



27/2

Hoërskool Johan Jurgens

Computer Applications Technology

Paper 2 (Theory) Memorandum

Grade 12

Time: 1 Hour

Examiner: Ms. M. Hugo

Date: 4 March 2026

Marks: 50

Moderator: Mrs T. Themba

Themba
27/02/26

SECTION A

QUESTION 1: MATCHING COLUMNS

Choose the term/concept from COLUMN B that matches the description in COLUMN A. Write only the letter (A–K) next to the question number (1.1–1.5) on your folio paper, for example 1.6 K.

Column A	
1.1	A- A web browser that was developed by Apple
1.2	C- A powerful computer that provides shared resources (such as printers and files) to network users. -
1.3	G- When changes are made to a file stored on your computer and in the cloud, the files will be updated to the latest version in both locations.
1.4	D- Creates three-dimensional objects from a digital model layer by layer
1.5	K- When companies/schools allow users to bring their own devices to connect to their network.

SUBTOTAL (QUESTION 1) [5] (L1)

11/17

11/17

11/17



QUESTION 2: TRUE / FALSE

Indicate whether each of the following statements are TRUE or FALSE. If the statement is FALSE, then you **MUST** also write the word(s) which should replace the underlined word to make the statement TRUE. In other words, you **cannot** just write down FALSE to receive the mark.

2.1 A database table consists of fields (columns) and records (rows). (1)

True

2.2 Devices needs a UPS for wired/wireless network connections. (1)

False, NIC (Network Interface Controller)

2.3 Email and instant messaging are both designed for real-time communication. (1)

False, Instant messaging is used for real-time communication

2.4 A URL is the unique address of a web page. (1)

email is not for instant messaging

True

2.5. The SUM function can add text and values in Excel. (1)

False, CountA can add text and values in Excel.

SUBTOTAL (QUESTION 2) [5] (L1)

STATE OF TEXAS

IN SENATE, FEBRUARY 11, 1903.

REPORT OF THE COMMISSIONERS OF THE GENERAL LAND OFFICE.

THE STATE OF TEXAS, 1846-1902.

LANDS BELONGING TO THE STATE

LANDS BELONGING TO THE STATE

QUESTION 3: MULTIPLE CHOICE QUESTIONS

Various options are given as possible answers to the questions. Choose the correct answer and write only the letter (A–D) next to the question number (3.1–3.5), for example 3.6 D.

3.1 Which of the following is an example of instant messaging (IM)?

- A Outlook
- B Whatsapp
- C Gmail
- D Thunderbird

(1)

3.2 What is the primary purpose of a network?

- A. To create video content
- B. To take photos
- C. To connect devices for communication and resource sharing
- D. To write documents and spreadsheets

(1)

3.3 Which function in Excel calculates the average of a range of cells?

- A SUM
- B COUNT
- C AVERAGE
- D MAX

(1)

3.4 In a database, a field that uniquely identifies each record is called a ...

- A. foreign Key
- B. primary Key
- C. record Key
- D. main Field

(1)

3.5 Which feature in Word allows you to send personalised letters to multiple recipients?

- A Track Changes
- B Mail Merge
- C Templates
- D Styles

(1)

SUBTOTAL (QUESTION 3) [5] (L1)

TOTAL FOR SECTION A: [15]

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES
QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

QUESTIONS FOR THE FOLLOWING EXERCISES

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGY

Smart Start Tutoring is a small extra-lesson centre.
The owner uses computers to:

- Register learners using Google Forms/Microsoft Forms
- Store learner information digitally
- Print worksheets
- Communicate with parents via email

Some computers freeze when many programs are open. The printer sometimes prints faded pages. The owner wants to replace old HDDs with SSDs.

Use the scenario to answer the questions below.

4.1 Define the term **convergence**.

(2) (L2)

Expected concept:

Combining separate technologies ✓ /functions into one device. ✓

Acceptable answers:

"Different technologies combined into one device."

"One device performing many functions."

"Previously separate devices combined."

"A smartphone replacing camera, GPS, music player."

- "The trend where separate technologies and functions that previously required different devices are combined into a single device."

4.2 Identify the type of user that the owner is.

(1) (L2)

Expected concept:

SOHO user ✓

Acceptable answers:

"Small Office Home Office user"

"SOHO"

4.3 Give ONE reason for your answer in 4.2.

(1) (L2)

- ✓ Must link to scenario.

Acceptable answers:

"Runs a small business."

"Uses computers for administration."

"Works from a small tutoring centre."

"Uses ICT for business purposes."

(Reason must match SOHO.)

Makes use of Ms. Forms.
Use computer and internet
to communicate with
parents.

QUESTIONS

STUDENT NAME: _____

- The student will be able to...
- The student will be able to...
- The student will be able to...
- The student will be able to...

Other questions may be added here.

STUDENT NAME: _____

10/10

STUDENT NAME: _____

1. The student will be able to...

2. The student will be able to...

3. The student will be able to...

4. The student will be able to...

5. The student will be able to...

Other questions may be added here.

STUDENT NAME: _____

10/10

STUDENT NAME: _____

10/10

STUDENT NAME: _____

1. The student will be able to...

2. The student will be able to...

3. The student will be able to...

4. The student will be able to...

5. The student will be able to...

4.4 State ONE way ICT improves productivity at the centre. (1) (L2)

✓ **Acceptable answers:**

Faster communication
Digital storage of records
Faster registration using online forms
Easier printing of worksheets
Automatic data capturing
Faster document creation

store learner information digitally.

4.5 List TWO input devices used at the centre. (2) (L1)

Any Two (✓ ✓)
Keyboard, Mouse, Scanner, Microphone, Webcam

4.6 The printer prints faded pages.
State ONE possible cause and solution. (2) (L3)

Cause (✓)

Any one:
Low ink, Low Toner, Cartridge empty, Wrong Paper, Cartridge blocked

Solution (✓)

Any one:
Replace ink/toner, Refill cartridge, clean cartridge, use correct paper
Must match cause with reasonable solution

4.7 Explain ONE advantage of replacing an HDD with an SSD. (2) (L2)

✓ **Acceptable answers:**

Faster than HDD, no moving parts, more durable, more energy Efficient, less likely to be damaged.
(one clear advantage)

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

- 4.8 Explain why adding more RAM may stop computers from freezing. (1) (L2)
More RAM allows more programs/data to be loaded at the same time, reducing freezing. ✓

Acceptable answers

- "More memory allows more programs to run."
- "Programs won't overload memory."
- "Prevents system from slowing down."
- "Reduces need for virtual memory."

Mark allocation:

- 1 mark – explanation of RAM storing programs/data
- 1 mark – link to reduced freezing/slowness

- 4.9 Differentiate between **web-based** and **installed** software. (4) (L4)

Must show difference.

✓ Acceptable answers:

Web-based:

- Runs in browser, needs internet, no installation needed

Installed:

- Installed on computer, can work offline, Stored locally

Marking:

- 1 mark web-based characteristic
- 1 mark installed characteristic

- 4.10 State **TWO** advantages of using Google Forms/Microsoft Forms for registration. (2) (L2)

✓ ✓ Acceptable answers:

- Automatic data collection
- Responses stored digitally
- Paperless
- Easy to share
- Can export to spreadsheet
- Saves time
- Reduces errors

- 4.11 Give **TWO** reasons why software updates are important. (2) (L2)

Software updates are important because they **fix bugs (errors) in the software.**

✓ ✓ Acceptable alternatives from the slide:

- Improve security
- Close security loopholes
- Prevent data corruption
- Improve performance

Compatibility

SUBTOTAL (QUESTION 4) [20]



1. $\frac{1}{x^2} = x^{-2}$
 $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

2. $\frac{d}{dx} \ln(x) = \frac{1}{x}$
 $\frac{d}{dx} \ln(x^2) = \frac{1}{x^2} \cdot 2x = \frac{2}{x}$

3. $\frac{d}{dx} e^x = e^x$
 $\frac{d}{dx} e^{2x} = e^{2x} \cdot 2 = 2e^{2x}$

4. $\frac{d}{dx} \sin(x) = \cos(x)$
 $\frac{d}{dx} \sin(2x) = \cos(2x) \cdot 2 = 2\cos(2x)$

5. $\frac{d}{dx} \cos(x) = -\sin(x)$

QUESTION 5: SOLUTION DEVELOPMENT

5.1.1	<p>Use COUNTA function</p> <p>(1) Count all cells containing data/any value (2) Count all non-empty cells</p> <p style="text-align: right;">✓ (Any one) (L1)</p>	1	
5.1.2	<p>SUMIFS function</p> <p>Used when adding is based on multiple criteria ✓ in the same or different ranges ✓(L2)</p>	2	
5.1.3	<p>#REF! error message</p> <p>(1) Function refers to deleted/moved rows/columns (2) Function copied and pasted/refers to a non-existing cell</p> <p style="text-align: right;">✓ (Any one) (L2)</p>	1	
5.1.4	<p>Sorting data in spreadsheet</p> <p>(1) Font colour (2) Cell colour (3) Cell icon (4) Conditional formatting icon</p> <p style="text-align: right;">✓ (Any one) (L1)</p>	1	5
5.2	<p>THREE corrections in HTML</p> <p>(1) Line 3 – Title text 'SAM's dealership' is missing (2) Line 10 – Remove width attribute/width="100%" (3) Line 9/11 – Header larger/smaller (4) Line 11 – Missing the break
 tag</p> <p style="text-align: right;">✓ ✓ ✓ (Any three) (L3)</p>	3	
5.3.1	<p>TWO reasons why no values appear in combo box</p> <p>(1) Row source type was not linked to value list (2) No values were entered into the row source/cells of the wizard (3) No values in the field of the Table/Query</p> <p style="text-align: right;">✓ ✓ (Any two) (L3)</p>	2	



Handwritten title or section header.

Handwritten text block, possibly a list or notes.

Handwritten text block on the left side.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block on the left side.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block on the left side.

Handwritten text block.

Handwritten text block.

Handwritten text block.

Handwritten text block.

5.3.2	TWO examples of functions			
	(1) Sum (2) Average (AVG) (3) Max (4) Min (5) Count (6) Date/Now		✓ ✓ (Any two) (L1)	2
5.3.3	Difference between queries			
	Query 1	Query 2	Mark	
	Shows all the fields	Shows <i>Amount</i> and <i>DOB</i> fields OR Does not show <i>NumberOfNights</i> field	✓	
	1. (<i>NumberOfNights</i> <=5) AND (<i>Amount</i> <800 OR <i>Amount</i> >2000) AND (<i>DOB</i> is Null)	2. ((<i>NumberOfNights</i> <=5) AND (<i>Amount</i> <800) AND (<i>DOB</i> is Null)) OR (<i>Amount</i> >2000)	✓	
	No sorting	Sorting on <i>Amount</i> field	✓	
	1. Query 1 displays all records where <i>Amount</i> less than 800 or greater than 2000 and the <i>NumberOfNights</i> is less and equal to 5 and <i>DOB</i> is empty 2. Query 2 show all records where: <ul style="list-style-type: none"> <i>Amount</i> more than 2000 whether <i>DOB</i> is empty or not and ignores <i>NumberOfNights</i>; or <i>Amount</i> less than 800 where the <i>NumberOfNights</i> is less and equal to 5 and <i>DOB</i> is empty. (L4) 		3	7

SUBTOTAL (QUESTION 5) [15]

TOTAL FOR SECTION B [35]

GRAND TOTAL SECTION A+B: [50]

