basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

NOVEMBER 2013

MEMORANDUM

MARKS: 150

This memorandum consists of 19 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit questions and this marking memorandum frequently during the marking session.

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

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

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

SECTION A

QUESTION 1:
MATCHING ITEMS

1.1	J	✔	(1)
1.2	M	✔	(1)
1.3	G	✔	(1)
1.4	K or B	✔	(1)
1.5	C	✔	(1)
1.6	L	✔	(1)
1.7	S	✔	(1)
1.8	A	✔	(1)
1.9	P	✔	(1)
1.10	E	✔	(1)
	TOTAL: [10]		

QUESTION 2:
MULTIPLE-CHOICE QUESTIONS

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

TOTAL SECTION A: 20

SECTION B

QUESTION 3

3.1	• Core i5 ✓ *(Note to marker: Accept 'i5'.)*		1
3.2.1	• The size/measurement ✓ of the display/monitor/screen	1	
3.2.2	• Resolution ✓ *(Note to marker: Accept any answer that implies resolution, e.g. horizontal and vertical pixels.)*	1	
3.2.3	• High definition/high density ✓	1	3
3.3	• (Temporarily) holds/stores the data and program/instructions ✓ the computer/CPU is working with at a given moment ✓ *(Note to marker: Do not accept reference to performance. Do not accept 'stores data' on its own if the answer does not refer to the temporary nature of RAM.)*		2
3.4.1	• (Microsoft) Windows ✓ 7 Ultimate	1	
3.4.2	• Accept any Linux/Android option ✓ e.g. Ubuntu, Debian, Arch, Fedora, Red Hat, Knoppix, Kubuntu, Xubuntu and Gentoo, etc. (*Note to marker: Do not accept any cell phone operating systems, e.g. Symbian, Blackberry, etc.*)	1	2
3.5.1	• Increased speed • No moving parts • Consumes less energy • Ruggedness/robustness/durability • No fragmentation *(Note to marker: Accept any one answer relating to one of the above options.)* ✓ (Any one)	1	
3.5.2	• (Permanently) stores data/information/programs ✓	1	2
3.6	• Built-in/Part of ✓ the motherboard		1

3.7	• It has a better quality of picture/audio than a DVD • It is newer technology/features • Larger capacity • Backward compatibility with all disc formats *(Note to marker: Do not accept answers referring to speed.)* ✓✓ (Any two)		2
3.8.1	• PAN (Personal Area Network) • HAN (Home Area Network) ✓ (Any one)	1	
3.8.2	• The notebook can connect to any wireless network/device • Allows mobile (Internet) access from hotspots/WAP • No need for additional components ✓ (Any one)	1	
3.8.3	• (Wireless) access point ✓/Wi-Fi router/smartphone	1	3
3.9	• It will be faster/easier than manual methods ✓ • More accurate/no human error ✓		2
3.10	• Webcam • Touch pad/touch screen • Microphone • Fingerprint reader/biometric input device • Memory card reader • Pointing stick, etc. *(Note to marker: Do not accept 'mouse' or keyboard'.)* ✓✓ (Any two)	2	2
3.11	• Hardware - Use a microphone ✓ • Software - Speech recognition/speech-to-text program ✓ *(Note to marker: Accept other hardware answers such as eye-tracking devices, blow-suck tube, tongue-activated joystick, mouth stick, footpad, head mouse, etc.)*		2

3.12.1	• UPS • Battery backup • Generator ✓ (Any one)	1	
			3
3.12.2	• Make regular/automatic backups • Restrict access rights to the file/pdf format • Make files read-only • Use versions option to save different versions • Use passwords (lock) and encryption • Save regularly (with confirmation) ✓✓ (Any two)	2	
			[25]

QUESTION 4

4.1	• Operating system ✓ (*Note to marker: Accept brand names such as Windows range or Linux. Do not accept system software.*)		1
4.2.1	Web browser ✓ (*Note to marker: Do not accept specific examples/brand names such as Google Chrome.*)	1	
4.2.2	• E-mail • Chat rooms/online forums (e.g. Moodle, etc.) • Instant messaging (*WhatsApp, BBM, SMS, MMS, etc.*) • VoIP (*e.g. Skype, Google+, Google Hangouts*)/Video conferencing • Social media/networking (e.g. *Facebook, Twitter, LinkedIn, MySpace, Pinterest,* etc.) ✓✓ (Any two)	2	
4.2.3	• (Software) piracy ✓	1	4
4.3	• Screen reader • Text-to-speech program (*e.g. Narrator*) • Speech-to-text (*e.g. Dragon Dictate*) (*Note to marker: Accept specific examples such as JAWS, NVDA, Daisy, Supernova, Thunderstorm, etc. Do not accept magnifier or high contrast.*) ✓ (Any one)		1
4.4.1	• It may not be changed ✓ or sold ✓	2	
4.4.2	• Anybody can modify open source software/Clients can personalise the software to meet their needs • Improvements can be/are shared with others • The services linked to OSS are relatively cheap (*Note to marker: Do not accept any reference to cost.*) ✓✓ (Any two)	2	4

4.5.1	• *Accept answers relating to* freeing up space ✓	1	
4.5.2	• The registry of the computer will not be updated • The operating system may display error messages • Part(s) of the program may not be completely deleted • Files needed/shared by other applications may also be deleted, etc. ✓✓ (Any two)	2	
4.5.3	Uninstaller/Use an appropriate application in the Control Panel ✓ (e.g. Add/Remove Programs/Software)	1	4
4.6.1	• A program/software ✓	1	
4.6.2	• Allows the operating system to communicate with/the operating system controls the device ✓	1	
4.6.3	• The driver program for many generic and specific devices is **pre-loaded** ✓ on the computer as part of the operating system and is **automatically installed** ✓ when the device is plugged into the computer.	1 1	4
4.7.1	• Scan flash drives and portable media before using them/Quarantine viruses that cannot be removed • Do not surf, search and download from suspicious websites • Do not open suspicious looking e-mails/attachments • Be cautious when installing/downloading software • Use auto-protect options • Be cautious of clicking on pop-up windows, etc. (*Note to marker: Do not accept any reference to updating antivirus software or not using the Internet.*) ✓✓ (Any two)	2	
4.7.2	• Downloading/installing a free software program that contains spyware • Clicking on pop-up windows/links which will install infected software • Visiting websites that are infected • Via e-mail attachments ✓✓ (Any two)	2	

4.7.3	• The operating system runs/boots up slower than usual • The operating system shuts down unexpectedly • The operating system does not start up • Less memory available • Files become corrupted • Some programs or files disappear • Random music or sounds play • Programs do not work properly • Unknown files or programs suddenly appear • (Error) messages appear • System/security settings changed • Software installed without authorisation • System properties change, etc. (*Note to marker: Do not accept hardware failure.*) ✔✔✔ (Any three)	3	
			7
			[25]

QUESTION 5

5.1.1	• Computing devices/equipment ✓ • that are connected together ✓	1 1	
5.1.2	• To share hardware • To share software • To share/centralise data and information/collaboration/improve collaboration • Easier administration/to implement security measures • To share Internet access, etc. (*Note to marker: Do not accept any reference to gaming.*) ✓✓ (Any two)	2	4
5.2	• NICs • Computers/Computing devices • Switch/Router/Gateway/Hub/Bridge • Wireless Access Point • Communication medium/cables/wireless ✓✓✓ (Any three)		3
5.3	• *Client computer* uses resources ✓ • *Network server* provides resources ✓/*Server is not used as a workstation*		2
5.4	• Provides Internet access/a connection to the Internet/data bundles • Offers Internet services such as e-mail, Instant Messaging, etc. • Offers technical support related to their services • Most ISPs offer a filtering service to avoid spam, viruses, etc. • Some ISPs regulate the services to which members have access • Provide one local telephone number for Internet connections • Web hosting service • Domain registration • Online storage, etc. (*Note to marker: Do not accept only the expansion of the abbreviation ISP.*) ✓✓ (Any two)		2

5.5	• Worldwide collection of electronic documents/web pages • Multimedia service provided on the Internet (*Note to marker: Do not accept 'Internet' as an answer on its own.*) ✓ (Any one)		1
5.6.1	• Permanent/always on, ✓ • High bandwidth/fast/high-speed ✓ connection	1 1	
5.6.2	• Large amounts of data ✓/multimedia content are sent and received over the Internet • Latency/fast/immediate response time required ✓ (*Note to marker: Accept answers that relate to high bandwidth requirements of online gaming/ video/multimedia data.*)	1 1	
5.6.3	• ADSL/DSL/VDSL • Cellular(Edge/GPRS)/3G/4G/LTE • Radio • Satellite • Wi-Fi • WiMax • Fibre connection • BBL (Broadband over power lines) (*Note to marker: Accept any other valid answers that fall under these categories e.g. Diginet. Do not accept ISDN.*) ✓✓ (Any two)	2	6
5.7	• The user uses a PIN to identify him or herself, usually accompanied by a password known only to the user (security questions) • Transactions take place on a secure site/(yellow lock appears/https)/Encrypted • The bank sends an SMS with a code to be entered for the transaction to proceed/One time password • On-screen keypad (to prevent access by keyloggers) • Automatically log off ✓✓ (Any two)		2

5.8	- When someone uses your personal details - to pretend that they are you - to commit illegal activity/fraud (*Note to marker: Accept suitable examples.*) ✓✓ (Any two)	2	2
5.9.1	A bug is an inherent error or 'fault' in the program/'Something' that does not work correctly ✓	1	
5.9.2	From the vendor/The Internet/CDs distributed with computer magazines ✓	1	
5.9.3	- Keeping system secure/fixing security loopholes - Adding new features/improvements to software (*Note to marker: Do not accept vague, unmotivated answers such as to make the computer run smoother, etc.*) ✓ (Any one)	1	
5.9.4	- Patches/updates are designed and released to fix a specific software problem (bug) - Service packs are scheduled releases of all the collective updates/patches/changes/upgrades to the software - Overcome compatibility issues ✓✓ (Any two)	2	5
			[27]

QUESTION 6

6.1.1	• Cheap communication/Low costs of communication • More and more people making use of ICT/Greater accessibility • Availability of many communications apps/software • Time/distance barriers removed • Many collaborative/social networking tools/software available • Important information/news globally available, etc. ✓✓ (Any two)	2	
6.1.2	• Photographs instead of names may be used to identify contacts • Voice control (such as Google Voice) can be used to give commands • Touch/Motion control/Gestures • An electronic assistant may be used to access and read back SMSs • GUI interface – (*Accept any ONE specific example such as icons, etc.*) ✓✓ (Any two)	2	4
6.2.1	• Payments occur electronically/Electronic Fund Transfers (EFTs) • Wide availability of e-banking services, e.g. ATMs • Prompt payments made irrespective of distance or time/POS • Payments can be made via portable device such as cell phones/smartphones/tablets • Payments can be made one cell phone smartphone/tablet to another • E-mail and communication media make it cheap and easy to reach a client to remind him/her to pay for a service or goods, etc. ✓✓ (Any two)	2	
6.2.2	• Employees/people can work from home/Saves cost of renting an office/Telecommuting • Access to software packages (such as Pastel Accounting, Payroll, etc.) could make it more efficient/cost effective to run a business • Could require less staff – reduces the salary payments • Stock levels can be monitored closely/kept to a minimum – money is not tied up in stock • Cheaper to advertise/market/reduces printing costs • Video conferencing/collaborative software could save travel costs • Reduces costs of communication, e.g. e-mail • Internet banking services, no need to drive to the bank, etc. ✓✓ (Any two)	2	

6.2.3	• Shortage of computer skills in the workforce • Cost of purchasing/upgrading hardware/software • Malware (*Accept any one example*) • Constant need for upgrading of skills/re-training • Reliance on stable power supply • High costs of bandwidth/Internet connectivity • Cybercrime • Loss of business due to downtime/computer malfunction/theft of hardware • Possible lack of productivity • Loss of data due to insufficient backup practice, etc. ✓✓ (Any two)	2	6
6.3	• Always working/Longer and longer working hours • The quality of life is negatively impacted because they never take a break from work/no social/family life • Anti-social behaviour • Negative impacts of information overload, etc. (*Note to marker: Do not accept any health-related answers, e.g. Carpal Tunnel Syndrome, stress, etc.)* ✓✓ (Any two)		2
6.4.1	• Text/SMS messages • Instant messages • E-mail • Multimedia (picture/video/voice)/MMS messages, etc. ✓✓ (Any two)	2	4
6.4.2	• Greater use of online entertainment/more content placed online • Greater use of portable media to view/interact with content/more entertainment apps developed • More free/cheap entertainment/content available online • Increased piracy • New genres/types of entertainment (online gaming, etc.) • Greater emphasis on interactive entertainment • Increased ability to share multimedia content (YouTube, Facebook, etc.) • People can do online bookings for shows, etc. ✓✓ (Any two)	2	

6.5.1	- Survey/Questionnaire/Interview - Electronic form - Video/voice recording of an interview ✓ (Any one)	1	
6.5.2	- Quicker to gather - The data gatherer does not have to type in the information that is collected (already stored electronically)/Google forms can automatically convert collected data into a spreadsheet - Can add controls/checks to restrict/validate data that is input - Can automatically check that all questions are answered, - You can reach more people/Easier to reach a wider audience, etc. ✓✓ (Any two)	2	
6.5.3	- Sorting/grouping data - Filtering data - Using graphical capabilities such as graphs, SmartArt, etc. - Pivot tables - Using functions *(Accept any one example.)* - Conditional formatting ✓✓ (Any two)	2	
6.5.4	- Tempted to copy and not read (little or no effort) - Increased risk of plagiarism - Copy information without evaluating it - Overwhelmed by the information available on a certain topic (suffer from information overload)/time consuming to process - A higher risk to exposure to inappropriate or irrelevant information, etc. *(Note to marker: Accept any valid and reasonable response.)* ✓✓ (Any two)	2	7

6.6.1	• Green computing ✓	1	5
6.6.2	• Save energy/electricity - by using Energy Star compliant/energy efficient hardware/switching off unused equipment/making use of suitable power schemes/hibernation, etc. • Save paper - do not make unnecessary printouts/Proofread on screen or online/make increased use of e-communications • Use environmentally friendly recycling methods to avoid/reduce e-waste/toxic waste • Donate old equipment to schools/Upgrade computers where possible as opposed to discarding and replacing to reduce e-waste • Re-use ink cartridges - Reducing e-waste/toxic effects by using recycled/refillable cartridges/upgrading/reusing older hardware instead of dumping it, etc. (Any two suggestions ✓✓ with a suitable motivation for each ✓✓)	4	
			[28]

QUESTION 7

7.1	• Spreadsheet - calculations/invoices/orders/statements of accounts, financial statements, etc. • Word processing application - correspondence, contracts, minutes of meetings, etc. • Database applications - employee data, stock data, suppliers'/ debtors'/ creditors' data, etc. • E-mail software - communication • Web browser software - Internet searches (*Note to marker: Marks are not allocated to the applications but to the use of the application. **Accept any valid response related to a small business.***) ✓✓ (Any two)		2
7.2.1	• Formatting of cells set to Currency/Accounting format ✓	1	
7.2.2	• Remove decimal commas from cells B4:B6 ✓ • Replace with decimal points ✓ (*Note to marker: Accept any response related to the fact that some computers may have been set up to accept a decimal comma so for example, an incorrect formula was used.*)	1 1	
7.2.3	• Insert border lines between the cells • Make the headings bold/larger font/use appropriate font sizes • Use highlighting/shading, etc. ✓ (Any one)	1	4
7.3	• Check the Properties window for the flash disk to see the amount of free space available • In My Computer the free space will be shown below the identifying drive letter. ✓ (Any one)		1

7.4.1	• Ergonomics ✓	1	
7.4.2	• Take eye breaks by rolling the eyes/Blink every five seconds/ Close and rest the eyes • Focus on an object in the distance • Place the display at an arm's length from the eyes • Use larger fonts • Adjust the lighting (screen or room) • Use an LED monitor • Increase the refresh rate/screen settings • Special glasses to protect the eyes, etc. ✓✓ (Any two)	2	3
7.5.1	• USB hub/devices with extra USB ports ✓ (*Note to marker: Do not accept hub only.*)	1	
7.5.2	• Difficult to find components for an old computer • Older parts can be costly/could be cheaper to buy a new computer than upgrade • Multiple components probably need to be upgraded (e.g. CPU, RAM and HDD) due to age of the computer • Newer components may not be compatible with an older motherboard, etc. (*Note to marker: Do not accept general reasons for upgrading.*) ✓✓ (Any two)	2	3
7.6	• Use the features of the search option/utility • Organise the files into appropriate directories and subdirectories • Rearrange/Group the files alphabetically/according to type/chronologically • Use meaningful file and folder names • Create an index of files, etc. ✓ (Any one)		1

7.7.1	• The attachment is too large
	• Convert/compress the photograph to a smaller size
	
	   OR
	
	• The computer is not connected to the Internet
	• Connect the computer to the Internet
	
	   OR
	
	• A security setting can disallow any attachments
	• Change the security setting to allow attachments to be sent
	
	   OR
	
	• Send later was selected instead of send now.
	• Select the send now option.
	
	             (Cause ✓ plus matching solution ✓)
		2	

7.7.2	• Use a feature of cloud storage/Use DropBox/SkyDrive, etc. • Share it on social networking sites such as Facebook/Instagram, Pinterest, etc. • Share it on a photo sharing website (e.g Flickr) • Use Instant Messaging such BBM/MXit/Twitter, etc. ✓ (Any one)	1	
7.7.3	• He is using the computer for something other than its intended use for that time ✓ • He is using the school's 'cap'/consuming bandwidth to send his private messages ✓ (*Note to marker: Do not accept answers such as 'breaking school rules'.)*	2	5
7.8.1	• A website ✓ where users can create, add to, modify or delete the content ✓	1 1	
7.8.2	• Not all the content of a wiki is always moderated (checked by an expert) and may not be correct/Anybody can contribute to a wiki ✓	1	6

7.8.3	• Plagiarism ✓ (*Note to marker: Accept appropriate synonyms for plagiarism. Do not accept piracy as an answer.*)	1	
7.8.4	• Type a sentence or phrase that she is suspicious of in a search engine and search for it • Use software designed to find plagiarism (such as Turnitin or PlagiarismDetect, etc.) • Teacher should pick up that it is not the learner's usual writing style or level • Non-printing characters peculiar to websites may appear/Original hyperlinks may still be left in the learner's work/Learners leave in the Americanisms/Dollar symbols as given • A number of different styles appear in the document, etc. 　　　　　　　　　　　　　　　　　　　✓✓ (Any two)	2	
			[25]

TOTAL SECTION B:　130
GRAND TOTAL:　150