basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

(THEORY)

NOVEMBER 2012

MEMORANDUM

MARKS: 150

This memorandum consists of 17 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit questions and marking memorandum frequently during the first half hour of marking.

- It is advisable to read the question frequently (and re-read) together with the candidate's response to check if they correlate. Do not get misled by candidates' statements/answers.

- On the second day it is suggested that the markers re-read the questions and answers before commencing the day's marking.

- Be careful not to home in on keywords or general statements, but rather read the entire answer. If in doubt, read the entire answer and then the question paper and marking memorandum. Ask yourself or your senior marker if the response could ˙fit˙ into the marking memorandum to allocate the correct marks to the candidate, for example memo states 'cheap' and learner responds 'less expensive'.

- Beware of overlapping answers to a specific question. In general, one mark is awarded per fact.

SECTION A

QUESTION 1				**QUESTION 2**			
MATCHING ITEMS				**MULTIPLE-CHOICE QUESTIONS**			

1.1	S	✓	(1)
1.2	J	✓	(1)
1.3	F	✓	(1)
1.4	P	✓	(1)
1.5	C	✓	(1)
1.6	L	✓	(1)
1.7	B	✓	(1)
1.8	D	✓	(1)
1.9	H	✓	(1)
1.10	E	✓	(1)
	Total : [10]		

2.1	A	✓	(1)
2.2	A	✓	(1)
2.3	C	✓	(1)
2.4	B	✓	(1)
2.5	C	✓	(1)
2.6	B	✓	(1)
2.7	D	✓	(1)
2.8	B	✓	(1)
2.9	D	✓	(1)
2.10	D	✓	(1)
	Total : [10]		

TOTAL SECTION A: 20

SECTION B

QUESTION 3

3.1	• 2.3 GHz ✓ *(Note to marker: Accept Intel Core i5 2.3 GHz)*		1
3.2.1	• Keyboard • Pointing devices: such as touch pad/joystick • Microphone • Touch screen • Finger print reader *(Note to marker: Do not accept webcam/mouse)* ✓✓ (Any two)	2	
3.2.2	• May free up desk space • Reduce clutter/no cables *(Accept 'easier to use', only if motivated correctly)* • Mouse can be used at a distance further away from a computer than a mouse cable would allow ✓ (Any one)	1	3
3.3	• Graphics/video/screen/display/3G card/graphics accelerator ✓ *(Note to marker: Do not accept 'screen' on its own)*		1
3.4	• Controls/manages the hardware (Makes the hardware work) • Manages storage space • Manages the allocation of memory to different processes • Provides the user interface • Controls/manages I/O (Input/Output) • Controls/manages basic security *(Note to marker: Specific examples can be accepted)* ✓✓ (Any two)		2
3.5.1	• Maximum resolution of image • Megapixels or image/picture element • The quality of the image, etc. ✓ (Any one)	1	

3.5.2	• Security surveillance/taking photographs for security • VoIP/Skype usage/social communication • Video conferencing/collaborating with other users • Taking photographs/recording video ✓✓ (Any two)	2	3
3.6	• 3G/4G • GPRS/EDGE (2.5G) • WAP • HSDPA/HSUPA/UMTS • LTE *(Note to marker: Do not accept WiFi/iBurst)* ✓✓ (Any two)		2
3.7	• Easy to take to a safe when not in use • Mobility - can be used in different classrooms/places (via a wireless network) • Can be used for a limited time if there is a power outage • Needs less space in the computer lab/they are thin and lightweight • Fewer cables/aesthetics • Uses less electricity • Easier to set up in a network ✓✓ (Any two)		2
3.8	• Internet for educational purposes – The Learning Channel, research, news, YouTube tutorial programs, etc. *(Allocate only one mark for any Internet-related answer)* • Outreach programmes - computer literacy classes for the community or training programmes, educational seminars, etc. • Learners can use it to make a school website or run the school magazine • Use DVD/CD-based resource material • Computer Aided Learning (CAL)/Computer Aided Instruction (CAI) programs/reading/remedial programs/administration/ Learner Management System (LMS)/learning/assessment • School project work • Development of learner resources/support material by the teacher *(Note to marker: look at answer from both learner and teacher perspective)* ✓✓ (Any two)		2

3.9	• Can use it to keep record of all the laboratory equipment (in computer centres or science labs) • Can barcode library/text books for stock records, issues and returns/Improves efficiency of issuing/Returning books/Improves the productivity/Reduces time spent (in the school library) • Can record stock or the selling of items (in the school tuck shop) (*Note to marker: Accept any answer referring to the use of a barcode scanner, for example items of stock belonging to a school, such as in a school tuck shop*) ✓ (Any one)		1
3.10.1	• Learners who cannot use their hands properly can use the speech recognition program to convert speech to text, i.e. to type what he/she is saying • Visually impaired learners can use speech recognition to give commands to the computer, etc. • Visually impaired learners can use speech recognition to convert speech into text, etc. (*Note to marker: Accept any answer referring to voice recognition instead of speech recognition*) (*Any one example* ✓ *with a matching usage* ✓)	2	

3.10.2	• Example: Visually impaired users
	  Usage: the program will read what is on the screen
	
	• Example: Dyslexic learners
	  Usage: can use it to read teaching and other materials to them
	
	• Example: Apraxia learners (those who cannot speak)
	  Usage: can use it to communicate, *etc.*
	
	            (*Any one example* ✓ *with a matching usage* ✓)
			4

3.11.1	• Takes longer to copy data to a CD than transferring data to a flash drive • If it is only a CD-ROM reader, learners would not be able to write a CD • The CD-drives are more expensive than flash disks • If CD-drive is not used frequently it becomes inoperable/unusable • CD-drives are outdated/older technology/cannot use DVDs, etc. ✓ (Any one)	1	

3.11.2	- Both DVD and CD formats can be used/backward compatible - Newer technology - Better quality - Faster access to data (*Note to marker: Do not accept any references to watching movies*) ✓ (Any one)	1	2
3.12	- To avoid injury ✓ *(Note to marker: Accept only one specific computer related injury, for example RSI/CTS, back strain, eye strain, etc.)* - To be able to work effectively/productively/improve the working environment, etc. ✓	1 1	2
			[25]

QUESTION 4

4.1.1	• Allows you to use the program • Activates the program • Gives access to the key/code that unlocks the security or the protection of a program, • Is a series of numbers characters/letters ✓ (Any one)	1	
4.1.2	• From software developer's website • From the supplier • With the original CD/DVD set/packaging • On the license agreement provided ✓ (Any one)	1	
4.1.3	• To ensure that the program is loaded only on the number of computers specified on the license • Reduce piracy/certify that program is an original copy/increase security ✓ (Any one)	1	
4.1.4	• Application/productivity software ✓	1	
4.1.5	• Can integrate between the different applications • Interface is standardised across the different applications • Functions are standardised across the programs • Cost – cheaper to purchase an office suite • Easier to manage updates ✓✓ (Any two)	2	6
4.2	• To store, manipulate and maintain school and learner records • To offer CAT, etc. *(Note to marker:* *Accept any scenario where a database program could be used in a school context* *Do not accept calculations without an explanation)* ✓ (Any one)		1
4.3.1	• It is software/program/utility ✓ • That allows the printer to communicate with/be used by the operating system/computer ✓ (Note to marker: *Do not accept 'application'.* *Accept an explanation on a 'set of instructions' – enables device to communicate with the computer)*	1 1	

4.3.2	• Check which drivers were automatically installed from the operating system's database/load generic drivers • Check on the CD that comes with the printer • Download from the Internet/manufacturer's website • Borrow a CD from someone who has the same printer, • Obtain from a computer shop, etc. ✓✓ (Any two)	2	4
4.4.1	• Use print preview before printing/edit document before printing so that you do not print unnecessary copies • Print on both sides of the paper • Change document formatting, for example, smaller font size/reduce margin size • Print two or more pages to one sheet • Save electronically/use more electronic communication/ documents ✓✓ (Any two)	2	
4.4.2	• Significant cost saving/reduced cost/increased savings, etc.✓ *(Note to marker:* *Any answer related to financial savings* *Cost must be qualified)* • Fewer cartridges and/or less ink is produced, leads to reducing the carbon footprint/Fewer cartridges need to be disposed of ✓ *(Note to marker:* *Any answer related to green computing* *Response must qualify green computing)*	1 1	
4.4.3	• Use energy star compliant/energy saving devices/equipment, for example, a thin client network/solar powered devices • Switch off devices when not in use • Set computers to sleep mode/hibernation when not in use for a while, etc. *(Note to marker: Response must relate to the computers in the computer centre)* ✓✓ (Any two)	2	6

4.5.1	• The antivirus program on his home computer is outdated/not updated recently • The antivirus program on his computer was deactivated • The license/trial period for the antivirus program has expired • The antivirus program does not pick up a specific virus – virus is too new to be included in the virus definitions • False-positive (incorrect reporting) ✓✓ (Any two)	2	
4.5.2	• Computer slows down/runs slower than usual • Available memory is less than usual • Files become corrupt/Programs or files do not work properly • Screen displays unusual images or messages • Music or unusual sounds play randomly • Existing files and programs disappear • Unknown programs or files appear • System properties change • Operating system does not start up • Operating system shuts down/crashes unexpectedly, etc. ✓✓ (Any two)	2	4
4.6.1	• Allow/add new functionality • 'Bugs' (errors) are fixed/Solves problems that occurred in the program • Better security/security loopholes can be plugged • Modifications to device drivers are made • Access to new expanded components such as themes are given ✓✓ (Any two)	2	
4.6.2	• A **patch** is downloaded (automatically from the Internet) • From a **service pack**, etc. *(Note to marker:* *Do not allocate the mark if candidate response is only 'via the Internet' or similar)* ✓ (Any one)	1	3
4.7	• There has not been a lot of deleting from and writing to the hard disk/The hard drives have hardly been used • The computers are new and the users have not yet installed and uninstalled many other programs • It is an SSD (solid state drive) ✓ (Any one)		1

4.8	• External hard drive • Flash disk/card • Blu-Ray disc • Tape • Triple layer DVD *(Note to marker: Do not accept only CD/DVD)* ✓ (Any one)		1
			[26]

QUESTION 5

5.1.1	• Cable • Wireless *(Note to marker:* *Response must relate to setting up a network* *Do not accept Bluetooth, infrared)* ✓ (Any one)	1	
5.1.2	• It is a central connection point where all the devices on the network plug in • Directs network traffic ✓ (Any one)	1	
5.1.3	• Printer/multifunction device • Router/wireless router/Internet access points • Storage drives/External hard drive • Photocopier *(Note to marker:* *Accept any other device that can be connected directly to the network* *Allocate one mark for multifunction and then no further mark for any part of that multifunction device thereafter)* ✓✓ (Any two)	2	4
5.2.1	• Provide all users with passwords/encryption • Install a firewall • Set/restrict access rights • Biometric device, etc. ✓✓ (Any two)	2	
5.2.2	• Use both upper and lowercase letters • Use a combination of numbers, letters and other characters • Do not use easily identifiable information, for example, name, ID numbers, etc. • Make the password longer than 8 characters *(Note to marker: Do not accept 'changing passwords on a regular basis')* ✓✓ (Any two)	2	

5.2.3	• Power failure • Power surges • Hardware failure/disk crash, etc. (*Accept specific examples*) *(Note to marker: Accept any <u>one</u> response related to the loss of computers such as theft/fire/natural disaster/vandalism, etc.* *Do not accept any software related issues such as viruses/bugs, etc.)* ✓✓ (Any two)	2	6
5.3	• Network administrator ✓ (*Accept IT/computer technician*)		1
5.4.1	• ADSL • WiMax • Wi-Fi • 2.5G/3G/4G/LTE • Satellite ✓ (Any one)	1	
5.4.2	• They can watch educational videos over the Internet/ educational gaming • Faster/quicker/The downloading/uploading of data will be faster • Permanently connected ✓ (Any one)	1	2
5.5.1	• Can ask experts questions online • They can view tutorials on topics they are having trouble with • Read e-books • Watch videos/YouTube • Play educational games • Quizzes/Online competitions • Online practise tests and examinations • Blog or build own website, etc. ✓✓ (Any two)	2	
5.5.2	• Limit the search to certain types of information, for example images or videos. • Use specific words/phrases • Use logical operators such as AND, OR, NOT • Consider the word order/Put the most important words first • Search date ranges • Use specific domains/advanced search features, etc. ✓✓ (Any two)	2	4

5.6	• To access files on the Internet from any computer • To allow others to access their files/collaboration • To store off-site backups/safekeeping • Easier to transfer larger files (e.g. ftp/Dropbox) ✓✓ (Any two)		2
5.7.1	• He is invading the privacy of the learners ✓	1	
5.7.2	• Use security software (e.g. Netnanny) • Proxy server/Firewall to block certain sites • Use filters of browser program, etc. ✓ (Any one)	1	2
5.8.1	• They do not have to queue at the bank/It is more convenient to do transactions online • It is physically safer if people do not carry money on them • Lower banking charges • Available 24/7, etc. *(Note to marker: Do not accept responses that are true for conventional banking as well as Internet banking, for example, to transfer funds)* ✓✓ (Any two)	2	
5.8.2	• Auction/online trading site ✓ *(Note to marker: Do not accept e-commerce site)*	1	
5.8.3	• You can advertise the item you wish to sell to a wider audience • Buying or selling can take place at any time/across time-zones/convenient • Opportunity to operate a business online • Easy to compare prices • Not confined by distance • Save costs by not travelling to shops, etc. ✓ (Any one)	1	
5.8.4	• It means that certain security measures ✓ have been taken/it is a secure site/encryption used *(Note to marker: Do not accept the expansion of https)*	1	5
5.9	• Digital signature ✓		1
			[27]

QUESTION 6

6.1.1	• Facebook • Instagram • Flickr • MySpace • YouTube • Badoo • LinkedIn • myLife • Twitter • Google+ • Foursquare • Pinterest, etc. *(Note to marker: Do not accept any IM (instant messaging) such as Mxit, BBM, WhatsApp, etc.)* ✓ (Any one)	1	
6.1.2	• Yes ✓ • A blog is a personal account/journal ✓ of a point of view, experience or even research • An online encyclopaedia is usually reviewed and checked ✓ by subject experts in the field. *(In general, an online encyclopaedia is more reliable than a blog)* *(Note to marker: Do not allocate a mark to No unless followed by valid explanations.)*	1 1 1	4
6.2	• It invades their privacy • It may depict them in unflattering ways • It may not be a true reflection of the person, etc. ✓ (Any one)		1
6.3	• Reaches their clients immediately/easier to communicate with customers • A cheaper way of marketing/advertising products/services • Advertise/market products/services directly to a specific target audience • Get feedback of service or products • Access to global markets, etc *(Note to marker: Accept features that are relevant provided there is a motivation e.g. setting up groups.)* ✓✓ (Any two)		2
6.4.1	• Can only access your e-mails if you have Internet access • Do not always have as many features as an office suite application • May not be as fast • May experience limited choices for creating an e-mail account • The credibility may be questionable/more anonymous • Could be more susceptible to spam/adverts/banners • Mail box has a limited size *(Note to marker: Accept a response where reference is made to a web-based e-mail address appearing unprofessional only in a business context)* ✓✓ (Any two)	2	

6.4.2	• Netiquette ✓	1	3
6.5.1	• The e-mail service provider will keep the message in the mailbox✓ • until it can be transferred to Mr Joe's computer ✓	1 1	
6.5.2	• Use the Bcc field ✓ of the e-mail program for Ms Smith	1	
6.5.3	• A group of e-mail names and addresses ✓ given a single name	1	
6.5.4	• It saves time because all the names do not have to be typed in one at a time • Any e-mail sent to the group will be sent to every person in the mailing list • Prevents errors in typing an address and omission of an address • Avoids the restriction the number of e-mail addresses that can be entered ✓ (Any one)	1	5
6.6.1	• It is an e-mail or message that appears to come from a trusted source, such as a bank ✓ • To trick a person into giving personal details ✓ • That can be used to commit fraud ✓	1 1 1	
6.6.2	• There may be spelling errors in the message • The e-mail may be sent from a web address other than the expected one • The message would ask you to follow a link and then to enter sensitive information • Will ask to confirm confidential details such as passwords, etc. • Inspect the properties of any links. ✓✓ (Any two)	2	5
6.7	• Using the school's resources for own gain • Using school time for business/steals school time • Neglects teaching duties, etc. ✓✓ (Any two)		2
6.8.1	• Smartphone/PDA/tablet/e-Readers ✓ *(Note to marker: Accept proprietary names of smartphones/PDA/tablets/e-Readers.* *Do not accept cellphone.)*	1	
6.8.2	• Symbian • iPhone operating system • Android (e.g. Ice Cream Sandwich/Honeycomb/Gingerbread/ JellyBean) • Blackberry operating system • Windows 7/8 mobile/Windows mobile • Ubuntu for Android • Linux (e.g. Maemo, MeeGo), etc. ✓ (Any one)	1	2

6.9.1	• Updated website content ✓/news/sport news sent automatically from a website (pushed) ✓usually in an e-mail with a link to the actual updated content	2	
6.9.2	• It alerts you to new content without having to check the website directly ✓	1	3
			[27]

QUESTION 7

7.1	• Open the task manager ✓ (use Ctrl+Alt+Delete) • Close the program that is not responding ✓ *(Note to marker: Accept check all devices and try re-connecting devices to computer)*	1 1	2
7.2.	• Run Disk cleanup/Delete temporary files and cookies/Empty Recycle Bin • Delete data/duplicate files from the hard drive • Uninstall unused programs/components • Make use of file/disk compression (zip), etc. ✓✓ (Any two)		2
7.3	• Check if the scanner is switched on • Check that the network cable is plugged in properly • Re-install the device driver • Check whether the scanner is broken, etc. ✓✓ (Any two		2
7.4	• The e-mail address he sent the message to is wrong/does not exist • The mail server is not online • Mailbox of recipient is full • Attachment rejected (virus/size/content) ✓✓ (Any two)		2
7.5	• Source the original program that will open the file from the Internet/install the program that will open the file on the computer • Ask the sender to re-send the file in a format/version that your computer can open • Try opening with another program, etc. ✓✓ (Any two)		2

7.6.1	• It may not delete properly/completely • It may delete files that will prevent other programs from working properly • It may corrupt the system ✓ (Any one)	1	
7.6.2	• Use the uninstaller that was installed with the program • Go to the Control Panel and then use the function to remove the program (Add/Remove / Programs and Features) ✓ (Any one)	1	2
7.7.1	• Sort/filter the spreadsheet ✓ • According to the class column ✓	1 1	
7.7.2	• Merge • Merge and Center • Merge Cells (Open Office) ✓ (Any one)	1	
7.7.3	• Multiply the answer by 24 ✓ (*Accept correct conversion*) • Format the cells/field to Number ✓	1 1	
7.7.4	• Import • Copy and paste • Copy ✓ (Any one)	1	
7.7.5	• Column/bar chart ✓	1	7
7.8.1	• Cell Number ✓ • Each entry will be unique/prevents duplication of record ✓	1 1	
7.8.2	• Validation rule ✓	1	3
7.9.1	• Query ✓ (or report based on a query)	1	
7.9.2	• Count function ✓ • In the report footer ✓ *(Note to marker: Do not accept a vague response such as 'use an appropriate function')*	1 1	3
			[25]

TOTAL SECTION B: 130
GRAND TOTAL: 150