

4.5   State THREE ways in which Mr Nda would know that the computers have a virus.   (3)

4.6   Read the statement below and study the screenshot to answer QUESTIONS 4.6.1, 4.6.2 and 4.6.3.

Mr Nda has an older computer at home. He opened the disk properties. The window below appeared.

■	Used space:	14,160,605,184 bytes	13.1 GB
□	Free space:	137,143,386,112 bytes	127 GB
	Capacity:	151,303,991,296 bytes	140 GB

Drive C

Disk Cleanup

4.6.1   What does the screenshot above show you about the state of the hard drive?   (1)

4.6.2   How would the amount of storage space available be affected if Mr Nda performed a disk defragmentation on this hard drive? Motivate your answer.   (2)

4.6.3   Other than using Disk Cleanup and performing a disk defragmentation, give Mr Nda THREE tips to keep his computers in good running order.   (3)

4.7   Mr Nda read in a magazine article that using macros in applications can make tasks easier.

4.7.1   Explain what a *macro* is.   (2)

4.7.2   Give ONE example how Mr Nda could use a macro to make his tasks easier.   (1)

4.8   Most operating systems need to be updated from time to time.

State TWO possible advantages of such updates.   (2)

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QUESTION 5

5.1 Give THREE reasons why Mr Nda may choose to install a peer-to-peer network rather than a client-server network. (3)

5.2 Mr Nda wants to know which device must be present in a computer to enable network connectivity and to coordinate the transmission of data. (1)

5.3 The community centre will provide facilities for people to play LAN games.

  5.3.1 Explain what *LAN games* are. (1)

  5.3.2 Name TWO input or output devices that one could use to play LAN games. (2)

5.4 The people who will use the community centre have asked Mr Nda to provide Internet access.

  5.4.1 Name the type of software you would need to read pages from the Internet. Do NOT give brand names. (1)

  5.4.2 Discuss THREE issues to consider when deciding on an ISP. (3)

  5.4.3 Name TWO ways to connect to the Internet. (2)

5.5 Mr Nda has seen advertisements for broadband.

  Other than cost, state THREE advantages of a broadband connection. (3)

5.6 Mr Nda has heard that some websites offer live streaming.

  Briefly explain what it means to use *live streaming*. (1)

5.7 What is the purpose of the digital certificate found on some websites? (1)

5.8 Give TWO reasons why some users save data in the 'cloud'. (2)

5.9 Mr Nda has heard that when the Internet is used, the web server stores small files known as cookies on a computer.

  Give TWO reasons why e-commerce and other web applications use cookies. (2)

5.10 Give the general name for the software that records the keys pressed, user logon information, visited websites and some screenshots. (1)

5.11   Mr Nda visited a website and a pop-up window appeared telling him that he had won a new iPad.

      5.11.1   Explain how he could stop this from happening.   (1)

      5.11.2   Explain the term *adware*.   (1)

5.12   What is the general term used to describe a set of rules for using the computers in the community centre?   (1)

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QUESTION 6

6.1   Eye strain is a common health risk when working on the computer for long periods of time.

        State THREE practical ways in which you can reduce the risks of eye strain while you are working on a computer without replacing or upgrading the monitor.   (3)

6.2   A CAT learner has to do an assignment on the benefits of tourism.

        6.2.1   Explain how a good, clear task definition can assist in making the assignment easier.   (1)

        6.2.2   The learner needs to find accurate information for his/her assignment on the Internet.

                  State TWO ways in which he/she can make sure that he/she is using a reliable website.   (2)

6.3   Name the functions in spreadsheets that would assist CAT learners in finding information for their PAT reports if they want to do the following:

        6.3.1   Calculate the total number of passengers travelling to Cape Town by train.   (1)

        6.3.2   Determine the most common family size (number of people in a family) that travel by air.   (1)

6.4   Mr Nda is excited about the capabilities of smartphones.

        6.4.1   Briefly explain what a *PIM* is.   (2)

        6.4.2   What feature of the smartphone would Mr Nda use to find his way from Johannesburg to Bloemfontein?   (1)

6.5   Give TWO reasons why some community members would wish to use a social networking site such as Facebook.   (2)

6.6   Many users use both instant messaging (IM) and e-mail to communicate.

        6.6.1   Name the type of e-mail application to which Hotmail or Gmail addresses belong.   (1)

        6.6.2   State TWO advantages of IM as opposed to e-mail.   (2)

        6.6.3   State TWO ways in which Mr Nda can reduce the amount of spam he receives.   (2)

6.7   Study the e-mail below and then answer the questions that follow.

To …	ndanda@gmail.com
Cc ...	at@gmail.com;bd@gmail.com;cd@gmail.com; fred@gmail.com;kel@gmail.com;john@gmail.com;
Bcc ...	
Subject:	
Attach:	Donation.ppt 23 MB

GOOD DAY JOHN

YOU DO NOT KNOW ME BUT I AM ASKING FOR A DONATION TO THE HIV AIDS AWARENESS PROGRAM AT THE CHILDRENS HOME. PLEASE CLICK ON THE ADDRESS HEREUNDER TO DEPOSIT YOU MONEY INTO THE ACCOUNT AT ABC BANK ACCOUNT NO. 123123123 – CHILDRENS HOME. SEND THIS EMAIL TO 20 OTHER PEOPLE AND YOU WILL HAVE A GREAT DAY.

Mpho : -)
Childrens Home
0710102030

6.7.1   Name TWO netiquette rules that have been ignored in the e-mail above.   (2)

6.7.2   Give the general term used to describe :-) and similar signs.   (1)

6.7.3   State TWO ways in which to reduce the size of the attachment.   (2)

6.8   Mr Nda received an e-mail which asked him to 'click here' to delete a virus from his computer system.

State TWO ways in which he could deal with a hoax e-mail such as this one.   (2)

6.9   How do wikis allow the community members to be part of the e-world?   (1)

6.10   State TWO social problems that are the result of spending too much time on sending and receiving social SMSs not related to work.   (2)

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QUESTION 7

Mr Nda asks you to assist the community members with any questions they may have.

7.1 Give TWO possible reasons why Thandi could not open an e-mail attachment. (2)

7.2 Jane often uses the community centre, but needs some advice on word processing.

    7.2.1 Give ONE reason why Jane has a blank page at the end of her document. (1)
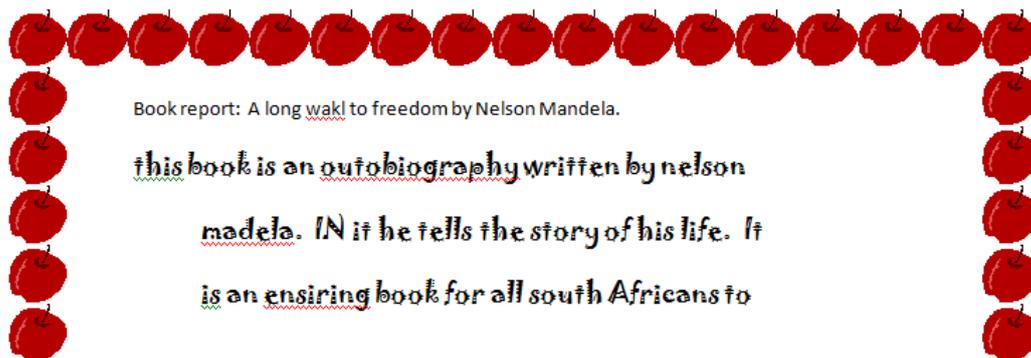
    7.2.2 Jane wants to put a different footer on the last page of her 10-page document.

        Explain to Jane how to do this. (2)

7.3 Mr Nda has noticed that many learners use the community centre to do research. Mr Nda is concerned about plagiarism.

    Briefly explain the term *plagiarism*. (2)

7.4 Study the extract from a learner's report below. Make THREE suggestions to improve the appearance and readability of the report.

Book report: A long wakl to freedom by Nelson Mandela.

this book is an outobiography written by nelson madela. IN it he tells the story of his life. It is an ensiring book for all south Africans to

(3)

7.5 Mr Nda must send a confidential word processing document to Kabelo via e-mail.

    7.5.1 How can Mr Nda ensure that this document can only be opened by Kabelo and nobody else? (1)

    7.5.2 Kabelo must edit and return the document to Mr Nda.

        What feature of a word processing application could be used so that Mr Nda can see what has been modified? (1)

7.6   Study the part of a spreadsheet below to answer QUESTIONS 7.6.1 and 7.6.2.

	A	**B**	**C**	**D**
11	Maximum	'######'	#VALUE!	

7.6.1   Cell B11 indicates that there is an error. Explain how you would
        correct this error.   (1)

7.6.2   Explain what the error message in cell C11 means.   (1)

7.7   What feature of a spreadsheet could Mr Nda use to ensure that other users
        cannot change formulas in his spreadsheet?   (1)

7.8   Name ONE way in which Mr Nda can use the computer to find a solution to a
        problem he has encountered in an office-suite application program, such as a
        spreadsheet application.   (1)

7.9   Study the extract below, taken from the database that was created to store the
        details of the community members who are helping Mr Nda in the centre.

No	Helper	Cell_no	ID_no	Gender	Shifts
1	Shezi, P	841231234	920212 0021 085	M	Morning
2	Burns, Q	833213214	900303 1234 082	F	Evening
3	Mhlongo, K	720001000	901212 0023 084	F	Afternoon
4	Moodley, K	833334444	910101 0053 082	M	Afternoon
5	Nene, T	821475489	910404 0067 168	F	Morning

7.9.1   Suggest a data type for the *ID_no* field.   (1)

7.9.2   Which TWO features of a database could be used to ensure that only
        'M' for male or 'F' for female is entered into the *Gender* field?   (2)

7.9.3   Give TWO reasons why an input mask would be used on a field such
        as the *ID_no* field.   (2)

7.9.4   Suggest a data type for the *No* field that will assign a unique
        sequential number to every new record as it is entered.   (1)

7.9.5   Mr Nda noticed that the 0 that starts a cellphone number does not
        display in the *Cell_no* field, even though he had typed it in.

        How can Mr Nda prevent this error from happening?   (1)

7.9.6   Give THREE reasons why it was better for Mr Nda to use a database
        instead of a spreadsheet for this data.   (3)

                                                                                [26]

                                                          TOTAL SECTION B: 130
                                                          GRAND TOTAL: 150