



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE**

**GRADE 12**

**COMPUTER APPLICATIONS TECHNOLOGY P2**

**(THEORY)**

**NOVEMBER 2010**

**MEMORANDUM**

**MARKS: 150**

**This memorandum consists of 16 pages.**

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

1.1	K	✓		(1)
1.2	H	✓		(1)
1.3	M	✓		(1)
1.4	J	✓		(1)
1.5	A	✓		(1)
1.6	P	✓		(1)
1.7	N	✓		(1)
1.8	B	✓		(1)
1.9	D	✓		(1)
1.10	F	✓ Accept Q		(1)
			<b>Total: 10</b>	

**QUESTION 2: MULTIPLE-CHOICE QUESTIONS**

2.1	D	✓		(1)
2.2	B	✓		(1)
2.3	C	✓		(1)
2.4	D	✓		(1)
2.5	D	✓		(1)
2.6	B	✓		(1)
2.7	C	✓		(1)
2.8	D	✓		(1)
2.9	B	✓		(1)
2.10	D	✓		(1)
			<b>Total: 10</b>	

**TOTAL SECTION A: 20**

**SECTION B****QUESTION 3**

3.1	<ul style="list-style-type: none"> <li>• To improve the speed/performance</li> <li>• To run the latest/newer software (e.g. for gaming)</li> <li>• To use additional hardware that you cannot currently use</li> <li>• Need for additional storage capacity/space</li> <li>• Need for more ergonomic hardware/health reasons</li> <li>• Practise green computing, etc</li> </ul> <p><i>(Do not accept any answer referring to repairing faulty hardware)</i> (Any 3) ✓✓✓</p>		3
3.2	<ul style="list-style-type: none"> <li>• More difficult/expensive to upgrade</li> <li>• Expensive to repair</li> <li>• More expensive to insure</li> <li>• Increased risk of theft</li> <li>• Limited battery life</li> <li>• Faulty component such as keyboard or monitor can render whole machine unusable</li> <li>• Can take longer to repair</li> <li>• More easily damaged/fragile, etc</li> </ul> <p><i>(Do not accept any answer referring to purchase cost)</i> (Any 3) ✓✓✓</p>		3
3.3	<ul style="list-style-type: none"> <li>• Comparative lack of processing power</li> <li>• Smaller keyboard</li> <li>• Smaller screen</li> <li>• Need for external drive/No built-in CD/DVD drive</li> <li>• Increased risk of theft, etc.</li> </ul> <p><i>(Do not accept any answer referring to purchase cost)</i> (Any 1) ✓</p>		1
3.4	<ul style="list-style-type: none"> <li>• Make use of a card reader</li> <li>• Place card in the camera and download via a USB cable</li> <li>• Place card in the camera/portable storage device and set up a Bluetooth connection/PAN (personal area network), etc.</li> </ul> <p>(Any 2) ✓✓</p>		2

3.5	3.5.1	Fragmentation occurs when files are 'scattered' across a disk/not stored contiguously ✓ The computer slows down as it will take longer to read/load the (scattered) file(s) ✓	2	
	3.5.2	No ✓ Defragmenting simply rearranges the fragmented files on disk (i.e. no more free space is recovered) ✓	2	
	3.5.3	<ul style="list-style-type: none"> <li>• Presence of spyware</li> <li>• Presence of viruses</li> <li>• Not using updated drivers</li> <li>• Too many programs loaded/running simultaneously</li> <li>• Programs running that require extensive resources like anti-virus programs</li> <li>• Utilising software that requires higher hardware specifications, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	6
3.6		<ul style="list-style-type: none"> <li>• Narrator/voice output</li> <li>• Magnifying utility</li> <li>• Choice of contrast/colour schemes</li> <li>• Setting size of fonts and icons</li> <li>• Setting the size/shape of the cursor</li> <li>• Use visual prompts instead of sounds</li> </ul> <p><i>(Do not accept answers that are hardware related or do not pertain to sound/sight such as sticky keys, etc.)</i></p> <p style="text-align: right;">(Any 2) ✓✓</p>		2
3.7	3.7.1	Video conferencing refers to the ability to see and talk ✓ to other users on a network ✓ (e.g. via the Internet/Public Switched Telephone Network (PSTN))	2	
	3.7.2	<ul style="list-style-type: none"> <li>• Webcam/video camera</li> <li>• Microphone</li> <li>• Headphones</li> <li>• Speakers</li> <li>• Modem</li> </ul> <p><i>(Do not accept answers that are not peripheral devices)</i></p> <p style="text-align: right;">(Any 2) ✓✓</p>	2	4

3.8	3.8.1	No ✓ Permission should be sought to use the images ✓  <i>(Also accept the 'source' must be 'credited' in the project)</i> <i>(Allocate one mark for 'No' without a motivation. Accept 'Yes' only if an acceptable explanation is given)</i>	2	
	3.8.2	<ul style="list-style-type: none"> <li>• Online photos require a lower resolution than hardcopy versions</li> <li>• Higher resolution photos online take longer to view/download</li> <li>• Photos are stored on local storage on a camera</li> <li>• The original photo was taken in a lower resolution</li> <li>• Photos were saved in a compressed format during downloading</li> <li>• Digital cameras often have high default resolution settings, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	3.8.3	Graphic design software/Image editing software/photo editing software ✓  <i>(Do not accept specific brand names such as 'Paint' or 'Photoshop')</i>	1	5
		<b>Total</b>		<b>[26]</b>

**QUESTION 4**

4.1	<p>4.1.1</p> <ul style="list-style-type: none"> <li>• Similar interface presented in the different programs/ Navigation structure/methods are similar between programs</li> <li>• Easier to integrate/export/import data between programs</li> <li>• Easy to learn to use other programs in suite because of similar/common ribbons/toolbars/shortcuts/menu structures</li> <li>• Often cheaper to purchase than purchasing the applications unbundled, etc.</li> </ul> <p><i>(Do not accept any answer referring to types of programs available in a typical suite)</i></p> <p style="text-align: right;">(Any 1) ✓</p>	1	
	<p>4.1.2</p> <ul style="list-style-type: none"> <li>• Insufficient RAM available</li> <li>• Insufficient hard drive space</li> <li>• Processor not sufficient (good/powerful enough) for new package, etc.</li> <li>• Insufficient hardware/resources are out of date</li> </ul> <p><i>(Do not accept any answer referring to software issues)</i></p> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	<p>4.1.3</p> <ul style="list-style-type: none"> <li>• Do not need/want the additional features provided</li> <li>• Do not want to contend with different interface</li> <li>• May need training/upgrading of skills</li> <li>• Package may run slower than older versions (on same PC)</li> <li>• Different file formats used, etc.</li> <li>• Financial considerations</li> </ul> <p><i>(Accept any answers from 4.1.2 above that were not used by the candidate)</i></p> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	<p>4.1.4</p> <p>No ✓ licensing is normally done on a per machine basis and has nothing to do with the type/function of the organisation. ✓</p> <p><i>(Also accept an answer of Yes, if the motivation of site licence or volume licensing is given, but do not accept any reference to shareware, etc.)</i></p>	2	7

4.2	<ul style="list-style-type: none"> <li>• Blog is easier to set up/maintain than a website</li> <li>• Provides better features for communication via posts (interactive)</li> <li>• Number of templates are available to set up blogs</li> <li>• Number of sites which host blogs for no cost, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>		2
4.3	<p>4.3.1</p> <ul style="list-style-type: none"> <li>• Antivirus software reports virus/suspicious activity</li> <li>• File(s) become corrupt</li> <li>• Unknown program(s) or file(s) suddenly appears</li> <li>• Settings of security software changed/switched off</li> <li>• Additional programs start to run when the computer is started</li> <li>• Size of a file changes without explanation</li> <li>• Strange/unexpected message/image displayed on the computer screen</li> <li>• Computer suddenly begins to start or run slowly</li> <li>• Unauthorised changes made to the registry</li> <li>• The available memory is less than it should be</li> <li>• Program(s) or file(s) are suddenly missing</li> <li>• Program/file changes without explanation</li> <li>• System properties change, etc.</li> <li>• It causes hardware to malfunction</li> </ul> <p><i>(Do not accept any answer referring to hardware being damaged)</i></p> <p style="text-align: right;">(Any 3) ✓✓✓</p>		3
	<p>4.3.2</p> <p>Spyware is software that is installed without the user's knowledge/consent ✓ can monitor/report on a user's activities (e.g. surfing habits, passwords) ✓</p>		2
	<p>4.3.3</p> <p>Adware simply causes advertisements to pop-up or appear on the screen ✓</p>		1
	<p>4.3.4</p> <ul style="list-style-type: none"> <li>• Anti-spyware software reports the presence of spyware or warns of suspicious activity</li> <li>• Default home page changed</li> <li>• Internet activity not initiated by the user</li> <li>• Taken to a different website than the URL specified</li> <li>• New toolbars, links/favourites added in web browser</li> <li>• Default search program changed</li> <li>• Computer suddenly begins to start or run slowly, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>		2

	4.3.5 Viruses are detected by making use of virus definitions. ✓ It is just these that need to be updated (not the program) ✓ in order to detect new viruses/strains. ✓	3	11
4.4	4.4.1 Digital divide ✓	1	
	4.4.2 <ul style="list-style-type: none"> <li>• Provide cheaper/more affordable Internet/broadband access</li> <li>• Use schools with ICT facilities as community centres after hours</li> <li>• Promote and extend ICT type subjects at school level</li> <li>• Make increased use of free/open source training materials</li> <li>• Recycle suitable hardware to community</li> <li>• Make more use of open source/freeware/shareware software, etc.</li> </ul> <p><i>(Accept any valid answer excluding additional funding)</i> <i>(Any 2) ✓✓</i></p>	2	
	4.4.3 The range of <u>applications</u> available. ✓  <i>(Accept financial considerations)</i> <i>(Do not accept answers which are standard on modern cell phones such as cameras, Internet connectivity, calendar facilities, etc.)</i>	1	4
4.5	4.5.1 Satellite ✓	1	
	4.5.2 Any answer which points to locating or finding directions to the farm using a GPS. ✓	1	
	4.5.3 <ul style="list-style-type: none"> <li>• Tracking game</li> <li>• For producing maps of the game park for tourists in the game farm</li> <li>• Trace routes/pinpoint locations in the game farm for tourists in the game farm</li> <li>• Geo-tagging of photographs, etc.</li> </ul> <p><i>(Any 1) ✓</i></p>	1	3
	<b>Total</b>		<b>[27]</b>



**QUESTION 5**

5.1	<p>5.1.1</p> <ul style="list-style-type: none"> <li>• Sharing of hardware (accept suitable examples)</li> <li>• Sharing of software (accept suitable examples)</li> <li>• Sharing of data (accept suitable examples)</li> <li>• Easier to communicate</li> <li>• Reduced costs due to sharing</li> <li>• Potentially better security</li> <li>• Easier to control backups</li> <li>• More storage available than on local drives</li> <li>• Easy to configure/perform software updates, etc.</li> </ul> <p><i>(Do not accept any answer to problems relating to gaming)</i> (Any 3) ✓✓✓</p>	3	
	<p>5.1.2</p> <ul style="list-style-type: none"> <li>• Malware could spread more quickly</li> <li>• Potential central point of failure, e.g. crash of a server</li> <li>• Rely on administrator to safely/regularly backup work on the network</li> <li>• Issues of privacy</li> <li>• Increased costs (accept suitable examples)</li> <li>• Need to keep software standard/consistent across all computers, etc.</li> </ul> <p><i>(Do not accept any answer to problems related to Internet usage)</i> (Any 2) ✓✓</p>	2	
	<p>5.1.3</p> <ul style="list-style-type: none"> <li>• Quick/easy to add additional equipment</li> <li>• No need for cabling</li> <li>• Allows users to be mobile within the range of the network, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	
	<p>5.1.4</p> <ul style="list-style-type: none"> <li>• Problems with signal strength/interference</li> <li>• Need to install extra equipment (accept suitable examples)</li> <li>• Potentially slower speeds</li> <li>• Security issues, i.e. eavesdropping, etc.</li> </ul> <p>(Any 1) ✓</p>	1	
	<p>5.1.5</p> <p>File server stores all the network users' files ✓ Need for larger/faster hard drive(s)/faster processor(s)/more RAM, etc. ✓</p>	2	

	5.1.6	Compress/zip files Only backup data files (not programs) Use incremental backups/backup only files changed since previous backup Remove duplicate/unwanted files, etc.  <i>(Do not accept answers relating to extra hardware)</i> <i>(Any 2) ✓✓</i>	2	12
5.2	5.2.1	ISP is a business/company ✓ that provides/offers Internet access/services. ✓	2	
	5.2.2	Fast ✓ Permanent connection ✓	2	
	5.2.3	Cap refers to the limit placed on the amount of data that can be transferred in a fixed period of time (usually per month). ✓ Uncapped means that there is no limit on the amount of data that can be transferred. ✓	2	
	5.2.4	Refers to maximum upload and download speeds of the connection. ✓  <i>(Learners do not have to specify which speed is faster)</i>	1	7
5.3	5.3.1	Digital/E-book reader ✓  <i>(Also accept brand names like Kindle/iPad, etc.)</i>	1	
	5.3.2	<ul style="list-style-type: none"> <li>• Books can easily be updated/distributed</li> <li>• Contribute to environment/green computing</li> <li>• Can adjust print size</li> <li>• Easy to transport/store large number of books</li> <li>• Potentially quicker to access/source books</li> <li>• Can have additional features other than text, i.e. video clips, etc.</li> <li>• Have a longer lifespan</li> </ul> <i>(Do not accept answers relating to cost)</i> <i>(Any 2) ✓✓</i>	2	
	5.3.3	Identity theft refers to illegally using personal/security details of another user to impersonate the user online. ✓	1	

5.3.4	<ul style="list-style-type: none"> <li>• Make use of secure passwords</li> <li>• Do not click on links in unsolicited emails</li> <li>• Do not conduct financial transactions on a computer that may not be secure, e.g. at a cyber café</li> <li>• Do not leave personal details/statements lying around</li> <li>• Change passwords regularly</li> <li>• Avoid giving out personal details or passwords wherever possible</li> <li>• Shred financial/personal documents before throwing them away</li> <li>• Become aware/read up on common security threats such as phishing, etc.</li> </ul> <p><i>(Do not accept any answers relating to making use of updated antivirus and security software)</i></p> <p style="text-align: right;"><i>(Any 2) ✓✓</i></p>	2	6
	<b>Total</b>		<b>[25]</b>

**QUESTION 6**

6.1	6.1.1	An attachment is a file that is sent to the recipient via e-mail ✓	1	
	6.1.2	Logo.bmp ✓ (Accept 2.7 MB)  (File extension not required).	1	
	6.1.3	<ul style="list-style-type: none"> <li>• Save it in a different format, e.g. jpeg</li> <li>• Save it with a lower resolution</li> <li>• Save it in greyscale/black and white if colour is not needed</li> <li>• Compress or zip the file, etc.</li> <li>• Cropping/resizing the picture.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	6.1.4	<ul style="list-style-type: none"> <li>• Spelling/grammar errors</li> <li>• No meaningful subject line</li> <li>• Use of capital letters (indicates shouting)</li> <li>• Not checking that the message sent is virus-free</li> </ul> <p>(Do not accept answers referring to the size of the attachments)</p> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	6.1.5	Gmail ✓  (Also accept <u>Mpho007@gmail.com</u> or google e-mail)	1	
	6.1.6	Recipients listed in the Cc field will be visible to other recipients of the message. ✓  Recipients listed in the Bcc field will not be visible to other recipients of the message. ✓	2	
	6.1.7	<ul style="list-style-type: none"> <li>• Take a long time to download</li> <li>• Costs more money in terms of duration of a phone call</li> </ul> <p style="text-align: right;">(Any 1) ✓</p>	1	
	6.1.8	Reduces the amount of cap ✓ still remaining for the period	1	11

6.2	Add the recipients' names to a mailing/distribution/group list. ✓ <i>(Accept a mail merge option)</i>		1
6.3	6.3.1 Social networking ✓	1	
	6.3.2 <ul style="list-style-type: none"> <li>Do not need to know each person's e-mail address</li> <li>Do not need to maintain a list of email addresses</li> <li>Easy to create groups where messages can be posted</li> <li>Extra facilities to share content such as photos, etc.</li> </ul> (Any1 ) ✓	1	
	6.3.3 <ul style="list-style-type: none"> <li>Recipients all have to have a Facebook account</li> <li>Still need to have recipients belonging to a list/group</li> <li>Concerns/issues with privacy</li> <li>Greater bandwidth/costs involved with Facebook</li> <li>Some institutions restrict Facebook access, etc.</li> </ul> (Any 2 ) ✓ ✓	2	
	6.3.4 <ul style="list-style-type: none"> <li>Creation of/exposure to undesirable content</li> <li>Content published can be seen and possibly used against you</li> <li>Issues of addiction</li> <li>Danger of online predators/ paedophiles</li> <li>People create virtual relationships</li> <li>Issues with security/privacy (if not given as an answer in 6.3.3)</li> <li>Cap/bandwidth issues involved (if not given as an answer in 6.3.3), etc.</li> </ul> (Any 2) ✓ ✓	2	
	6.3.5 <ul style="list-style-type: none"> <li>Formation of interest groups</li> <li>Posting of multimedia (photos/videos, etc.)</li> <li>Many add-on/plug-in features such as games, etc.</li> <li>Facility to find old friends/acquaintances</li> <li>Status updates, etc.</li> </ul> (Any 2) ✓ ✓	2	8
6.4	<ul style="list-style-type: none"> <li>Try writing data at a slower speed</li> <li>Try another CD/DVD</li> <li>Make sure the CD/DVD disc is clean and dust-free</li> <li>Close any other applications that are running</li> <li>Make sure that your free disk space is not running low</li> <li>Defragment the hard disk, etc.</li> <li>Restarting the computer</li> <li>Re-installing the CD writing software</li> </ul> (Any 2) ✓ ✓		2

6.5	6.5.1 <ul style="list-style-type: none"> <li>• May improve computer literacy skills</li> <li>• May improve memory recall skills</li> <li>• May improve peripheral vision</li> <li>• May improve psychomotor skills</li> <li>• May improve strategy skills</li> <li>• May lead to socialisation online, etc.</li> <li>• May improve keyboarding skills</li> <li>• Keeps them occupied/entertained</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	6.5.2 <ul style="list-style-type: none"> <li>• Issues of addiction/time wastage</li> <li>• Danger of RSI type of problems</li> <li>• Costs in terms of cap usage</li> <li>• Could cause antisocial behaviour</li> <li>• Can be linked to violent/aggressive behaviour</li> <li>• Can blur the difference between reality and fantasy</li> <li>• Can affect emotional development, etc.</li> <li>• Health issues</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	4
	<b>Total</b>		<b>[26]</b>

**QUESTION 7**

7.1	7.1.1 A set of questions and answers ✓ to frequently asked questions regarding a particular topic. ✓	2	
	7.1.2 The headings are not formatted in the same styles as the existing headings. ✓ Format/change the style of the headings and update the table of contents. ✓	2	
	7.1.3 Portrait mode is when the page is longer than it is wide. ✓ Landscape is when the page is wider than it is long. ✓  <i>(Accept landscape as horizontal and portrait as vertical)</i> <i>(Also accept other suitable explanations or diagrams)</i>	2	
	7.1.4 Insert section breaks before and after the page. ✓ Change just the page orientation of that section to landscape. ✓  <i>(Also accept select text on required page and change page orientation of selected text only)</i>	2	
	7.1.5 Scan the document with a scanner. ✓ Use Optical Character Recognition (OCR) software to convert the scanned document into editable text ✓	2	10
7.2	<ul style="list-style-type: none"> <li>• Spreadsheets have a wider range of formulas available</li> <li>• Automatic re-calculation of formulas in spreadsheets when changes are made</li> <li>• Easier to reference cells within a table in spreadsheets</li> <li>• Formulas can be duplicated more easily</li> <li>• Can make use of absolute addressing</li> <li>• Greater range of (type) formatting in spreadsheets</li> <li>• Table structure (cells) are already present in a spreadsheet</li> <li>• Easier to reference cells in a range across non-adjacent cells, etc.</li> </ul> <i>(Do not accept graph facilities as this can also be done based on the data in a word processing table)</i>  <p style="text-align: right;">(Any 2) ✓✓</p>		2

7.3	7.3.1	Absolute ✓ (cell addressing)	1	
	7.3.2	To prevent the cell address(es) from changing ✓ when a formula is copied. ✓	2	
	7.3.3	It will not change. ✓  (Also accept 14%*\$E\$5)	1	4
7.4	7.4.1	Accept either Gender or Request as the field. ✓ Any suitable motivation explaining that the default value is the most often used/likely value for that field. ✓  (e.g. more requests are from one gender than the other, etc.)	2	
	7.4.2	Accept any answer which refers to the Count function. ✓ Must be placed in the report footer. ✓  (Do not accept answers such as 'at the end/bottom' of the report)	2	
	7.4.3	Report/records would need to be grouped according to the Gender field. ✓ Report/records would need to be sorted ✓	2	
	7.4.4	<ul style="list-style-type: none"> <li>• Quicker to capture data</li> <li>• No problems with inconsistent spelling</li> <li>• No problems with case sensitivity</li> <li>• Easier to specify and use in queries</li> <li>• Easier to validate data, etc.</li> </ul> (Do not accept answers such as 'easier to sort')  (Any 2) ✓✓	2	8
7.5		A primary key is a field ✓ in a database (table) where each value must be unique/different for every record. ✓		2
		<b>Total</b>		<b>[26]</b>

**TOTAL SECTION B: 130**  
**GRAND TOTAL: 150**