



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

SEPTEMBER 2015

**COMPUTER APPLICATIONS TECHNOLOGY P2
MEMORANDUM**

MARKS: 150

This memorandum consists of 11 pages.

SECTION A**QUESTION 1: MATCHING ITEMS**

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

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

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

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

3.1	False Phablet ✓	(1)
3.2	False Broadband ✓	(1)
3.3	True ✓	(1)
3.4	False Cloud computing ✓	(1)
3.5	True ✓	(1)

[5]**TOTAL SECTION A: 25**

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGIES

4.1	4.1.1	<ul style="list-style-type: none"> • Takes up less desk space. • Uses less electricity. • Good image quality / high resolution. • Available in larger sizes. • Additional ports. • High contrast ratio. (✓✓ Any 2) 	2	3
	4.1.2	Graphics cards allow computers to produce graphics and images more quickly. ✓	1	
4.2		<ul style="list-style-type: none"> • Require batteries. • More expensive. • Can easily be removed / stolen. • Signal strength can be affected by electrical sources (interference). (✓✓ Any 2) 		2
4.3	4.3.1	Biometric input is a process that allows a unique biological feature of a person to be used as a password or in access control. ✓	1	5
	4.3.2	<ul style="list-style-type: none"> • Voice recognition • Fingerprint recognition • Iris recognition • Retina scanning • Signature verification (✓✓ Any 2) 	2	
	4.3.3	<ul style="list-style-type: none"> • Voice recognition devices will not work if you have flu or cold that affects your voice. • Diabetes may affect your eyes and result in inaccurate iris scanning. • Cuts or burns to your fingers, hands or face may result in identification process not working. • Biometric devices are expensive. (✓✓ Any 2) 	2	
4.4	4.4.1	<ul style="list-style-type: none"> • Save on external storage. • Zip / compress large files. • Change pictures to jpeg files. • Delete unwanted files. • Delete duplicate files. • Uninstall unwanted programmes. (✓✓ Any 2) 	2	5
	4.4.2	Cloud storage is storage space on another server which you access through the Internet. ✓	1	
	4.4.3	<ul style="list-style-type: none"> • The amount of space that is provided for free is usually small. • To get extra space you have to buy it at a monthly or yearly fee. • People that you share files with might delete your files by accident. • You need Internet access. (✓✓ Any 2) 	2	

4.5	4.5.1	<ul style="list-style-type: none"> • Learners who cannot use their hands properly can use the speech recognition program to convert speech to text. • 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. (✓ Any 1) 	1	
	4.5.2	<ul style="list-style-type: none"> • Braille keyboards / braille 'display' • Magnification devices • Large-key keyboards • Braille printers (✓ Any 1) 	1	2
4.6	4.6.1	<ul style="list-style-type: none"> • Provides the user with an interface to work with computer / hardware • Responsible for allocating hardware resources. • Coordinates all activities of the system. • Provides basic security functions. • Provides access to storage. • Controls boot-up process • Manages the programs running in memory, etc. (✓✓ Any 2) 	2	
	4.6.2	<ul style="list-style-type: none"> • Do not need to install software. ✓ • Applications do not take up your hard disk space. ✓ • Users do not need to update software on individual computers as it is done from the server. ✓ • Independent of any operating system. ✓ • Users can access their applications and data from any computer connected to the Internet. ✓ • Most of these applications are free. ✓ (✓✓ Any 2) 	2	
	4.6.3	<ul style="list-style-type: none"> • Too many background programmes. • Computer may be infected by malware/virus. • Too many programs open at the same time. • Software updates being automatically downloaded. • Defective application (✓✓ Any 2) 	2	6
4.7		<ul style="list-style-type: none"> • Virtual memory is a feature of the OS by which hard disk space can be used as extra memory when RAM is insufficient to load or run programs. ✓ • It will slow down the performance of the computer. ✓ 	2	2
				[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	5.1.1	<ul style="list-style-type: none"> Files can be accessed from any computer in the network. Files can be transferred without the use of portable devices. Software can be shared by many users. Hardware such as printers can be shared by many users. Increased security – user access to network can be controlled from a single point. A single Internet connection can be shared by many users. All programs can be installed and updated from a single location. From teaching point of view, you can get software which allows you to broadcast to all computers in the classroom. Internet access can also be controlled. Facilitating communication (✓✓ Any 2) 	2	2
5.2	A file server is a powerful computer that can be used to provide resources and services to all the computers linked together in a network. ✓		1	1
5.3	5.3.1	<i>Uncapped</i> means that there is no limit on the amount of data that can be downloaded or uploaded. ✓	1	2
	5.3.2	Video conferencing takes up a lot of cap (data bundles) because it makes use of video technology. ✓	1	
5.4	Shaped connection: priority is given to e-mails, web browsing, Internet banking and "normal" downloads via a web browser'. ✓ Unshaped connection: treat all protocols the same. ✓		2	2
5.5	5.5.1	Pop-up are windows usually of advertisements that appear automatically without your permission when you are on Internet. ✓	1	2
	5.5.2	They may relate to spyware infection on the computer. ✓	1	
5.6	5.6.1	<ul style="list-style-type: none"> Do not have to stand in queues/saves time. Do not have to carry large amounts of money around. Have access whenever you are on-line/24/7. Safer as you do not have to go to the bank. Can keep track of your accounts. Cuts down on travelling/transport costs. Usually cheaper bank charges, etc. (✓✓ Any 2) 	2	3
	5.6.2	<ul style="list-style-type: none"> Use of once-off/per session passwords sent to specified cellphone numbers. Automatically logging off after a fixed time period Passwords/Pin numbers SMS notification of transactions. Secure protocols such as SSL. On-screen keypads for entering pin numbers, etc. (✓ Any 1) 	1	

5.7	5.7.1	Caching is memory that stores frequently used data, instructions or webpages so that they display more quickly when they are opened again. ✓	1	3
	5.7.2	<ul style="list-style-type: none"> • Reduces bandwidth usage ✓ • Allow previous visited pages or data used to load quicker. ✓ 	2	
				[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1	6.1.1	<ul style="list-style-type: none"> • Faster than collecting by manual means. • Cheaper – you can save on research costs. • More accurate as responses go directly into the system. • Quick to analyse. • Easier for researchers to manipulate data. • More honest responses. • More flexible as the order of the questions can easily be changed. (✓✓ Any 2) 	2	4
	6.1.2	<ul style="list-style-type: none"> • Spreadsheet can be used to do calculations/create graphs. • Database to extract information via queries. <p>(✓✓ Any 1 combination: application + motivation)</p>	2	
6.2		<ul style="list-style-type: none"> • Anyone can make changes to the content. • Authority not established. • Content is not always verified. • Content is not always formally edited. (✓✓ Any 2) 	2	2
6.3		The item has copyright. ✓	1	1
6.4		<ul style="list-style-type: none"> • APA ✓ • Harvard 	1	1
6.5		<ul style="list-style-type: none"> • Check the information against more than one source and cross-reference them to see whether the information can be substantiated. • Check the bibliography or other references where you can access other sources that support the information. • What is possibly missing from the source? • Check that the information is free of errors – sources that have spelling and grammar mistakes might be inaccurate in other ways as well. • Check whether the source ties in with what you already know. • How often has the information been used? (✓✓ Any 2) 	2	2
				[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	7.1.1	Phishing refers to attempts of people to con users into revealing personal and confidential details such as PIN numbers and passwords by posing as a legitimate organisation. ✓	1	3
	7.1.2	<ul style="list-style-type: none"> • 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 2)	2	
7.2		<ul style="list-style-type: none"> • When making a backup. • When it is free software. (✓ Any 1)	1	1
7.3	7.3.1	Sniffer attack is a process in which a small program or device reads data packets being sent to someone over a network. ✓	1	2
	7.3.2	DoS is denial of service which means a process where a network or computer is receiving huge amounts of useless data. ✓	1	
7.4	7.4.1	The process in which criminals use a person's Internet connection to connect to the Internet without his or her permission. ✓	1	2
	7.4.2	Identity theft is the process which a criminal uses the identity of a person dishonestly. ✓	1	
7.5		<ul style="list-style-type: none"> • It can reduce the personal and social interaction between people. • People may become less physically active which could lead to obesity and ill-health. • The overuse of technology may cause physical harm to people, e.g. RSI. • Technology processes may result in unwanted by-products that pollute the environment. • E-waste can harm the physical environment • People can use Internet for harmful research. (✓✓ Any 2)	2	2
				[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	<h1>Computer Applications Technology</h1>✓		1	1
8.2	<body bgcolor="blue"> (any colour except 'black' can be accepted)		1	1
8.3	8.3.1	Sort or filter according to class. ✓	1	4
	8.3.2	Import from (Get external data) ✓	1	
	8.3.3	Because SUMIF ADDS together and a function to COUNT is needed to determine the number of learners in 12B. ✓	1	
	8.3.4	Conditional formatting ✓	1	
8.4	<ul style="list-style-type: none"> Save in an earlier/lower version. Open on a PC that has the correct software installed. Download and install a patch. Try opening in another program e.g. Open Office. (✓✓ Any 2) 		2	2
8.5	<ul style="list-style-type: none"> Consistency; everything looks the same. Easier/faster/convenient to format. Automatic Table Of Content, etc. (✓ Any 1) 		1	1
8.6	<ul style="list-style-type: none"> Cancel print jobs. Restart a print job. Pause a print job. Change the order in which print jobs are handled. (✓ Any 1) 		1	1
8.7	<ul style="list-style-type: none"> Captions are always consistently positioned. The format of the captions is always consistent. Captions will update when any relevant change is made in document. Will show in any table of figures/graphs/tables. Captions are automatically numbered consecutively. (✓✓ Any 2) 		2	2
8.8	8.8.1	A validation rule can be added to specific field that restricts values of more than 100. ✓ Validation rule: >=0 and <=100 ✓	2	3
	8.8.2	Required property ✓	1	
				[15]

TOTAL SECTION B: 75

QUESTION 9: INTEGRATED SCENARIO

9.1	9.1.1	<ul style="list-style-type: none"> Cheaper than laptop equivalents. Less likely to be damaged by being dropped or knocked over. Less likely to be stolen. Cheaper to repair and upgrade, etc. (✓✓ Any 2) 	2	6
	9.1.2	<ul style="list-style-type: none"> More expensive than desktop equivalents. Can easily be damaged by being dropped or knocked over. Expensive to insure as they are often stolen. Only run for 2 to 4 hours without needing access to power. Expensive to repair and upgrade, etc. (✓✓ Any 2) 	2	
	9.1.3	<ul style="list-style-type: none"> RAM CPU HDD (✓✓ Any 2) 	2	
9.2	9.2.1	DVD writer ✓	1	3
	9.2.2	Blue ray drive ✓	1	
	9.2.3	DVD-R disks are used once. ✓ DVD-RW disks can be erased and new data be added. ✓	1	
9.3	9.3.1	<ul style="list-style-type: none"> 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 2) 	2	4
	9.3.2	<u>Site licence</u> ✓ – software can be installed in a number of computers, as long as the computers are owned by the same company. ✓	2	
9.4	9.4.1	<ul style="list-style-type: none"> Has no copyright restrictions. Has no restriction as to the number of computers it can be used on. Source code is available for free and may be edited. May be distributed in a changed form, subject to the original licence agreement terms. (✓✓ Any 2) 	2	3
	9.4.2	<ul style="list-style-type: none"> Open-source software is not supported in all geographical areas. Some people may not understand the technical help offered on the Internet. No-one to hold responsible. Various versions of the same software. Resistance to change/comfortable with what they know. Not as widely used. No guarantee of quality. One can generally only get open source software from Internet. (✓ Any 1) 	1	
9.5	9.5.1	Device driver – software that enables devices to work and communicate with your computer. ✓	1	
	9.5.2	<ul style="list-style-type: none"> On the disk that came with printer. Supplied as part of driver database in the operating system. Download driver from the Internet. (✓✓ Any 2) 	2	3

9.6	9.6.1	An activation code – Is a series of numbers characters/letters that gives access to the key/code that unlocks the security or the protection of a program. ✓	1	5
	9.6.2	<ul style="list-style-type: none"> 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. To link the copy of the software to you. To register you as user to enable help and online support. (✓✓ Any 2)	2	
	9.6.3	<p>A custom installation allows more experienced users to choose the components of the program that must be installed. ✓</p> <p>A typical installation contains the options and components of the software that most people want. ✓</p>	2	
9.7	9.7.1	<ul style="list-style-type: none"> Use print preview before printing. 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. Communicate/Save electronically. (✓✓ Any 2)	2	4
	9.7.2	<ul style="list-style-type: none"> By switching off computers when not in use. ✓ Use energy saving devices e.g. LED screens. ✓ 	2	
9.8	9.8.1	<ul style="list-style-type: none"> They are much faster than normal hard drives. They cannot be damaged easily/No moving parts/Durable. Energy-efficient They run quieter than traditional hard drives. (✓✓ Any 2)	2	4
	9.8.2	<p>They are expensive. ✓</p> <p>Smaller capacity than traditional hard drives. ✓</p>	2	
9.9	9.9.1	<ul style="list-style-type: none"> Use software that updates your data automatically. Backup data only, not programs (have CD or Internet to retrieve these). Use external storage medium (external hard drive). Keep backup in other location in case of theft, fire. Do maintenance of data to have no unnecessary duplicates. Archive large files not used often. Check that backup works by opening backed up files once in a while. (✓✓ Any 2)	2	3
	9.9.2	<ul style="list-style-type: none"> External hard drive DVD Flash drives Blue ray disks CD (✓ Any 1)	1	

9.10	9.10.1	<ul style="list-style-type: none"> You do not need the program in which the document was created to open it. The program required to read these documents is free/widely available. Users cannot easily make changes to the document. <p>(✓✓ Any 2)</p>	2	3
	9.10.2	Adobe Reader ✓	1	
9.11	9.11.1	<p>An anti-virus program is a database with unique virus definitions. The anti-virus software detects the virus by comparing it to its database of definitions. ✓</p> <p>If the database is not updated, new virus definitions are not available to detect new viruses. ✓</p>	2	7
	9.11.2	No. ✓ Viruses can install themselves on systems via any portable storage media. ✓	2	
	9.11.3	<ul style="list-style-type: none"> Disable 'auto run' features for flash drives. Scan all portable storage media before using them. Avoid downloading/using pirated software. Scan attachments when/before opening them. Do not open attachments from unknown sources Do not interact with/click on pop-ups that appear on the screen. <p>(✓✓ Any 2)</p>	2	
	9.11.4	The virus is moved into an area where it cannot cause harm. ✓	1	
9.12	9.12.1	<ul style="list-style-type: none"> Facebook Twitter LinkedIn MySpace Second Life, etc. <p>(✓✓ Any 2)</p>	2	4
	9.12.2	Create a duplicate user's name and profile picture from their existing account. ✓	1	
	9.12.3	<ul style="list-style-type: none"> You have to have access to the Internet to be able to communicate. Increased risk of identity theft, etc. Many people have false information on their profiles. Increased risk of loss in productivity of employees/learners Quantity of communication at the expense of quality of communication. 	1	

TOTAL SECTION C: 50
GRAND TOTAL: 150