basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

COMPUTER APPLICATIONS TECHNOLOGY P2

MAY/JUNE 2025

MARKS: 150

TIME: 3 hours

This question paper consists of 19 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of:

   SECTION A (25)
   SECTION B (75)
   SECTION C (50)

2. Answer ALL the questions.

3. Number the answers correctly according to the numbering system used in this question paper.

4. Start EACH question on a NEW page.

5. Do NOT write in the right-hand margin of the ANSWER BOOK.

6. Leave a line after EACH subquestion.

7. Generally, one mark is allocated per fact; therefore, a 2-mark question would require TWO facts, etc.

8. Read the questions carefully. DO NOT give more answers than the question requires as it will NOT be marked.

9. All answers MUST be related to Computer Applications Technology.

10. Unless otherwise specified, answers such as 'cheaper', 'slower'/'faster', etc. will NOT be accepted.

11. Do NOT use brand names in your answers, unless specifically required.

12. Write neatly and legibly. 2025

SECTION A

QUESTION 1: MULTIPLE-CHOICE QUESTIONS

Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (1.1 to 1.10) in the ANSWER BOOK, e.g. 1.11 D.

1.1 Which ONE of the following file extensions is used when storing database files?

A .docx
B .accdb
C .xlsx
D .html (1)

1.2 Which component provides start-up instructions when the computer is switched on?

A CPU
B RAM
C ROM
D SSD (1)

1.3 A type of network connection between a smartwatch and a smartphone:

A LAN
B WAN
C PAN
D WLAN (1)

1.4 The 's' in HTTPs in a URL indicates …

A a standard layout for websites.
B that a website is more secure.
C faster upload/download speed.
D that a website is simple text format. (1)

1.5 Identify the attribute that was used in the last row of the HTML table below.

Day	Times
Mon-Thur	08:30 to 18:30
Fri-Sun	09:00 to 16:30
25 December: Closed	

A Rowspan
B Cell spacing
C Colspan
D Cell padding (1)

1.6 What is the main purpose of an internet service provider (ISP)?

A To provide web browsers
B To provide internet access
C To provide internet searches
D To provide browser history (1)

1.7 The purpose of OCR software is to …

A scan text and barcodes.
B convert text to play audio.
C compress text and files.
D recognise and digitise text. (1)

1.8 A simulation of human thinking and mimicking of human actions:

A Virtual reality (VR)
B Artificial intelligence (AI)
C Augmented reality (AR)
D Fourth Industrial Revolution (4IR) (1)

1.9 The task definition does NOT include a …

A brief discussion on the topic and purpose.
B short introduction of the current situation.
C description of the specific target audience.
D detailed solutions to the given problem. (1)

1.10 Which function will calculate the total price of ALL the hardcover romance books?

	C	D	E	F	G
8	**Genre Genre**	**No. of pages Aantal bladsye**	**Rating Gradering**	**Format Formaat**	**Price Prys**
9	Romance	206	2	Hardcover	R354.00
10	Fiction	643	4	Audiobook	R353.00
11	Romance	914	5	Audiobook	R284.00
12	Fiction	484	2	Hardcover	R384.00
13	Fiction	839	3	Ebook	R330.00
14	Non-Fiction	173	1	Hardcover	R394.00
15	Science Fiction	802	4	Audiobook	R381.00
16	Romance	217	5	Hardcover	R425.00

A =SUMIFS(G9:G16,"Romance", F9:F16,"Hardcover")
B =SUMIFS(G9:G16,C9:C16,"Romance", F9:F16,"Hardcover")
C =SUMIFS(G9:G16,D9:D16,"Romance", F9:F16,"Hardcover")
D =SUMIFS(G9:G16,C9:C16,Romance, F9:F16,Hardcover) (1)
[10]

QUESTION 2: MATCHING ITEMS

Choose a term/concept from COLUMN B that matches the description in COLUMN A. Write only the letter (A–T) next to the question numbers (2.1 to 2.10) in the ANSWER BOOK, e.g. 2.11 U.

COLUMN A		COLUMN B	
2.1	A wired internet connection	A	WiMAX
2.2	A device that connects computers in a network to the internet	B	information overload
2.3	Splits the pages in a word processing document to be formatted differently	C	section break
2.4	A device that has the ability to access areas that are too difficult or dangerous for humans to reach	D	drone
2.5	An authentication used to distinguish between humans and bots	E	phishing
2.6	An operator that returns a TRUE result when either one of the two criteria is true	F	CAPTCHA
2.7	Software that updates and fixes multiple errors in applications	G	patch
2.8	When large amounts of data are challenging for a person to process	H	router
2.9	A method that captures every character a user inputs without their consent	I	page break
2.10	Verification of information with other sources	J	big data
		K	accuracy
		L	VR helmet
		M	OR
		N	OTP
		O	AND
		P	ADSL
		Q	service pack
		R	keylogging
		S	NIC
		T	currency

(10 x 1) **[10]**

QUESTION 3: TRUE/FALSE ITEMS

Indicate whether the following statements are TRUE or FALSE. Write 'true' or 'false' next to the question numbers (3.1 to 3.5) in the ANSWER BOOK. Correct the statement if it is FALSE by changing the underlined word(s) to make the statement TRUE. (Do NOT simply use the word 'NOT' to change the statement.)

NO mark will be awarded if only FALSE is written.

EXAMPLES:

QUESTION	ANSWER
A <u>stylus</u> can be used for more accurate input on some touch screens.	True
A <u>sound card</u> has slots for hardware components, such as the CPU.	False, motherboard

3.1 A <u>report</u> in a database provides a user-friendly layout to make data capturing easier. (1)

3.2 <u>Convergence</u> is the combination of two or more technologies in a single device. (1)

3.3 <u>DDoS</u> is electronic junk mail. (1)

3.4 The shortcut <u>Ctrl + V</u> is commonly used for pasting text that a user has copied or cut. (1)

3.5 <u>Data</u> is information that is interpreted and analysed and gives insight into better decision-making. (1)
[5]

TOTAL SECTION A: 25

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGIES

4.1 Study the advertisement below and answer the questions that follow.

Introducing the All-New StellarX Pro Desktop Computer

- Intel Core i9-12900K 12-Core Processor
- NVIDIA GPU GeForce RTX 4090 24 GB GDDR6X
- 64 GB DDR5 RAM
- 2 TB SSD + 4 TB HDD
- Wi-Fi 6E, Bluetooth 5.2
- USB 4.0, HDMI 2.1, DisplayPort 1.4
- Windows 11 Pro
- AVG antivirus software
- Adobe trial software
- MS Office 365

4.1.1 Give the size of the memory used by the CPU. (1)

4.1.2 Name the utility software found in the advertisement. (1)

4.1.3 Why would you use the Bluetooth connection rather than the Wi-Fi connection to connect devices?

Give ONE example of a Bluetooth device that can be used with the desktop above. (2)

4.1.4 State TWO advantages of having an SSD of 2 TB and an HDD of 4 TB. (2)

4.1.5 Explain TWO compatibility issues that will arise when a person using MS Office 2013 receives a word processing document created in MS Office 365. (2)

4.2 Differentiate between *system software* and *application software*. (2)

4.3 Define the term *site licence*. (1)

4.4 State TWO purposes of using activation codes in software installations. (2)

4.5 State TWO advantages of using an HDMI cable rather than a VGA cable. (2)

4.6 Give TWO specifications that determine the quality of a monitor. (2)

4.7 State TWO limitations of a 3D printer. (2)

4.8 Explain *multitasking* in an operating system. (1)

4.9 Explain what is meant by a *dedicated device*. (1)

4.10 Companies use QR codes to allow customers to link to their websites.

4.10.1 Give TWO reasons why this is beneficial to a company. (2)

4.10.2 State TWO limitations for customers when using QR codes. (2)
[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1 Name TWO devices that can be shared in a network, besides computers. (2)

5.2 State TWO differences between an *intranet* and the *internet*. (2)

5.3 Suggest TWO ways in which fibre-optic networks improve data transmission speed. (2)

5.4 Give TWO examples of services that the government provide over the internet. (2)

5.5 Give ONE reason for using the bookmark feature in a web browser. (1)

5.6 E-mail is widely used as a form of communication.

5.6.1 Why would you use Bcc instead of Cc in an e-mail? (1)

5.6.2 Why would you rather forward an e-mail instead of replying to an e-mail? (1)

5.6.3 Give TWO reasons why people prefer using a web-based e-mail system. (2)

5.7 Grade 12 lessons are broadcasted for learners to revise their work.

Explain TWO differences between a *vodcast* and *real-time streaming*. (2)
[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1 What is the purpose of a focus question in a research task? (1)

6.2 Name ONE source, excluding printed media, that can be used to collect data. (1)

6.3 Many learners plagiarise information from the internet for their research tasks.

Define the term *plagiarism*. (2)

6.4 State TWO ways in which a database can be used to analyse and process data. (2)

6.5 It is important to use different levels and types of questions when formulating questions during research.

6.5.1 Explain TWO ways to avoid being biased when asking questions in a survey. (2)

6.5.2 Suggest TWO ways in which questions starting with 'How many?' can assist during the analysis phase of the PAT. (2)
[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1 State ONE way to responsibly dispose of computing devices. (1)

7.2 The use of ICT has significantly changed the world we live in.

Identify TWO negative effects that ICT has on humans in society. (2)

7.3 State ONE way in which repetitive strain injuries can be prevented. (1)

7.4 Explain TWO ways in which an employee benefits from telecommuting. (2)

7.5 Give TWO reasons why updating software on a device will benefit a user, besides fixing errors. (2)

7.6 State ONE advantage and ONE disadvantage of the use of cryptocurrency by a business. (2)
[10]

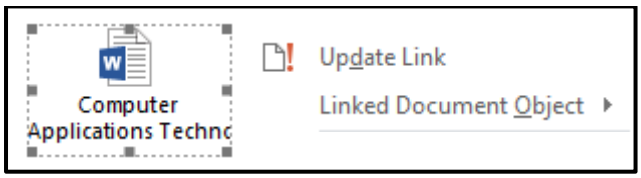
QUESTION 8: SOLUTION DEVELOPMENT

8.1 Which report feature in a database can be used to display information per category? (1)

8.2 Explain why you will use the lookup wizard in a database table. (1)

8.3 Name TWO word processing features that allow users to move from one place to another, in the same document. (2)

8.4 The linked object below was created in a word processing document.



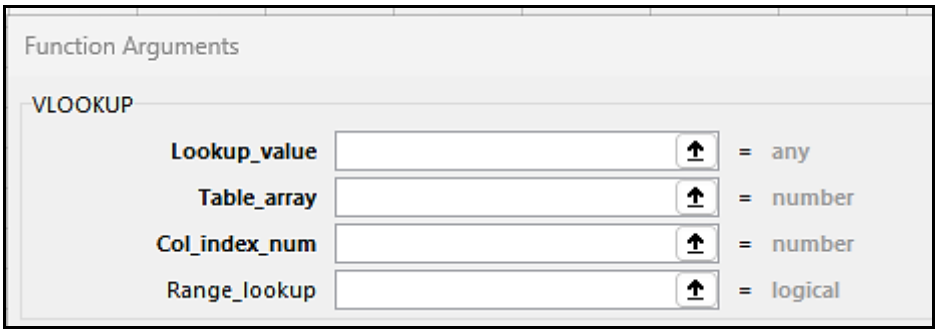
Give TWO reasons why you would use linked objects. (2)

8.5 The following error message appears when opening a spreadsheet file:

'There are one or more circular references …'

What causes this error? (1)

8.6 In the VLOOKUP function, the argument *Range_lookup* can accept True or False.



Explain when True and False would be used in a *Range_lookup*. (2)

8.7 Study the incomplete HTML code on the left and the corresponding web page on the right in the example below.

HTML code	Web page
<html> <head> <title> **Membership** </title> </head> <body bgcolor = "**bisque**"> **Membership** **Operating hours** <ul type = "**circle**"> **Mon-Thurs: 08:30 to 18:30** **Fri-Sun: 09:30 to 17:30** **25 December: Closed** </body> </html>	**Membership** **Operating hours** ◦ Mon-Thurs: 08:30 to 18:30 ◦ Fri-Sun: 09:30 to 17:30 ◦ 25 December: Closed

8.7.1 Give any TWO missing tags from the HTML code that would influence the display. (2)

8.7.2 Give THREE reasons why the image would NOT display in the web page. (3)

8.7.3 What attribute can be included in the HTML code to display the words 'The Zoo' if the picture does not display? (1)
[15]

TOTAL SECTION B: 75

SECTION C

QUESTION 9: INTEGRATED SCENARIO

The school election team is organising an RCL (Representative Council of Learners) election by using an electronic voting system. Candidates must use various ICT tools for campaigning. Voters will use devices linked to a network to vote and these votes will be transferred to a centralised server.

9.1 The candidates standing for the elections can use ICTs for their campaigns.

9.1.1 Identify and explain ONE way in which candidates can use ICTs. (2)

9.1.2 Discuss TWO ways in which candidates can avoid falling victim to social engineering. (2)

9.1.3 Explain the concept of a *digital footprint* and its impact when candidates campaign online. (2)

9.2 The school will implement this electronic voting system for the first time and has to consider several aspects.

9.2.1 Explain TWO advantages of using an electronic voting system instead of a traditional paper-based system. (2)

9.2.2 How can the school ensure that the electronic voting is accessible to learners with various physical disabilities? (2)

9.2.3 Discuss ONE hardware issue that the school can experience using the electronic voting system and suggest a solution to overcome it. (2)

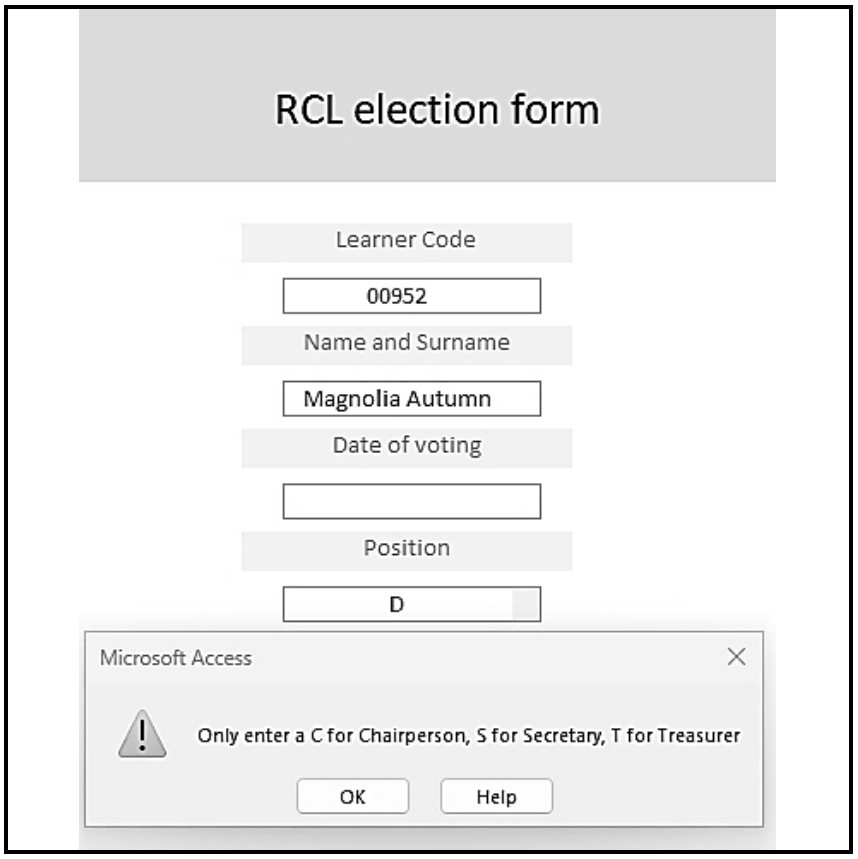
9.3 The school election team wants to ensure that the network and election data are secure from unauthorised people.

Discuss TWO ways in which the network security can be improved by the school. (2)

9.4 The school election team will request assistance from experts in specific ICT fields.

Explain TWO ICT-related jobs a team member can perform during this process. (2)

9.5 Voters will be using a database form to vote for their favourite candidate. Improvements need to be made to the database form.



9.5.1 Voters are only allowed to vote once.

How can the team make sure voters vote only once using the *Learner Code*? (1)

9.5.2 A text box was used for the voters to enter the candidate's name and surname.

Suggest another control in which candidates' names and surnames can be captured by voters without any spelling errors.

Motivate your selection of this control. (2)

9.5.3 An error message will be displayed when a voter enters incorrect data in the *Position* field.

Give the validation rule that was used to display the error message that appears in the screenshot above. (2)

9.6 After the elections, the database data will be exported to a spreadsheet for analysis.

9.6.1 Which spreadsheet feature can be used to determine the total number of votes for each candidate? (1)

9.6.2 Give ONE reason why a chart would be suitable for feedback of results. (1)

9.7 The election results will be published on the school's website.

Suggest TWO layout factors to consider when designing the web page. (2)
[25]

QUESTION 10: INTEGRATED SCENARIO

Sanele is the owner of a small local restaurant, Snack Shack. Customers can sit in or order takeaways via the Snack Shack app.

10.1 The waiter is sure that the barcode scanner is working, but it is not scanning the barcodes.

10.1.1 Name TWO other input devices that can be used instead of the barcode scanner. (2)

10.1.2 Suggest TWO troubleshooting actions to determine why the barcode scanner is not scanning. (2)

10.2 Customers can download and install the Snack Shack app on their smartphones.

10.2.1 The customers do not want to use their own data because it is capped.

What is meant by the term *capped*? (2)

10.2.2 Some customers' smartphones do not have enough storage space.

Suggest TWO ways to solve this problem. (2)

10.3 Sanele created a hotspot for his customers to use while they are at the Snack Shack.

State TWO problems customers may experience while using the hotspot. (2)

10.4 Sanele should keep record of the restaurant's information and bank statements.

10.4.1 Give TWO reasons why Sanele should make automatic backups. (2)

10.4.2 State TWO guidelines to consider when making backups. (2)

10.5 The local restaurant owners have a monthly video conference to discuss good practices and challenges.

State TWO advantages of using video conferencing for this purpose. (2)

10.6 A spreadsheet is used to create quotes for special occasions.

	A	B	C	D	E	F
1						
2						
3		**QUOTE**				
4						
5						
6	**Name:**	Tommy Jones				
7	**Order No.:**	SS002/25				
8	**Order Date:**	2025-05-22				
9	**Order Time:**	08:35:20				
10	**Requested Date:**	2025-08-17				
11	*Customers must accept the quote within 7 days of the quote date*					
12						
13	**Item**		**Quantity**	**Unit Price**		**Total**
14	Chocolate milkshake		15	R 28.00	R	420.00
15	Cheese burger		15	R 45.00	R	675.00
16	Ribs & Steak combo		2	R 110.00	R	220.00
17				**TOTAL**		=SUM(F14:F15)
18				**VAT %**		=F17*0.15
19				**GRAND TOTAL**		=SUM(F17:F18)
20						

10.6.1 Which spreadsheet feature was used in **cells A1:C5**? (1)

10.6.2 The function in **cell F17** is correct, but gives an incorrect answer when calculating the total.

Explain why the answer would be incorrect and give the solution. (2)

10.6.3 Customers must accept the quote within seven days of the quote date.

Rewrite the function so that it will display the cut-off date that the customer must accept the quote.

=DATE(YEAR(B10),MONTH(B10)),DAY(B10)) (1)

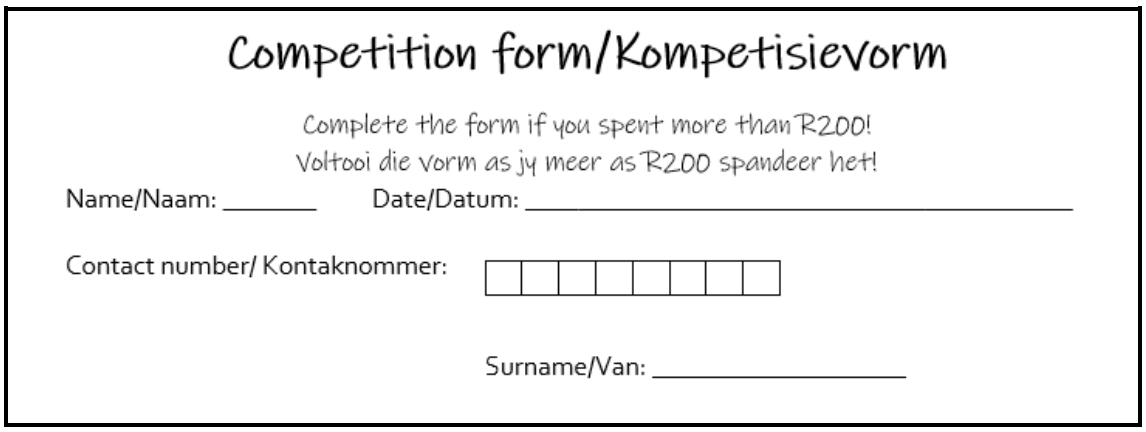
10.7 Sanele bought a new printer to print the quotes for his customers.

10.7.1 He was able to automatically print as soon as the printer was plugged in.

Give the term used to describe the automatic configuration of the printer. (1)

10.7.2 Suggest TWO ways in which the Snack Shack can save ink when printing the quotes. (2)

10.8 The Snack Shack has a competition for customers who spent more than R200.



Competition form/Kompetisievorm

Complete the form if you spent more than R200!
Voltooi die vorm as jy meer as R200 spandeer het!

Name/Naam: _____ Date/Datum: _____

Contact number/ Kontaknommer: ☐☐☐☐☐☐☐☐☐☐

Surname/Van: _____

Give TWO possible layout errors on this form. (2)
[25]

TOTAL SECTION C: 50
GRAND TOTAL: 150

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