basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

FEBRUARY/MARCH 2017

MEMORANDUM

MARKS: 150

This memorandum consists of 15 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the memorandum frequently during the marking session.

- It is advisable to read the question frequently (and re-read) together with the candidate's response to check that it correlates, so that you are not misled by the candidate's statements/answers.

- Be careful not to focus on keywords or general statements, but rather read the entire answer. If in doubt, read the entire answer and then the question paper and memorandum. Ask yourself or your senior marker if the response could ˈfitˈ into the memorandum before allocating the correct marks to the candidate. For example, the memorandum states 'cheap' and the learner responds with 'less expensive'.

- Beware of overlapping answers to a specific question. In general, ONE mark is awarded per fact.

SECTION A

QUESTION 1: MULTIPLE-CHOICE

1.1	B	✔	1
1.2	B	✔	1
1.3	B	✔	1
1.4	D	✔	1
1.5	C	✔	1
1.6	A	✔	1
1.7	B	✔	1
1.8	C	✔	1
1.9	D	✔	1
1.10	B	✔	1
		Total: [10]	

QUESTION 2: MATCHING ITEMS

2.1	P	✔	1
2.2	J	✔	1
2.3	B	✔	1
2.4	N	✔	1
2.5	Q	✔	1
2.6	E	✔	1
2.7	L	✔	1
2.8	I	✔	1
2.9	M	✔	1
2.10	O	✔	1
		Total: [10]	

QUESTION 3: TRUE/FALSE ITEMS

	(Note to marker: In Question 3.1, 3.2, 3.3 and 3.4 accept the correct term even if 'false' is not stated. Do not award a mark if only 'FALSE' is written down.)	
3.1	FALSE, crowd funding ✔	1
3.2	FALSE, Count✔	1
3.3	FALSE, VGA/DVI/HDMI/display port✔	1
3.4	FALSE, Aspect Ratio✔	1
3.5	TRUE✔	1
		[5]

TOTAL SECTION A: **25**

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGIES

4.1.1	• To obtain directions/To pinpoint where they are. • To find alternative routes (less traffic) 　　　　　　　　　　　　✓ **(**Any one)	1	
4.1.2	To stay up to date with new editions of maps/roads/street names.✓	1	
4.1.3	• To check the driving of the driver • To identify the exact location of the vehicle for evidence/insurance purposes should the taxi/bus be involved in an accident or hijacking, etc. • To use as evidence if the driver is accused of being negligent/if criminal activities take place in the taxi etc. • To gather data regarding traffic patterns • As training material for drivers, etc. 　　　　　　　　　　✓ ✓ ✓ (Any three)	3	
4.1.4	It has no moving parts and is therefore less likely to be affected by vibration in the vehicle/less likely to 'break'.　✓ (*Note to marker: Do not accept answers referring to speed, capacity or noise*).	1	6
4.2	It will revert to using the on-board graphics adapter ✓		1
4.3.1	• Large file size of photos/uses a lot of storage space/fills up the available storage quickly • Sending/uploading/saving to the cloud will take a lot of data 　　　　　　　　　　　　✓(Any one)	1	
4.3.2	• Reduce brightness • Reduce screen time-out/reduce the time before the screen blanks out • Turn off vibration mode • Reduce volume • Turn off any wireless functionality, e.g. Wi-Fi, Bluetooth/Airplane mode • Monitor/switch off background apps that are not needed • Minimise notifications/Reduce checks for e-mails • Use power saving modes, etc. 　　　　　　　　　　　✓(Any one)	1	

　　　　　　　　　　　　　　　　　　　Please turn over

4.3.3	• Fewer physical buttons • The button layout can be changed as needed on the touch screen • More intuitive action • Easier to manipulate images/Gestures, e.g. pinching, etc. ✓✓(Any two)	2	
4.4	• Accidental deletions also affect backups/files across multiple devices • Extra bandwidth used • Malware can spread • Possible security risks with multiple copies of same file, etc. ✓✓(Any two)		2
4.5.1	• Keyboard • Touch screen • Mouse • Keypad ✓(Any one)		1
4.5.2	Update the record of the item on the POS system/database/server✓		1
4.6	A site license allows installation of the software ✓ on all devices within the company✓		2
4.7	To check which programs/background processes are making his computer perform slowly✓ and to close these programs✓		2
4.8	RAM loses its contents when the computer is switched off/in a power failure ✓		1
4.9	• Pin code/Password • Fingerprint scanner • Pattern unlock (draw a pattern on the screen) ✓✓(Any two)		2
4.10	• To reduce (cost of) data usage • Often have limited storage space • Threat of malware • Reduce power consumption, etc. ✓✓(Any two)		2
4.11	Add a USB hub✓ to the computer *(Note to marker: Accept general answers such as unplugging a device that is not used all the time, such as the printer.)*		1
			[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	• Delivery to your home/No need to leave your home/Safer than going to a shop/More convenient • Can do your shopping from any device connected to the Internet • Can easily compare specifications/prices/easier to find specific item • Can see recommendations/choices of other customers • Much wider variety of items to choose from/Can buy from overseas shops • Saves on travelling costs when doing shopping, etc. ✔✔(Any two)		2
5.2	It indicates that the website is designed for viewing on mobile devices/smaller screens✔		1
5.3.1	• Malware infection • Maintenance being performed on lines • Number/Size of concurrent downloads • Amount of people online through a certain exchange/Contention ratio • Connection problems at the telephone exchange/ISP problems/Damage to (underwater) cables • Damaged/Malfunctioning router • Shaping/Soft cap on an uncapped line/Line throttling, etc. ✔✔(Any two)	2	
5.3.2	Connects the computer/network to the Internet✔	1	3
5.4	• High cost of data/Internet connectivity • Relative lack of knowledge and skills • Lack of access to (very) high speed Internet access. ✔✔(Any two)		2
5.5	• Emoticons/Smileys/Emojis/Icons • Short versions of phrases, e.g. LOL, ROTFL • Use capital letters when necessary, etc. ✔✔(Any two)		2
5.6.1	Web browser✔ *(Note to marker: accept specific examples, e.g. Google Chrome, etc.)*		1
5.6.2	Intranet uses Internet technology and can be accessed from outside ✔ the premises as long as the user has been authorised✔		2
5.7	Transferring files✔		1
5.8	Firewall ✔		1
			[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1.1	• Check boxes allow users to make more than one choice • Data would not be accurate ✓(Any one) *(Note to marker: Accept any valid, specific example of data not being accurate.)*	1	
6.1.2	• The caption/text on the button does not clearly indicate the function of the button • The location of the button on the form is not intuitive ✓(Any one)	1	
6.1.3	• List boxes restrict the user to only choosing from the list of options ✓whereas combo boxes allow users to enter additional items not on the list✓. This may cause incorrect or invalid options to be entered/The list of classes is fixed/finite so there is no need for the user to enter another option ✓	3	5
6.2.	Information on web page may be outdated/old/not show any updated information on the page. ✓ Any ONE of ✓: • Refresh/reload the page/Press F5 key • Delete the cached pages, etc.		2
6.3.1	COUNTIF ✓	1	
6.3.2	She included the levels (cells A2:A7) as part of the chart data/Cells A2:A7/Column A forms a(nother) series on the chart. /Incorrect data range✓ Any ONE of: ✓ • Use cells B2:B7/column B to draw the chart • Delete the series including the levels from column A	2	3
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	The confidential information that was collected cannot be sent back to the creator of the malware.✔ (*Note to marker: Accept answers referring to keylogger hardware being harmful.*)		1
7.2.1	Using computers in a way that is not harmful to the environment ✔	1	
7.2.2	• It contains poisonous materials • It requires more and more land to be allocated to rubbish heaps • It can cause health issues for humans and animals • It can pollute water and soil, etc. ✔✔(Any two)	2	3
7.3	• Do not need large premises • Employees can work flexi-time (24/7) if need be • Less need for expensive equipment/features to improve working conditions (like coffee machine) • Reduced carbon footprint for the company, etc. ✔✔(Any two)		2
7.4	Phishing is any attempt to trick a user into giving out sensitive information. ✔ Humans make the attempt by sending out e-mails etc./There is no set program/code for the anti-virus program to recognise ✔		2
7.5	• Do not use a lot of data/Do not download too much/Ask how much data you may use • Do not visit sites which could potentially endanger the security of the computer • Not visiting sites with inappropriate content sites • Not downloading inappropriate content • Ask each time before you use the connection, etc. ✔✔(Any two)		2
			[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	Match Table of Contents levels/styles to those of styles used in the document✓ **OR** Change the styles of the headings to match the ones specified in the Table of contents dialog		1
8.2	Use a column break (Ctrl+Shift+enter) ✓		1
8.3	• Indentation • Tab Stops • Text Box • Align (center) ✓✓(Any two)		2
8.4	A bookmark marks/indicates specific text in a document ✓which can be navigated/hyperlinked to ✓		2
8.5.1	• CONCATENATE • RIGHT/MID (not both) • RANDBETWEEN • LEN ✓✓ (Any two)	2	
8.5.2	The number of days (between the two dates)✓ **AND** • Divide by 365(.25) • Custom date display format ✓(Any one)	2	4
8.6.1	The number of records ✓that appear in the report ✓ *(Note to marker: Also accept the number of records that have a value for the Pay field.)*	2	
8.6.2	The (current) date/time✓	1	3
8.7	The end tag/ was omitted✓		1
8.8	• The image is not saved in the same folder as the HTML document/image name spelled incorrectly • The code is unknown format/ not compatible with the browser being used ✓(Any one)		1
			[15]

TOTAL SECTION B: **75**

SECTION C: INTEGRATED SCENARIO

QUESTION 9

9.1.1	• Devices can be moved freely around the venue and still connect • No need to install/lay cables for every device • Internet connectivity can be given to devices where cables cannot be laid, etc. ✓✓(Any two)	2	
9.1.2	3G/4G/LTE✓	1	
9.1.3	• Communication medium/Cable • Switch • (Modem) Router/Access Point • Modem • Wi-Fi cards/NICs • Wi-Fi extenders/signal boosters, etc. ✓✓(Any two)	2	
9.1.4	• Website hosting • E-mail services/addresses • Fax to e-mail • Cloud storage • Spam/Phishing protection • SaaS ✓✓(Any two)	2	
9.1.5	To control or limit Internet use✓ *(Note to marker: Accept specific examples such as not going onto 'dodgy' sites/excessive downloading, etc.)*	1	
9.1.6	• Data usage could be high • Poor connection speed could cause the video to hang/buffer ✓✓(Any two) *(Note to marker: Accept answers relating to cost of high data usage such as the faster connection required or to quality of the video.)*	2	10

9.2	• Can be accessed from any computer, anywhere in the world via the Internet • Online storage is usually available with the online application • Software is always up to date/New versions are automatically available to subscribers • The hardware requirements of the computer can be lower, etc. ✓✓(Any two) *(Note to marker: Do not allocate a mark for cheaper if not accompanied by a valid explanation.)*		2
9.3	• There may be software compatibility issues • Problems with hardware compatibility • Need for more expertise to support different devices • Greater concern for theft/loss of confidential information • Potential misuse of bandwidth • Potential spread of viruses • Slowing down the network ✓ (Any one)		1
9.4.1	The server provides resources/services to the clients ✓ *(Note to marker: Do not accept answers such as 'controlling the network'.)*	1	
9.4.2	• Less data will be used • Less bandwidth will be used/fewer bottlenecks will occur when multiple users try to download over the Internet connection simultaneously. • Will be quicker/easier to download from the intranet • They will automatically download the correct app without searching the app store or choosing between similar apps ✓✓(Any two	2	
9.4.3	A Trojan is a malicious software/program designed to look unsuspicious/useful ✓ It relies on the user opening/running it ✓so that it can deliver its payload/implement the malware contained in it	2	5
9.5.1	1152 GB/1128 GB/1 TB + 128 GB ✓	1	
9.5.2	The SSD ✓	1	
9.5.3	NIC ✓	1	
9.5.4	RAM ✓	1	4

9.6.1	• Fixing problems/bugs/flaws in software • Improve the security features of the software • Improve the efficiency of the software ✓✓(Any two)	2	
9.6.2	• Updates ensure minimal problems with software • Developer feels all updates are important • Updates ensure that software stays current • Users may forget to update software, etc. ✓(Any one)	1	
9.6.3	• Data use could increase dramatically • Downloading updates will have an impact on the speed at which a user can browse the Internet • A drop in computer performance while the update is running may occur • Drop in performance after updates installed • Decrease in storage space • Features may be unnecessarily updated as they are not used, etc. ✓(Any one)	1	4
			[26]

QUESTION 10

10.1	• Not everybody has the WhatsApp app installed • Need to have everybody's cellphone numbers • In a group one can be inundated with responses to a posting/People are reluctant to join groups ✓(Any one)		1
10.2.1	A person receives too much new information/posts/e-mails, etc. to process efficiently/being overwhelmed/is not coping with volume of information they encounter✓	1	
10.2.2	• Don't subscribe to too many sites for updates/Unsubscribe from lists/groups • Define/Use e-mail message rules • Limit interactions/friendships/postings on social media • Do not contribute to the problem by continually posting/sending (needless) information • Use ICT tools (accept examples such as RSS feeds) to help process organise data/information • Create to-do lists of critical tasks • Actively take breaks from interacting with people/systems that contribute to information overload etc. ✓✓(Any two)	2	3
10.3.1	• Internet banking/Banking app • Cell phone banking (for dumb/feature phones) • Transfer at an ATM ✓✓(Any two) *(Note to marker: Accept specific examples, FNB banking app, Paypal, Bitcoin etc.)*	2	
10.3.2	• Receive a confirmation notification via e-mail or SMS • Use a banking app/Notifications/Electronic receipts • Check online bank statements ✓(Any one)	1	3
10.4.1	It reduces the likelihood of error ✓ as it guides the user to fill in the correct number of digits.	1	
10.4.2	• Add more space for the surname • Use blocks for surname • Reduce space for the initials • Increase height of rows • Add instructions • Increase the number of blocks/cells for the cell number, etc. ✓✓(Any two)	2	3

10.5	• Do not connect to the network/Internet • Install/Make use of security software • Ensure security software is updated • Do not allow anyone to insert any form of storage device/block ports • Disable any wireless capabilities, e.g. Bluetooth • Password-protect the data files which contain the final votes • Encryption • Biometrics, etc. ✓✓(Any two)	2	2
10.6.1	Duplicate values ✓are likely/not unique value	1	
10.6.2	Input mask✓	1	
10.6.3	Validation rule(s)/required field ✓	1	
10.6.4	Combo/Drop down/ List box/Lookup Wizard✓	1	4
10.7.1	When the file will not open automatically when double-clicking on it/ When the file has no default program associated with it. ✓	1	
10.7.2	• It can be viewed without access to the type/version of software it was created in • The 'reader' software is free/freely available • It has become standard/used extensively • It can be used to restrict editing of the file • It can (sometimes) be smaller in size than the original file, etc. ✓✓(Any two)	2	
10.7.3	• So that it associates the type of file with the selected program • So that it will automatically open this type of files with the selected program in the future • So that you are not asked the same 'question' next time ✓(Any one)	1	4
10.8.1	Only need to change in one place if cost changes/Do not have to adjust each formula, etc. ✓ *(Note to marker: Do not accept 'quicker' or 'easier' without a suitable explanation.)*	1	
10.8.2	Absolute cell referencing needs to be used on cell B9/B9 cell reference changes when copied✓ **OR** Relative cell referencing was used and resulted in cell reference changes when copied =IF(D2="Yes",0,C2*B9) /=IF(D2="Yes",0,C2*B$9) ✓	2	

10.8.3	• Yes, if one calculates totals of each project type first • A meaningful graph cannot be produced by just selecting text entries ✓(Any one)	1	4
			[24]

<div align="right">

TOTAL SECTION C: **50**
GRAND TOTAL: **150**

</div>