



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2017

**COMPUTER APPLICATIONS TECHNOLOGY P2
MARKING GUIDELINE**

MARKS: 150

This marking guideline consists of 15 pages.

SECTION A: SHORT QUESTIONS**QUESTION 1: MATCHING ITEMS**

1.1	E ✓	(1)
1.2	H ✓	(1)
1.3	K ✓	(1)
1.4	F ✓	(1)
1.5	A ✓	(1)
1.6	D ✓	(1)
1.7	J ✓	(1)
1.8	C ✓	(1)
1.9	B ✓	(1)
1.10	G ✓	(1)

[10]**QUESTION 2: MULTIPLE-CHOICE**

2.1	C ✓	(1)
2.2	B ✓	(1)
2.3	D ✓	(1)
2.4	B ✓	(1)
2.5	C ✓	(1)
2.6	A ✓	(1)
2.7	B ✓	(1)
2.8	C ✓	(1)
2.9	B ✓	(1)
2.10	A ✓	(1)

[10]**QUESTION 3: MODIFIED TRUE/FALSE**

3.1	False – Grid computing	(1)
3.2	False – Contrast ratio	(1)
3.3	False – service pack	(1)
3.4	True	(1)
3.5	False – router	(1)
		[5]

TOTAL SECTION A: 25

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGIES

4.1.	4.1.1	<p><i>Any TWO of ✓✓</i></p> <p>The laptop would be preferred because of the following reasons:</p> <ul style="list-style-type: none"> - More powerful CPU/Processing is done faster/Higher processing speed/2.4 GHz CPU/Any valid reason that implies a more powerful CPU. - More RAM/8GB RAM/Any valid reason that implies more RAM. - Bigger HDD/1.5TB HDD/It has more storage space to save all the video footage. - Need a keyboard to do a significant amount of typing/Any valid reason that implies the need of a keyboard. - A larger screen to work on. <p><u>Also accept any other correct sensible reason.</u></p> <p>NOTE:*If learner only answered Faster/Better may only receive ONE MARK but any other answer may not imply faster. *DO NOT accept any answer about software or cost.</p>	2	2																				
4.2	4.2.1	SSD: Solid State Drive/Disc OR Static State Drive ✓	1																					
	4.2.2	<p><i>Any THREE comparative differences ✓✓✓</i></p> <p>Do not accept cost as an answer</p> <table border="1"> <thead> <tr> <th>SSD</th> <th>HDD</th> </tr> </thead> <tbody> <tr> <td colspan="2">Both sides must be correct to earn one mark</td> </tr> <tr> <td>Electronic</td> <td>Magnetic</td> </tr> <tr> <td colspan="2">For the following only the left/right half is required:</td> </tr> <tr> <td>Has no moving parts and works quietly</td> <td>Has moving parts such as platters and read/write head and can be heard when working</td> </tr> <tr> <td>Faster data transfer rate</td> <td>Slower data transfer rate</td> </tr> <tr> <td>Smaller storage capacity</td> <td>Larger storage capacity</td> </tr> <tr> <td>Smaller (physical dimensions)</td> <td>Larger (physical dimensions)</td> </tr> <tr> <td>More robust/reliable</td> <td>Less robust/reliable</td> </tr> <tr> <td>Less power consumption/ more energy efficient</td> <td>More power consumption/ less energy efficient</td> </tr> </tbody> </table>	SSD	HDD	Both sides must be correct to earn one mark		Electronic	Magnetic	For the following only the left/right half is required:		Has no moving parts and works quietly	Has moving parts such as platters and read/write head and can be heard when working	Faster data transfer rate	Slower data transfer rate	Smaller storage capacity	Larger storage capacity	Smaller (physical dimensions)	Larger (physical dimensions)	More robust/reliable	Less robust/reliable	Less power consumption/ more energy efficient	More power consumption/ less energy efficient	3	
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More robust/reliable	Less robust/reliable																							
Less power consumption/ more energy efficient	More power consumption/ less energy efficient																							
	4.2.3	Currently/generally SSDs are not readily available in as large a storage capacity as a traditional HDD. ✓	1	5																				

4.3	4.3.1	<p><i>Any ONE for THREE marks: ✓✓✓</i></p> <p>Cache memory is high speed/faster memory ✓ that stores instructions and data that will probably be used next ✓ by the CPU. ✓</p> <p>OR</p> <p>Cache memory increases the speed of the system ✓ by using its high speed memory that stores instructions and data that will probably be used next ✓ by the CPU. ✓</p> <p>OR</p> <p>Cache memory increases the speed of the system ✓ by preventing the CPU having to wait ✓ for data from the slower RAM. ✓</p>	3	3
4.4	<p><i>Any TWO reasons: ✓✓</i></p> <ul style="list-style-type: none"> • The RAM in a tablet is not removable from the motherboard. ✓ • RAM in a laptop is upgradeable. ✓ • Motherboards differ. • Physical space for RAM is different/The RAM in a tablet is specialised memory designed to be as small as possible and is unique to that device as it is physically a part of the logic board. • RAM in a laptop is generic and can be used in different types of laptops. 		2	2
4.5	4.5.1	<p><i>Any TWO advantages of USB over Firewire ✓✓</i></p> <ul style="list-style-type: none"> • USB can be used on almost any computer, because almost all computers contain USB ports. ✓ • There is no form of chipset incompatibility with USB devices. ✓ • USB is more common/better supported/more devices make use of USB. • USB is more cost effective than using Firewire. 	2	3
	4.5.2	Application software. ✓	1	
4.6	4.6.1	<p><i>Any ONE of: ✓</i></p> <ul style="list-style-type: none"> • 3G • EDGE • GPRS • LTE/4G • Radio <p>• Do not accept Wi-Fi, Wireless.</p>	1	3
	4.6.2	The cloud refers to storage/services/space ✓ located on the Internet/on-line/external. ✓	2	

4.7	4.7.1	VoIP converts voice/video/images data into (digital) data ✓ that can be sent over a network/Internet. ✓ OR VoIP can use a standard Internet connection ✓ to make telephone calls. ✓ NOTE: Voice over Internet protocol – ONLY ONE MARK	2	
	4.7.2	<i>Any ONE of: ✓</i> Skype Google Hangouts/Google Talk etc.	1	
	4.7.3	<i>Any ONE of: ✓</i> <ul style="list-style-type: none"> • Discussion groups such as chat rooms, newsgroups, forums. • IM messaging. • Social networking sites and blogs such as Facebook, Twitter, MySpace, FaceTime, IRC, etc. 	1	4
4.8		<ul style="list-style-type: none"> • QR code/2D barcode. ✓ • It would be scanned (by a smartphone) ✓ to reveal the text/information it contains. • Any suitable example such as URL of school, etc. ✓ 	3	3
				[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	Any TWO reasons for not being feasible: ✓✓			
	<ul style="list-style-type: none"> • The video footage is contained in large data files. • Netiquette requires not sending large attachments/Do not e-mail large files. • Large e-mail attachments can be blocked/flagged as spam. • Bandwidth constraints/slow to upload or download. • Data cost per MB/GB. (Do not accept any answer on privacy/piracy/format of the video.)		2	2
5.2	5.2.1	Podcasting is when video/audio clips are made available/published online for downloading purposes. The format cater for portable media devices.	1	
	5.2.2	Any TWO of: ✓✓ <ul style="list-style-type: none"> • RSS feeds • SMS • Blog post • Website update • E-mail • Instant message 	2	3
5.3	5.3.1	Broadband is any high speed/high bandwidth connection to the Internet.	1	
	5.3.2	(a) Digital	1	
		(b) Any ONE EXAMPLE ✓ ISDN Diginet Fibre/FTTH/FTTx	1	3
5.4	5.4.1	Click on this icon to add any files to the e-mail message.	1	
	5.4.2	Rich text option: Allows you to format the e-mail message. ✓ Plain text: Message is sent without any formatting. Even formatting that has been done, will be lost. ✓	2	3
5.5	(Online) Advertising/ads		1	1
5.6	<ul style="list-style-type: none"> • E-books can easily be updated/distributed. • Contribute to environment/green computing. • Can adjust print size/fonts in e-books can be resized. • Easy to transport/store large number of books. • Potentially quicker to access/source books/delivered almost instantly. • Can have additional features other than text, i.e. video clips, etc. • Many e-books are sold with bonuses, which you usually do not get with a printed book. This adds value to your purchase. • E-books take up less space. (Do not accept answers relating to cost.)		2	2
5.7	Keeps track of pages visited.		1	1
				[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1	6.1.1	<p><i>Any TWO ways: ✓✓</i></p> <ul style="list-style-type: none"> • The 'calendar' option allows you to set reminders for events or appointments. • These meetings can be automatically synchronised to include all of the participants. • The calendars can be shared by the participants and reminders can be sent to them about the meetings, etc. 	2	
	6.1.2	A to-do list.	1	3
6.2		<p><i>Any TWO: ✓✓</i></p> <ul style="list-style-type: none"> • Improved accuracy/Data validation can be done/No issues with handwriting/Easier to capture the answer on a computer. • Less time needed for data capture/Respondents may be more likely to complete it easier and faster/Answer the survey. • Data can be exported for analysis (into a spreadsheet) directly. • Easier to distribute survey/has wider range of respondents. • Green computing (saving paper). • Irrelevant answers can be eliminated because you can choose between the options. 	2	2
6.3		<p><i>Any ONE: ✓</i></p> <ul style="list-style-type: none"> • Neatness/legibility. • Provides users with a check to see that they filled in the correct number of digits. 	1	1
6.4		<p><i>Any ONE: ✓</i></p> <ul style="list-style-type: none"> • Sorting • Grouping • Filtering • Pivot tables <p><i>(Do not accept functions or any particular example of a function.)</i></p>	1	1

6.5	<p><i>Any TWO: ✓✓</i></p> <ul style="list-style-type: none"> • When there is a need to relate or link data. • Easier to perform queries to find specific information. • To produce reports. • When graphical representation of results is not required. • To provide an easier format for users to enter data using a form/Better data capture forms can be used. • Multiple users can edit the database at the same time. • Databases have the capacity to store more data than a spreadsheet. • When the bulk of the information entered is not numerical, etc. • Designed to work with structured records. • Better data validation functions. • Data can be exported to other formats. 	2	2
6.6	The use of another author's expression of thoughts and ideas and passing them off as one's own without permission.	1	1
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	<p><i>Any ONE: ✓</i></p> <ul style="list-style-type: none"> • May be used for legal downloads, e.g. open-source software. • May be used to distribute documents or other files on which no copyright is applicable, etc. 	1	1
7.2	<p><i>Any TWO: ✓✓</i></p> <p>Answers relating to a lack of privacy:</p> <ul style="list-style-type: none"> • Cookies • Facial recognition • Logging of IP addresses • Location-based services • Targeted advertising • Data surveillance, etc. <p>AND/OR</p> <p>Answers relating to protecting one's privacy:</p> <ul style="list-style-type: none"> • The use of proxy servers • Cleaning browsing history • Encryption • The use of a VPN • Browser options such as 'Incognito' mode and Do Not Track (DNT), etc. 	2	2

7.3	7.3.1	The GPS coordinates of where the photograph was taken, is added to the photograph's metadata.	1	2
	7.3.2	The inclusion of the GPS coordinates may alert poachers where to find the rhino.	1	
7.4	Adjust the settings (Privacy settings) of your Facebook account to prevent being tagged (without permission) in photographs.		1	1
7.5	<i>Any TWO: ✓✓</i> <ul style="list-style-type: none"> • Use of GPS technology, e.g. directions. • Use of the Internet, for example the entertainment of the passengers. • Updates to the car's software. • Traffic updates/information direct to the car. • Remote monitoring for security/Vehicle tracking. • Remote monitoring of performance/maintenance of the car. 		2	2
7.6	<i>Any TWO: ✓✓</i> <ul style="list-style-type: none"> • Spamming • Distributed Denial-of-Service Attacks • Brute-force dictionary attacks on servers • Unauthorised banner display • Click jacking, etc. 		2	2
				[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	8.1.1	<ul style="list-style-type: none"> • A relative/normal cell reference. ✓ • It changes as the formula is copied down. ✓ • An absolute cell reference. ✓ • It remains the same as the formula is copied down. ✓ 	4	9
	8.1.2	<ul style="list-style-type: none"> • Change the regional settings to South African via the control panel OR change settings in the control panel. ✓ • Format as Currency. ✓ 	2	
	8.1.3	<ul style="list-style-type: none"> • Title/heading ✓ • Legend ✓ • Data labels/percentage/value ✓ 	3	
8.2	8.2.1	Group Footer or Group Header	1	3
	8.2.2	Query	1	
	8.2.3	<ul style="list-style-type: none"> • VAT:[Price]*0.14 ✓ • VAT:[Price]/100*14 (Any ONE) <p>(Note to marker: Only the field name should appear between square brackets.)</p>	1	

8.3	A feature to reflect information regarding the reference to a book or academic work. ✓ Accept either ONE below: <ul style="list-style-type: none">• Used when one wants to refer to another person's work in an explanation. ✓• To show consultation of other sources to avoid plagiarism.	2	2
8.4	Styles	1	1
			[15]
		TOTAL SECTION B:	75

SECTION C

QUESTION 9: INTEGRATED SCENARIO

9.1	<p>NOTE: Any ONE correct motivation ✓✓</p> <p>If answered Yes: ✓</p> <ul style="list-style-type: none"> • Bluetooth as a range of 100 m if signal amplifiers are used. ✓ • Line of sight is not required. <p>If answered No:</p> <ul style="list-style-type: none"> • Bluetooth has a limited range (around 10 m) and the votes of many members will not be received by the server. 	2	2
9.2	<p>Any TWO of: ✓✓</p> <ul style="list-style-type: none"> • The device needs to be paired with the server. • The controller is not discoverable to the server. • A password may need to be supplied to pair the two devices. • The batteries need to be replaced. • The device/server must be switched on. • Reset the device/server. • Bluetooth needs to be activated on both pairing devices. 	2	2
9.3	<p>9.3.1 Any ONE of: ✓✓</p> <p>Watching a video online ✓ while it downloads in the background. ✓</p> <p>OR</p> <p>Media content/video delivered continuously ✓ over the Internet. ✓</p> <p>OR</p> <p>Streaming is using a high bandwidth connection ✓ to make continuous flow of data possible. ✓</p> <p>OR</p> <p>Transmitted in continuous stream ✓ while earlier parts are being used, ✓ e.g. watching a live game while it is being played.</p>	2	
	<p>9.3.2</p> <ul style="list-style-type: none"> • Broadband Internet connection ✓ • Digital video camera/computer/ ✓ 	2	

	9.3.3	<ul style="list-style-type: none"> • Data usage could be high ✓ • Poor connection speed could cause the video to hang/buffer <p style="text-align: right;">(Any ONE)</p> <p>(Note to marker: Accept answers relating to cost of high data usage such as the faster connection required or to quality of the video.)</p>	1	
	9.3.4	Speech to text/speech recognition	1	6
9.4	9.4.1	<p><i>Any TWO advantages of wireless network over a cabled network: ✓✓</i></p> <ul style="list-style-type: none"> • Less expensive to install/easy to setup. • No need to use cables. • More convenient as clients do not need to be at a network point to access the network. • Easy to add another access point/computer/device. • Mobility of devices. 	2	
	9.4.2	<ul style="list-style-type: none"> • Wireless access point/Wireless router with access point. ✓ • Wi-Fi adapter/Wi-Fi network card. ✓ 	2	
	9.4.3	<p>WiMAX</p> <p>(NOTE: Do not accept: Wi-Fi.)</p>	1	
	9.4.4	<p><i>Any TWO of: ✓✓</i></p> <ul style="list-style-type: none"> • Sharing/transferring files. • Identity verification/authentication purposes. • Location-based profile automation. • Can be used in payment systems. • Switch devices on or off. 	2	
	9.4.5	<p><i>Any TWO of: ✓✓</i></p> <ul style="list-style-type: none"> • Have an up to date anti-virus software installed. • Have an up to date anti-spyware software installed. • Have an up to date anti-malware software installed. • Do not open any suspicious attachments in e-mails. • Firewalls. • Scan computer/removable media at regular intervals. • Passwords. • Encryptions. <p>(Also accept any other correct alternative response to protect the computer from software access.)</p>	2	
	9.4.6	The driver translates instructions from the operating system into the actual signals that controls the hardware of the device./Software that enables your computer to communicate with the hardware.	1	10

9.5	9.5.1	<p><i>Any TWO aspects: ✓✓</i></p> <p>(a) FASTER AND IMPROVED DATA PROCESSING</p> <ul style="list-style-type: none"> • Counting of votes – faster electronically by clickers opposed to manual. • More accurate – prevent human errors during counting process. • Using ICT as opposed to snail mail. <p><i>Any TWO aspects: ✓✓</i></p> <p>(b) IMPROVED DATA STORAGE</p> <ul style="list-style-type: none"> • Large amounts of data can be stored in a small space/CD/DVD's as opposed to storage space/rooms required for storing paper votes/reports. • Duplicates can be created immediately – time consuming with paper votes. 	2	2
			2	10
				[24]

QUESTION 10

10.1	Survey – A set of written/typed questions given to many or a group of people. ✓ AND Interview – A verbally administered set of questions usually intended for one person. ✓		2	
10.2	<i>Any TWO:</i> ✓✓ <ul style="list-style-type: none"> • There are no outside checks concerning what is posted on the Internet/Anyone can post anything, so it could be incorrect. • Information may be presented with bias. • Information may be out of date. 		2	
10.3	Information overload is what happens when people cannot cope with the amount of information that they are exposed to every day.		1	
10.4	Twitter		1	
10.5	10.5.1	Phishing	1	
	10.5.2	No, he should not click on the link, because he would probably be directed to a website that is a replica of the actual banking website, where she would be prompted to log on. He would thus be giving out personal, confidential details such as PIN numbers and passwords.	2	
	10.5.3	Social engineering	1	
	10.5.4	<i>Any TWO of:</i> ✓✓ <ul style="list-style-type: none"> • Logon passwords/PIN codes. • ‘One time passwords’, sent to a cellphone or via e-mail for each e-banking ‘session’. • Closing the e-banking ‘session’ after a period of inactivity. • Notifications sent to the user’s cellphone that an e-banking ‘session’ has started, etc. 	2	
	10.5.5	A computer virus is a form of malicious software (malware) that is written to disrupt the normal functioning of a person’s computer without their knowledge or consent. ✓ It can be used to turn a computer into a ‘bot’ (which can be controlled remotely via the Internet), to spread malware or to create security loopholes for other programs. ✓	2	
	10.5.6	A Trojan is a form of malware which is a destructive program disguised as a useful application/program. It can be used to install malware on a computer.	2	10

10.6	10.6.1	Place the <hr /> tag in the body of the HTML document.	1	10	
	10.6.2	Any ONE of: ✓ <ul style="list-style-type: none"> Use a font tag. Change the <h1> tags to different (smaller size) tags such as <h2> or <h3>, etc. 	1		
	10.6.3	Colour should be color.	1		
9.8	10.7.1	Memo/Long Text	1		
	10.7.2	Unique numbers are automatically assigned so that there can be no duplicate values.	1		
	10.7.3	<ul style="list-style-type: none"> S should be S*/S should be followed by a wildcard. ✓ S* should be in both criteria lines./Criteria for the Age should appear in same line and given as <20 Or >30. ✓ 	2		
10.8	10.8.1	Starting a new section ✓ that allows different page formatting/settings on the same page. ✓	2		
	10.8.2	Assign a name/link to a specific point in the document for quicker access/to which a hyperlink can be linked.	1		
			TOTAL SECTION C:		50
			GRAND TOTAL:	150	