education

Department:
Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

CATN.2

COMPUTER APPLICATIONS TECHNOLOGY: THEORY (P2)

NOVEMBER 2009

MARKS: 150

TIME: 3 hours

This question paper consists of 15 pages.

AFTERNOON SESSION

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.

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.

COLUMN A		COLUMN B	
1.1	A branch of study concerned with the design of equipment/furniture that deals with health and safety issues	A	spreadsheet
1.2	An example of a virtual on-line world	B	Bluetooth
1.3	A computer application that could be used to do basic bookkeeping or accounting	C	Wikipedia
		D	F1
		E	Second Life
1.4	A unit of measurement of the capacity of the latest SD cards	F	input mask
		G	LCD
1.5	Software freely available for use and where the source code can be altered/changed as needed	H	WWW
		I	microwave
1.6	Multimedia portion of the Internet	J	F5
1.7	A method used for transferring data between two digital devices over a short distance	K	Encarta
		L	help
1.8	Keyboard key commonly used to obtain help in application programs	M	ergonomics
1.9	Computer chip or tag attached to items for identification purposes	N	GPRS
		O	GB
1.10	Database feature used to ensure the correct format of data input by the user	P	open source
		Q	RFID
		R	disk cleanup
		S	copyright
		T	economics

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

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

Various options are given as possible answers to the following questions/statements. Choose the answer and write only the letter (A – D) next to the question number (2.1 – 2.10) in the ANSWER BOOK.

2.1   The printer used to produce colour images that do not smudge on ordinary photocopy paper is a …

        A   colour laser printer.
        B   mono laser printer.
        C   multifunction inkjet printer.
        D   'Photosmart' printer.

2.2   What action would one perform on an image or picture to remove the unwanted parts?

        A   Crop
        B   Cut
        C   Resize
        D   Undo

2.3   What software application can also be used to remove unwanted parts of an image or picture?

        A   Compression ('zip') program
        B   Graphics program
        C   PDF writer
        D   Spreadsheet program

2.4   A survey has been carried out to find the percentage of learners who watch movies downloaded from the Internet. The data can best be displayed as a …

        A   pie chart/graph.
        B   scatter chart/graph.
        C   line chart/graph.
        D   radar chart/graph.

2.5   Which ONE of the following statements concerning a disk defragmenter is TRUE?

        A   A disk defragmenter removes viruses.
        B   A disk defragmenter will create more free disk space.
        C   A disk defragmenter will not work on hard drives.
        D   A disk defragmenter re-organises the locations of files on a disk.

2.6   Which ONE of the following will have the least influence on the overall performance of a computer system?

    A   Choice of operating system
    B   Amount of free hard drive space
    C   Type and amount of memory
    D   Speed of the DVD writer

2.7   Which component of a database has been specifically designed to be printed?

    A   Table
    B   Query
    C   Form
    D   Report

2.8   The digital divide refers to the …

    A   availability of and access to technology.
    B   use of technology in rural and urban areas.
    C   use of new versus old technology.
    D   use of digital versus analogue technology.

2.9   Which input device is essential when using a desktop computer for common office applications?

    A   Mouse
    B   Keyboard
    C   Tablet pen
    D   Printer

2.10   Which ONE of the following is NOT a feature associated with a spreadsheet program?

    A   Outline numbering
    B   Chart Wizard
    C   Autofill
    D   Absolute cell references   (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

Many people share interests and ideas and form friendships using social networking applications such as FaceBook, MySpace, MXit and YouTube. A team of Computer Applications Technology (CAT) learners has been asked to provide information about the advantages, disadvantages and requirements of these applications.

The learners must submit the following to the school governing body:

- A brochure outlining the advantages and disadvantages of social networking technologies
- A question-and-answer leaflet based on the questions submitted by parents

The learners will work at home on the project, but will all get together to produce and print the final copies in the computer centre at school.

QUESTION 3

Parents have been invited to submit specific questions/concerns to be addressed by the team. Respond to the following comments and questions received from parents:

3.1   Concern #1: "*Are there any advantages for my child when using MXit?*"
        Name ONE possible advantage of using MXit.   (1)

3.2   Concern #2: "*What can be done to prevent RSI if a child spends a lot of time on-line with social networking?*" Name ONE way to prevent RSI.   (1)

3.3   Concern #3: "*I have heard that social networking puts your computer at risk of being infected with viruses.*"

        3.3.1   Explain TWO precautions one can take to prevent virus infections.   (2)

        3.3.2   What is the difference between *spyware* and *adware*?   (2)

3.4   Concern #4: "*People speak about identity theft.*"

        3.4.1   Explain what *identity theft* is.   (2)

        3.4.2   Describe TWO precautions children can take to protect themselves from identity theft on a social networking site.   (2)

3.5   Concern #5:   "*I have heard that all forms of social networking require broadband.*"

       3.5.1   What is *broadband*?   (2)

       3.5.2   For which ONE of the following would high bandwidth be a necessity and for which ONE is it definitely not essential? Briefly substantiate your answers.

- FaceBook
- MXit
- Podcasting
- Video/web conferencing   (4)

3.6   Concern #6: "*How does video/web conferencing contribute to cost-saving?*"   (1)

3.7   Concern #7: "*My secretary says that I should not use only capital letters when typing a message on e-mail.*" What is the reason for this rule?   (1)

3.8   Concern #8: "*My son opened FaceBook, YouTube and MySpace all at the same time, whilst also listening to music and playing a game on the same computer, causing the computer to freeze often.*" What can he do to resolve the problem without adding additional hardware?   (1)

3.9   Concern #9:   "*My daughter has found information on Wikipedia on the Internet.*"

       3.9.1   Name ONE possible advantage of Wikipedia over other electronic encyclopaedias such as Encarta or World Book.   (1)

       3.9.2   Is the information used in Wikipedia reliable enough to use? Motivate your answer.   (2)

3.10   Concern #10: "*Which utility program, that usually comes with the operating system, can be used to make the text in FaceBook available to people with visual difficulties?*"   (1)

3.11   Concern #11: "*Blogs seem to have become very popular.*"

       3.11.1   Why do people create a blog rather than a website?   (1)

       3.11.2   "*My son has a blog and the latest sport headlines from a national newspaper always pops up on it.*" What did the son do to make the latest headlines automatically pop up?   (1)

       3.11.3   Name ONE very common or popular site where you can create a blog for free.   (1)

3.12   Concern #12: "*When I visit some social networking sites, irritating advertisements sometimes appear on the screen. How can I stop this from happening?*"   (1)

3.13   Concern #13: "*Considering the cost of Internet connectivity, if I am only going to use the Internet for short periods to send e-mail, would it be better to choose an ADSL or a dial-up connection*?" Give TWO reasons why a dial-up connection would be the better option.   (2)

[29]

QUESTION 4

4.1   Team members working at home need to be in constant communication with one another while compiling the social networking brochure.

   4.1.1   Name TWO ways, excluding e-mail, in which the learners can quickly communicate with each other electronically.   (2)

   4.1.2   Which is the most suitable method of communication to use to send the brochure to each other? Substantiate your choice of method.   (2)

4.2   Mpho has made screen shots/screen dumps of the GUI of FaceBook. He wishes to use these images as illustrations in the brochure.

   4.2.1   Explain what a *GUI* is.   (2)

   4.2.2   Describe TWO ways in which he can insert these images into his document.   (2)

4.3   List TWO potential disadvantages of social networking sites.   (2)

4.4   When Mpho attached his version of the brochure to an e-mail to the rest of the team, Tom complained about the amount of 'cap' used to download it.

   4.4.1   What does the term *cap* refer to?   (1)

   4.4.2   Give TWO reasons why Tom should use a dedicated connection as opposed to a dial-up connection to the Internet.   (2)

   4.4.3   Briefly discuss TWO ways in which Mpho can reduce the size of his attachment.   (2)

   4.4.4   Describe TWO ways in which each member can make sure that his/her work can be viewed but not changed.   (2)

   4.4.5   Irshaad complains that he cannot open Mpho's attachment. Identify a possible reason and explain how he can solve this problem.   (2)

4.5   Pete's Internet connection does not work. Irshaad offered to bring a hard copy of the brochure to school for Pete to change.

        Briefly explain how Pete can change the hard copy to an electronic copy, making sure it can be edited, without having to retype the document.   (2)

4.6   The team leader, Lindi, warns each member to use the backup utility of the operating system to archive all files used in the project, which are stored on their hard drives, to another folder on their hard drives.

        4.6.1   Taking the reason for making backups into account, why is Lindi's warning not appropriate?   (1)

        4.6.2   Referring to your answer to QUESTION 4.6.1, suggest ONE better way to ensure that you do not lose your files.   (1)

4.7   Irshaad is upset because his new computer is becoming slower. He has recently deleted a lot of unwanted games. Name ONE way of safely removing unwanted games on the computer.   (1)

4.8   Pete uses an old computer with an operating system that is nearly four years old, while Irshaad uses a brand new computer with the latest operating system.

        4.8.1   How can Pete legally install the new operating system on his computer?   (1)

        4.8.2   Name ONE possible problem that Pete may encounter whilst installing the new operating system on his old computer.   (1)
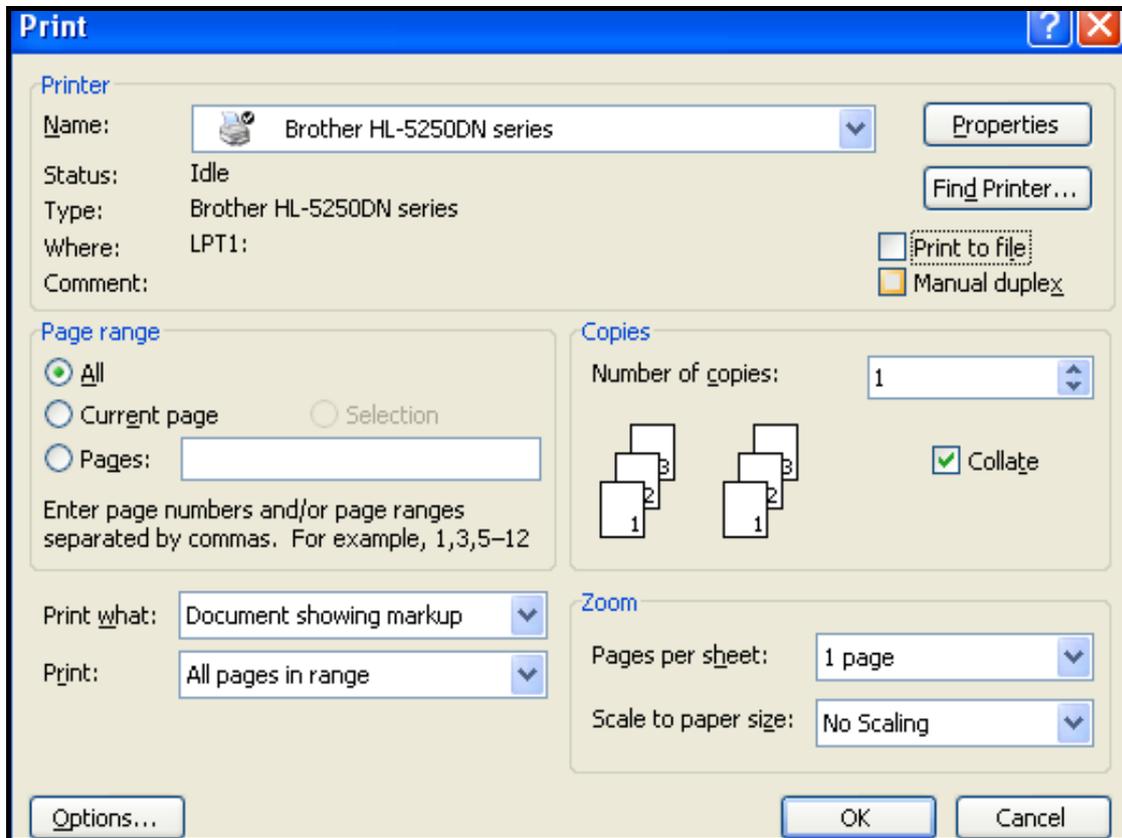
        [26]

QUESTION 5

5.1   All the team members bring their work on their flash disks/drives or a CD to the computer centre at school to do the final editing.

        5.1.1   Discuss TWO advantages of using a flash disk/drive over a stiffy disk.   (2)

        5.1.2   Pete complains that he has to unplug his USB printer every time he wants to use his flash disk/drive because his computer does not have enough USB ports. Suggest a solution to his problem.   (1)

5.2   The team downloads their work to the network in the computer centre at school.

        5.2.1   Discuss TWO advantages of using a network in the computer centre at school.   (2)

5.2.2   Discuss ONE disadvantage of using a network in the computer centre at school.   (1)

5.2.3   If a person is working on a computer, how would the individual be able to tell if he/she is on a network?   (1)

5.2.4   List TWO different security measures that should be in place to ensure that the data is only accessible by the team.   (2)

5.3   The files on the school's network are saved to a central server. The network administrator created certain rules for saving files on the network server.

5.3.1   The learners may not save YouTube videos on the network. Give ONE technical reason for this ban.   (1)

5.3.2   One very relevant video appeared on YouTube. How could the network administrator easily manage to have all learners access this video off-line without lifting the ban on videos?   (1)

5.4   Lindi brought her files to school on a CD and copied them to the network. The files can be opened but the changes cannot be saved.

5.4.1   Explain why this happens.   (1)

5.4.2   Discuss ONE way in which to solve the problem.   (1)

5.5   The computer centre has two printers installed on the network, a colour inkjet printer and a mono laser printer.

5.5.1   Which printer would you use to print 1 000 copies of the brochure to distribute to the parents? Substantiate your answer.   (2)

5.5.2   Besides using the colour inkjet printer at school, name ONE other way in which the brochure may be printed in colour. What would the advantage be in following this approach?   (2)

5.5.3   Name ONE disadvantage of using refilled cartridges to print the brochure for the parents.   (1)

5.5.4   When the brochure document is sent to one of the network printers, it takes a very long time before the printer starts to print. Give ONE possible reason for this delay.   (1)

5.6   When the team printed the brochure, they found that all the comments and changes made by them were printed in the final copy. Study the 'Print' dialog box below and give the reason why this happened.

(1)

5.7   The school governing body wants the brochure published on the school's website. The brochure must be able to be read using Adobe Reader. What file format must be used for this purpose?   (1)

5.8   Explain the differences between the quality of pictures/photos that need to be viewed on-line only, compared with those that need to be printed.   (2)

5.9   Mpho suggests that all the learners take their computers to his home so that they can work there when the school is closed. Assume that they do not have laptop computers. What disadvantage could there be to this idea?   (1)

5.10   They wish to set up a small independent network. Name TWO hardware requirements that must be in place for them to do so.   (2)

5.11   The team would also like to connect to the Internet to be able to get information for the brochure.

     5.11.1   Name ONE way of connecting to the Internet if Mpho does not have a landline at home.   (1)

     5.11.2   Which type of program is essential if they wish to surf the Internet? Do not give brand names.   (1)

5.11.3   Which type of software could they use when setting up the Internet connection to make sure that the network is safe from unauthorised access?   (1)

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QUESTION 6

6.1   Mr Jonas, one of the parents, is concerned that the computer he is using at home is not suitable for social networking. He has submitted the following specifications of his laptop and asks for your opinion on the suitability of this computer for social networking:

> Intel Core 2 Duo
> 2.2 GHz processor
> 512 MB RAM
> 250 GB Hard Drive
> Graphics card
> Firewire
> 5-in-1 card reader

6.1.1   Mr Jonas will have to buy additional hardware to access the Internet. What hardware will he have to buy and why?   (2)

6.1.2   Name ONE advantage of using a laptop rather than a desktop computer.   (1)

6.1.3   Pete, Mr Jonas' son, is very happy about having a separate graphics card. Name ONE specific advantage of having a good graphics card when using YouTube.   (1)

6.1.4   Currently Mr Jonas' laptop cannot be used for video/web conferencing. Which component must be added to allow for video/web conferencing?   (1)

6.1.5   What is the purpose of having a card reader on the laptop?   (1)

6.2   Lindi wishes to buy a new computer so that she can access social networking sites, but her father feels that she should rather upgrade her old computer.

6.2.1   Name TWO instances where it would be better to replace a computer rather than upgrade it.   (2)

6.2.2   She wishes to buy some new software. Name TWO hardware components she should know the specifications of before buying the software.   (2)

6.3   Lindi's old computer is very old and will be of no use to anybody else.

       6.3.1   Suggest ONE eco-friendly way of disposing of the computer.   (1)

       6.3.2   Name ONE way in which she should NOT dispose of her old computer.   (1)

6.4   Mpho has uploaded a folder that contains all the files pertaining to the project on the network. The contents of the folder, called *Mpho's files*, are as follows:

Microsoft users:	OpenOffice users:
Internet Budget.xls	Internet Budget.xls
FaceBook tips.txt	FaceBook tips.txt
MXit Tutorial.ppt	MXit Tutorial.odp
YouTube advantages.doc	YouTube advantages.doc
How to surf.ppt	How to surf.odp
Most popular sites.mdb	Most popular sites.odb
Brochure.pdf	Brochure.pdf
Parent communication.dot	Parent communication.ott
Time logger.xls	Time logger.xls
Irshaad on MXit.jpg	Irshaad on MXit.jpg
School logo.bmp	School logo.bmp

       6.4.1   Identify the database file in the folder.   (1)

       6.4.2   Name ONE program which can open a **.txt** file.   (1)

       6.4.3   Without seeing the file sizes, which of the image files is likely to be the largest? Substantiate your answer.   (2)

       6.4.4   What does the **.dot/.ott** file extension indicate?   (1)

       6.4.5   Explain ONE advantage of using a **.dot/.ott** file.   (1)

6.5   Irshaad has a very advanced graphics program on his computer at home. He would like to install the software on all the computers on the network at school. He has uninstalled it at home to make this installation legal. Mpho does not agree.

     Comment on the situation described above by referring to the legal considerations.   (2)

6.6   The team has to use the words "social networking" repeatedly in the brochure and leaflet. Which feature of the word processing program could they use to create a keyboard shortcut to enter these words?   (1)

                                                                      [21]

QUESTION 7

7.1   The team has created the database below to keep information on social networking sites.

Field Name	Data Type	
Tipe/Type	Text	General type of social networks Algemene tipe van sosiale netwerke
Name/Naam	Text	Name of application Naam van die toepassingsprogram
URL	Text	Link to the application Skakel na die toepassingsprogram
Ownership/Eienaarskap	Text	Proprietary or Open Source Eiendomsregtelik of Oop Bron
Elements/Elemente	Text	Elements found in the application Elemente wat in die toepassingprogram gevind word
Additional Information/ Bykomende inligting	Text	Description and use of the application Beskrywing en gebruik van die toepassingsprogram
Logo	Text	Picture of the application logo Prentjie van die toepassingsprogramlogo

Available data types

- Text
- Memo
- Number
- Date/Time
- Currency
- AutoNumber
- Yes/No
- OLE Object
- Hyperlink
- Lookup Wizard
- Image (for OpenOffice)

7.1.1   All the data types have been set as Text. Select the most appropriate type from the available data types above, for each of the fields below. In each case, give a reason for your choice.

(a) Ownership/Eienaarskap
(b) URL
(c) Additional information/Bykomende inligting
(d) Logo   (8)

7.1.2   What field size would you choose for the Name/Naam field?   (1)

7.1.3   Select the field most suitable to be a primary key. Give a reason for your choice.   (2)

7.2   What feature of a database report would you use to display the names of the sites organised according to type?   (1)

7.3   In which section of a database report would you put the function to display the total number of records in your database? (1)

7.4   The school has a formal format for written communication with parents. The format/style for communication with parents was created in a word processing application.

    7.4.1   Name TWO ways to insert the report from the database in this word processing document. (2)

    7.4.2   After the document has been completed, it looks very untidy because of the blue underlining of some text. Explain why the blue underlining appears. (1)

7.5   The team has to keep track of their petty cash expenses for this project in a spreadsheet application.

    7.5.1   When they set the amount to currency, the computer shows the dollar (**$**) symbol instead of the rand (**R**) symbol. Name TWO ways to correct this error. (2)

    7.5.2   Why does the formatting (as opposed to rounding) of data sometimes lead to different answers when totalling a column of figures? (2)

    7.5.3   Irshaad has copied the final figures from the other team members' spreadsheets. He gets the error message **#REF** when he pastes it into his spreadsheet. Name ONE solution to this problem. (1)

7.6   Mpho has pasted a graph/chart from a spreadsheet program into a word processing document.

Explain how he can insert the graph from the spreadsheet into the word processing document without having to redo it every time the spreadsheet is updated. (2)

7.7   Mpho has the information of expenses of some team members as text in a word processing document.

Describe how to organise the text and transfer it to a spreadsheet. (2)

[25]

TOTAL SECTION B: 130

GRAND TOTAL: 150