

MARKING GUIDELINES

EXAMINATION		NATIONAL SENIOR CERTIFICATE	
GRADE		12	
DATE		MAY/JUNE 2025	
SUBJECT		COMPUTER APPLICATIONS TECHNOLOGY	
PAPER		2	
MARK TOTAL		150	
DURATION (HOURS)		3	
NUMBER OF PAGES		18	



SOUTH AFRICAN COMPREHENSIVE ASSESSMENT INSTITUTE
SUID-AFRIKAANSE KOMPREENSIEWE ASSESSERINGSINSTITUUT

FINAL APPROVED MARKING GUIDELINES

DATE OF MEETING	
UMALUSI MODERATOR	
CHIEF MARKER	
INTERNAL MODERATOR	



SUBJECT SPECIFIC MARKING GUIDELINE

- Revisit the questions and the marking guideline 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.
- Do not 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 the IM or CM if the response could 'fit' into the marking guidelines before allocating the correct marks to the candidates:
 - For example, the marking guidelines state 'cheap' and the learner responds with 'less expensive'; and 'delete' and the candidate responds with 'erase'/'wipe'/'remove' etc.
- Beware of overlapping answers to a specific question. In general, ONE mark is awarded per fact.
- All marking should be done in **red pen**. Internal moderation is done in **black pen**, moderation by SACAI is done in **green pen**, while Umalusi moderates in **purple pen**.
- Marks should be indicated with a tick "✓" directly above the relevant keyword. In the case of two marks per fact, two ticks "✓✓" should be indicated. Do NOT place the tick at the end of the line (sentence) or paragraph. Mark wrong answers with a cross (X) or underline wrong sentences.



SECTION A

QUESTION 1: MATCHING ITEMS			
1.1	T	✓	(1)
1.2	I	✓	(1)
1.3	S	✓	(1)
1.4	R	✓	(1)
1.5	K	✓	(1)
1.6	O	✓	(1)
1.7	P	✓	(1)
1.8	L	✓	(1)
1.9	A	✓	(1)
1.10	D	✓	(1)
[10]			

QUESTION 2: MULTIPLE CHOICE			
2.1	B	✓	(1)
2.2	C	✓	(1)
2.3	A	✓	(1)
2.4	A	✓	(1)
2.5	D	✓	(1)
[5]			

QUESTION 3: TRUE OR FALSE

Note to marker: Do not award a mark if the sentence is changed, only the underlined term may be changed if the candidate indicated that the statement is false.

3.1	True	✓	(1)
3.2	False, spreadsheet	✓	(1)
3.3	False, intranet	✓	(1)
3.4	False, social engineering	✓	(1)
3.5	False, title	✓	(1)
3.6	False, Info	✓	(1)
3.7	True	✓	(1)
3.8	True	✓	(1)
3.9	True	✓	(1)
3.10	False, Dimm	✓	(1)

[10]

TOTAL SECTION A: [25]

SECTION B

QUESTION 4: SYSTEM TECHNOLOGIES

4.1	<p>Media included in multimedia presentations</p> <ul style="list-style-type: none"> • Video • Audio • Animation • (Still) images • Text • Maps • Charts and graphs <p style="text-align: right;">Any two ✓ ✓</p>	(2)
4.2	<p>Purpose of disk partitioning and disk formatting</p> <p><i>Disk partitioning:</i> It creates different sections on the storage device ✓ (each of which acts like an independent storage unit)</p> <p><i>Disk formatting:</i> The primary purpose of disk formatting is to establish a file system ✓ which is used to store and retrieve data</p> <p>Note: disk formatting: Do not accept any answer related to removal of viruses or deleting of files</p>	(2)
4.3	<p>Ownership and updates of online applications</p> <p>Users do not/never own the software ✓ but have access to the latest updates/software (are always up to date) ✓</p>	(2)
4.4	<p>Wireless microphone</p> <p>No (connecting a microphone using NFC will not work) ✓ because NFC only works over very short distances ✓</p>	(2)
4.5	<p>Computer specification for a graphics card</p> <ul style="list-style-type: none"> • The PCIe connection • The power supply/PSU • Cooling System • RAM (memory) <p style="text-align: right;">Any two ✓ ✓</p>	(2)



4.6.1	Less storage space needed Users make use of online applications (cloud computing) ✓ Online applications are not installed on the local computer (and therefore need less local storage space) ✓	(2)
4.6.2	Locations to install GPU and CPU GPU on a graphics card/motherboard (if integrated) ✓ CPU on a motherboard / Zif socket / CPU socket ✓	(2)
4.6.3	Software required for printing Operating system ✓ (Device) driver ✓	(2)
4.7.1	Difference in storage space 768 or 744 ✓ GB ✓ 1024 GB – 256 GB	(2)
4.7.2	Linux category software Open-source software/Open-source operating system ✓ Note: Do not award the mark if the candidate simply indicates Linux is free	(1)
4.7.3	Advantage of including webcam and microphone It can be used for video conferencing/online meetings/making calls/ speaking to other while playing games ✓	(1)
4.7.4	Gigabit meaning 'Gigabit' refers to the data transfer speed or bandwidth ✓ of the Ethernet connection	(1)
4.7.5	Why the computer is a desktop It has an HDD and SSD ✓ The computer will use an external monitor ✓	(2)
4.7.6	Wired vs. Wireless Wired ✓ AND <ul style="list-style-type: none"> • A wired connection is more stable • A wired connection offers better security • Less interference • Transfer data over longer distances <p style="text-align: right;">Any two ✓ ✓</p>	(2)

[25]

QUESTION 5: NETWORK AND INTERNET TECHNOLOGY

5.1	<p>NIC's used by laptops An Ethernet NIC ✓ and a Wireless/WiFi NIC ✓</p> <p>Note: No marks are awarded for wired or wireless NIC's</p>	(2)
5.2	<p>TWO internet connected devices to create a hotspot</p> <ul style="list-style-type: none"> • Routers • MiFi or Mobile Hotspot Devices • Gaming Consoles • Smart Home Hubs • Smart TVs/Streaming Devices <p style="text-align: right;">Any two ✓ ✓</p>	(2)
5.3.1	<p>Data transmission rules Protocol ✓</p>	(1)
5.3.2	<p>SMTP Simple Mail Transfer Protocol ✓ It is used for sending of email messages ✓</p>	(2)
5.4	<p>Wireless access point vs router A wireless access point allows wireless <u>devices</u> to connect to each other/to the internet/to a network ✓ but a router connects the local <u>network</u> to the internet ✓</p>	(2)
5.5	<p>Grid computing and big data They rely on many computers that are not in the same geographical location ✓ and combine/use the processing power of all these computers/servers to process their data ✓</p>	(2)
5.6	<p>TWO measures to block unwanted content from a web browser</p> <ul style="list-style-type: none"> • Enable a pop-up/ad blocker • Use the block website feature of the browser • Install a plug-in that blocks known questionable sites • Use a safe-search feature of the search engine • Use an anti-virus program that has web content screening <p style="text-align: right;">Any two ✓ ✓</p>	(2)
5.7	<p>Data limit reached Charge a fee for additional data used ✓ Throttle the user's transfer rate/slow down the rate at which data is received. ✓</p>	(2)



QUESTION 6: INFORMATION MANAGEMENT

6.1	<p>Information sources and data-gathering tools</p> <ul style="list-style-type: none"> • Printed media • Books • Newspapers • Journals • Field notes • Maps <p style="text-align: right;">Any two ✓ ✓</p>	(2)
6.2	<p>First step in the problem-solving cycle</p> <p>Defining the problem ✓</p>	(1)
6.3	<p>Factors to consider when evaluating websites</p> <ul style="list-style-type: none"> • Authority: Helps determine if the information comes from a credible source • Author credentials: Provide insight into their expertise in the subject matter • Grammar: It indicates professionalism and reliability • Objectivity: Is there bias in the information provided?/Are all factors included in the information? • Currency: It refers to how up to date the information is • Accuracy and Reliability: information can be verified through other sources <p style="text-align: right;">Any two ✓ ✓ ✓ ✓</p> <p>Note: One mark for each term (must be two) and one mark for the description of that term.</p>	(4)
6.4	<p>TWO advantages of conducting a survey in person</p> <ul style="list-style-type: none"> • No need to find (and enter) (a large number of) email addresses • Potentially faster to administer (e.g. no need to wait for email responses) • Smaller possibility of receiving irrelevant responses (i.e. from people who are not the intended recipients) • People can ask questions about the questionnaire to get more clarity • People who do not have email or internet access are not excluded • Easier to specify the target group (in terms of geographical location, e.g. only people who attended a concert) • People may mistakenly interpret the email as spam or phishing • Higher response rates <p style="text-align: right;">Any two ✓ ✓</p>	(2)



6.5	Information in the form of codes <ul style="list-style-type: none">• Easier/quicker for respondents to answer• Easier/quicker to capture/convert to digital format• Fewer problems in terms of interpreting handwriting• Easier to validate responses <p style="text-align: right;">Any one ✓</p>	(1)
-----	---	-----

[10]



QUESTION 7: SOCIAL IMPLICATIONS

7.1	Gesture recognition devices <ul style="list-style-type: none"> • Hand gestures • Head or eye movements • Read lips • Sign language <p style="text-align: right;">Any one ✓</p>	(1)
7.2	Identify device Firewall ✓	(1)
7.3	TWO problems when implementing a BOYD policy <ul style="list-style-type: none"> • Different operating systems are controlled and managed differently. This diversity complicates efforts to manage and control applications uniformly • Users can freely download apps from app stores, making it challenging for employers to restrict or monitor these downloads effectively • Creating lists of approved (whitelisting) and prohibited (blacklisting) applications can be time-consuming • Employers need to ensure that devices have the latest patches and updates for applications • Privacy Concerns: Employees may resist app control measures, fearing that their personal data could be accessed or monitored by the employer. • Security Risks: Personal devices may lack the necessary security features and updates, increasing the risk of malware or unauthorised access. <p style="text-align: right;">Any two ✓ ✓</p>	(2)
7.4	Email spoofing & phishing Both involve sending emails that appear official ✓ to trick users into revealing sensitive/personal information/to deceive recipients ✓	(2)
7.5	Cloud storage vs cloud backup Cloud storage allows you to manually select and store files online ✓ Cloud backup automatically backs up specific files and their changes in the cloud ✓	(2)
7.6	Internet banking When using public hotspots/unsecured websites ✓	(1)



7.7	Two-factor authentication <ul style="list-style-type: none">• It enhances online security by requiring a second verification factor (typically a physical device like a phone, in addition to a username and password)• Requires two different forms of identification or verification before access is granted	Any one ✓ (1)
-----	---	---------------

[10]



QUESTION 8: SOLUTION DEVELOPMENT

8.1	<p>Open webpage by double clicking it The file is (by default) a text file. ✓</p> <p>AND</p> <ul style="list-style-type: none"> • Save the file with an .html extension • Right-click on the file and select "Open with" (and select a web browser) <p style="text-align: right;">Any one ✓</p>	(2)
8.2	<p>Html to create a list <ol type="A"> ✓ Item 1 ✓ Item 2 Item 3 </p>	(3)
8.3.1	<p>Attribute missing Primary key ✓</p>	(1)
8.3.2	<p>Control for Yes/No field Checkbox ✓</p>	(1)
8.3.3	<p>Calculated field Total: [Won/Wen] ✓ + [Lost/Verloor] ✓</p>	(2)
8.4.1	<p>Date entered and displayed differently The cells were formatted ✓ as dd-mm-yyyy ✓</p>	(2)
8.4.2	<p>COUNTIF not the correct function COUNTIF is only used with one range and criteria. ✓ The COUNTIFS function should be used. ✓</p>	(2)
8.5	<p>Purpose of track changes It allows multiple people to make edits/suggestions to a document ✓ and show all those changes. ✓</p>	(2)

[15]

TOTAL SECTION B: [75]

SECTION C

QUESTION 9: INTEGRATION

9.1	<p>Mouse scanner A mouse scanner is a device that allows you to scan documents or images by moving the mouse scanner over the surface you want to scan ✓</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Mouse scanners offer convenience and portability • Allows scanning of documents of various sizes • Space Saving <p style="text-align: right;">Any two ✓ ✓</p>	(3)
9.2	<p>Connect SSD internally Internally: SATA / PCIe (when using NVMe M.2) ✓ Externally: USB ✓</p>	(2)
9.3	<p>Use of a server in a network</p> <ul style="list-style-type: none"> • A server provides centralised control • Servers enable multiple users or devices to access shared resources like files • Servers offer enhanced security • Servers offer backup capabilities • Servers host websites • They run and manage software applications • Servers manage email systems and other communication services. <p style="text-align: right;">Any two ✓ ✓</p> <p>Note: Only one mark for a server primarily supplies resources to clients/other devices</p>	(2)
9.4.1	<p>All-in-one printer All-in-one printer/multifunction printer/MFP ✓</p>	(1)
9.4.2	<p>Automatic document feeder feature Multiple pages or documents ✓ can be loaded into the device for scanning, copying ✓ (without the need for manual page-by-page placement)</p> <p>Note: Do not award the second mark if printing is mentioned</p>	(2)



9.4.3	<p>Function of LCD screen</p> <ul style="list-style-type: none"> • User Interface: It allows users to navigate through menus, settings, and options • Status Display: The screen shows the current status of the printer, such as printing progress etc. • Job Management: Users can view and manage print, scan, or copy jobs directly from the screen • Setup and Configuration: It allows users to configure various settings like paper size, print quality, network connections, and more • Guided Instructions: Provide step-by-step instructions on the screen for tasks 	(2)
9.5	<p>Multiprocessing and multitasking</p> <p>Multiprocessing: This involves using multiple CPU ✓ cores or processors to execute multiple tasks simultaneously (each task can run on a separate core) ✓</p> <p>Multitasking: This allows a single CPU or core ✓ to handle multiple tasks by rapidly switching between them ✓</p>	(4)
9.6	<p>Multi-touch technology description</p> <p>A feature of a screen that allows it to register more than one point being touched simultaneously ✓ on a trackpad/touchpad/touch screen ✓</p>	(2)
9.7	<p>TWO ways that technology contributes to environmental problems</p> <ul style="list-style-type: none"> • Resource depletion: Making electronic devices and technologies involves removing valuable metals and minerals from the earth. ✓ • Increased pollution/energy consumption: The manufacturing and disposal of electronic devices contribute to energy consumption and greenhouse gas emissions/the transportation of goods, data, and people over long distances can have a significant environmental impact ✓ 	(2)
9.8	<p>Internet of things</p> <p>The Internet of Things (IoT) refers to a network of physical objects (such as devices, vehicles, appliances, and sensors)—that are connected to the internet ✓, enabling them to exchange data. ✓</p>	(2)
9.9	<p>Blockchain</p> <p>With Blockchain it is impossible to hack/change records of transactions ✓ and all transactions are secure and transparent ✓</p>	(2)
9.10	<p>VR used by the security company</p> <ul style="list-style-type: none"> • VR can be used in the training of staff • It can be used to get a 'real' experience of places before entering those locations <p style="text-align: right;">Any one ✓</p>	(1)



	<p>Note: Accept any use of VR by the security company that will be to their advantage</p>	
--	--	--

[25]



QUESTION 10: INTEGRATION

10.1.1	<p>Artificial intelligence</p> <p>AI is the development of computer systems or software ✓ that can perform tasks that typically require human intelligence ✓</p>	(2)
10.1.2	<p>AI helps find missing persons</p> <ul style="list-style-type: none"> • Facial recognition • Analyse images and videos from surveillance cameras, social media etc. • Consolidate and analyse data from various sources, such as financial transactions and mobile phone records • Analyse behavioural patterns, such as financial transactions, social interactions, and online activities • Chatbots powered by AI can interact with the public and collect tips, information, and possible leads <p style="text-align: right;">Any two ✓ ✓</p>	(2)
10.2	<p>Mobile internet access on laptop</p> <p>A USB dongle ✓ with a sim card ✓ is connected to the laptop providing internet access</p> <p>OR</p> <p>Tethering by connecting a pocket router ✓ via cable to USB port ✓</p>	(2)
10.3	<p>Share large file</p> <p>Upload the file to cloud storage ✓ and share the file or the link ✓</p>	(2)
10.4.1	<p>Instant messaging vs e-mail</p> <p>Instant messaging: It allows users to receive text messages in <u>real-time</u> (have conversations) ✓</p> <p>E-mail: It allows individuals to receive messages only after it is downloaded/connected to a (mail) server ✓</p>	(2)
10.4.2	<p>E-mails without e-mail program</p> <p>E-mails can be read using web-based email ✓</p>	(1)
10.5	<p>Version of cloud computing applications</p> <p>For example, the functions of Office 365 on mobile devices are limited compared to Office 365 on a desktop computer ✓</p>	(1)



10.6	<p>TWO ways that geotagging can assist</p> <ul style="list-style-type: none"> • Involves adding location metadata to photos, videos, or social media posts/geotagged data allows search efforts to be concentrated in specific areas • Geotagged information can create a timeline of the person's movements • Geotagged data can be analysed to identify patterns or anomalies in the person's behaviour or movements <p style="text-align: right;">Any two ✓ ✓</p>	(2)
10.7	<p>Ransomware (After infecting your computer system) the malware encrypts files ✓</p>	(1)
10.8.1	<p>Equipment used Mobile office: typically use mobile devices while on the go ✓ Telecommuting: Typically use home-based equipment for work ✓</p>	(2)
10.8.2	<p>Mobile office and telecommuting work environment Employees in both situations work remotely</p>	(1)
10.8.3	<p>Ensure data security and privacy when telecommuting</p> <ul style="list-style-type: none"> • Implementing strong password policies • Using multi-factor authentication • Providing VPN access for secure connections • Restrict access to sensitive information based on role / position in company • Use encrypted communication software <p style="text-align: right;">Any two ✓ ✓</p>	(2)
10.9.1	<p>Property of Days/Dae that must be changed Need to change: Field size ✓ Recommended value: Byte/Integer ✓</p>	(2)
10.9.2	<p>Redundant field It is not displayed ✓ AND no criteria were entered for the field ✓</p>	(2)
10.10	<p>Cannot enter data on form Restrict editing, filling in forms must be selected ✓</p>	(1)

[25]

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