



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	• 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		• 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	• Voice recognition • Fingerprint recognition • Iris recognition • Retina scanning • Signature verification (✓✓ Any 2)	2	
	4.3.3	• 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	• 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	• 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	• 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	2
	4.5.2	• Braille keyboards / braille 'display' • Magnification devices • Large-key keyboards • Braille printers (✓ Any 1)	1	
4.6	4.6.1	• 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	6
	4.6.2	• 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	• 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	
4.7		• 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	- 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	- 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	- 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	• Reduces bandwidth usage ✓ • Allow previous visited pages or data used to load quicker. ✓	2	
				[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1	6.1.1	• 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	• Spreadsheet can be used to do calculations/create graphs. • Database to extract information via queries. (✓✓ Any 1 combination: application + motivation)	2	
6.2		• 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		• APA ✓ • Harvard	1	1
6.5		• 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	• 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		• 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		• 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	Computer Applications Technology ✓		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	- 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	- Consistency; everything looks the same. - Easier/faster/convenient to format. - Automatic Table Of Content, etc. (✓ Any 1)		1	1
8.6	- 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	- 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	- 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	- 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	- 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	- 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	Site licence ✓ – 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	- 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	- 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	- 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	- 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	A custom installation allows more experienced users to choose the components of the program that must be installed. ✓ A typical installation contains the options and components of the software that most people want. ✓	2	
9.7	9.7.1	- 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	- By switching off computers when not in use. ✓ - Use energy saving devices e.g. LED screens. ✓	2	
9.8	9.8.1	- 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	They are expensive. ✓ Smaller capacity than traditional hard drives. ✓	2	
9.9	9.9.1	- 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	- External hard drive - DVD - Flash drives - Blue ray disks - CD (✓ Any 1)	1	

9.10	9.10.1	- 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. (✓✓ Any 2)	2	3
	9.10.2	Adobe Reader ✓	1	
9.11	9.11.1	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. ✓ If the database is not updated, new virus definitions are not available to detect new viruses. ✓	2	7
	9.11.2	No. ✓ Viruses can install themselves on systems via any portable storage media. ✓	2	
	9.11.3	- 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. (✓✓ Any 2)	2	
	9.11.4	The virus is moved into an area where it cannot cause harm. ✓	1	
9.12	9.12.1	- Facebook - Twitter - LinkedIn - MySpace - Second Life, etc. (✓✓ Any 2)	2	4
	9.12.2	Create a duplicate user's name and profile picture from their existing account. ✓	1	
	9.12.3	- 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