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SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

COMPUTER APPLICATIONS TECHNOLOGY P2

MAY/JUNE 2025

MARKING GUIDELINES

MARKS: 150

These marking guidelines consist of 20 pages.



SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the marking guidelines 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 or your senior marker 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 state '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.

SECTION A**QUESTION 1: MULTIPLE-CHOICE**

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

QUESTION 2: MATCHING ITEMS

2.1	P	✓ ADSL	1
2.2	H	✓ Router	1
2.3	C	✓ Section Break	1
2.4	D	✓ Drone	1
2.5	F	✓ CAPTCHA	1
2.6	M	✓ OR	1
2.7	Q	✓ Service pack	1
2.8	B	✓ Information overload	1
2.9	R	✓ Keylogging	1
2.10	K	✓ Accuracy	1
Total: [10]			



QUESTION 3: TRUE/FALSE ITEMS*(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.*
- Award the mark if the correct answer is given without the word FALSE.*
- Do NOT award the mark if only the word FALSE is given without the correct answer).*

3.1	False, Form ✓ (do not accept Table)	1
3.2	True ✓	1
3.3	False, Spam ✓	1
3.4	True ✓	1
3.5	False, Knowledge ✓	1
		[5]

TOTAL SECTION A: 25

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

4.1.1	Size of the memory used by the CPU 64 GB ✓	1	
4.1.2	Utility software AVG/Antivirus ✓	1	
4.1.3	Reason for using Bluetooth instead of Wi-Fi Reason: (1) Automatic installation makes connection quicker (2) Two devices are within a short range (3) Less power consumption (4) No wires/internet connectivity need ✓ (Any one) Example: (1) Mouse and keyboard connected to the desktop (2) Headsets connected to the desktop (3) Smartphone connection to the desktop ✓ (Any one) (Note to marker: Accept any relevant example related to the desktop)	2	
4.1.4	TWO advantages for having an SSD of 2 TB and an HDD of 4 TB (1) Increased storage capacity for files, programs and data (2) Separate working files and applications (3) Increase life span of the SSD and HDD drives ✓✓ (Any two)	2	
4.1.5	TWO compatibility issues (1) Features might not work properly in older versions (2) The files might not open in the older versions (3) The formatting of the file might not be the same ✓✓ (Any two)	2	
			8



4.2	<i>Difference between system software and application software</i> <table><tr><th>System software</th><th>Application software</th></tr><tr><td>Manage hardware and system operations</td><td>Helps users perform specific tasks</td></tr><tr><td>Runs in the background</td><td>Runs when the user needs it</td></tr><tr><td>Include operating system and utility programs</td><td>Includes programs like word processor, web browser and games</td></tr><tr><td>Essential for computer function</td><td>Not required for the computer to run but useful for tasks</td></tr><tr><td>Controls and support application software</td><td>Depends on system software to function</td></tr></table> ✓ (Any one) ✓ (Any one)	System software	Application software	Manage hardware and system operations	Helps users perform specific tasks	Runs in the background	Runs when the user needs it	Include operating system and utility programs	Includes programs like word processor, web browser and games	Essential for computer function	Not required for the computer to run but useful for tasks	Controls and support application software	Depends on system software to function		2
System software	Application software														
Manage hardware and system operations	Helps users perform specific tasks														
Runs in the background	Runs when the user needs it														
Include operating system and utility programs	Includes programs like word processor, web browser and games														
Essential for computer function	Not required for the computer to run but useful for tasks														
Controls and support application software	Depends on system software to function														
4.3	<i>Define site licence</i> A site licence agreement allows an institution unlimited installation within the company ✓		1												
4.4	<i>Purpose of activation codes in software installation</i> (1) To link the copy of the software to the legal owner (2) To prevent piracy/the software from being installed on more devices than the agreement allows (3) To enable help and online support ✓✓ (Any two)		2												
4.5	<i>TWO advantages of HDMI cable as opposed to VGA cable</i> (1) Digital signal results in better audio/video quality (higher resolution)/HDMI enables better quality images/display (2) Transmits both audio and video data (3) Faster data transfer ✓✓ (Any two)		2												
4.6	<i>TWO specifications that determine quality of the monitor</i> (1) Resolution (2) Colour depth (3) Frequency/Refresh rate (4) Aspect ratio ✓✓ (Any two) (Note to marker: Accept any relevant specifications related to a monitor)		2												



4.7	TWO limitations of a 3D printer (1) Model size is limited to the printer size (2) Not suitable for mass production/It takes long to print objects (3) Not all objects can be created/printed (4) If the process is interrupted it has to start over ✓✓ (Any two)		2
4.8.	Explain multitasking Multitasking allows the operating system to run multiple programs simultaneously ✓		1
4.9	Explain dedicated device A dedicated device is designed for one specific task ✓		1
4.10.1	TWO reasons why QR codes are beneficial for a company (1) QR codes give quicker access to websites (2) Less errors are made when accessing the website (3) Can contain other information, e.g. contact details ✓✓ (Any two)	2	4
4.10.2	TWO limitations for customers using QR codes (1) Customers need to have a smartphone with a working camera (2) Customers must have an internet connection (3) Some smartphones need a special app to scan QR codes (4) Some customers may not understand how QR codes work ✓✓ (Any two)	2	
			[25]



QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	<i>TWO devices shared in a network besides computers</i> (1) Printer/multifunction device (2) Router/wireless router/Internet access points (3) Storage drives/External hard drive (4) Photocopier (5) Scanner ✓✓ (Any two)		2								
5.2	<i>TWO differences between intranet and internet</i> <table border="1"><tr><td>Intranet</td><td>Internet</td></tr><tr><td>Private network</td><td>Public network</td></tr><tr><td>Small-scale network</td><td>Global network</td></tr><tr><td>Limited access to members only</td><td>Open access to everybody</td></tr></table> ✓✓ (Any two) (Note to marker: Marks cannot be allocated for two answers in the same row)	Intranet	Internet	Private network	Public network	Small-scale network	Global network	Limited access to members only	Open access to everybody		2
Intranet	Internet										
Private network	Public network										
Small-scale network	Global network										
Limited access to members only	Open access to everybody										
5.3	<i>TWO ways fibre-optic improve data transmission speed</i> (1) Light based transmission allows data to travel faster (2) Higher bandwidth capacity carries more data simultaneously (3) Minimal signal loss for more reliable transmission (4) Immune to electromagnetic interference that ensures consistent speed ✓✓ (Any two)		2								
5.4	<i>TWO government internet services</i> (1) Information about education/health/justice etc. (2) License renewal (3) Election information (4) Home affairs (5) Tax returns/E-filing ✓✓ (Any two)		2								
5.5	<i>ONE reason for using a Bookmark feature</i> Quick access to saved websites ✓		1								
5.6.1	<i>Why use Bcc instead of Cc fields in e-mail</i> So that other users cannot see who e-mails are sent to ✓	1									



5.6.2	Reason for using the forward instead of reply to (1) The person is not on the original receiver's list (2) To include the attachments ✓ (Any one)	1											
5.6.3	TWO reasons for using web-based email systems (1) Accessible from anywhere (2) Integrates with other cloud services and productivity tools (3) Automatic online backup (4) Automatic updates and upgrades managed by service provider (5) Can be accessed across devices and platforms ✓✓ (Any two)	2	4										
5.7	TWO differences between vodcast and real-time streaming <table border="1"><thead><tr><th>Vodcast (Video Podcast)</th><th>Real-Time Streaming</th></tr></thead><tbody><tr><td>Pre-recorded episodes</td><td>Live broadcasting</td></tr><tr><td>Watched at any time</td><td>Viewed as it happens</td></tr><tr><td>Limited or no interaction</td><td>Live interaction</td></tr><tr><td>Accessible anytime and anywhere</td><td>Viewers experience events simultaneously</td></tr></tbody></table> ✓✓ (Any two) <i>(Note to marker: Marks cannot be allocated for two answers in the same row)</i>	Vodcast (Video Podcast)	Real-Time Streaming	Pre-recorded episodes	Live broadcasting	Watched at any time	Viewed as it happens	Limited or no interaction	Live interaction	Accessible anytime and anywhere	Viewers experience events simultaneously		2
Vodcast (Video Podcast)	Real-Time Streaming												
Pre-recorded episodes	Live broadcasting												
Watched at any time	Viewed as it happens												
Limited or no interaction	Live interaction												
Accessible anytime and anywhere	Viewers experience events simultaneously												
			[15]										



QUESTION 6: INFORMATION MANAGEMENT

6.1	Focus question A question that provides guidance and clarity for the research ✓		1
6.2	ONE other source to collect data excluding printed media (1) Interviews (2) Questionnaires/Surveys (3) Electronic-media (webpages, e-books, online magazines/newspapers) ✓ (Any one)		1
6.3	Definition of plagiarism Plagiarism refers to the act of using someone else's work, ideas, or information ✓ without giving proper credit. ✓		2
6.4	TWO ways for using database to analyse and process data (1) Queries/Reports (2) Totals (Functions/Formulas) (3) Sorting (4) Filtering (5) Conditional formatting ✓✓ (Any two)		2
6.5.1	TWO ways to avoid being biased when asking questions (1) Avoid questions that are leading to a particular answer (2) Phrase question neutrally/Use clear language (3) Phrase questions as a single concept to avoid double barrelled questions/do not ask two questions in one (4) Ensure that the information gathered are from a wide variety of people/groups/sources ✓✓ (Any two)	2	4
6.5.2	TWO ways to use question: 'How many' for analysis (1) Provide numerical data for the use of calculations (2) Numerical data are used to create graphs (3) To provide trends and patterns in the data ✓✓ (Any two)	2	
			[10]



QUESTION 7: SOCIAL IMPLICATIONS

7.1	ONE way to dispose of computing devices (1) E-waste recycling centre (2) Donate the computer/Resell/Trade in (3) Reuse certain computer parts ✓(Any one)		1
7.2	TWO negative effects ICT has on humans Physical health: (1) Increase obesity (2) Cause conditions such as RSI (3) Long hours in front of screens can result in eye strain and sleep disruption Mental and emotional health: (1) Overuse can lead to technology addiction (2) Can create stress/anxiety and fear of missing out (3) Can be exposed to cyberbullying/online harassment (4) Reduced attention span due to frequent notifications Social and relationship impacts: (1) Reduced face-to-face interaction and social bonding (2) Isolation and loneliness (3) Creating a confusion between personal and professional life Developmental effects: (1) Reduces critical thinking and memory retention (2) Social media can hamper academic/work performance ✓✓(Any two)		2
7.3	Prevention of repetitive strain injuries (1) Use an ergonomic/comfort keyboard (2) Use palm/wrist rests (3) Maintain good posture/take regular breaks ✓ (Any one)	1	
7.4	Employee benefits for using telecommuting (1) Employee can work more flexible hours/flexibility (2) Saves on the cost of transport and clothing suitable for work environments (3) Not wasting time travelling to work (4) Potentially fewer distractions than in a formal office environment/potentially greater productivity ✓✓ (Any two)	2	3



7.5	TWO reasons why updating software will benefit the user (1) New functions/features could be added (2) Existing security breaches may be fixed (3) Programming bugs could be fixed (4) To prevent compatibility issues ✓✓ (Any two)		2
7.6	ONE advantage and ONE disadvantage for the use of cryptocurrency Advantages: (1) Payments can be made anywhere in the world (2) Secure method of payment (3) More companies are using cryptocurrency ✓ (Any one) Disadvantages: (1) Make anonymous payment/Cannot trace who made the payment (2) Payments can be used for criminal activities ✓ (Any one)		2
			[10]



QUESTION 8: SOLUTION DEVELOPMENT

8.1	Report feature to display per category Grouping ✓		1
8.2	Why use a lookup wizard in database table To create a list of options so that the user can choose ✓ /The user can choose from a pre-created list		1
8.3	Word processing features for navigation in same document (1) Find (2) Go To/Bookmark (3) Hyperlink (4) Cross-reference ✓✓ (Any two)		2
8.4	TWO reasons for the use of linked objects in a Word processing document (1) Give quick access to the document to edit (2) Automatically updates with the new changes made in the document (3) The linked object will open in the program it was created ✓✓ (Any two)		2
8.5	Reason for error message The error occurs when you enter a function/formula that contains a cell reference that is the same as the cell in which the function/formula is entered ✓		1
8.6	Explain use of True and False in the Range_lookup True finds the closest match to the lookup value ✓ False finds the exact match of the lookup value ✓		2
8.7.1	TWO missing tags (1) Bold tags: operating hours: OR Heading tag (2) Horizontal line: (3) Opening list tag: (4) Closing body tag: </body> ✓✓ (Any two)		2



8.7.2	THREE reasons for image not displaying (1) Image is not saved in the same location as the file ✓ (2) The file extension is incorrect ✓ (3) Name for the image is incorrect ✓	3	6
8.7.3	Attribute to include to display 'The Zoo' if picture does not display <alt> attribute ✓	1	
			[15]

TOTAL SECTION B: 75



SECTION C**QUESTION 9: INTEGRATED SCENARIO**

9.1.1	Identify and explain ONE way candidates can use ICTs to promote campaign <table><tr><th>ICT</th><th>Explanation</th></tr><tr><td>(1) Social media</td><td>(1) Able to reach a larger group of learners</td></tr><tr><td>(2) Presentation Software</td><td>(2) Use of presentation software during assemblies/break/gatherings</td></tr><tr><td>(3) Website/Blog</td><td>(3) Create a website/blog to share personal information/manifest</td></tr><tr><td>(4) Video conferencing</td><td>(4) Use online question and answer sessions to engage with voters</td></tr><tr><td>(5) QR codes</td><td>(5) Use QR codes to provide easy access to their website/blog/social media</td></tr></table> ✓ (Any one ICT) ✓ (Any one explanation) (Notes to marker: • Accept only one example of ICT • Explanations must be related to the ICT • Accept any valid explanation that is well explained)	ICT	Explanation	(1) Social media	(1) Able to reach a larger group of learners	(2) Presentation Software	(2) Use of presentation software during assemblies/break/gatherings	(3) Website/Blog	(3) Create a website/blog to share personal information/manifest	(4) Video conferencing	(4) Use online question and answer sessions to engage with voters	(5) QR codes	(5) Use QR codes to provide easy access to their website/blog/social media	2
ICT	Explanation													
(1) Social media	(1) Able to reach a larger group of learners													
(2) Presentation Software	(2) Use of presentation software during assemblies/break/gatherings													
(3) Website/Blog	(3) Create a website/blog to share personal information/manifest													
(4) Video conferencing	(4) Use online question and answer sessions to engage with voters													
(5) QR codes	(5) Use QR codes to provide easy access to their website/blog/social media													
9.1.2	TWO ways to avoid falling victim to social engineering (1) Do not share personal information (e.g. ID number, home address)/Do not provide personal information on social media (2) Do not accept requests from unknown people (3) Do not open files from unknown sources/Do not download any software from unknown sources (4) Do not access unsecure sites (5) Share only campaign related photos ✓✓ (Any two)	2												
9.1.3	Concept of digital footprint Concept: The trail of data left by a candidate campaigning's online activities ✓ Relevance: The candidates' reputation (cyber profile) and future opportunities can be impacted in a positive or negative way ✓	2												

6



9.2.1	TWO advantages of using electronic voting system (1) Improved accessibility and convenience for voters (2) Faster tallying and reporting of results (3) Environmentally friendly as there is no need for paper ballots (4) More accurate – human errors reduced ✓✓ (Any two)	2											
9.2.2	Accessibility of electronic voting for physical disabilities (1) Provide an assistant for voters with a physical disability (2) Provide specific assistive devices (e.g. sip-and-puff, eye tracking, speech-to-text, Braille keyboards, foot-operated mouse, head-operated pointer) (3) Make sure the electronic voting system is compatible with audio and visual assistance such as screen readers, audio ballots, and high-contrast interfaces ✓✓ (Any two)	2											
9.2.3	ONE hardware issue and ONE solution <table border="1"><thead><tr><th>Issue</th><th>Solution</th></tr></thead><tbody><tr><td>(1) Difficult to set up</td><td>(1) Experts needed to set up/Training of staff on how to set up the system</td></tr><tr><td>(2) Internet connectivity issues</td><td>(2) Ensure the school has a reliable internet connection/Have a backup option (like mobile hotspots) ready</td></tr><tr><td>(3) System crashes</td><td>(3) Test the system before use/Have IT support available to fix any crashes quickly</td></tr><tr><td>(4) Power failure during voting</td><td>(4) Use an uninterruptible power supplies (UPS) to prevent shutdowns/Have backup power plans</td></tr></tbody></table> ✓ (Any one issue) ✓ (Any one solution) (Notes to marker: • Accept only one hardware issue • Solutions must be related to the issue • Accept any valid solution that is well explained)	Issue	Solution	(1) Difficult to set up	(1) Experts needed to set up/Training of staff on how to set up the system	(2) Internet connectivity issues	(2) Ensure the school has a reliable internet connection/Have a backup option (like mobile hotspots) ready	(3) System crashes	(3) Test the system before use/Have IT support available to fix any crashes quickly	(4) Power failure during voting	(4) Use an uninterruptible power supplies (UPS) to prevent shutdowns/Have backup power plans	2	6
Issue	Solution												
(1) Difficult to set up	(1) Experts needed to set up/Training of staff on how to set up the system												
(2) Internet connectivity issues	(2) Ensure the school has a reliable internet connection/Have a backup option (like mobile hotspots) ready												
(3) System crashes	(3) Test the system before use/Have IT support available to fix any crashes quickly												
(4) Power failure during voting	(4) Use an uninterruptible power supplies (UPS) to prevent shutdowns/Have backup power plans												



9.3	TWO ways to secure the network (1) Use of encryption/Strong password (2) Access controls (3) Firewalls ✓✓ (Any two)	2	
9.4	TWO ICT-related jobs (1) Data analyst – to analyse the election data and the results (2) Web developer – to design and maintain the school website used for announcing the results (3) Network administrator – to ensure that the schools network infrastructure is secure and reliable (4) Technicians – technical support for the devices ✓✓ (Any two) <i>(Note to marker: Accept any other relevant job-related answer related to the scenario)</i>		2
9.5.1	Property set on Learner Code field (1) Primary Key (2) Index Duplicate - No (3) Index Duplicate - Yes (No duplicates) ✓(Any one)	1	5
9.5.2	Control used for Name and Surname field List box/Combo Box ✓ Motivation: (1) Display all the candidates names/more accurate ✓	2	
9.5.3	Validation rule for Position field "C" Or "S" Or "T" (1) Correct characters in quotes ✓ (2) Or ✓	2	
9.6.1	Spreadsheets feature to get total per candidate SUBTOTAL ✓	1	2
9.6.2	ONE reason to use a chart for feedback (1) Clearer/Easier to understand the results (2) Improves visual communication (3) Highlights key insights (4) Quick/Easier comparison (5) Easier to spot trends ✓ (Any one)	1	



9.7	<i>TWO factors to consider for layout of web page design</i> (1) The page should be easy to navigate with clear headings (2) The text should be readable on different devices (3) The page should have consistent formatting and design (4) Not too many colours, enough white spaces ✓✓ (Any two) <i>(Note to marker: Accept any relevant answer related to the scenario)</i>		2
			[25]



QUESTION 10: INTEGRATED SCENARIO

10.1.1	TWO other input devices instead of barcode scanner (1) Keyboard (2) Mouse (3) Touch Screen ✓✓ (Any two)	2	
10.1.2	TWO troubleshooting methods to determine why barcode scanner is not scanning (1) Check if the barcode scanner is connected/plugged in/Bluetooth is on (2) Check if the cord is damaged (3) Check if something is blocking the light sensor (4) Verify that the driver is installed (5) Restart to check if the driver is working properly ✓✓ (Any two)	2	4
10.2.1	Term capped Capped refers to the limit of data available ✓ to the user during a specific period ✓	2	
10.2.2	TWO ways for solving limited storage space (1) Remove unwanted programs/files (2) Remove duplicate files (3) Move/Archive unused/large files to a different storage device/the cloud (4) Remove temporary/cached files (5) Empty bin/Remove deleted files, e.g. photos (6) Reduce virtual memory files ✓✓ (Any two)	2	4
10.3	TWO problems customers experience while using hotspot (1) Signal loss/interference (2) Lack of security/Unauthorised users (3) Range may be limited (4) Data transfer speeds can sometimes be slow ✓✓ (Any two)		2



10.4.1	TWO reasons Sanele should make automatic backups (1) No user intervention required for backups (2) Employees may forget if done manually (3) Saves time due to scheduled backups/ensures backup is always/regularly/timeously done (4) Time/schedule backups when computers are not in use ✓✓ (Any two) (Note to marker: Do NOT accept reasons for a backup that is NOT automatic)	2	
10.4.2	TWO guidelines to consider when making backups (1) Keep backups off-site (2) Use more than one storage medium (3) Check that backups can be used to restore data (4) Only backup new or changed files (5) Use a clear file structure/labels/meaningful name (6) Exclude software/application files (7) Exclude certain file types such as photos and videos ✓✓ (Any two)	2	4
10.5	TWO advantages of using video conferencing (1) Not restricted to a specific location (2) No need to travel (3) Meetings can be recorded/Re-used (4) Meetings can be transcribed/summarised (5) Automatic attendance register ✓✓ (Any two)		2
10.6.1	Feature used in cell A1 Merge and centre ✓	1	
10.6.2	Reason why formula is incorrect with solution Reason: The formula in F17 does not include all the relevant cells ✓ Solution: =SUM(F14:F16) ✓	2	
10.6.3	Function to determine preparation date =DATE(YEAR(B10),MONTH(B10),DAY(B10)+7✓)	1	4



10.7.1	Printer automatically working Plug-and-Play ✓	1	
10.7.2	Ways to save ink (1) Print in draft mode or economical mode (2) Adjust print resolution (3) Print only order forms that are needed (4) Use ink saving software ✓✓ (Any two)	2	3
10.8	TWO possible layout errors (1) Not enough space for the name (2) Not enough blocks for the contact number (3) Name and surname should appear together (4) Too much space for the date ✓✓ (Any two)		2
			[25]

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