



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATION

COMPUTER APPLICATIONS TECHNOLOGY P2

2015

MEMORANDUM

MARKS: 150

This memorandum consists of 16 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the memorandum/marking guideline 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 it correlates, so that you are not misled by the 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 answer and then the question paper and memorandum. Ask yourself or your senior marker if the response could 'fit' into the memorandum before allocating the correct marks to the candidate. For example, the memorandum states 'cheap' and the learner responds with '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	K	✓	1
1.2	P	✓	1
1.3	N	✓	1
1.4	S	✓	1
1.5	C	✓	1
1.6	G	✓	1
1.7	B	✓	1
1.8	Q	✓	1
1.9	F	✓	1
1.10	A	✓	1
Total: [10]			

QUESTION 2: MULTIPLE-CHOICE

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

QUESTION 3: TRUE/FALSE ITEMS

(Note to marker: In QUESTIONS 3.2, 3.3 and 3.5 candidates need to provide both the word 'False' and the correct term, e.g. wiki, in order to obtain the mark.)

3.1	True✓	1
3.2	False – firewall✓	1
3.3	False – input✓	1
3.4	True✓	1
3.5	False – Ctrl+V✓	1
		[5]

TOTAL SECTION A: 25

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

4.1	<ul style="list-style-type: none"> • Less clutter of cables/where cables are not practical to use • Does not have to be very close to the computer • Allows for a wider range of movement, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not to accept answers like, it is more modern, looks 'cooler', etc.)</i></p>		2
4.2	<ul style="list-style-type: none"> • Webcam/(digital) camera • Microphone/Headset • Router/3G/4G router/dongle/modem • Headphone/Earphone/Speakers <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept a reference to a computer.)</i></p>		2
4.3.1	<ul style="list-style-type: none"> • Scanning • Faxing • Photocopying • E-mailing • OCR conversion • Converting to PDF • Saving to a network, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
4.3.2	<ul style="list-style-type: none"> • If the one function fails, all functionality may be lost • If the one function fails, whole device goes in for repair as opposed to single/separate devices • Can only use one function at a time • Extra functions may not be required by the user/unnecessarily increase the cost, etc. <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Do not accept 'more expensive' etc.)</i></p>	1	3
4.4	<p>They use (specialised) programs✓ that are more demanding on hardware✓</p> <p><i>(Note to marker: Accept one example of specific hardware needed.)</i></p>		2

4.5	<ul style="list-style-type: none"> • Electronic sharing of files uses less paper/Designs can be done on the computer instead of on paper • Reduced impact to environment due to less travelling • Stress/load tests being simulated instead of building needless prototypes • Tracking climate change • Keeping record/track of endangered wildlife, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.6	<ul style="list-style-type: none"> • Types of cartridges used • Number of pages printed per cartridge • Speed • Print resolution/Quality • Colour/Monochrome • Wired/wireless e.g. Wi-Fi or NFC • Built-in card reader • USB port • Duplex printing • Paper tray capacity • LCD/Touch screen • Paper sizes/media that can be used • Connectivity to a network • On-board storage • The duty cycle of a printer, etc. <p style="text-align: right;">✓✓(Any two)</p>		2
4.7	<ul style="list-style-type: none"> • Convergence is the merging or 'coming together' of different technologies/devices in a (new) single device/one device that has the functionality of different devices✓ • Any ONE example such as a smartphone, multi-function printer, etc.✓ 		2
4.8	<ul style="list-style-type: none"> • Reconnect the keyboard • Restart the computer • Pair the devices again (if wireless) • Check/replace batteries (if wireless) • Check/reinstall drivers • Bring device within range (if wireless) • Try plugging into another port, etc. <p style="text-align: right;">✓✓(Any two)</p>		2
4.9	<ul style="list-style-type: none"> • Lower the resolution of any pictures within the document • Compress/Zip the document • Compress/Zip the existing content of the flash drive <p style="text-align: right;">✓(Any one)</p>		1

4.10.1	<ul style="list-style-type: none"> • RAM/Memory • CPU • Hard Drive/Solid State Drive • Graphics card • Motherboard <p style="text-align: right;">✓✓ (Any two)</p>	2	
4.10.2	SSD/Solid State Drive/mSATA✓	1	3
4.11	<ul style="list-style-type: none"> • Assist a blind user/Address disability of certain users✓ • Convenience, e.g. a user can listen to the content while doing something else/user can listen to the text being read aloud✓ <p><i>(Note to marker: Accept one specific reference to an example of the above. Accept converting text to speech.)</i></p>		2
4.12	<ul style="list-style-type: none"> • The performance (for the user) of the computer will decrease/tasks consume system resources • The tasks will take longer to complete • The efficiency of the tasks may decrease, e.g. virus can infect a file that has been scanned already/disk write may occur to an area of the disk that has already been optimised through defragmentation • Open files are read only and cannot be scanned <p style="text-align: right;">✓✓ (Any two)</p>		2
			[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	NIC/Network Interface Card/3G/Wi-Fi adapter✓		1
5.2	<ul style="list-style-type: none"> • E-filing/tax return • Information services, such as Home Affairs • Checking voters' registration • Paying for services such as TV licenses, municipal accounts • Disseminating Grade 12 results • Study Guides • Awareness campaigns, e.g. HIV • Warnings of load shedding • Electronic correspondence, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.3	<ul style="list-style-type: none"> • Not every parent may have access to Twitter/Internet • Privacy issues • It would require a lot of work/admin on the part of the school • Limit to amount of text that can be sent, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.4	<ul style="list-style-type: none"> • Manage rights of each user/group • Users will have a separate folder in the home directory on the server/Files from different users will not get dumped into the same folder by default • Users cannot access each other's files • To give different users different rights/privileges • To control the access to files on the network, etc. <p style="text-align: right;">✓ (Any one)</p>		1
5.5	<ul style="list-style-type: none"> • Lower cost than a telephone call/Cost is the same irrespective of the distance • Can be used on a wide variety of devices • (Geographical) mobility • Video can be used during the call • Additional functionality of software e.g. file sharing capability of Skype, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.6	<p>A LAN occupies a smaller (geographical) area than a WAN/ A WAN occupies a larger (geographical) area than a LAN ✓.</p> <p><i>(Note to marker: Accept any reference to size of the network. Accept expansion of the acronym.)</i></p>		1

5.7	<ul style="list-style-type: none"> • Check for suitability across all web pages • Check consistency of colour/formatting and layout across all web pages • Can be used on mobile devices • Make sure all links work • Make sure the links have appropriate descriptions. • See that the information on the web pages is grouped in a logical way e.g. FAQ • Check for language errors on the website • Easy/Consistent navigation between pages, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.8	<ul style="list-style-type: none"> • Via USB • OTG • Bluetooth • Card reader/Portable storage media • E-mail • Cloud storage e.g. Dropbox, Google drive, etc. • Wi-Fi • Via network • NFC, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.9	<ul style="list-style-type: none"> • Via FTP or another program that doesn't limit the size • Via Cloud Storage • Compression • Torrents • Breaking it up into several smaller parts that can be sent over e-mail (and then recombined) <p style="text-align: right;">✓✓ (Any two)</p>		2
			[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1.1	Create a link/linked object ✓ <i>(Note to marker: Accept using 'Paste link' when pasting it in the document.)</i>	1	
6.1.2	<ul style="list-style-type: none"> • No need to retype responses to questionnaire/Information can be stored directly from the response • Easier/Quicker to respond • To limit a variety of responses/Default values/Restrict empty fields <p style="text-align: right;">✓✓ (Any two)</p>	2	
6.1.3	Bookmark✓	1	4
6.2	<ul style="list-style-type: none"> • Printed media e.g. Magazines, Books, etc. • Electronic sources other than the Internet • Interviews • Questionnaire/Survey • Television <p style="text-align: right;">✓✓ (Any two)</p>	2	
6.3	<ul style="list-style-type: none"> • Compare the information with other sources • Check whether the author has a vested interest • Look for any bias • Check credentials of the author <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept answers that are NOT related to objectivity.)</i></p>	2	
6.4	<ul style="list-style-type: none"> • No need to retype the responses • Do not have any issues with illegible handwriting • Easier/More efficient to get input from a large geographic area • No paper waste, etc. <p style="text-align: right;">✓ (Any one)</p>	1	5
6.5	Passing off someone else's work/intellectual property as your own✓ <i>(Note to marker: Accept an example which clearly describes plagiarism.)</i>		1
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	<ul style="list-style-type: none"> • RSI/CTS • Obesity • Blood circulation problems • Poor eye-sight • Backache, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept answers that are NOT related to physical health problems.)</i></p>			2
7.2.1	<ul style="list-style-type: none"> • Domain name • E-mail address known for spam/Other users have tagged it as spam • Typical combination of words from known examples of spam triggered it in the header or content, e.g. 'has been credited' <p style="text-align: right;">✓✓ (Any two)</p>	2		6
7.2.2	There is a hyperlink potentially requesting personal information✓	1		
7.2.3	<ul style="list-style-type: none"> • Delete/Ignore the e-mail • Report (as phishing) • Do not follow any hyperlinks • Do not reply to the e-mail • Call the company/SARS/institution to verify • Do not provide any information asked for in the e-mail, etc. <p style="text-align: right;">✓✓✓ (Any three)</p>	3		
7.3	<ul style="list-style-type: none"> • Workers can work from any place, e.g. home • Spend less time traveling • Potentially less cost to the company e.g. Company does not have to rent an office/work space, travelling costs, etc. • Environmental benefits, e.g. less traffic on the road/less emissions from cars • Flexible working hours, etc. <p style="text-align: right;">✓✓ (Any two)</p>			2
				[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	To find synonyms of words/words with similar meaning✓		1
8.2	<ul style="list-style-type: none"> Keep track/history of individual changes made by multiple users✓ Changes can be validated before being effected✓ <p>(Note to marker: Do not accept 'Track changes to a document'.)</p>		2
8.3	<ul style="list-style-type: none"> Easy to maintain consistent formatting/All headings will look the same Easy to update styles/change all occurrences at the same Needed for automatic table of contents, etc. <p>✓✓ (Any two)</p>		2
8.4	Autofill✓ (Note to marker: Accept an accurate description of Autofill.)		1
8.5	<ul style="list-style-type: none"> To paste without formatting To paste values without the formula To transpose To paste a link <p>✓ (Any one)</p>		1
8.6	To explain the purpose of a line/block of code/To Add information that will not show when the web page is viewed✓		1
8.7	<ul style="list-style-type: none"> Tag had spelling errors/syntax errors on tag/No closing tag Reference resource or file being referenced does not exist anymore Hyperlinks of a saved page do not reference online resource/page/document anymore No Internet access <p>✓✓ (Any two)</p>		2
8.8	It is a field✓ which uniquely identifies a record/has a different value for each record/the values cannot be repeated✓		2
8.9	It is a step-by-step guide✓ on how to create a new database object, e.g. query wizard/form wizard/report wizard✓		2
8.10	One cannot predict what the person's surname can be/Surnames are usually different✓		1
			[15]

TOTAL SECTION B: 75

SECTION C**QUESTION 9: INTEGRATED SCENARIO**

9.1	<ul style="list-style-type: none"> • Height of the desks/chairs at correct position/Arms are at the correct height/angle • Fresh air circulation/Air-conditioning • Comfortable chairs • Dust free environment • Ergonomic layout of the class • Suitable lighting, etc. <p style="text-align: right;">✓✓✓ (Any three)</p>		3
9.2.1	<ul style="list-style-type: none"> • Higher quality graphics can be transmitted to the monitor/VGA has an analogue signal/HDMI is digital • Audio can be transmitted over the same cable as video • HDMI ports are more common on newer computers/devices <p style="text-align: right;">✓ (Any one)</p>	1	6
9.2.2	500 GB✓	1	
9.2.3	Using the dedicated memory instead of RAM on the computer which means more RAM is available for processing of other tasks✓ <i>(Note to marker: Accept a reference to the graphics quality being improved.)</i>	1	
9.2.4	4 GB✓	1	
9.2.5	Touch screen✓	1	
9.2.6	802.11 (b/g/n)✓	1	
9.3.1	<ul style="list-style-type: none"> • New functions/features could be added • Existing security breaches may be fixed • Programming bugs could be fixed <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.3.2	A patch fixes a small, specific problem✓.	1	
9.3.3	Shareware can be used free of charge for a limited period of time/It has limited features compared to the full version of the program✓. AND The software can be tested for free before buying it✓. <i>(Note to marker: Accept that Shareware license agreement allows installation on multiple computers.)</i>	2	

9.3.4	<ul style="list-style-type: none"> Others cannot edit the content Can be opened irrespective of the software it was originally created in Software needed to view the document is generally easily/freely available. <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Accept potentially smaller file sizes.)</i></p>	1	6
9.4	<ul style="list-style-type: none"> Post interesting articles/news items Regularly update it Interact with readers Invite/Remind readers via SMS/e-mail Use informal language/tone of voice Use headlines for posts which would grab a reader's attention Regularly post pictures/multimedia which will support the content Add RSS features/capabilities, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
9.5	<ul style="list-style-type: none"> Pop-up/Ad-blocker Use the built-in functions of a web browser <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Accept block adds.)</i></p>		1
9.6	Parts of files scattered over (non-contiguous areas of) a disk✓.		1
9.7.1	<ul style="list-style-type: none"> The speed at which the printer works Number of pages a printer can complete in a minute <p style="text-align: right;">✓ (Any one)</p>	1	2
9.7.2	Quality of the printout/How many dots of ink/toner will be made on the paper in an inch✓	1	
9.8	Basic computer/Computer with the lowest specification currently available on the market✓.		1
9.9	<ul style="list-style-type: none"> Cannot be forgotten like a password✓ Unique to each person✓ 		2

9.10.1	<ul style="list-style-type: none"> • Centralised storage/Ability to access from any connected device/computer • Update/Install software from a central location • Sharing software • Sharing of expensive hardware devices such as printers • (Efficient) sharing an Internet connection • Communication between users within the network • Centralised backup/security • Desktops can be viewed/controlled centrally using software such as NetOp or iTalc, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.10.2	<ul style="list-style-type: none"> • Can be more difficult to install/maintain • Potentially more equipment needs to be purchased • Signal is more prone to being hacked • Wireless signals might interfere with other signals such as alarm systems • Signal strength can vary/Signal can easily be affected, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept unmotivated, generalised answers such as 'slower'.)</i></p>	2	4
9.11.1	<ul style="list-style-type: none"> • Backup regularly • Incremental backups/Only back up files changed from last backup • Keep backups off-site • Use external storage devices • Rotate storage media • Check to see if data within the backups can be accessed/opened/used • Make multiple backups • Automate/Schedule backups, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.11.2	<ul style="list-style-type: none"> • Data is available anywhere with access via the Internet • Many cloud storage sites offer limited free storage space • No need to carry storage devices • Data can be shared with other users • Service provider responsible for backups • Saves on local hard drive space • Security access control • Automatic synchronisation features/options, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	4
9.12.1	<ul style="list-style-type: none"> • Batteries are flat/Connection lost • Not installed properly/Incorrect driver <p style="text-align: right;">✓ (Any one)</p>	1	

9.12.2	<ul style="list-style-type: none"> • Incorrect drivers • More than one printer is available/The document was sent to the incorrect printer • No paper • No ink • Hardware problem with the printer • Printer queue could be paused/Printer could still be spooling • Print job could have been cancelled, etc. <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Do not accept reference to switching on or correctly connecting the printer.)</i></p>	1	2
9.13.1	<p>A web browser is a program which is used to display/navigate between websites✓.</p> <p>A search engine is a program/website which finds websites on the Internet that contain certain key words or phrases✓.</p>	2	
9.13.2	<ul style="list-style-type: none"> • He/She does not have to queue/travel to the bank • Not restricted to banking hours • Doesn't have to risk walking around with cash • (Generally) cheaper than 'over-the-counter'/non-electronic banking, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.13.3	<p>Anti-virus software/(Internet) security suite✓✓</p> <p>OR</p> <p>Any ONE example of anti-malware software/Security suite ✓✓ e.g. Kaspersky Anti-Virus, Avast, MS Essentials, NOD32, ESET, AVG, Norton, F-Secure, Panda, Bit Defender, Malwarebytes Anti-Malware, etc.</p>	2	
9.13.4	<p>Program that records keystrokes✓ in order to find/steal confidential information✓</p> <p><i>(Note to marker: For the second mark also accept a reference to stealing usernames, passwords, bank details, etc.)</i></p>	2	8

9.14	<ul style="list-style-type: none"> • No personal Internet use/Educational use only • Respect intellectual property/copyright issues • Respect privacy of others • General netiquette issues (accept any one suitable example) • No personal e-mail • Do not install programs on the computers • Do not log in using someone else's username and password • Do not download software • Do not play games on the school computers • Stick to storage/bandwidth quotas • No portable storage devices (such as flash drives) may be used on the computers • Do not download/view offensive material • Cyberbullying is not allowed, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept one example of offensive material in the place of downloading/viewing offensive material.)</i></p>			2
9.15.1	Text wrapping/Soft enter/Alt+Enter✓			1
9.15.2	<p>=D3/\$D\$2*\$E\$2</p> <p>OR</p> <p>=D3/\$D\$2*E\$2</p> <p>OR</p> <p>=D3/D\$2*E\$2</p> <p>Absolute cell referencing correctly added✓</p>			1
9.15.3	COUNTIF✓			1
9.15.4	SUMIF✓			1
9.15.5	<ul style="list-style-type: none"> • Wide range of statistical functions available for processing • Formulas/Values updated if data/formulas change • Easy to process large number of marks • Easy to copy formulas • Can make graphs to compare learner performance • Sort/Filter data • Data can be arranged on multiple sheets • Conditional formatting (to highlight specific marks/range of marks), etc. <p style="text-align: right;">✓✓ (Any two)</p>			2
TOTAL SECTION C:				50
GRAND TOTAL:				150