



**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**SEPTEMBER 2023**

**COMPUTER APPLICATIONS TECHNOLOGY P2  
(DEAF)**

**MARKS: 150**

**TIME: 3 hours**

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This question paper has 16 pages.

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**INSTRUCTIONS AND INFORMATION**

1. This question paper has:  
SECTION A (25)  
SECTION B (75)  
SECTION C (50)
2. **Answer ALL** the questions.
3. **Give** the answers the **same numbers** as the questions.
4. **Answer EACH** question on a **NEW** page.
5. Do **NOT** write in the **right-hand margin** of the **ANSWER BOOK**.
6. **Leave** an **open line** after **EACH** sub-question.
7. You get **one mark** per fact.
8. **Read** the questions. **DO NOT** write more than the **question requires**.
9. All answers **MUST** be **about Computer Applications Technology**.
10. You may **not give answers** such as 'cheaper', 'slower'/'faster', etc.  
**We will tell you** when it is **different**.
11. Do **NOT** use **brand names** in your **answers**.  
**We will tell you** when it is **different**.
12. Write **neatly**.  
Your **work** must be **easy** to read.

## SECTION A

## QUESTION 1: MULTIPLE-CHOICE QUESTIONS

Choose a answer.

Write the letter (A–D) next to the question numbers (1.1 to 1.10) in the ANSWER BOOK.

Example: 1.11 D

- 1.1 ... is an **acronym** that **indicates**<sub>(show)</sub> that **human error** has an **influence** on the **computer's output**.
- A DIMM
  - B GIGO
  - C SOHO
  - D FOSS
- (1)
- 1.2 Which **ONE** of the following is an **example** of a **popular e-reader**?
- A Kindle
  - B Phablet
  - C iPad
  - D Notebook
- (1)
- 1.3 A **protocol** that **provides** a **measure** of **protection** to **users** of **websites** when **online banking** is done.
- A HTTP
  - B HSPA
  - C HTML
  - D HTTPS
- (1)
- 1.4 **Identify** the **statement** that is **NOT correct**.
- A A network is a collection of connected computers.
  - B A LAN can be used within one household.
  - C Ethernet refers to wireless network technology only.
  - D A WAN connects computers across cities, countries and continents with each other.
- (1)
- 1.5 A **comment** in **HTML code** will **appear** ... when the **web page** is **displayed** in the **browser**.
- A in brackets
  - B nowhere
  - C as a title
  - D after all the tags
- (1)

- 1.6 A **shortcut** for a **series** of **keystrokes** and/or **mouse moves** that can be **recorded** for **future use** to **automate** a **procedure** or **task** is **known as** ...
- A an add-in.
  - B SQL.
  - C a smart tag.
  - D a macro. (1)
- 1.7 Which **ONE** of the following **return fields** will **calculate** the **correct value** of **value-added tax (VAT)** at **15%** in a **database query**?
- A  $BTW = ["Price"] * 0.15$
  - B  $BTW: (Price) * 0.15$
  - C  $BTW = (!Price) * 0.15$
  - D  $BTW: [Price] * 0.15$  (1)
- 1.8 Which **ONE** of the following **functions** results in an **answer rounded off** to the **nearest whole number**?
- A  $=INT(24.7)$
  - B  $=AVERAGE(C1:C6)$
  - C  $=ROUND(5.58,1)$
  - D  $=TRUNC(21.73,1)$  (1)
- 1.9 **Google** is an **example of** ...
- A a web browser.
  - B a website.
  - C social engineering.
  - D a search engine. (1)
- 1.10 ... is a **broadband access technology** that allows for **high-speed internet connection** from a **private household**.
- A WiMAX
  - B FTTH
  - C LTE
  - D ADSL (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), for example 2.11 U.

COLUMN A		COLUMN B	
2.1	Web browsers store web documents such as HTML pages and graphics temporarily on the hard disk	A	shaping
2.2	Software programs designed to run on smartphones	B	metadata
2.3	A protocol used to define the structure and layout of a web page	C	multiprocessing
2.4	Fast and powerful computers used for weather forecasting	D	pirated copies
2.5	Making use of quad-core processors to increase the speed of the computer	E	combination
2.6	The set of data that describes the size, colour depth, resolution, date created, etc., of an image	F	multitasking
2.7	A concept where employees can work from home making use of the internet, telephone and e-mail	G	summary
2.8	Different technologies and functions are combined into one single device	H	telecommuting
2.9	The illegal downloading and distribution of films	I	html
2.10	Data saved online on server computers (remote servers) that can be accessed <sub>(opened)</sub>	J	mainframe computers
		K	catching
		L	cloud storage
		M	http
		N	worm
		O	teleconferencing
		P	hacking
		Q	privacy
		R	apps
		S	convergence
		T	supercomputers

(10 x 1) [10]

**QUESTION 3: TRUE/FALSE ITEMS**

Are the statements **TRUE** or **FALSE**?

Write 'true' or 'false' next to the question numbers (3.1 to 3.5).

If the statement is **true**, write 'TRUE'.

If the statement is **false**, write 'FALSE'.

**Change** the underlined word(s) to **make** the statement **TRUE**.

Do **NOT** use the word 'NOT' to **change** the **statement**.

**NO** mark will be given if **FALSE** is written **without** a **correct answer**.

**EXAMPLES:**

QUESTION	ANSWER
The initial start-up instructions are stored in the ROM.	True
An NIC has slots for hardware components, such as the CPU.	False – motherboard

- 3.1 Green computing is the **study** and **design** of the **workplace** and the **equipment** that is **used** in the **workplace**, for the **comfort** and **safety** of the **people** in their **work environment**.
- 3.2 The 'wild card' character can be **used** in the **Search and Find** ('Find and **Replace**') feature of a **word processor**.
- 3.3 Broadband refers to the **total amount** of **data transferred**<sub>(moved)</sub> over the **internet** in a **given period**.
- 3.4 Backwards compatible is the **ability** of **software** to **open** and **use files** **created** in **previous (older) versions** of the **software**.
- 3.5 Application software is **software** intended to **control**, **support** or **operate** the **computer**. (5 x 1) [5]

**TOTAL SECTION A: 25**

## SECTION B

## QUESTION 4: SYSTEM TECHNOLOGIES

4.1 Describe a **SOHO** user and give **ONE** example of such a user. (2)

4.2 Utility programs perform routine tasks.

List **TWO** common tasks that are carried out by various(different) utility programs. (2)

4.3 Backup is important to ensure that data is not lost.

4.3.1 Discuss **TWO** ways in which data on a computer could get lost. (2)

4.3.2 Suggest **ONE** way in which the backup of data can be done more securely. (1)

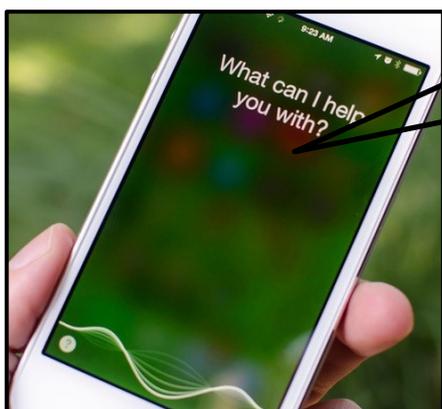
4.4 Mobile users want and need their technology with them wherever they are.

4.4.1 Explain the downside related to the concept of:

'Always on – Always connected'. (1)

4.4.2 Give **ONE** reason why note-taking software will be an advantage for a traffic officer to have on his mobile device. (1)

4.5 Computer programs that work as intelligent virtual assistants are installed in source smartphones and mobile devices.



"Hey *Siri*,  
How is the weather this  
week?"

4.5.1 Name the general term used to describe technology that enables voice recognition in smartphones or mobile devices. (1)

4.5.2 Which technology makes it possible for a personal voice assistant to determine the geographical location of a person or place? (1)

4.6 Explain why it may be important to compress files. (2)

4.7 Why will defragmentation of a hard drive not make extra space available on the hard drive? (1)

4.8 Your computer occasionally displays the following message:



4.8.1 Define the concept *virtual memory*. (1)

4.8.2 Give **TWO** examples of when the operating system will make use of **virtual memory**. (2)

4.9 Study the image. Answer the questions.



4.9.1 Identify the **technology** that the **image** refers to. (1)

4.9.2 Give **TWO** limitations of the **above-mentioned technology**. (2)

4.10 Study the picture of *Virtual Reality*. Answer the questions.



4.10.1 Give a simple explanation of how *Virtual Reality* works. (2)

4.10.2 Give **THREE** possible limitations of the use of *Virtual Reality*. (3)

[25]

**QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES**

- 5.1 **Define** the **concept e-commerce**. (2)
- 5.2 **Give TWO recommendations**<sub>(suggest)</sub> in which you **can ensure better privacy** on **social media**, such as **Facebook** or **WhatsApp**. (2)
- 5.3 **Give TWO reasons** why a **user** would rather **opt** for a **fibre internet connection** than an **ADSL connection**. (2)
- 5.4 **Give** any **TWO advantages** of **online shopping**. (2)
- 5.5 Name **TWO measures used** by the **banks** to **protect** their **clients** when they **do their banking online**. (2)
- 5.6 **Why** is it not **recommended** to **use VoIP** for **emergency calls**? (1)
- 5.7 **Briefly explain** what **information overload** is. (1)
- 5.8 **Explain** the **difference** between a **router** and a **modem**. (2)
- 5.9 **Give** the **file format/type** typically **used** to **save** a **podcast**. (1)

**[15]**

**QUESTION 6: INFORMATION MANAGEMENT**

6.1 Give **TWO** advantages of using electronic forms to collect information. (2)

6.2 Why is there a need for a conclusion in a formal report? (2)

6.3 Study the statement below.  
It comes from a formal report published in 1975.  
Answer the questions.

“Material manufacturers claim that layers give a rich look to any **garment**<sub>(clothing)</sub> and that this will undoubtedly remain **valid**<sub>(effective)</sub> for centuries to come. Although that may be true, people may still think otherwise.”

6.3.1 Give **TWO** reasons why the information in this paragraph is not reliable by referring to the evaluation of sources. (2)

6.3.2 Suggest **ONE** way to make this paragraph more suitable for inclusion in a formal report. (1)

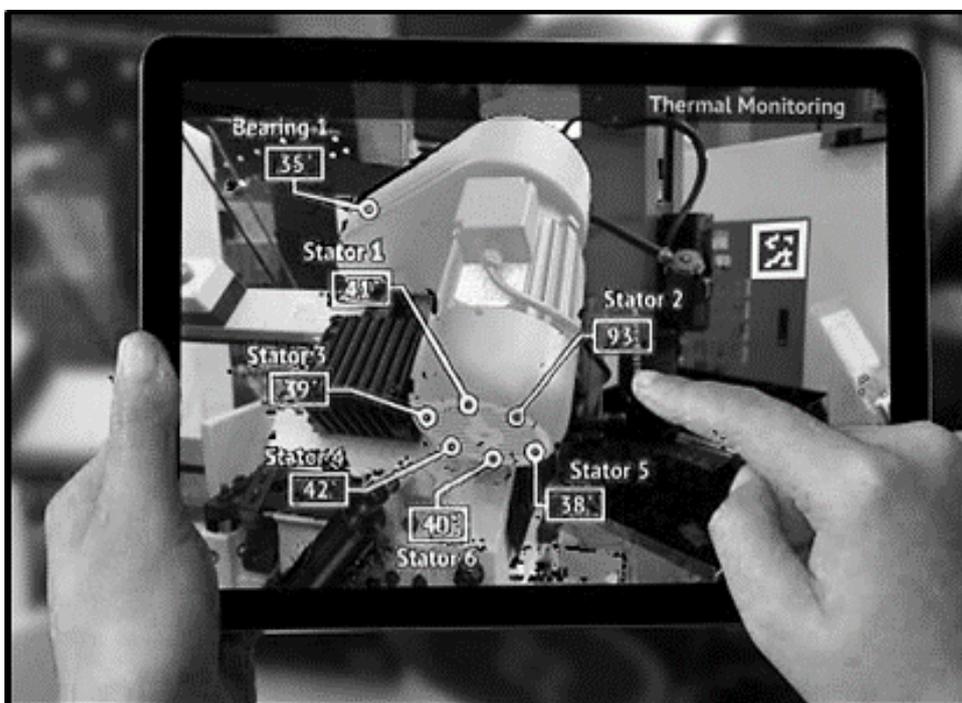
6.4 Give **TWO** aspects that you must include in a task definition for a research project, such as the PAT. (2)

6.5 Briefly explain how you can avoid being guilty of plagiarism when doing research. (1)

**[10]**

**QUESTION 7: SOCIAL IMPLICATIONS**

- 7.1 **Define** the concept *user-centred design (UCD)*. (1)
- 7.2 **Suggest** a **software accessibility option** that will help a **person suffering** from **tremors**(shakes) when **giving input** to a **computer**. (1)
- 7.3 **DDoS attacks** are becoming **more widespread** each year.
  - 7.3.1 **Describe** the **role** of a **bot** in a **DDoS attack**. (2)
  - 7.3.2 **Discuss** how a **DDoS attack** can be **used** by a **hacktivist group** like **Anonymous** to **wage cyberwarfare** against **enemies**, such as **during the Ukraine/Russia war**. (2)
- 7.4 An **e-learning application** was **developed** to **help train new employees** to **use the equipment** in the **laboratory** (see below).



- 7.4.1 **What** is the **name** of the **technology** used by this e-learning application? (1)
- 7.4.2 **Explain** why this **technology** will be **more useful** compared to **watching a video** about the **same equipment**. (1)
- 7.5 **Give TWO examples** of the **use** of **artificial intelligence** in our **everyday lives**.  
**Do not just list the names of applications.** (2)

[10]

**QUESTION 8: SOLUTION DEVELOPMENT**

The **PAT forms part** of the **CAT syllabus**.

You are **expected** to **write a report**.

The **following** are the **challenges** that you **come across**.

- 8.1 You need to **create an automatic table of contents**.  
**Every time** you **attempt** to **create the table of contents**, the following **message appears**.

**No table of contents entries found.**

- 8.1.1 You **know** that **you used styles**.  
 What **could** be the **reason** for the **above message**.  
 How can you **fix** the **problem**? (2)
- 8.1.2 **When you copy and paste information** to your **word processing document**, you are **sometimes forced** to **change the font and format**.  
 How can this be **prevented**? (2)
- 8.2 You will **use a spreadsheet** to **help you** with **calculations** in your **assignment**.  
**Study the spreadsheet**.  
**Write down a possible formula/function** that was **used to obtain the result** in **column D3**.

	A	B	C	D
1	Dressing Room Allocations			
2	Surname	Name	Gender	Dressing Room
3	Stark	Tony	Male	Old
4	Wayne	Bruce	Male	Old
5	Johansson	Scarlett	Female	New
6	Fox	Megan	Female	New
7				

- 8.3 **Name TWO features** of a **spreadsheet**, other than **graphs**, that help with the **processing and analysis** of **data**. (2)
- 8.4 In a **database table**, you need to **create a field** to **restrict**(limit) the **capturing** of a **code**.  
**Give the input mask** you will **use to obtain**(get) the **following result**:  
**E263r**  
**Keep in mind** that **every code** must **start** with a **capital letter E**, followed by **three compulsory numbers** and **one optional small letter**. (3)

8.5 A database query was created to display the records of all the donors who had contributed money and water to assist in drought-stricken areas.

Give TWO reasons why the query below will NOT produce the required result.

Field:	Surname	Money	Water	Received	
Table:	tbiWater	tbiWater	tbiWater	tbiWater	
Sort:					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Criteria:		< > 0			
or:			Is Not Null		

(2)  
[15]

TOTAL SECTION B: 75

## SECTION C

## QUESTION 9: INTEGRATED SCENARIO

Most government offices, companies and schools chose to continue their services online during the Covid-19 pandemic.

Adapting to new technology can often be difficult, but it does not have to be.

- 9.1 Name TWO advantages of using an online platform such as ZOOM for learning and teaching. (2)
- 9.2 Would you prefer to receive resources from your educator via a WhatsApp group or by e-mail? Give TWO reasons to motivate your choice. (2)
- 9.3 Teachers used videos to support learners.
- 9.3.1 Name TWO disadvantages to the learners when the teacher asked them to download high resolution videos. (2)
- 9.3.2 Name ONE software application you can use to edit videos. (1)
- 9.4 List TWO hardware requirements required<sub>(needed)</sub> to hold video conferencing meetings. (2)
- 9.5 Write the difference between a *service pack* and a *patch* by referring to the function of each. (2)
- 9.6 Mention TWO aspects whereby the implementation of a BYOD policy would have complied<sub>(conformed)</sub> with Covid-19 safety protocols<sub>(rules)</sub>. (2)
- 9.7 Provide TWO reasons why a laptop would be a better option to use as an online learning device instead of a tablet computer. (2)
- 9.8 Companies had several<sub>(some)</sub> questions about wearable technologies and their development. Help them understand ICT better by answering the following questions.
- 9.8.1 Explain the term *wearable technology*. (2)
- 9.8.2 State TWO uses of wearable technology. (2)
- 9.9 Blockchain is a new technology used in financial transactions. Explain how this technology works. (3)
- 9.10 Give the generally accepted term that describes a process where a single idea or business practice is funded by several small donations from volunteer contributors. It is usually before starting the business venture. (1)
- 9.11 Define the concept *5th industrial revolution ('5IR')*. (2)

**[25]**

**QUESTION 10: INTEGRATED SCENARIO**

- 10.1 **Authentication** is a **safety measure** that can be **used while doing business** on the **internet**.
- 10.1.1 **Explain** what is meant by a **Two Factor (Two-step) Authentication**. (2)
- 10.1.2 **Give TWO advantages** of authentication as a **safety measure**. (2)
- 10.2 **Digital currency** is increasingly becoming common.
- 10.2.1 **Define** the term *digital currency*. (2)
- 10.2.2 **Name ONE example** of a digital currency. (1)
- 10.2.3 **Evaluate**<sub>(state)</sub> the **efficiency** of using digital currencies. (2)
- 10.3 Your **image** does **not display** on your **website**.  
You want the **image info.png** to **display** with a **width** and **height** of **200**.
- 10.3.1 You **used** the **following HTML coding**:
- ```
<img scr = "info" width = "200" hight = "200">
```
- The **image** does **not display**.  
**Correct the errors** so that the **image** will **display correctly**. (3)
- 10.3.2 **Name any other possible reason** why an **image** will **not display** (**except in the coding itself**). (1)
- 10.4 Your **school decided** to have an **online competition showcasing projects learners** have **produced**.  
**Each entrant needs to pay a registration fee** before the **competition**.
- 10.4.1 **Suggest TWO technologies** that **participants** can **use** to **pay** the **registration fee**, if they **cannot get** to the **school** or a **bank**. (2)
- 10.4.2 **How** could the **organisers** of the **competition confirm** that the **registration fee** has been **paid**, **other than calling** the **bank**? (2)

10.5 The **spreadsheet** was created to keep track of entrants:

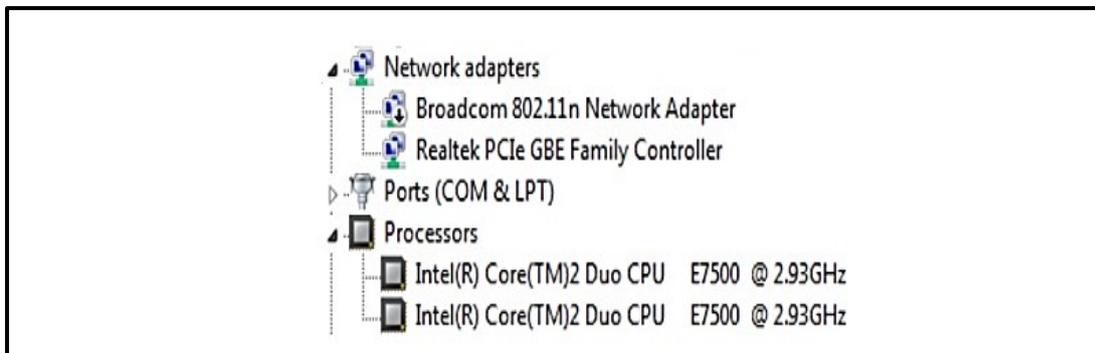
	A	B	C	D	E
1	<b>Project Name</b>	<b>Project type</b>	<b>Stands</b>	<b>Paid</b>	<b>Contact person</b>
2	New discoveries	Science	1	Yes	Thabo
3	Language literacy	Language	2	No	Susan
4	French in school	Language	1	No	Grant
5	New textbooks	Science	3	Yes	Barry
6	Chemistry in school	Science	2	Yes	Sandy
7	Tech in cars	Science	1	Yes	Kagiso
8					
9	<b>Registration fee:</b>	R 250.00			

10.5.1 Which function would you use to determine how many entrants have already paid? (2)

10.5.2 Explain how to add a column between column D and E. (2)

10.5.3 How will you ensure that the amount in cell B9 is used in each cell when a formula is filled down, without retyping the amount? (1)

10.6 The **screenshot** below contains(holds) **system information** of a computer that will be used in **online teaching**.



10.6.1 Which ONE of the network adaptors in the advert above, will be instrumental in providing Wi-Fi access? (1)

10.6.2 Why are there two processors listed in the image above? (2)  
[25]

TOTAL SECTION C: 50  
GRANDTOTAL: 150