Tshwane University of Technology

We empower people

YEAR: MARCH 2023

CLASS TEST 1
MEMORANDUM

SUBJECT NAME:	COMPUTER FUNDAMENTALS
SUBJECT CODE:	CFAF05D
QUALIFICATION(S):	

PAPER DESCRIPTION: Theory   **DURATION:** 2 HOURS   **PAPER:** ONLY

SPECIAL REQUIREMENTS

- ■ **NONE**
- ☐ **NON-PROGRAMMABLE POCKET CALCULATOR**
- ☐ **SCIENTIFIC CALCULATOR**
- ☐ **COMPUTER ANSWER SHEET**
- ☐ **GRAPH PAPER**
- ☐ **DRAWING INSTRUMENTS**

OTHER:

INSTRUCTIONS TO CANDIDATES:

ANSWER ALL QUESTIONS ON THE QUESTION PAPER

TOTAL NUMBER OF PAGES INCLUDING COVER PAGE: 10 (including cover page)

TOTAL NUMBER OF ANNEXURES: 0

EXAMINER 1:   Ms Twala   **FULL MARKS:** 60

TOTAL MARKS: 60

MODERATOR: Mrs Rammutla   **STUDENT TOTAL:** ⎯⎯

STUDENT %: ___

1

QUESTION 1 [MULTIPLE CHOICE]   [10]

1.1.   Largest and most important circuit board.

   a) Expansion card
   b) Adapter card
   c) Memory modules
   d) Motherboard √ [Unit 1, slide 11]

1.2.   A circuit board that provides more ports than those provided by the motherboard.

   a) Expansion card √ [unit 1, slide 12]
   b) Momory modules
   c) RAM
   d) Riser cards

1.3.   A temporary storage for data and instructions as they are being processed by the CPU.

   a) Hard drive

   b) RAM √ [Unit 1, slide 13]

   c) ROM

   d) Optical drive

1.4.   _____ receives and converts house current so that components inside the case can use it.

   a) Power supply √ [Unit 1, slide 15]
   b) Multimeter
   c) Processor
   d) Post diagnostic cards

1.5.   Which connector is used by the first ATX power supplies and motherboards?

   a) 20-pin P1 connector √ [unit 1, slide 18]
   b) 4-pin and 8-pin auxiliary connector
   c) 24-pin or 20+4 – pin P1 connector
   d) 6-pin and 8-pin PCIe connector

1.6.   When you want to drain the power supply, how long should you press and hold the power button for?

a) 2 seconds
b) 5 seconds
c) 3 seconds √ [Unit 2, slide 6]
d) None of the above

1.7.   When removing the expansion cards, which bag is best for storing the cards?

a) Plastic bag
b) Refuse bag
c) Any bag
d) None of the above √ [Unit 2, slide 17]

1.8.   A computer case is sometimes called as _____.

a) System board
b) Expansion cards
c) Chassis √ [Unit 1, slide 2]
d) None of the above

1.9.   In which step should you back up important data when taking a computer apart?

a) Step 1
b) Step 2 √ [unit 2, slide 6]
c) Step 3
d) Step 4

1.10.   Select an alternative name for VGA port.

a) S-video port
b) Ethernet port
c) DB-15 port √ [unit 1, slide 7]
d) DVI port

QUESTION 2 [TRUE & FALSE]   [10]

State whether the following statements are True or False

Write your answer in Page Table 123. Only in TABLE 123 will be marked/graded.

2.1.   A processor processes most of the data and instructions for the entire system.
    a) True √ [unit 1, slide 11]
    b) False

2.2.   A computer case is sometimes called a docking station.
    a) True
    b) False √ [unit 1, slide 5]

2.3.   Expansion cards are also called as adapter cards.
    a) True √ [unit 1, slide 12]
    c) False

2.4.   DIMM slots hold expansion cards.
    a) True
    b) False √ [unit 1, slide 13]

2.5.   Clean LCD panel with a hard wet cloth.
    a) True
    b) False √ [unit 1, slide 16]

2.6.   Never touch inside of a turned on computer.
    a) True √ [unit 2, slide 5]
    b) False.

2.7.   Before USB, laptops offered expansion card slots, which are sometimes called PCMCIA cards.
    a) True
    b) False√ [unit 1, slide 29]

2.8.   When removing components, draw a diagram   of all cable connections to the motherboard, expansion cards and drives.

a) True ✓ [unit 2, slide 15]
b) False

2.9.   Plastic screws may be used several times.
a) True
b) False ✓ [unit 2, slide 48]

2.10.   Refer to the diagrams created during the disassembling process, when putting a computer together.
a) True ✓ [unit 2, slide 28]
b) False

QUESTION 3   [10]

Match column A with the correct description in column B.

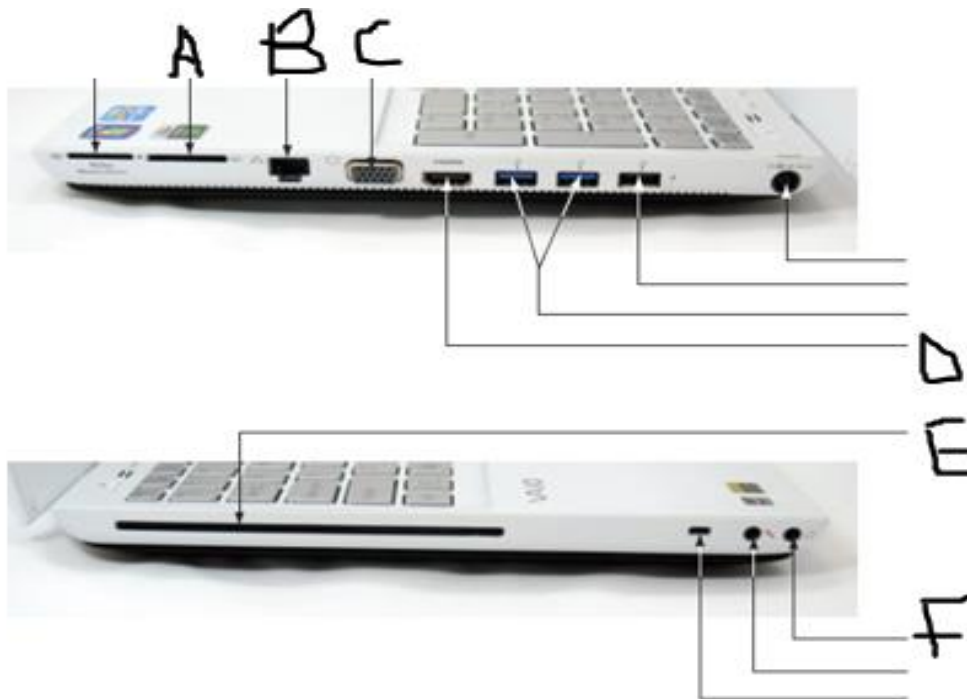| Column A	Column B
1. Docking station √ [unit 1, slide 31]	A. Slots for memory modules.
2. All-in-one computer √ [unit 1, slide 34]	B. Protects against ESD.
3. Smartphone √ [unit 1, slide 39]	C. Provides ports to allow a laptop to easily connect to a full-sized monitor, keyboard, AC adapter, and other peripheral device.
4. Processor √ [unit 1, slide 11]	D. Uses a mix of components for a desktop and a laptop.
5. Post diagnostic cards √ [unit 1, slide 49]	E. Are necessary to keep motherboard from touching the metal case.
6. Firmware √ [unit 1, slide 50]	F. Processes most of the data and instructions for the entire system.
7. Spacers √ [unit 2, slide 20]	G. Helps discover, report computers errors and conflicts at power-on-self test.
8. ESD strap √ [unit 2, slide 48]	H. Programs and data stored on the motherboard.
9. Heat sink √ [unit 1, slide 11]	I. Is a cell phone with added capabilities.
10. DIMM √ [unit 1, slide 13]	J. Consists of metal fins that drew heat away from a component.

TABLE 123

PLEASE WRITE ANSWERS FOR QUESTIONS 1 ,2 and 3 in this table

Only A; B; C or D			Only True or False			Multiple choice eg. 1.A	
Question 1			Question 2			Question 3	
1	D		1	A		1.	C
2	A		2	B		2.	D
3	B		3	A		3.	I
4	A		4	B		4.	F
5	A		5	B		5.	G
6	C		6	A		6.	H
7	D		7	B		7.	E
8	C		8	A		8.	B
9	B		9	B		9.	J
10	C		10	A		10.	A

Question 4 [6]

Write the name of each labeled ports/slots on a laptop computer.

A- **SD CARD SLOT** √ **[unit 1, slide 25]**

B- **Ethernet port** √

C- **VGA port** √

D- **HDMI** √

E- **Optical drive** √

F- **Speaker port** √

Question 5 [Abbreviations]   [10]

Write down the following the abbreviations:

5.1   VGA   - Video Graphics Array √ [Unit 1, slide 7]

5.2   HDMI   - High Definition Multimedia Interface √ [Unit 1, slide 8]

5.3   CPU   - Central Processing Unit √ [Unit 1, slide 11]

5.4   RAM   - Random Access Memory √ [Unit 1, slide 13]

5.5   HDD   - Hard Disk Drive √ [Unit 1, slide 14]

5.6   ESD   - Electrostatic Discharge √ [Unit 1, slide 37]

5.7   FRU   - Field Replaceable Unit √ [Unit 1, slide 46]

5.8   SSD   - Solid State Drive √ [Unit 1, slide 44]

5.9   PCIe   - Peripheral Component Interconnect express √ [Unit 2, slide 30]

5.10   ZIF   - Zero Insertion Force √ [Unit 2, slide 48]

Question 6 [Long questions] [14]

6.1 List and explain at least 3 (three) types of computer cases. **(6)**

Tower case – sits upright and can hold several drives √√

Desktop case – lies flat and sometimes holds monitor √√

Mobile case – used with laptops and tablets √√

All-in-one case – used with all-in-one computer √ √ [Unit 1, slide 6] any 3

6.2 List 2 (two) types of form factors**. (2)** [Unit 1, slide 16]

1) ATX √

2) Micro-ATX √

6.3 Write 4 (four) steps that every computer technician should know and adhere to, when taking a computer apart (disassemble). **(4)**

Step 1 : Plan and organize your work √ [Unit 2, slide 4]

Step 2: Open the computer case and Examine the System √ [Unit 2, slide 6]

Step 3: Remove Expansion Cards √ [Unit 2, slide 15

Step 4: Remove the Motherboard, Power Supply, and Drives √ [Unit 2, slide 18]

6.4 You are required to disassemble a computer, but you need to take the expansion cards to a potential buyer who lives far away from you. What type of bag will be best for storing these cards? **(2)**

an antistatic bag √ [Unit 2, slide 17]

TOTAL [60]