

Confidential



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.

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. ...

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 |
|----|-----------------|--------------------------------|---------------------|-------------------|---------------|
| | Genre Genre | No. of pages Aantal bladsye | Rating Gradering | Format Formaat | Price Prys |
| 8 | | | | | |
| 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 report in a database provides a user-friendly layout to make data capturing easier. (1)
- 3.2 Convergence is the combination of two or more technologies in a single device. (1)
- 3.3 DDoS is electronic junk mail. (1)
- 3.4 The shortcut Ctrl + V is commonly used for pasting text that a user has copied or cut. (1)
- 3.5 Data 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)

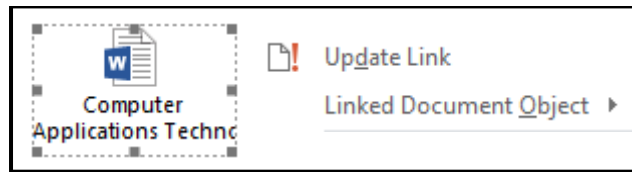
[10]

QUESTION 7: SOCIAL IMPLICATIONS

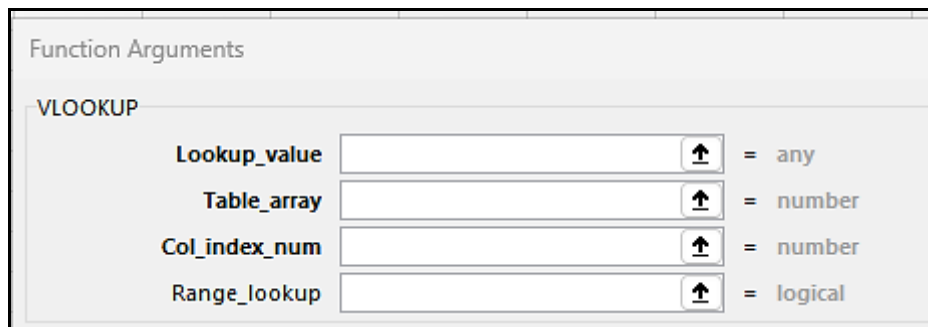
- 7.1 State ONE way to responsibly dispose of computing devices. (1)
 - 7.2 The use of ICT has significantly changed the world we live in.
Identify TWO negative effects that ICT has on humans in society. (2)
 - 7.3 State ONE way in which repetitive strain injuries can be prevented. (1)
 - 7.4 Explain 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 |
|---|--|
| <pre> <html> <head> <title> Membership </title> </head> <body bgcolor = "bisque"> <h1> Membership </h1> <hr/> Operating hours <ul type = "circle"> Mon-Thurs: 08:30 to 18:30 Fri-Sun: 09:30 to 17:30 25 December: Closed </body> </html> </pre> |  |

- 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.

The screenshot shows a web form titled "RCL election form". It contains several input fields: "Learner Code" with the value "00952", "Name and Surname" with the value "Magnolia Autumn", "Date of voting" (empty), and "Position" with the value "D". An error message dialog box is overlaid on the form, titled "Microsoft Access". The message reads: "Only enter a C for Chairperson, S for Secretary, T for Treasurer". The dialog box has "OK" and "Help" buttons.

- 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 | QUOTE | | |  | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 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 | <i>Thank you!</i> | | | 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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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 |

| | | | |
|--------|---|---|-------------|
| 4.7 | <p>TWO limitations of a 3D printer</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | | 2 |
| 4.8. | <p>Explain multitasking</p> <p>Multitasking allows the operating system to run multiple programs simultaneously ✓</p> | | 1 |
| 4.9 | <p>Explain dedicated device</p> <p>A dedicated device is designed for one specific task ✓</p> | | 1 |
| 4.10.1 | <p>TWO reasons why QR codes are beneficial for a company</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | 2 | |
| 4.10.2 | <p>TWO limitations for customers using QR codes</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | 2 | 4 |
| | | | [25] |

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

| 5.1 | <p>TWO devices shared in a network besides computers</p> <p>(1) Printer/multifunction device (2) Router/wireless router/Internet access points (3) Storage drives/External hard drive (4) Photocopier (5) Scanner</p> <p style="text-align: right;">✓✓ (Any two)</p> | | 2 | | | | | | | | |
|--------------------------------|---|----------|----------|-----------------|----------------|---------------------|----------------|--------------------------------|--------------------------|--|---|
| 5.2 | <p>TWO differences between intranet and internet</p> <table border="1"> <thead> <tr> <th>Intranet</th> <th>Internet</th> </tr> </thead> <tbody> <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> </tbody> </table> <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Marks cannot be allocated for two answers in the same row)</i></p> | 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 | <p>TWO ways fibre-optic improve data transmission speed</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | | 2 | | | | | | | | |
| 5.4 | <p>TWO government internet services</p> <p>(1) Information about education/health/justice etc. (2) License renewal (3) Election information (4) Home affairs (5) Tax returns/E-filing</p> <p style="text-align: right;">✓✓ (Any two)</p> | | 2 | | | | | | | | |
| 5.5 | <p>ONE reason for using a Bookmark feature</p> <p>Quick access to saved websites ✓</p> | | 1 | | | | | | | | |
| 5.6.1 | <p>Why use Bcc instead of Cc fields in e-mail</p> <p>So that other users cannot see who e-mails are sent to ✓</p> | 1 | | | | | | | | | |

| 5.6.2 | <p>Reason for using the forward instead of reply to</p> <p>(1) The person is not on the original receiver’s list (2) To include the attachments</p> <p style="text-align: right;">✓ (Any one)</p> | 1 | | | | | | | | | | | |
|---------------------------------|---|-------------------------|---------------------|-----------------------|-------------------|---------------------|----------------------|---------------------------|------------------|---------------------------------|--|---|---|
| 5.6.3 | <p>TWO reasons for using web-based email systems</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | 2 | 4 | | | | | | | | | | |
| 5.7 | <p>TWO differences between vodcast and real-time streaming</p> <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> <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Marks cannot be allocated for two answers in the same row)</i></p> | 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 | 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

| | | | |
|------------|---|----------|----------|
| <p>7.1</p> | <p>ONE way to dispose of computing devices</p> <p>(1) E-waste recycling centre (2) Donate the computer/Resell/Trade in (3) Reuse certain computer parts</p> <p style="text-align: right;">✓(Any one)</p> | | <p>1</p> |
| <p>7.2</p> | <p>TWO negative effects ICT has on humans</p> <p>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</p> <p>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</p> <p>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</p> <p>Developmental effects: (1) Reduces critical thinking and memory retention (2) Social media can hamper academic/work performance</p> <p style="text-align: right;">✓✓(Any two)</p> | | <p>2</p> |
| <p>7.3</p> | <p>Prevention of repetitive strain injuries</p> <p>(1) Use an ergonomic/comfort keyboard (2) Use palm/wrist rests (3) Maintain good posture/take regular breaks</p> <p style="text-align: right;">✓ (Any one)</p> | | <p>1</p> |
| <p>7.4</p> | <p>Employee benefits for using telecommuting</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | <p>2</p> | <p>3</p> |

| | | | |
|-----|--|--|-------------|
| 7.5 | <p>TWO reasons why updating software will benefit the user</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | | 2 |
| 7.6 | <p>ONE advantage and ONE disadvantage for the use of cryptocurrency</p> <p>Advantages: (1) Payments can be made anywhere in the world (2) Secure method of payment (3) More companies are using cryptocurrency</p> <p style="text-align: right;">✓ (Any one)</p> <p>Disadvantages: (1) Make anonymous payment/Cannot trace who made the payment (2) Payments can be used for criminal activities</p> <p style="text-align: right;">✓ (Any one)</p> | | 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: <hr/> (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 | |
| 8.7.3 | Attribute to include to display 'The Zoo' if picture does not display <alt> attribute ✓ | 1 | 6 |
| | | | [15] |

TOTAL SECTION B: 75

SECTION C

QUESTION 9: INTEGRATED SCENARIO

| <p>9.1.1</p> | <p>Identify and explain ONE way candidates can use ICTs to promote campaign</p> <table border="1"> <thead> <tr> <th>ICT</th> <th>Explanation</th> </tr> </thead> <tbody> <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> </tbody> </table> <p style="text-align: right;">✓ (Any one ICT) ✓ (Any one explanation)</p> <p><i>(Notes to marker:</i></p> <ul style="list-style-type: none"> • <i>Accept only one example of ICT</i> • <i>Explanations must be related to the ICT</i> • <i>Accept any valid explanation that is well explained)</i> | 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 | <p>2</p> | |
|---------------------------|---|----------|-------------|------------------|--|---------------------------|---|------------------|--|------------------------|---|--------------|--|----------|--|
| 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 | | | | | | | | | | | | | | |
| <p>9.1.2</p> | <p>TWO ways to avoid falling victim to social engineering</p> <p>(1) Do not share personal information (e.g. ID number, home address)/Do not provide personal information on social media</p> <p>(2) Do not accept requests from unknown people</p> <p>(3) Do not open files from unknown sources/Do not download any software from unknown sources</p> <p>(4) Do not access unsecure sites</p> <p>(5) Share only campaign related photos</p> <p style="text-align: right;">✓✓ (Any two)</p> | <p>2</p> | | | | | | | | | | | | | |
| <p>9.1.3</p> | <p>Concept of digital footprint</p> <p>Concept: The trail of data left by a candidate campaigning's online activities ✓</p> <p>Relevance: The candidates' reputation (cyber profile) and future opportunities can be impacted in a positive or negative way ✓</p> | <p>2</p> | <p>6</p> | | | | | | | | | | | | |

| <p>9.2.1</p> | <p>TWO advantages of using electronic voting system</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | <p>2</p> | | | | | | | | | | | |
|----------------------------------|--|----------|----------|-------------------------|--|----------------------------------|--|--------------------|---|---------------------------------|--|----------|----------|
| <p>9.2.2</p> | <p>Accessibility of electronic voting for physical disabilities</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | <p>2</p> | | | | | | | | | | | |
| <p>9.2.3</p> | <p>ONE hardware issue and ONE solution</p> <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> <p style="text-align: right;">✓ (Any one issue) ✓ (Any one solution)</p> <p><i>(Notes to marker:</i></p> <ul style="list-style-type: none"> • <i>Accept only one hardware issue</i> • <i>Solutions must be related to the issue</i> • <i>Accept any valid solution that is well explained)</i> | 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 | <p>2</p> | <p>6</p> |
| 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 | | | | | | | | | | | | |

| | | | |
|--------------|---|----------|----------|
| <p>9.3</p> | <p>TWO ways to secure the network</p> <p>(1) Use of encryption/Strong password (2) Access controls (3) Firewalls</p> <p style="text-align: right;">✓✓ (Any two)</p> | <p>2</p> | |
| <p>9.4</p> | <p>TWO ICT-related jobs</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept any other relevant job-related answer related to the scenario)</i></p> | <p>2</p> | <p>2</p> |
| <p>9.5.1</p> | <p>Property set on Learner Code field</p> <p>(1) Primary Key (2) Index Duplicate - No (3) Index Duplicate - Yes (No duplicates)</p> <p style="text-align: right;">✓(Any one)</p> | <p>1</p> | |
| <p>9.5.2</p> | <p>Control used for Name and Surname field</p> <p>List box/Combo Box ✓</p> <p>Motivation: (1) Display all the candidates names/more accurate ✓</p> | <p>2</p> | |
| <p>9.5.3</p> | <p>Validation rule for Position field</p> <p>"C" Or "S" Or "T"</p> <p>(1) Correct characters in quotes ✓ (2) Or ✓</p> | <p>2</p> | <p>5</p> |
| <p>9.6.1</p> | <p>Spreadsheets feature to get total per candidate</p> <p>SUBTOTAL ✓</p> | <p>1</p> | |
| <p>9.6.2</p> | <p>ONE reason to use a chart for feedback</p> <p>(1) Clearer/Easier to understand the results (2) Improves visual communication (3) Highlights key insights (4) Quick/Easier comparison (5) Easier to spot trends</p> <p style="text-align: right;">✓ (Any one)</p> | <p>1</p> | <p>2</p> |

| | | | |
|-----|--|--|-------------|
| 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) (Note to marker: Accept any relevant answer related to the scenario) | | 2 |
| | | | [25] |

QUESTION 10: INTEGRATED SCENARIO

| | | | |
|--------|---|---|---|
| 10.1.1 | <p>TWO other input devices instead of barcode scanner</p> <p>(1) Keyboard (2) Mouse (3) Touch Screen</p> <p style="text-align: right;">✓✓ (Any two)</p> | 2 | |
| 10.1.2 | <p>TWO troubleshooting methods to determine why barcode scanner is not scanning</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | 2 | 4 |
| 10.2.1 | <p>Term capped</p> <p>Capped refers to the limit of data available ✓ to the user during a specific period ✓</p> | 2 | |
| 10.2.2 | <p>TWO ways for solving limited storage space</p> <p>(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</p> <p style="text-align: right;">✓✓ (Any two)</p> | 2 | 4 |
| 10.3 | <p>TWO problems customers experience while using hotspot</p> <p>(1) Signal loss/interference (2) Lack of security/Unauthorised users (3) Range may be limited (4) Data transfer speeds can sometimes be slow</p> <p style="text-align: right;">✓✓ (Any two)</p> | | 2 |

| | | | |
|---------------|--|----------|----------|
| <p>10.4.1</p> | <p>TWO reasons Sanele should make automatic backups</p> <p>(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)</p> <p><i>(Note to marker: Do NOT accept reasons for a backup that is NOT automatic)</i></p> | <p>2</p> | |
| <p>10.4.2</p> | <p>TWO guidelines to consider when making backups</p> <p>(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)</p> | <p>2</p> | <p>4</p> |
| <p>10.5</p> | <p>TWO advantages of using video conferencing</p> <p>(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)</p> | <p>2</p> | |
| <p>10.6.1</p> | <p>Feature used in cell A1</p> <p>Merge and centre ✓</p> | <p>1</p> | |
| <p>10.6.2</p> | <p>Reason why formula is incorrect with solution</p> <p>Reason: The formula in F17 does not include all the relevant cells ✓</p> <p>Solution: =SUM(F14:F16) ✓</p> | <p>2</p> | |
| <p>10.6.3</p> | <p>Function to determine preparation date</p> <p>=DATE(YEAR(B10),MONTH(B10),DAY(B10)+7) ✓</p> | <p>1</p> | <p>4</p> |

| | | | |
|--------|--|---|-------------|
| 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