



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE**

**GRADE 12**

**COMPUTER APPLICATIONS TECHNOLOGY P2**

**NOVEMBER 2025**

**MARKS: 150**

**TIME: 3 hours**

**This question paper consists of 16 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 represents a compressed file?
- A .wav
  - B .rtf
  - C .bmp
  - D .zip
- (1)
- 1.2 Which ONE of the following is NOT netiquette?
- A Proofread the e-mail before sending
  - B Not adding a subject line to the e-mail
  - C Make sure there are no large attachments
  - D Be concise in the content of the e-mail
- (1)
- 1.3 Which communication medium is used in a PAN?
- A Bluetooth
  - B WiMax
  - C Fibre optics
  - D Microwaves
- (1)
- 1.4 Which statement about a touch screen is FALSE?
- A Allows natural input, such as gestures
  - B Serves as both a mouse and keyboard
  - C Unlimited simultaneous physical touches
  - D Standard device on most mobile devices
- (1)
- 1.5 What is the primary function of a firewall?
- A Protects against unauthorised access
  - B Removes malware from the computer
  - C Only allows incoming communication
  - D Prevents software piracy activities
- (1)
- 1.6 If the display of text by a projector appears to be too light or too dark, the ... setting can be adjusted.
- A brightness
  - B contrast ratio
  - C resolution
  - D aspect ratio
- (1)

- 1.7 A dedicated device which performs calculations and executes instructions necessary to display animations and videos:
- A CPU
  - B GPU
  - C NIC
  - D RAM
- (1)
- 1.8 What would the following paragraph setting be used for in a word processing document?
- 
- A To adjust alignment of text between lines
  - B To adjust spacing of text in a paragraph
  - C To adjust indentation of text in a paragraph
  - D To adjust spacing between lines of text
- (1)
- 1.9 Why would some mobile users avoid a video call?
- A Cameras only capture and send images
  - B Rapid decrease of storage capacity
  - C Rapidly reaches available cap
  - D Users are not concerned about privacy
- (1)
- 1.10 Which ONE of the following criteria for a query will display ALL netball players who are NOT in Grade 10?
- A Sport = "Netball" OR Grade <> 10
  - B Sport = "Netball" AND Grade <> 10
  - C Sport = NOT LIKE "Netball" AND Grade = 10
  - D Sport = "Netball" AND Grade >= 10
- (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	Provides battery backup only for a short period of time to prevent data loss	A	website
		B	crowd funding
2.2	A compromised computer being remotely controlled by a hacker	C	botnet
		D	ROM
2.3	The trend whereby different household devices are connected to one another	E	blogs
		F	COUNTIFS
2.4	A software application used to view and explore pages on the web	G	theme
		H	solar
2.5	A wireless technology used to make wireless payments if the devices are close to the POS	I	big data
		J	IF
2.6	A type of memory that stores data and instructions permanently	K	browser
		L	patch
2.7	Multiple software updates installed simultaneously	M	style
		N	zombie
2.8	Online platforms where many people contribute to a project financially	O	RFID
		P	service pack
2.9	A feature that uses multiple settings to format an entire document with certain fonts, colour schemes and effects	Q	NFC
		R	UPS
2.10	A spreadsheet function that chooses one of two options based on a condition	S	RAM
		T	IoT

(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
Computer program instructions are executed by the <u>CPU</u> .	True
An <u>NIC</u> has slots for hardware components, such as the CPU.	False, motherboard

- 3.1 The snipping tool utility can be used to capture a portion of the screen. (1)
- 3.2 Digital divide refers to the ongoing transformation of society and industry, driven by the convergence of digital, physical and biological technologies. (1)
- 3.3 The MAX function can be used to find the second highest value in a list. (1)
- 3.4 Intellectual property refers to the ownership of an idea or design that is protected by copyright and patent laws. (1)
- 3.5 The special character that prevents a line break from occurring between two words or characters is known as a non-breaking hyphen. (1)
- [5]**

**TOTAL SECTION A: 25**

**SECTION B****QUESTION 4: SYSTEMS TECHNOLOGIES**

- 4.1 Learners at a school were provided with flash drives.
- 4.1.1 Name the technology that automatically detects new hardware and installs a driver. (1)
- 4.1.2 During which stage in the information processing cycle is a flash drive used? (1)
- 4.1.3 Give TWO reasons why a flash drive is NOT suitable for archiving files. (2)
- 4.2 Give TWO reasons why a motherboard is important. (2)
- 4.3 Explain TWO uses of a recycle bin. (2)
- 4.4 What do **A** and **B** in the path below represent? (2)
- 
- 4.5 A school must have a backup policy to prevent data loss.
- 4.5.1 Explain TWO ways in which data loss can take place. (2)
- 4.5.2 Suggest TWO guidelines that must be included in a backup policy regarding storage media. (2)
- 4.6 Explain what a *Creative Commons (CC) licence* is. (2)
- 4.7 State TWO ways of locating a video file if the user is unsure of the date on which the file was saved. (2)
- 4.8 Name the accessibility feature that is available for users experiencing challenges pressing multiple keys on a keyboard. (1)
- 4.9 What does the term *ergonomically designed* mean? (2)
- 4.10 Your monitor's light is on, but nothing displays on the monitor. Give TWO troubleshooting tips you can follow to solve the problem. (2)
- 4.11 Explain the process used by a 3D printer to create objects. (2)

**[25]**

**QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES**

- 5.1 What is a *podcast*? (2)
- 5.2 Name TWO services, apart from internet access, that an ISP can offer. (2)
- 5.3 Explain ONE effect that an acceptable use policy (AUP) has on a user when using streaming services. (1)
- 5.4 Discuss ONE benefit and ONE limitation of using cloud computing. (2)
- 5.5 State TWO disadvantages of purchasing from an online store rather than a physical store. (2)
- 5.6 Name any TWO mobile internet technologies that can be used for connecting remotely to a company's network. (2)
- 5.7 Which TWO aspects should you consider when creating a website such that it is accessible to visually impaired users? (2)
- 5.8 Explain TWO reasons why incognito/in-private browsing benefits a user. (2)
- [15]**



**QUESTION 6: INFORMATION MANAGEMENT**

6.1 A user uses a URL shortening service.

State TWO benefits of using a URL shortening service. (2)

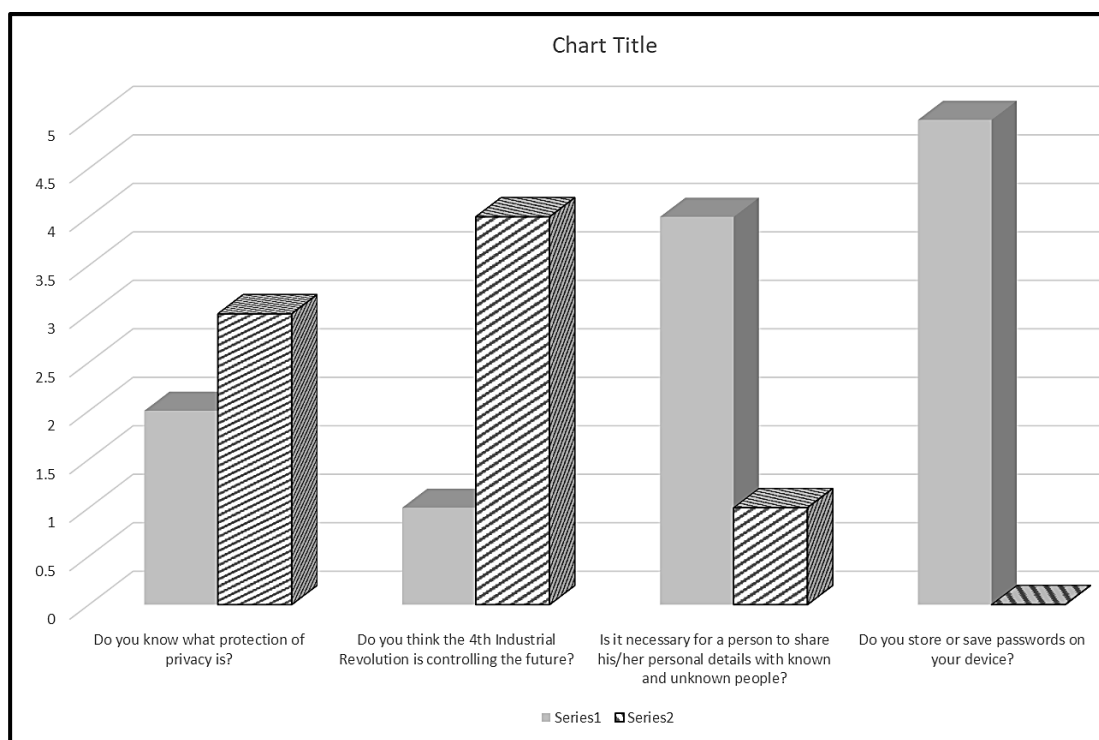
6.2 Name TWO elements of a report that must be included in your final practical assessment task (PAT) report. (2)

6.3 State TWO criteria you should consider when evaluating the reliability of an online source. (2)

6.4 When working on your PAT, it is important to create a suitable folder structure.

State TWO factors that you need to consider when creating your folder structure. (2)

6.5 Study the chart below showing a summary of responses on a questionnaire.



Give TWO reasons why it is difficult to interpret the chart.

(2)  
[10]

**QUESTION 7: SOCIAL IMPLICATIONS**

- 7.1 Define the term *click-jacking*. (2)
- 7.2 Name and briefly describe ONE type of e-mail threat. (2)
- 7.3 Discuss TWO ways in which you can protect yourself from online harassment. (2)
- 7.4 Describe TWO privacy issues that individuals can experience when businesses use their information in big data. (2)
- 7.5 Briefly explain TWO long-term impacts of software piracy on the global software industry. (2)
- [10]**

**QUESTION 8: SOLUTION DEVELOPMENT**

8.1 State the actions you have to perform in a word processing document prior to creating EACH of the following:

8.1.1 An automatic table of figures displaying all diagrams (1)

8.1.2 An automatic index to display an alphabetic list of words (1)

8.2 What is the difference between an *embedded object* and a *linked object*? (2)

8.3 A teacher captured learners' marks in a spreadsheet, as shown in the screenshot below. Levels 1 to 7 in **column D** are determined by the percentage that the learners obtained in **column C**.

	A	B	C	D
1			Percentage	Level
2	1	Halley, Sevres	29	1
3	2	Town, Lindiwe	33	2
4	3	Bergen, Erik	47	3
5	4	Draco, Elizabeth	56	4
6	5	Buck, Bongive	65	5
7	6	Van Tonder, Gert	73	6
8	7	Salos, Ruphus	82	7
9				

8.3.1 Name a function, other than a LOOKUP function, that was used to determine the correct level for each percentage. (1)

8.3.2 Which spreadsheet feature was used to complete the list of numbers in **column A**? (1)

8.4 You received a spreadsheet from a friend, but can only enter data in certain cells. You receive a pop-up message when trying to work in other cells.

Give ONE reason why you are only able to work in certain cells. (1)

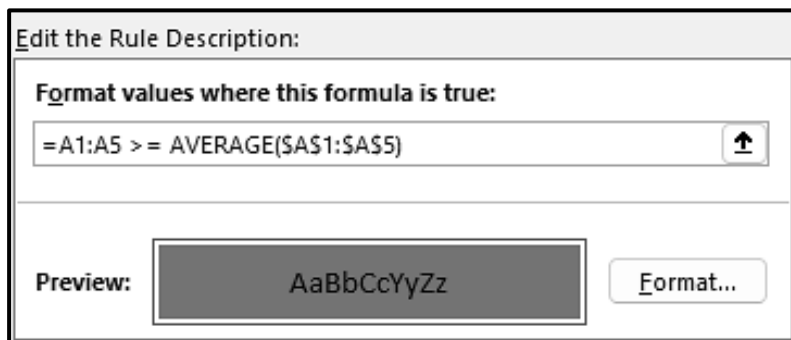
8.5 The following fields were used in a database table to store the records of the learners participating in various sports:

Field Name	Data Type
Surname	Short Text
Date_Of_Birth	Date/Time
Age	Number
SportType	OLE Object

8.5.1 Suggest a more suitable data type for the *SportType* field. (1)

8.5.2 Why should you NOT make the field size of the *Surname* field less than 10? (1)

8.6 Study the screenshot of a conditional formatting rule in a spreadsheet.



Briefly explain the result of the rule that was applied to **cells A1:A5**. (2)

8.7 Study the HTML code below, which is used to place the image **Well done.jpg** on a web page.

```
<img src = "Well done" alt = "Top achiever" width = "100" height = "75" />
<a href = "#Stars"> They brought us pride </a>
```

- 8.7.1 Give TWO reasons for setting the width and height attributes in the image tag. (2)
- 8.7.2 Why would the image NOT display on the web page? (1)
- 8.7.3 What does "#Stars" in the <a>...</a> tag refer to? (1)
- [15]**

**TOTAL SECTION B: 75**

**SECTION C****QUESTION 9: INTEGRATED SCENARIO**

Mr Brown is establishing a coding and robotics club at the school. The club will consist of learners from all grades and volunteer teachers.

- 9.1 The club needs laptops. Mr Brown submitted TWO quotations for laptops to the school governing body.

**Quotation 1**

- 15.6" FHD IPS 165 Hz display
- 16 GB RAM and 1 TB HDD storage
- Intel Core i5-1135G7  
(4 cores, 2.4 GHz to 4.2 GHz)
- 802.11 b/g/n
- 3-year warranty (upon registration)
- Free AVG Antivirus
- Windows 11
- Office 2019
- Scratch software

**Quotation 2**

- 14.0" 16:10 OLED display
- 32 GB RAM and 1 TB SSD storage
- Intel Core i7-1255U  
(10 cores, 1.7 GHz to 4.7 GHz)
- 802.11 b/g/n
- 3-year warranty (upon registration)
- Free AVG Antivirus
- Windows 11
- Office 365
- MakeCode software

- 9.1.1 Which operating system is installed on both laptops? (1)
- 9.1.2 State TWO functions of an operating system. (2)
- 9.1.3 Give TWO reasons why Quotation 2 is better than Quotation 1. (2)
- 9.1.4 What is the purpose of the 802.11 specification? (1)
- 9.1.5 State ONE disadvantage that can be associated with using the type of antivirus indicated in the quotations. (1)
- 9.2 The new laptops need to be set up in a network.
- 9.2.1 Why is a WAN NOT a suitable type of network for these computers? (1)
- 9.2.2 Suggest a network communication medium that the club can use. Motivate your answer. (2)
- 9.2.3 Explain TWO ways in which the club can ensure ethical use of the network. (2)

9.3 The learners are allowed to bring their own computing devices for their projects.

9.3.1 State TWO disadvantages of BYOD for the club. (2)

9.3.2 A learner's device does not respond when he/she tries to open a video file.

State TWO ways in which this problem can be resolved. (2)

9.4 An incomplete spreadsheet is used to capture the total number of hours spent at the club.

	A	B	C	D	E	F
1	Coding and Robotics Club					
2		Monday	Tuesday	Wednesday	Thursday	Friday
3	Week 1	1:42	1:00	2:10	1:30	0:45
4	Week 2	0:50	1:50	1:15	2:00	1:00
5	Week 3	1:30		3:00	1:12	0:56
6	Week 4	1:45	0:33	1:00		2:00
7	Total time	#NAME?				
8						

To calculate the total number of hours spent at the club on Mondays, the function **=SUMS(B3:B6)** was entered in **cell B7**, but it gives an error message.

9.4.1 What does the **#NAME?** error message in **cell B7** indicate? (1)

9.4.2 The spreadsheet data is copied into a word processing document, but not all the columns are visible on the page.

Without changing the font size, state TWO ways in which the learners can adjust the table so that all the columns appear. (2)

9.5 Spreadsheet data will be displayed within the body section of an HTML document.

What is the purpose of the **<body>** tag in HTML? (1)

9.6 Learners use online social networks to do research and to solve problems.

9.6.1 State TWO advantages of being part of online social networks. (2)

9.6.2 Why is cybersecurity important while learners are using online social networks? (1)

9.7 During the competition, plagiarism leads to immediate disqualification.

Briefly explain the concept *plagiarism*. (2)

**[25]**

**QUESTION 10: INTEGRATED SCENARIO**

A welcoming committee needs to organise an orientation week for 150 Grade 8 learners. The learners will be placed into specific groups that will participate in different activities.

- 10.1 The committee chairperson will do a presentation at the welcoming ceremony in the school hall using a laptop.
- 10.1.1 Name TWO additional hardware devices that the chairperson will need during the welcoming ceremony. (2)
- 10.1.2 Identify an appropriate type of application software that can be used during the welcoming ceremony in the hall. Motivate your answer. (2)
- 10.1.3 While preparing for the welcoming ceremony, the chairperson tries to shut down the laptop and receives a message that updates are running.
- Discuss TWO possible consequences if the laptop is switched off while the updates are being installed. (2)
- 10.2 The Grade 8 learners will be divided into their different groups.
- 10.2.1 The details of the Grade 8 learners will be captured into a database.
- Which TWO objects in a database can be used to capture the Grade 8 learners' information? (2)
- 10.2.2 A database table has to be exported into a spreadsheet.
- Name TWO factors to consider before exporting a database table to a spreadsheet. (2)
- 10.2.3 Each Grade 8 learner will receive a personalised letter to indicate in which group they are placed.
- Which word processing feature can the welcoming committee use to quickly generate the letters for all Grade 8 learners? (1)
- 10.3 The committee will use augmented reality to create a guided tour of the school for the different groups.
- Discuss TWO benefits of using augmented reality instead of virtual reality for the guided tour. (2)

- 10.4 The welcoming committee is planning an online gaming day in the ICT centre.
- 10.4.1 Explain the concept of *broadband*. (2)
- 10.4.2 Give TWO reasons why the school should have a large bandwidth available for playing online games. (2)
- 10.5 The welcoming committee needs to provide the school management with a report on the orientation week.
- 10.5.1 Suggest TWO data gathering tools that can be used to get direct feedback from the Grade 8 learners. (2)
- 10.5.2 State TWO ways in which to ensure that data collected is free from errors before analysis is started. (2)
- 10.6 Drones will be used to capture videos of all the outdoor activities.
- State TWO limitations that can be experienced when using drones for video capture. (2)
- 10.7 A video with all the highlights will be created and uploaded to the school's website. The link will be e-mailed to the parents, using a distribution list.
- State TWO advantages of using a distribution list. (2)
- [25]**
- TOTAL SECTION C: 50**  
**GRAND TOTAL: 150**