basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL
SENIOR CERTIFICATE

GRADE 12

MARKS: 150

These marking guidelines consist of 13 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the marking guidelines 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 marking guidelines. Ask yourself or your senior marker if the response could ˈfitˈ into the marking guidelines before allocating the correct marks to the candidate. For example, the marking guidelines state '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

<table>
<tr><td colspan="4">QUESTION 1: MULTIPLE-CHOICE</td><td colspan="4">QUESTION 2: MATCHING ITEMS</td></tr>
<tr><td>1.1</td><td>A</td><td>✔</td><td>1</td><td>2.1</td><td>P</td><td>✔</td><td>1</td></tr>
<tr><td>1.2</td><td>A</td><td>✔</td><td>1</td><td>2.2</td><td>N</td><td>✔</td><td>1</td></tr>
<tr><td>1.3</td><td>D</td><td>✔</td><td>1</td><td>2.3</td><td>A</td><td>✔</td><td>1</td></tr>
<tr><td>1.4</td><td>D</td><td>✔</td><td>1</td><td>2.4</td><td>R</td><td>✔</td><td>1</td></tr>
<tr><td>1.5</td><td>C</td><td>✔</td><td>1</td><td>2.5</td><td>B</td><td>✔</td><td>1</td></tr>
<tr><td>1.6</td><td>B</td><td>✔</td><td>1</td><td>2.6</td><td>E</td><td>✔</td><td>1</td></tr>
<tr><td>1.7</td><td>D</td><td>✔</td><td>1</td><td>2.7</td><td>G</td><td>✔</td><td>1</td></tr>
<tr><td>1.8</td><td>A/B</td><td>✔</td><td>1</td><td>2.8</td><td>L</td><td>✔</td><td>1</td></tr>
<tr><td>1.9</td><td>C</td><td>✔</td><td>1</td><td>2.9</td><td>H</td><td>✔</td><td>1</td></tr>
<tr><td>1.10</td><td>B</td><td>✔</td><td>1</td><td>2.10</td><td>K</td><td>✔</td><td>1</td></tr>
<tr><td colspan="4" align="right">Total: [10]</td><td colspan="4" align="right">Total: [10]</td></tr>
</table>

QUESTION 3: TRUE OR FALSE

	(Note to marker: Do not award a mark if only 'FALSE' is written down.)	
3.1	FALSE, Firewall/Router✓	1
3.2	FALSE, Pop-up✓	1
3.3	TRUE✓	1
3.4	FALSE, Styles/Templates✓	1
3.5	FALSE, Questionnaire/Survey✓	1
		[5]

TOTAL SECTION A: [25]

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGIES

4.1	- More convenient/Easier to use/User is more familiar with a mouse - More accurate mouse movements - Ergonomic design of the mouse ✓ (Any one)		(1)
4.2	- Laptops can be locked away - Battery can allow use during power outages (Generally) consumes less power - Mobility makes it easy to set up any room for tests and exams, or to be used for different purposes ✓✓ (Any two)		(2)
4.3	- SSDs are more expensive per GB of storage - They are not good for long term (archiving) storage (lose charge) - Write cycles are limited ✓✓ (Any two)		(2)
4.4.1	- Access to updated information on the Internet - Take a picture of homework - Use social networking for collaboration - Use for reading digital/electronic version of textbooks - Interact with electronic quizzes ✓✓ (Any two) *(Note to marker: Accept any valid example that has educational value)*	(2)	
4.4.2	- Limited Battery life - Limited controls - Small screen size - Overheating issues - Lower screen resolution ✓✓ (Any two)	(2)	
4.4.3	- Wi-Fi - NFC - Bluetooth ✓✓ (Any two)	(2)	
4.4.4	Location information is added to the photo (as metadata) ✓	(1)	(7)

4.5.1	Devices are too small/Standard USB connectors are too large✓	(1)	
4.5.2	- Tablets - Flash storage - Rechargeable headphones/speakers - Digital cameras - Power banks ✓✓ (Any two) *(Note to marker: Accept valid examples such as tablet keyboard, dashcam)*	(2)	(3)
4.6.1	- The attachment is an exe file which could be a virus - Exe is not an image file extension ✓ (Any one)	(1)	
4.6.2	- Delete the e-mail - Save and scan the attachment with an antivirus program - Do not open the attachment ✓ (Any one)	(1)	(2)
4.7	- Virus/malware infection - Could open your computer to being hacked - Legal consequences - Cannot be updated/Manufacturer may disable software during update attempt ✓✓ (Any two)		(2)
4.8	- Start up in safe mode - Re-install operating system/Format storage media (HDD/SDD)/Try to boot from recovery disk/media - Check boot sequence in BIOS - Remove external storage from USB ports and try again - Test the power supply - Check the primary hard drive and replace if necessary ✓✓ (Any two)		(2)
4.9	- It was created using multi-session/the session was not closed - The optical drive is faulty on either one of the computers - Incorrect label placement - The file system is not supported - The CD was not properly written ✓✓ (Any two)		(2)
4.10	- Fixes program bugs - Addresses security vulnerabilities - Adds features to the operating system - Fewer system crashes/More system stability ✓✓ (Any two)		(2)
			[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1.1	Package C✓ **AND** Uncapped data✓ High line speed✓	(3)	
5.1.2	Package B✓ **AND** • Less data required • Sufficient line speed • Cost effective ✓ (Any one)	(2)	(5)
5.2.1	• Data cap is used up • Problems with the NIC • Line cable not connected • Network settings in the operating system are incorrect • Firewall is blocking access to a website • Service provider not accessible ✓✓ (Any two)	(2)	
5.2.2	To refresh/reload the webpage✓	(1)	
5.2.3	Not secure✓ because of http instead of https ✓ (no lock symbol)	(2)	(5)
5.3.1	Check the list under Wi-Fi settings/Enable Wi-Fi on the phone✓ *(Note to marker: Accept if list is mentioned without reference to Wi-Fi settings)*	(1)	
5.3.2	Use a firewall✓ Use an anti-malware/virus program✓	(2)	(3)
5.4	Provides additional functionality/features✓ on websites		(1)
5.5	• Updates are automatically sent to people • No need to continually visit the website to check for new information ✓ (Any one)		(1)
			[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1	When data is processed/becomes meaningful✔ *(Note to marker: Accept examples showing data to information e.g. adding headings to columns.))*		(1)
6.2	- Reach a larger audience - Distance is not an issue - Data capture can be automated ✔ (Any one) **AND** - Responses can be collated into a spreadsheet - Responses can be analysed automatically ✔ (Any one)		(2)
6.3	Negative ages/numbers will be accepted✔ Very high ages will be accepted/there is no limit to how high a number may be✔		(2)
6.4	- It may be old information - Information may be biased - Information may not be accurate/contrary to other expert authors - Search criteria may be irrelevant ✔✔ (Any two)		(2)
6.5	Track changes✔		(1)
6.6	- Lock cells - Protect the sheet/add a password - Make the file read only ✔ (Any one)		(1)
6.7	- Use a primary key - Use indexing (No duplicates) property ✔ (Any one)		(1)
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	• It requests to be forwarded to many other people • You receive the same message from many people • It could include a threat • Difficult to verify • Highly emotional content ✓ (Any one)		(1)
7.2	• Could lead to job losses • Distracts employees (lowers productivity) • Increase in electricity consumption • Networks can be hacked into • Employees use work place resources for their own benefit / /Employees may increase company risk by downloading viruses and torrents • May lead to lack of trust between employer and employee ✓✓ (Any two)		(2)
7.3	• Government has no control over transactions • No tax can be generated from transactions • No consumer protection rights if unhappy with purchase • It is often used as payment in illegal activities • Rapid fluctuation in value may put citizens at risk ✓✓ (Any two)		(2)
7.4	• Employer cannot track working hours/may not trust employee to work the hours he should • Employer expense to set up ICT systems to accommodate telecommuting • Work is dependent on a stable Internet connection/electricity supply ✓✓ (Any two) *(Note to marker: Accept any other valid reason.)*		(2)
7.5	• Appliances can be started remotely before getting home • Check on the status of appliance • Manufacturer can diagnose problems without visiting • Firmware can be upgraded • Usage can be monitored • Data can be retrieved from these devices ✓ (Any one)		(1)
7.6	• Distraction to learning • Sharing of sensitive pictures • Theft creates unnecessary disciplinary issues for the school • Learners may develop anti-social behaviour ✓✓ (Any two)		(2)
			[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	Not saved with an html extension/<html> beginning and end tags omitted✓		(1)
8.2	Specify the size/Resize/ Adjust the width and height of the picture✓		(1)
8.3.1	All fields may hold duplicate values✓		(1)
8.3.2	Yes/No/Boolean✓ Lookup wizard✓		(2)
8.3.3	Default value✓		(1)
8.3.4	Change data type to Memo/Long Text✓		(1)
8.4	Format Painter✓		(1)
8.5	• Insert table on the text • Convert text to table • Copy text and paste into table • Use the Draw Table option ✓✓ (Any two)		(2)
8.6.1	Increase column width		(1)
8.6.2	• Change the condition to greater than or equal to 28/Change to greater than 27 • Swop the TRUE and FALSE arguments/Swop the position of 200 and 0 ✓✓ (Any two)		(2)
8.6.3	COUNTIF✓		(1)
8.7	StoreName✓		(1)
			[15]

TOTAL SECTION B: [75]

SECTION C

QUESTION 9: INTEGRATED SCENARIO

9.1	- No dedicated graphics card/Integrated graphics - Low resolution screen - Small screen size - Low amount of RAM - Slow/outdated CPU - No sound card - Reduced number of ports - Slower bus speeds - Smaller HDD ✓✓ (Any two)		(2)
9.2	- Word processor: Microsoft Word/Libre Office Writer - Document publisher: Microsoft Publisher - Web development tool: Dreamweaver/Frontpage/Notepad++ - Browser: Internet Explorer/Edge/Chrome/Firefox - Image manipulation software: Photoshop/Gimp, etc. ✓✓ (Any two) *(Note to marker: Accept only one correct example of each type of software application)*		(2)
9.3	Template has pre-set formatting and layout✓		(1)
9.4.1	A – Router/Gateway/Switch✓	(1)	
9.4.2	B – Switch/Gateway/Router/Repeater/Hub✓	(1)	
9.4.3	- Install a firewall - Every user should have their own profile/login details - Secure/Lock the room ✓✓ (Any two)	(2)	
9.4.4	- Better security - Better data transfer rates - Not affected by weather or physical obstructions ✓✓ (Any two)	(2)	(6)
9.5	- Wider audience - People can comment on articles - Automatic notifications to audience about new articles - Analytics on audience is possible - No printing costs ✓✓ (Any two)		(2)

9.6	• Source code is available in FOSS • FOSS is free • Proprietary source code is not available • Proprietary software may not be free ✓ (Any one)		(1)
9.7.1	• There is no Internet connection • Computer has a virus • Prevented by firewall settings • Not a licenced copy of Windows/Corrupted windows files ✓✓ (Any two)	(2)	
9.7.2	• Windows will be vulnerable to security threats • Bugs in the operating system or other applications will not be fixed • Newer features will not be added ✓ (Any one)	(1)	(3)
9.8	Backup to a cloud service✓ Backup to an external storage that can be moved✓		(2)
9.9.1	• User friendly layout • Allows for single record view • Images can be inserted for visual appeal ✓✓ (Any two)	(2)	
9.9.2	• Query • Filter • Sort • Grouping ✓✓ (Any two)	(2)	(4)
9.10	• May prevent data theft • May prevent malware from external storage devices • May prevent unnecessary data from being loaded onto the computer ✓✓ (Any two)		(2)
			[25]

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QUESTION 10: INTEGRATED SCENARIO

10.1.1	• Tablet • Smartphone • Phablet	✓✓ (Any two)	(2)	
10.1.2	• Cyber stalking • Data mining for advertising • Cyber bullying	✓✓ (Any two)	(2)	
10.1.3	• Get permission from the owner • Acknowledge the source of the picture • Determine licence terms for images/Creative Commons licence	✓✓ (Any two)	(2)	
10.1.4	2 Rows ✓ and 3 Columns ✓		(2)	(8)
10.2.1	• Viruses • Too many applications installed • Two anti-virus programs installed at the same time • New software demands on hardware • Old operating system • Too many applications launch automatically on start up • Disk may be fragmented	✓✓ (Any two)	(2)	
10.2.2	• RAM • Hard drive • CPU	✓✓ (Any two)	(2)	
10.2.3	• Upgrade operating system/Repair/Install Windows • Install patches • Install service pack	✓✓ (Any two)	(2)	
10.2.4	• Give to a charity organisation • Dispose in an environmentally friendly way • Sell off parts	✓✓ (Any two)	(2)	(8)
10.3.1	CPU has two cores✓		(1)	
10.3.2	Gives wireless/WiFi✓ network access		(1)	(2)

10.4.1	• Legend has meaningful names • Minor gridlines • Axis titles • Data labels, etc. ✓✓ (Any two)	(2)	(4)
10.4.2	• Conditional formatting • Sorting • Filters • Functions • Pivot table/chart • Subtotal/outline ✓✓ (Any two) *(Note to marker: Do not accept any references to normal formatting like bold, font colours, etc.)*	(2)	
10.5.1	Number/number based datatype✓ There is a calculation in the query based on this field✓	(2)	
10.5.2	Totals/Group by✓ was used to get the average of all 4 records	(1)	(3)
			[25]

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