Province of the
EASTERN CAPE
EDUCATION

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NATIONAL SENIOR CERTIFICATE

GRADE 12

SEPTEMBER 2026

COMPUTER APPLICATIONS TECHNOLOGY P2 MARKING GUIDELINE

MARKS: 150

This marking guideline consists of 15 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the marking guideline frequently during the marking session.
- It is advisable to read (and re-read) the question frequently 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 the marking guidelines.
- Ask yourself if the response could 'fit' into the marking guidelines before allocating the correct marks to the candidate.
- Accept correct answers that are expressed differently, e.g. the marking guidelines states 'slow' and the candidate responds with 'not fast'.
- Beware of overlapping answers to a specific question. In general, ONE mark is awarded per fact.
- Do not choose answers on the candidate's behalf. Where a question requires a candidate to LIST or NAME: mark the first number of answers/facts required, e.g. the first TWO facts if the candidate presents a list of FIVE facts and only TWO facts were required, even if presented in paragraph format.
- Questions requiring longer answers must be regarded as a single unit. Marks can be awarded if correct statements are found anywhere in the paragraph.

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SECTION A: SHORT QUESTIONS

QUESTION 1: MULTIPLE-CHOICE		
1.1	B ✓	(1)
1.2	C ✓	(1)
1.3	D ✓	(1)
1.4	D ✓	(1)
1.5	A ✓	(1)
1.6	B ✓	(1)
1.7	D ✓	(1)
1.8	D ✓	(1)
1.9	B ✓	(1)
1.10	B ✓	(1)
		[10]

QUESTION 2: MATCHING ITEMS		
2.1	J ✓ DDoS	(1)
2.2	O ✓ Cable Lock	(1)
2.3	P ✓ Intranet	(1)
2.4	A ✓ EULA	(1)
2.5	C ✓ ROM	(1)
2.6	M ✓ OSS	(1)
2.7	G ✓ Cache	(1)
2.8	N ✓ Mail Merge	(1)
2.9	H ✓ Bookmark	(1)
2.10	I ✓	(1)
		[10]

QUESTION 3: TRUE/FALSE

Note to marker:

- *In Question 3.1, 3.3 and 3.5, candidates need to provide the correct term, e.g. Motherboard, in order to get the mark*
- *<u>Award the mark if the correct answer is given without the word FALSE</u>*
- *Do NOT award the mark if only the word FALSE is given without the correct answer.*

3.1	True ✓	(1)
3.2	False, Grid ✓	(1)
3.3	False, PAN ✓	(1)
3.4	False, <Ctrl> + <A> ✓	(1)
3.5	True ✓	(1)
		[5]

TOTAL SECTION A: 25

SECTION B

QUESTION 4: SYSTEM TECHNOLOGIES

4.1.1	**Operating system** Android (15) ✓	1	
4.1.2	**Type of storage** SSD / Flash / electronic storage ✓ **Reason:** • No moving parts • Faster access speed • More durable • Uses less power • Smaller and lightweight ✓✓ (any two)	3	
4.1.3	**Reason for less memory than storage** RAM stores data/programs/instructions that you are currently working on temporarily, ✓ whereas storage permanently stores all the data/programs/files. ✓	2	
4.1.4	**CPU specification** Octa-core (4.47 GHz Oryon) ✓	1	
4.1.5	**Front camera lower resolution** Front camera is used for selfies ✓ which does not require high resolution as photos are taken up close ✓ **OR** Front camera mostly used for video calls, ✓ which would use less data ✓	2	
4.1.6	**Refresh rate:** 120 Hz ✓	1	
4.1.7	**NFC specification** Contactless payments / Tap-to-pay ✓ by means of a wireless data transfer over very short distances ✓	2	
4.1.8	**Technology** Bluetooth ✓	1	13
4.1.9	**Advantages of smartwatch** • Fitness tracking • Notifications • Health monitoring • Calls without taking phone out • Tapping for payment, etc ✓✓ (any two)	2	2
4.2	**Checking system requirements** Need to ensure hardware is compatible / enough storage, RAM, etc. ✓ so that the software can run smoothly / properly. ✓	2	2

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4.3.1	**Virtual memory definition** Virtual memory is space on the storage device ✓ used as temporary RAM.	1	
4.3.2	**Reason for using virtual memory** Virtual memory would be used when RAM is full. ✓	1	2
4.4.1	**Type of printer** Laser ✓ **Reason:** Good for text / faster printing speed / cheaper cost per page ✓	2	
4.4.2	**Reasons printer would not respond** • Printer not switched on • Not connected (Wi-Fi/cable) • No drivers installed / outdated drivers • Spooler problem • Out of paper/ink ✓✓ (any two)	2	
4.4.3	**Type of user** SOHO (Small Office Home Office) user ✓	1	5
4.5	**Purpose of compressing files** To reduce the file size to save storage space ✓ (Accept practical examples of reducing file size such as: Compressing files so that it can be emailed as smaller attachments, etc.)	1	1
			[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1.1	**Role of server** A server provides resources/services to clients on a network. ✓	1	
5.1.2	**Example of type of server** • File server • Web server • Mail server • Print server • Database server • Cloud server • Gaming server ✓ (any one)	1	2
5.2.1	**Device used to connect computers** Switch ✓	1	
5.2.2	**Advantages of fibre** • Faster data transfer speeds • Can span longer distances without losing signal strength • No electrical magnetic interference • More secure / no eavesdropping • Higher bandwidth ✓✓ (any two)	2	
5.2.3	**Purpose of ISP** Providing internet access to customers ✓	1	
5.2.4	**Line being throttled** **Definition** When ISP deliberately reduces data transfer speed ✓ **Happens due to:** ✓ • Data cap reached • Network congestion • Fair usage policy – too much data being used in given period	2	
5.2.5	**Hotspot** The area in which Wi-Fi connectivity is available ✓	1	7
5.3	**Differences between *web-based* and *locally installed* software** • Web-based does not make use of local storage space • Web-based is accessed through the web browser • Web-based requires internet access • Web-based is always updated / latest version ✓✓ (any two)	2	2

5.4.1	**Netiquette rules** • Use clear subject line • Be polite • No ALL CAPS • Check spelling • Do not make use of emojis in formal email • Do not forward chain mail / spam • Use reply all only when necessary • Any other valid rule ✓✓ (any two)	2	
5.4.2	**Use of Bcc in e-mail** The recipient will not be visible to the receiver of the email / to hide the email address ✓	1	
5.4.3	**Popular web-based e-mail** Gmail / Yahoo Mail / iCloud Mail, etc. ✓	1	4
			[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1.1	**Open-ended questions more difficult** Open-ended questions allow respondents to write their own full answer / they are not selecting from a list of options, ✓ thus there are many different answers that makes it difficult to analyse/put into a graph ✓	2	
6.1.2	**Software application:** Spreadsheet ✓ **How it can be used:** • Data can be sorted and filtered • Formulas and functions can be used for statistical analysis • Graphs/charts can be created • Quick analysis such as conditional formatting ✓ (any one)	2	
6.1.3	**Another source** • Interview • Website • Journal • Book ✓ (any one)	1	5
6.2.1	**Date website accessed** Online content is dynamic and subject to change, removal, or updates at any time ✓	1	
6.2.2	**Information in source** • Author • URL • Website title • Website name ✓✓ (any two)	2	3
6.3	**Objectivity criteria** The information in the source is unbiased / not opinion based ✓	1	1
6.4	**Purpose of task definition** To clearly outline the problem / give the scope / give objectives of the investigation in one's own words ✓ **OR**: Ensures that the learner understands the project requirements	1	1
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1.1	**Name for scam using disguised button** Click-jacking ✓	1	
7.1.2	**Explanation** Malware was installed ✓	1	
7.1.3	**Name for computer controlled by outside source** Bot / Zombie ✓	1	3
7.2	**TWO ways to protect against ransomware** • Install antivirus • Do regular backups • Do not click on suspicious links, especially in e-mails • Keep software updated • Make use of a firewall ✓✓ (any two)	2	2
7.3	**Online harassment situation** Sending repeated threatening or abusive messages online. ✓	1	1
7.4	**Information overload negatively impact productivity** Information overload makes it hard to focus / feeling stressed, ✓ thus causing a delay in decisions being made ✓	2	2
7.5	**TWO ways large businesses contribute to green computing** • Energy-efficient hardware / devices • Recycling old/broken hardware / devices • Power-saving policies / put devices off when not in use • Have virtual meetings – not driving and polluting the air • Office Automation – E-mails, Digital filing, etc. to save paper ✓✓ (any two)	2	2
			[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	**Tab stop settings** Right-aligned ✓ tab stop with a dotted leader. ✓	2	2
8.2	**Differences between *hyperlink* and *cross-reference*** • Hyperlinks appear as blue and underlined text whereas cross-references appear as normal text • Hyperlinks get inserted over existing text, whereas cross-references add their own text • Hyperlinks can link to an external source, whereas cross-references are restricted to areas in the same document • Cross-references update automatically if the target heading or number changes. Hyperlinks do not update automatically ✓ (any one)	1	1
8.3.1	**Names of functions for Code** Concatenate/Concat ✓ and right ✓	2	
8.3.2	**Custom date format** dd ✓-mmm ✓ (Note to marker: cannot get both marks if dash left out)	2	
8.3.3	**Correct function** Range needs to be absoluted or named (Stars!A$1:C$4) ✓ The column that needs to be returned should be 3, not 2 ✓	2	
8.3.4	**Benefit of freeze panes** Keeps headers visible when scrolling through many rows, allowing you to instantly know what data you are looking at. ✓	1	7
8.4.1	**Gaming conventions not displayed in Red Broadway font** Closing font tag needs to be after </h2> closing tag ✓ Type attribute needs to be face ✓ Colour needs to be spelled color ✓	3	
8.4.2	**Hyperlink text** Click here ✓	1	
8.4.3	**<!-- Add table --> tag** Comment tag ✓	1	5
			[15]

TOTAL SECTION B: 75

SECTION C

QUESTION 9: INTEGRATED SCENARIO

9.1.1	**IoT definition** Objects/devices connected to each other via the internet. ✓	1	1
9.2	**TWO examples of how IoT can be used on campus** • Smart lighting • Smart air conditioning • Smart attendance through RFID tags • Security alarm controlled remotely • Security cameras visible remotely • Smart sprinkler/water systems Any other suitable example ✓✓ (any two)	2	2
9.3	**Disadvantage of using IoT devices on campus** • User privacy through cameras • Cybercriminals can hack into network via IoT devices • May lead to over-reliance on the technology ✓ (any one)	1	
9.4.1	**AUP** Sets out the rules governing acceptable device/network usage ✓	1	
9.4.2	**BYOD policy** Learners must bring and use their own devices on the network ✓	1	
9.4.3	**Disadvantages of BYOD** • Device theft is difficult to control • Difficult to control data usage • Learners can be easily distracted • Potential spread of malware • Compatibility issues • Not all learners may have access to their own devices • IT support challenges ✓✓ (any two)	2	
9.4.4	**AI** **Definition:** Machines that simulate human intelligence (machines that can learn, reason, problem-solve and make decisions) ✓ **Used for:** Research / Writing assistance / Tutoring ✓	2	6

9.4.5	**Ethical concern about AI being used** • Students using AI to write essays or solve problems raises questions about who actually authored the work, as AI-generated content cannot be copyrighted in the same way as human work. (Plagiarism concern) • Overdependence on AI for solving tasks may lead to a reduction in students' critical thinking, research abilities, and problem-solving skills. • The ease of generating answers leads to cheating, requiring universities to implement, yet struggle with, AI-detection • AI systems, if trained on biased data, can lead to unfair grading or discriminatory outcomes, particularly affecting non-native English speakers or minority groups. ✓✓(any one) *(Note to marker: 2 marks only if the concern is well explained/ justified)*	2	2
9.5.1	**Cloud computing** Availability of computing resources (such as storage, software and infrastructure), as services over the internet ✓ **OR** Software that runs on servers that is accessed via the internet	1	
9.5.2	**Benefit of cloud computing** • Learners can access their work from any device with internet connection – allows anytime/anywhere accessibility • Students can easily collaborate on the same document together ✓ (any one)	1	2
9.6.1	**Differences between *AR* and *VR*** • AR adds digital elements to real world whereas VR is fully immersive in a whole new digital world • AR uses smartphone/tablet/AR glasses whereas VR needs a VR headset • VR the user is isolated from the real world, whereas AR the users stay in touch with the real world • AR requires more bandwidth than VR when connected to the internet ✓✓ (any two)	2	5

9.6.2	**Best suited for education** AR ✓ • Cheaper to implement as most students have a smartphone • No special headset required • Physically safer ✓✓ (any two) **OR** VR • Immersive simulations without causing damage • Practical training without the rea-world consequences of failing • Virtual experiences help students to learn faster and remember longer	3	
9.7	**Benefit of M-Learning** • M-Learning allows students to learn at their own pace, re-watch, or review material as needed, tailoring to their individual needs. • Students can get instant, automated feedback on quizzes or tasks, allowing them to instantly address knowledge gaps and track their progress. • It breaks down geographical barriers, enabling access to learning in remote areas. • Microlearning Opportunities – The ability to consume content in small "bite-sized" chunks help improve focus and memory retention. • Mobile learning often reduces costs associated with traditional materials and textbooks ✓ (any one)	1	1
9.8.1	**Reasons query does not give desire result** • 2026 and Like “Medical*” should be on the same line ✓ • Wildcard* missing in front of Medical as well ✓	2	
9.8.2	**Field for Primary Key** IDNo ✓	1	
9.8.3	**Field not needed to display** RegistrationYear ✓ as it would be 2026 for all the records ✓	2	5
			[25]

QUESTION 10

10.1.1	**Advantages of using government internet services** • 24/7 access at any place with internet access • Saves time as no need to stand in long queues • Less travel / no need to travel – saves costs • Improved communication between government departments and the public • Immediate feedback is provided • Easier access to up-to-date information and documents • Increased efficiency and lower costs in the long run • Less hard copies – promoting green computing ✓✓ (any two)	2	
10.1.2	**Example of government internet service** • Renewing television licenses • SARS e-filing • Telephone accounts via Telkom website • Water readings can be entered online • ID and passport documents can be paid online • Educational publications and past papers can be downloaded • Any other valid example ✓ (any one)	1	
10.1.3	**Increase or reduce digital divide** **Definition** The gap between individuals that have access and can use technologies (the internet) and those that do not. ✓ **Evaluation** In the short term, it increases the gap because you are increasing the number of online services which require devices and access to the internet ✓	2	5
10.2.1	**Download App** Google Play Store ✓	1	
10.2.2	**Biometric security is more secure than password** Biometric security is unique / tied to an individual, ✓ which cannot be easily copied. ✓	2	
10.2.3	**Multi-factor authentication** Adds an extra layer of security ✓ (OTP with the password), especially when logging into a new device. ✓	2	5
10.3.1	**Secure website** • https • Padlock icon • SSL certificate ✓✓ (any two)	2	5

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10.3.2	**How banks protect their clients** • OTP / Two-factor authentication • SMS confirmation / notifications • On-screen keyboards to prevent keylogging software • Automatic logouts and timeouts – sessions end after a few minutes of inactivity • Banks use AI to analyze transaction patterns and instantly flag or block transactions that seem suspicious, such as unusual spending locations or amounts. ✓✓ (any two)	2	
10.3.3	**Name for online payment** EFT (Electronic Fund Transfer) ✓	1	
10.4.1	**Uploading and downloading** Uploading – sent from device to internet ✓ Download – received from the internet to device ✓ (Accept if learner writes a practical example of each)	2	
10.4.2	**Streaming** Watching a video while being connected to the internet. ✓	1	3
10.5.1	**Video call software** Zoom / MS Teams / Google Meet / WhatsApp video Call, FaceTime, etc. ✓	1	
10.5.2	**Protocol** VoIP (Voice over Internet Protocol) ✓	1	
10.5.3	**TWO etiquette practices for video conferencing** • Ensure a stable internet connection. • Test video and microphone before call • Use a quiet, well-lit environment. • Mute microphone when not speaking. • Dress professionally and be on time. • Position the camera at eye level. ✓✓ (any two)	2	4
10.6	**Word processing feature for letters** =(B2-A2) ✓*24 ✓	2	2
10.7	**Result of =ROUNDDOWN(36.59,1)** 36.5 ✓	1	1
			[25]
		TOTAL SECTION C:	**50**
		GRAND TOTAL:	**150**

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