

PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF MANAGEMENT SCIENCES

DEPARTMENT OF MANAGEMENT

QUALIFICATION: Bachelor of Business and Information Administration	
QUALIFICATION CODE: 07BBIA	LEVEL: 5
COURSE CODE: BIS521S	COURSE NAME: Business Information Systems 1B
SESSION: November 2019	PAPER: Theoretical Paper
DURATION: 2 Hours	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Deoni Olivier
MODERATOR:	Godwin Kaisara

INSTRUCTIONS
<ol style="list-style-type: none">1. You have to answer ALL the questions.2. Read questions carefully before answering.3. Please number your answers clearly.4. Make sure your student number appears on the answering script.

PERMISSIBLE MATERIALS

1. Pen, pencil, ruler and eraser

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

QUESTION 1 - ABBREVIATIONS**(10 MARKS)****Please complete these abbreviations in full:**

- 1.1 GPU
- 1.2 LCD
- 1.3 VoIP
- 1.4 BIOS
- 1.5 DLP
- 1.6 CCD
- 1.7 CAPTCHA
- 1.8 HDMI
- 1.9 POST
- 1.10 TFT

QUESTION 2 – Give one Word/ Phrase for the following:**(10 MARKS)**

- 2.1 refers to the time it takes to turn a pixel on, from black to white, or off, from white to black.
- 2.2 consists of data as computer instructions that enable the user to interact with a computer, its hardware, or perform tasks.
- 2.3 A is a combination of the alphabet letters or numbers.
- 2.4 When a printer houses a printer, copy machine, scanner, and sometimes a fax-machine, we call it a printer?
- 2.5 devices read text printed with magnetized ink.
- 2.6 can be thought of as an oversized and more sophisticated version of the USB memory stick.
- 2.7 uses less power and when you turn the computer on again you are right where you left off.
- 2.8 is the process of transferring the information from the storage device into the memory of the computer.
- 2.9 is the first operation in the operating system function process.
- 2.10 is extra memory and it's a small section of a hard disk space.

QUESTION 3**(10 MARKS)**

Match the following concepts in Column A with the definitions in Column B. Write down the question number and then the correct letter from Column B that matches that of Column. e.g. 3.1 C

COLUMN A	COLUMN B
3.1 Cyber-terrorist	a) Someone who illegally gains unauthorized access to other computers.
3.2 Co-ordinating tasks	b) Popular, multitasking based operating system that can run on different computers.
3.3 EB	c) Protection for your identity on the internet.
3.4 Hacker	d) Receiving data or instructions from input devices, sending information to output devices.
3.5 Optical disks	e) Uses existing and easy-to-find techniques and programs written by someone else to exploit or break into a computer system.
3.6 Cyber-extortionist	f) Is someone that uses the internet or large network to destroy or damage computers and / or information for political reasons, like targeting a telecommunication network of a country.
3.7 LINUX	g) External bit
3.8 Digital Security	h) Someone who demands payment to stop an attack on a company's IT structure.
3.9 Dot pitch	i) ExaByte
3.10 Script kiddie	j) An operating system that are found on mobile devices or computer electronics.
	k) A measurement that describes the sharpness of a screen display.

QUESTION 4 - DEFINE THE FOLLOWING TERMS:**(10 MARKS)**

- 4.1 Input
- 4.2 Information
- 4.3 Instructions
- 4.4 Output
- 4.5 Graphics

QUESTION 5**(30 MARKS)**

- 5.1 Draw a table in which you compare two differences between CCFL and LED. (4)
- 5.2 In some cases where your family members also have access to your computer, then there are specific security measures that apply. Discuss 5 security measures. (5)
- 5.3 Give five (5) characteristics of a mobile printer. (5)
- 5.4 Briefly explain what is encryption, and what methods of encryption are common? Also draw a simple diagram to illustrate the encryption process. (10)
- 5.5 List six (6) examples of storage devices. And state whether they are internal or external. (6)

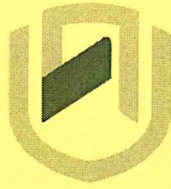
QUESTION 6**(30 MARKS)**

- 6.1 Describe page swapping used with virtual memory as a function of the operating system used in information technology. (3)
- 6.2 Briefly explain what an interactive whiteboard is and give a practical example of where it can be used. (3)
- 6.3 Identify the following picture and give four (4) characteristics of it. (5)



- 6.4 Explain the following pen input devices: (4)
- a) Stylus
 - b) Digital pen
 - c) Graphics tablet
- 6.5 List and explain the five (5) biometric devices used for authentication or verification. (10)
- 6.6 What exactly does access time measure? (2)
- 6.7 List three (3) advantages of using an external drive. (3)

TOTAL MARKS: 100



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FIRST OPPORTUNITY EXAMINATION MEMORANDUM	
EXAMINER(S)	Deoni Olivier
MODERATOR:	Godwin Kaisara

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THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)

QUESTION 1 - ABBREVIATIONS

(10 MARKS)

Please complete these abbreviations in full:

- 1.1 GPU – Graphics Processing Unit ✓
- 1.2 LCD – Liquid Crystal Display ✓
- 1.3 VoIP – Voice over Internet Protocol ✓
- 1.4 BIOS – Basic Input/ Output System ✓
- 1.5 DLP – Digital Light Processing ✓
- 1.6 CCD – Charge Coupled Device ✓
- 1.7 CAPTCHA – Completely Automated Public Turning test to tell Computers and Humans Apart ✓
- 1.8 HDMI – High Definition Media Interface ✓
- 1.9 POST – Power-On-Self-Test ✓
- 1.10 TFT – Thin Film Transistor ✓

QUESTION 2 – Give one Word/ Phase for the following:

(10 MARKS)

- 2.1 ...**Response Time**... refers to the time it takes to turn a pixel on, from black to white, or off, from white to black. ✓
- 2.2 ...**Software**... consists of data as computer instructions that enable the user to interact with a computer, its hardware, or perform tasks. ✓
- 2.3 A ...**Username**... is a combination of the alphabet letters or numbers. ✓
- 2.4 When a printer houses a printer, copy machine, scanner, and sometimes a fax-machine, we call it a **Multi-Function** printer? ✓
- 2.5 ...**Magnetic-Ink Character Recognition**... devices read text printed with magnetized ink. ✓
- 2.6 ...**solid state drive**... can be thought of as an oversized and more sophisticated version of the USB memory stick. ✓
- 2.7 ...**hibernation**... uses less power and when you turn the computer on again you are right where you left off. ✓
- 2.8 ...**reading**... is the process of transferring the information from the storage device into the memory of the computer. ✓
- 2.9 ...**start up**... is the first operation in the operating system function process. ✓
- 2.10 ...**virtual memory**... is extra memory and it's a small section of a hard disk space. ✓

QUESTION 3

(10 MARKS)

3.1 f	✓
3.2 d	✓
3.3 i	✓
3.4 a	✓
3.5 j	✓
3.6 h	✓
3.7 b	✓
3.8 c	✓
3.9 k	✓
3.10 e	✓

QUESTION 4 - DEFINE THE FOLLOWING TERMS:

(10 MARKS)

- 4.1 **Input:** is information or data entered into a computer or computer-like device by a user or by a device either manually or automatically, for processing.
- 4.2 **Information:** cannot exist without data, because once these unprocessed bits of data, as mentioned in the point above, are processed, they are transformed into information.
- 4.3 **Instructions:** are commands that the user gives to the computer by means of using an input device.
- 4.4 **Output:** This term is defined as "data that has been processed and is sent out from the computer or computer-like device and is displayed as information in a form that we as humans can read, understand or hear".
- 4.5 **Graphics:** the products of the graphic arts, especially commercial design or illustration.

QUESTION 5

(30 MARKS)

5.1 Draw a table in which you compare two differences between CCFL and LED. (4)

CCFL – Cold Cathode Fluorescent lamp	LED – Light Emitting Diode
The liquid crystals need a light source to work. Older technology used the CCFL light source to light up the pixels (picture element).	Manufacturers, however, improved this by using the technology as a light source.
This creates picture quality problems.	This allows much better control of light.

5.2 In some cases where your family members also have access to your computer, then there are specific security measures that apply. Discuss 5 security measures. (5)

- One way of implementing security is to set up different user accounts.
- The person setting up user accounts will normally be the administrator of the computer.
- An administrator has full rights to access any file on the computer and to limit other users' rights on the computer.
- You can create a user account for you as the administrator with a password.
- Then you can create a guest account for other users.

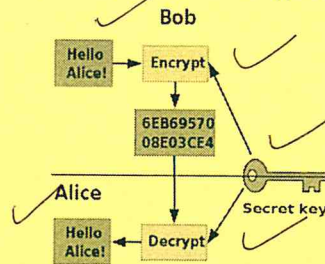
5.3 Give five (5) characteristics of a mobile printer. (5)

- A mobile printer is a small lightweight, battery-powered printer that allows a mobile user to print from a laptop, smartphone, or other mobile device while travelling.
- Mobile printers fit easily in a briefcase alongside a laptop.
- Mobile printers mainly use ink-jet or thermal technology.
- Many connect to a USB port.
- Others have a built-in wireless port through which they communicate with the device.

5.4 Briefly explain what is encryption, and what methods of encryption are common? Also draw a simple diagram to illustrate the encryption process. (10)

- Encryption ensures information protection, allowing only authorised parties to view it. This includes files stored on the computer or on a network, as well as data transferred over wireless networks and the internet.
- Encryption also provides authentication - the origin of a message can be verified.
- It ensures integrity, i.e. proof that the contents of a message have not been changed since it was sent.
- The sender of a message cannot deny sending the message.

- Data can be encrypted by using two main types of encryption: asymmetric encryption (also called public-key encryption) and symmetric encryption (also called private or secret key encryption).



- 5.5 List six (6) examples of storage devices. And state whether they are internal or external. (6)

Hard disk drive – internal ✓
 Solid state drive – internal and external ✓
 USB flash drives – external ✓
 Optical discs – external ✓
 Network attached storage device – internal to a server ✓
 Magnetic stripe card – external ✓

QUESTION 6

(30 MARKS)

- 6.1 Describe page swapping used with virtual memory as a function of the operating system used in information technology. (3)

If a program is not in use for a specific period, the operating system swaps a portion of the data and program, now referred to as a page, to the virtual memory. Should you need to use the program again, the operating system swaps the page back into main memory again.

- 6.2 Briefly explain what an interactive whiteboard is and give a practical example of where it can be used. (3)

An interactive whiteboard is an instructional tool that allows computer images to be displayed onto a board using a data projector. A presenter controls the images or text on the board and can save it on the computer afterwards. E.g. a classroom set up

- 6.3 Identify the following picture and give four (4) characteristics of it. (5)

All-in-one printer:

- Uses ink-jet printer technology and laser printer technology.
- Occupies less space
- Less expensive than buying each device separately.
- Saves time - using one machine instead of different machines with different locations.



6.4 Explain the following pen input devices: (4)

- a) **Stylus:** is a small metal or plastic device that looks like a tiny pen but uses pressure instead of ink.
- b) **Digital pen:** is slightly bigger than a stylus, is an input device that captures and converts a user's handwriting or drawings into a digital format.
- c) **Graphics tablet:** also called a digitiser, is an electronic plastic board that detects and converts movements of a stylus or digital pen into digital signals that are sent to the computer.

6.5 List and explain the five (5) biometric devices used for authentication or verification. (10)

- **Face scanner** - face scanners identify a person by taking measurements of a person face. For example, the distance between the person's chin, eyes, nose, and mouth.
- **Hand scanner** - the palm of your hand is also unique to you. A biometric hand scanner will identify the person by the palm of their hand.
- **Finger scanner** - a biometric finger scanner identifies the person by their fingerprint. These can be a secure method of identifying a person.
- **Retina or iris scanner** - A biometric retina or iris scanner identifies a person by scanning the iris or retina of their eyes.
- **Voice scanner** - a voice analysis scanner will mathematically break down a person's voice to identify them.

6.6 What exactly does access time measure? (2)

- The amount of time it takes to locate an item on a storage device.
- The time it takes to transfer an item from memory to the CPU.

6.7 List three (3) advantages of using an external drive. (3)

- Transporting a large number of files
- Storing a large number of audio and video files
- Securing your data by removing the data from your computer