



# basic education

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

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**COMPUTER APPLICATIONS TECHNOLOGY P2**

**(THEORY)**

**FEBRUARY/MARCH 2011**

**MEMORANDUM**

**MARKS: 150**

**This memorandum consists of 14 pages.**

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

1.1	H	✓	(1)
1.2	G	✓	(1)
1.3	M	✓	(1)
1.4	F	✓	(1)
1.5	C	✓	(1)
1.6	N	✓	(1)
1.7	B	✓	(1)
1.8	P	✓	(1)
1.9	R	✓	(1)
1.10	E	✓	(1)
			<b>Total: 10</b>

**QUESTION 2: MULTIPLE-CHOICE QUESTIONS**

2.1	D	✓	(1)
2.2	D	✓	(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	D	✓	(1)
2.10	C	✓	(1)
			<b>Total : 10</b>

**TOTAL SECTION A: 20**

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

3.1		<ul style="list-style-type: none"> <li>• CPU/processor ✓</li> <li>• RAM/memory ✓</li> <li>• Hard drive ✓</li> </ul>			3
3.2		<ul style="list-style-type: none"> <li>• Mobility/portability/easier to use for presentations</li> <li>• Can run on batteries for a period of time if power is off</li> <li>• Occupy less space than a desktop PC, etc.</li> </ul>	(Any 2) ✓✓		2
3.3		<ul style="list-style-type: none"> <li>• Type of battery</li> <li>• Expected battery life</li> <li>• Weight</li> <li>• Whether a carry case is included, etc.</li> </ul> <p><i>(Do not accept answers that are applicable to desktops as well or cost issues including insurance, etc.)</i></p>	(Any 2) ✓✓		2
3.4	3.4.1	<ul style="list-style-type: none"> <li>• Size of monitor</li> <li>• Resolution/quality of image</li> <li>• Refresh rates</li> <li>• Viewing angles</li> <li>• Contrast ratios, etc.</li> </ul> <p><i>(Do not accept answers relating to a choice between CRT and flat-screen monitors.)</i></p>	(Any 2) ✓✓	2	
	3.4.2	<ul style="list-style-type: none"> <li>• Consume less power</li> <li>• Weighs less</li> <li>• Take up less space, etc.</li> </ul> <p><i>(Accept better resolution/quality of image.)</i> <i>(Do not accept better viewing angles.)</i></p>	(Any 2) ✓✓	2	4
3.5	3.5.1	Ergonomics refers to the study/design of equipment ✓ so that it is comfortable/easy/safe for a user to use. ✓		2	

	3.5.2	<ul style="list-style-type: none"> <li>• Soft touch keys</li> <li>• Keyboard/keys angles at a comfortable angle</li> <li>• Wrist/palm rest</li> <li>• Dedicated keys for frequently used functions</li> <li>• Curved keyboard, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	3.5.3	Wireless/Bluetooth/Infrared ✓	1	
	3.5.4	<ul style="list-style-type: none"> <li>• Greater chance of theft</li> <li>• Needs batteries to run</li> <li>• Interference/loss of signal, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	7
3.6	3.6.1	Laser printer OR laser ✓  <i>(Also accept any answer relating to a networked photocopying type of printer.)</i>	1	
	3.6.2	Ink-jet printer OR ink-jet ✓  <i>(Also accept any answer relating to a 'photo-smart' type of printer or colour copier.)</i>	1	
	3.6.3	<ul style="list-style-type: none"> <li>• Speed</li> <li>• Quality/resolution of printer</li> <li>• Paper sizes/media that can be used</li> <li>• Whether the printer can be connected to a network</li> <li>• Compatibility with operating system</li> <li>• Warranty/guarantees, etc.</li> </ul> <p style="text-align: right;"><i>(Do not accept answers relating to purchase cost.)</i> (Any 3) ✓✓✓</p>	3	5
3.7	3.7.1	Biometric (devices) ✓	1	
	3.7.2	So that only the authorised/recognised user can gain access to the data on the flash disk. ✓	1	
	3.7.3	<ul style="list-style-type: none"> <li>• Voice (print) recognition</li> <li>• Facial recognition</li> <li>• Iris (eye) recognition</li> </ul> <p style="text-align: right;">(Any 1) ✓</p>	1	3
		<b>Total</b>		<b>26</b>

**QUESTION 4**

4.1	4.1.1	<ul style="list-style-type: none"> <li>• Provides the user with an interface to work with computer/hardware</li> <li>• Responsible for allocating hardware resources</li> <li>• Coordinates all activities of the system</li> <li>• Provides basic security functions</li> <li>• Provides access to storage</li> <li>• Controls boot-up process</li> <li>• Manages the programs running in memory, etc.</li> </ul> <p><i>(Accept relevant examples that illustrate any of the points listed.)</i></p> <p style="text-align: right;">(Any 3) ✓✓✓</p>	3	
	4.1.2	<ul style="list-style-type: none"> <li>• Do not need/want the additional features provided with Windows 7</li> <li>• Different interface to contend with/may need training/upgrading of skills</li> <li>• Computer may run slower than with original operating system</li> <li>• Problems with sourcing compatible drivers for hardware</li> <li>• Insufficient RAM available</li> <li>• Insufficient hard drive space</li> <li>• Processor not sufficient for new package, etc.</li> </ul> <p><i>(Do not accept any answer referring to software issues.)</i></p> <p style="text-align: right;">(Any 3) ✓✓✓</p>	3	
	4.1.3	<p>Open source software allows access (to the source code) to make changes to the program itself. ✓</p> <p><i>(Do not accept answers relating to licensing or cost.)</i></p>	1	
	4.1.4	Linux ✓	1	8
4.2	4.2.1	<ul style="list-style-type: none"> <li>• User does not have to keep checking that they have all the latest updates.</li> <li>• 'Inexperienced' users do not have to make decisions as to which updates to install.</li> <li>• Does not require any time/effort on the part of the user, etc.</li> </ul> <p style="text-align: right;">(Any 1) ✓</p>	1	
	4.2.2	Switch off the option to automatically download and install updates. ✓	1	

	4.2.3	<ul style="list-style-type: none"> <li>• Fix security loopholes (e.g. against viruses)</li> <li>• Provide updated drivers</li> <li>• Fix errors/bugs in the (code of the) operating system</li> <li>• Provide new features in the operating system</li> <li>• Updates can make the system run more smoothly, etc.</li> </ul> <p><i>(Do not accept vague answers such as 'keeps the system updated'.)</i></p> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	4.2.4	<ul style="list-style-type: none"> <li>• Online updates may use a lot of cap/bandwidth/download time</li> <li>• While in progress it can/will slow down the computer</li> <li>• May not want features that come with updates</li> <li>• Users may want to choose which updates they want installed</li> <li>• A stable system can sometimes become unstable, etc.</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	6
4.3	4.3.1	<p>A virus is software/code ✓ written to impact negatively on a computer system/exploit security weaknesses ✓ and is designed to spread itself. ✓</p> <p><i>(Do not accept answers such as it being a 'bug'.)</i></p>	3	
	4.3.2	<ul style="list-style-type: none"> <li>• Install antivirus software</li> <li>• Keep the antivirus software updated</li> <li>• Disable 'auto run' features for flash drives</li> <li>• Make sure operating system is updated regularly/automatically</li> <li>• Scan all portable storage media before using them</li> <li>• Avoid downloading/using pirated software</li> <li>• Scan attachments when/before opening them</li> <li>• Do not open attachments from unknown/suspicious sources</li> <li>• Do not interact/click on pop-ups that appear on the screen, etc.</li> </ul> <p style="text-align: right;">(Any 3) ✓✓✓</p>	3	
	4.3.3	<p>No ✓ viruses can install themselves on systems via any portable storage media (flash disks, etc).✓</p>	2	8

4.4	<ul style="list-style-type: none"><li>• Use an uninstaller program (often comes with the program)</li><li>• Use the operating system to uninstall the program (e.g. Add/Remove programs in Control Panel in Windows)</li></ul> (Any 1) ✓		1
4.5	<ul style="list-style-type: none"><li>• Save in an earlier/lower version</li><li>• Open on a PC that has the correct software installed (e.g. Office 2007/10)</li><li>• Download and install a patch</li><li>• Try opening in another program e.g. Open Office, etc.</li></ul> (Any 2) ✓ ✓		2
4.6	Professional editions have more features than home editions. ✓		1
	<b>Total</b>		<b>26</b>

**QUESTION 5**

5.1	5.1.1	<ul style="list-style-type: none"> <li>• A LAN stretches over a limited (geographical) distance whereas a WAN (Wide Area Network) extends over a vast distance. ✓</li> <li>• Any suitable example of a WAN (e.g. Internet, nation-wide banking network, etc.) ✓</li> </ul>	2	
	5.1.2	Network card/network interface card (NIC) ✓	1	
	5.1.3	<ul style="list-style-type: none"> <li>• Usernames/passwords</li> <li>• Setting access/group rights for users</li> <li>• Placing user groups on different segments of the network, etc.</li> </ul> <p><i>(Do not accept answers relating to physical access to the computers.)</i></p> <p>(Any 1) ✓</p>	1	
	5.1.4	<ul style="list-style-type: none"> <li>• More storage places available on the network/additional (network) drives available (<i>Accept specific drive letters e.g. X, OR non-local drives e.g. U, T, Z drives, etc.</i>)</li> <li>• Access to hardware not connected to the PC (e.g. shared printer etc)</li> <li>• Can communicate with other users on the networks, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	6
5.2	5.2.1	<ul style="list-style-type: none"> <li>• Speed of connection</li> <li>• Cap limit</li> <li>• Whether the service is available in your area</li> <li>• Reputation of ISP, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	
	5.2.2	<ul style="list-style-type: none"> <li>• Dial-up connections are charged for connection time (telephone costs) ✓</li> <li>• Broadband connection costs are based on the volume of data transferred over a period ✓</li> </ul>	2	4
5.3	5.3.1	Used to host/view/display videos ✓	1	
	5.3.2	<ul style="list-style-type: none"> <li>• Use a program that will block specific types of sites (<i>Accept brand names such as iCop, Net Nanny or NetOp, etc.</i>)</li> <li>• Use proxy server/firewall to block the sites (<i>Accept only proxy or only server.</i>)</li> </ul> <p>(Any 1) ✓</p>	1	



	5.3.3	High bandwidth required/reduces cap quickly ✓ <i>(Do not accept answers relating to cost.)</i>	1	
	5.3.4	<ul style="list-style-type: none"> <li>• Learners wasting time</li> <li>• Learners are potentially exposed to undesirable material</li> <li>• Learners can post potentially undesirable material</li> <li>• Could be considered a waste of bandwidth</li> <li>• Potential exposure of learners to online predators/paedophiles</li> <li>• Parents might not approve, etc.</li> </ul> <i>(Do not accept any answer relating cap/bandwidth usage if used in the previous answer.)</i> (Any 2) ✓✓	2	
	5.3.5	<ul style="list-style-type: none"> <li>• Download video material elsewhere ✓</li> <li>• Post video in a shared drive/in learners' drives/ demonstrate with a projector, etc. ✓</li> </ul>	2	7
5.4	5.4.1	<ul style="list-style-type: none"> <li>• Previous/older copy of the web page has been stored/cached locally on the computer ✓</li> <li>• Need to refresh/download web page ✓</li> </ul> <i>(Accept press F5 for refreshing of web page.)</i>	2	
	5.4.2	<ul style="list-style-type: none"> <li>• RSS allows updated/new data from a variety of sites/sources to be automatically downloaded/sent to the user ✓</li> <li>• Saves time and trouble as new content is automatically downloaded. ✓</li> </ul> <i>(Do not accept Really Simple Syndication as an answer on its own.)</i>	2	4
5.5	5.5.1	URL refers to the address of a website/page/resource ✓ <i>(Do not accept Uniform Resource Locator as an answer on its own.)</i>	1	
	5.5.2	<ul style="list-style-type: none"> <li>• Look through (browsing) history</li> <li>• Bookmarks</li> <li>• Favourites</li> </ul> (Any 2) ✓✓	2	
	5.5.3	A search engine is a program/website that searches a database of registered sites/web pages ✓ for matches to text/words that are entered/input by the user. ✓	2	5
		<b>Total</b>		<b>26</b>

**QUESTION 6**

6.1	6.1.1	https indicates that the website is 'secure'/makes use of encryption to protect online transactions. ✓  <i>(Do not accept the expansion of the acronym as an answer.)</i>	1	
	6.1.2	<ul style="list-style-type: none"> <li>• Banks do not contact customers via e-mail to ask them to log onto their website or to update their account</li> <li>• Spelling errors in the e-mail</li> <li>• Looks like a typical phishing scheme, etc.</li> </ul> (Any 2) ✓✓	2	
	6.1.3	<ul style="list-style-type: none"> <li>• Contact the bank</li> <li>• Check the actual web address by looking at the properties of the hyperlink</li> <li>• Check online to see if similar schemes are doing the rounds, etc.</li> </ul> (Any 2) ✓✓	2	
	6.1.4	Phishing ✓	1	
	6.1.5	<ul style="list-style-type: none"> <li>• Do not click on hyperlinks to gain access to banking websites</li> <li>• Type the name of the bank's URL in the web browser yourself</li> <li>• Make sure you have security software installed on your computer</li> <li>• Make sure the security software/system on your computer is frequently updated</li> <li>• Use good password practice</li> <li>• Be careful where and how you give out personal information</li> <li>• Read up on the latest trends in phishing, etc.</li> </ul> (Any 2) ✓✓	2	8
6.2	6.2.1	<ul style="list-style-type: none"> <li>• Can be done at any time (24/7/365)</li> <li>• Do not have to physically go to shop</li> <li>• Able to compare prices easily</li> <li>• Potentially lower prices</li> <li>• Can read reviews by other readers/see recommendations</li> <li>• Purchases delivered, etc.</li> </ul> (Any 2) ✓✓	2	

	6.2.2	<ul style="list-style-type: none"> <li>• Lower overhead costs (staffing, building, etc.)</li> <li>• Can potentially supply books at lower costs than conventional shops</li> <li>• Do not have to carry large stocks</li> <li>• Wider markets (Internet presence)</li> <li>• Easy to market</li> <li>• Can detect trends more easily</li> <li>• Can match customer's preferences with those of others</li> <li>• Whole system can be computerised/automated</li> <li>• Less bad debts (only credit cards are accepted)</li> </ul> <p>(Any 2) ✓✓</p>	2	
	6.2.3	<ul style="list-style-type: none"> <li>• Notification of transactions by SMS</li> <li>• Security features such as passwords/PIN numbers</li> <li>• On-screen key pad to enter PIN numbers (bypass keyboard loggers)</li> <li>• 'One-time' passwords used per session and sent to customer's cell phone</li> <li>• Use of secure protocols (https/SSL)</li> <li>• Automatic logging off of customer after period of time in a session, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	6
6.3	6.3.1	<p>Spam is unsolicited e-mails advertising products, etc. ✓</p> <p><i>(Also accept electronic junk mail as an answer.)</i></p>	1	
	6.3.2	<ul style="list-style-type: none"> <li>• Avoid giving out e-mail address where possible</li> <li>• Make use of different e-mail addresses</li> <li>• Install anti-spam software</li> <li>• Use the anti-spam filters of your e-mail program</li> <li>• Make use of an ISP that filters for spam, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	3
6.4	6.4.1	<ul style="list-style-type: none"> <li>• You do not need the program in which the document was created to open it</li> <li>• The program needed to read these documents (Adobe Reader) is free</li> <li>• Users cannot (easily) make changes to the document</li> <li>• Adobe Reader is widely available, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	

	6.4.2	<ul style="list-style-type: none"> <li>• Each document (job) waiting to be printed is placed in a printer queue ✓ (per printer) on disk</li> <li>• This will show if the printing is still waiting in the queue, or it will display an error message ✓</li> </ul>	2	
	6.4.3	<ul style="list-style-type: none"> <li>• Check that the printer has paper</li> <li>• Check that the printer is online</li> <li>• Check for paper jams</li> <li>• Check if there is paper in the correct feeder tray</li> <li>• Check that there is toner/ink in the cartridges, etc.</li> </ul> <p>(Any 2) ✓✓</p>	2	6
6.5		<ul style="list-style-type: none"> <li>• Cross-reference the information with other sources</li> <li>• Check that the publication date is recent</li> <li>• Check if the information comes from a credible source</li> <li>• Look critically at the spelling and grammar for credibility</li> <li>• Check to see that the document is not biased or opinion-based</li> <li>• Check the credentials of the author(s)</li> <li>• Check the links given to other sources, etc.</li> </ul> <p>(Any 3) ✓✓✓</p>		3
		<b>Total</b>		<b>26</b>

**QUESTION 7**

7.1	<ul style="list-style-type: none"> <li>The language is set as 'US/American' English ✓</li> <li>Change language setting to 'UK' or 'South African English' ✓</li> </ul>			2
7.2	<ul style="list-style-type: none"> <li>Program is in overtype mode ✓ where existing characters are replaced with newly typed characters</li> <li>Change to 'insert' mode ✓</li> </ul> <p><i>(Also accept descriptions on how to get out of overtype mode e.g. double-click on the OVR on the status bar.)</i></p>			2
7.3	<ul style="list-style-type: none"> <li>Bookmarks</li> <li>Hyperlinks</li> <li>Use Find/Replace option if text is known</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>			2
7.4	<p>Use the 'match case' option ✓ so that only occurrences of the word which match the specified capitalisation are replaced</p> <p><i>(Also accept using the Find and Replace function to replace each word separately.)</i></p>			1
7.5	<ul style="list-style-type: none"> <li>The captions are always consistently positioned</li> <li>The format of the captions is always consistent</li> <li>Captions will update when any relevant change is made in the document</li> <li>Will show in any table of figures(images)/graphs/tables</li> <li>Captions are automatically numbered consecutively</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>			2
7.6	7.6.1	SUM ✓	1	
	7.6.2	COUNTIF ✓	1	
	7.6.3	COUNT ✓	1	
	7.6.4	LEFT or MID ✓	1	
	7.6.5	MODE ✓	1	5
7.7	<ul style="list-style-type: none"> <li>Change page orientation from portrait to landscape (or vice versa)</li> <li>Choose the 'fit to one page' print option</li> <li>Reduce the sizes of the margins</li> <li>Use auto-width option/make columns narrower</li> <li>Try and wrap headings where possible</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>			2

7.8	7.8.1	A wizard is a step by step ✓ guide/program that helps you create your own document/form/report, etc. ✓  (Do not accept 'program' as an answer on its own.)	2	
	7.8.2	<ul style="list-style-type: none"> <li>• Can add instructions on how to enter records (which format to be used, etc.)</li> <li>• Can create form to mirror the hardcopy form to facilitate data capturing</li> <li>• Can restrict which field the user can/has to enter data into</li> <li>• Easier to work with as only one record at a time is shown</li> <li>• Can add controls (drop down lists, etc. to facilitate data capturing, etc.)</li> </ul> <p style="text-align: right;">(Any 2) ✓✓</p>	2	
	7.8.3	A numerical field will discard any leading zeroes ✓ (whereas a text field will retain the leading zero)	1	
	7.8.4	<ul style="list-style-type: none"> <li>• No records will be displayed ✓</li> <li>• No value can be both greater than 10 and less than or equal to 1 at the same time ✓</li> </ul>	2	7
7.9	7.9.1	Will display the total number ✓ of records listed in the report ✓	2	
	7.9.2	Will display the number of records per group ✓ (of the field that the records are grouped on)	1	3
		<b>Total</b>		<b>26</b>

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