

MWALIMU EXAMINATIONS BUREAU

END OF TERM I UCE EXAMINATIONS – 2016

COMPUTER STUDIES

DRAFT MARKING SCHEME

SECTION A (20 MARKS)

1	C	6	B	11	D	16	B
2	B	7	A	12	A	17	A
3	B	8	C	13	B	18	D
4	C	9	D	14	D	19	C
5	D	10	A	15	A	20	C

SECTION B (60 MARKS)

Answer **all** questions in this section. All the working **must** be done in the spaces provided.

21. a) What is a **device driver**? (2 marks)

- a small program that tells the operating system how to communicate with a device for example plotter.

b) Give **two** devices that may require the installation of a device driver (2 marks)

- Web Cam
- Keyboard
- Mouse
- Printer
- Scanner
- Plotter
- Joystick
- Graphics tablet

Any 4x1=04 marks

c) Name **two** kinds of information normally requested to log on to a multiuser operating system (2 marks)

- *User name*
 - *Password*
- 2x1 = 2marks**

d) Name **four** functions that are normally carried out by an operating system (4 marks)

- *Managing the processor*
 - *Managing Memory*
 - *Managing Files*
 - *Booting of the computer*
 - *Spooling of print jobs*
 - *Providing user interface for interaction*
 - *Managing computer hardware and software security*
 - *Loading of programmes/platform for application programs*
 - *Monitoring system performance*
 - *Configuring devices*
- Any 4x1=04 marks**

22. a) (i) What is a **primary keyword**? (2 marks)

- *is a key in a relational database that is unique for each record.*

ii) Give **two** examples of database management programs (2 marks)

- *Paradox*
- *FileMaker Pro*
- *Lotus Approach*
- *Foxbase*
- *Microsoft Access*
- *dBASE*

Any 2x1 = 2marks

b)(i) Name **two** database objects (2 marks)

- *Table*
- *Query*
- *Form*
- *Report*
- *Modules*

Any 2x1 = 2marks

(ii) Mention **four** merits of using electronic databases (4 marks)

- *Allow the user to add, delete or modify records more easily.*
- *It is easy to search and retrieve records*

- *Control data duplication or redundancy*
- *Ensure data security by providing security features*
- *It is easy to generate reports that can be used in decision-making*

23. a) (i) What is a **browser**? (2 marks)

- *is an application specifically designed to locate, retrieve, and display content found on the Internet*
- *Is a software application for retrieving, presenting and traversing information resources on the World Wide Web.*

Any 1x2 = 2marks

(ii) Give **two** examples of browsers (2 marks)

- *Safari*
- *Thunderbolt*
- *SeaMonkey*
- *Opera*
- *Google Chrome*
- *Internet Explorer*
- *Mozilla Firefox*

Any 2x1 = 2marks

b) Mention **three** advantages of using email as a means of communication (3 marks)

- *Faster means of communication*
- *It is cheaper*
- *Convenient to send to many people*
- *Provision of vacation responders*
- *Secure since passwords are used*
- *Enables attachments*
- *Keeps a log / record of sent, received, deleted messages*
- *Keeps a record of addresses*
- *It allows a message to be forwarded*
- *It can contain hyperlinks which connect a person to other websites*
- *Unlimited message length*
- *Can be sent any time of the day*

Any 3x1 = 3 marks

c) Outline **three** limitations of using email as means of communication (3 marks)

- *Viruses*
- *Spam*
- *Information can be intercepted (hacked)*
- *Internet access is required*
- *Information can be misrepresented especially when typed in a hurry*
- *Requires checking the inbox regularly to stay updated*

Any 3x1 = 3 marks

24. a)(i) Differentiate between a **cold boot** and a **warm boot** (2 marks)

Cold boot is the process of turning on a computer after it has been powered off completely while warm boot is the process of restarting, or resetting, a computer that is already turned on.

Both definitions must be correct = 2marks

(ii) Name **two** kinds of information stored in the CMOS of a personal computer (2 marks)

- *Type of keyboard used*
- *Type of mouse used*
- *Type of monitor used*
- *Date and time in the computer system*
- *The amount of RAM installed*
- *The type and capacity of disk drives*

Any 2x1 = 2marks

b) Give **two** examples of secondary storage devices (2 marks)

- *CD/DVD drive writer*
- *Floppy disk driver*
- *Hard disk drive*

Any 2x1 = 2marks

c) Give **four** examples of secondary storage media (4marks)

- *Flash disk*
- *Memory card*
- *External hard disk*
- *Floppy disk*
- *Compact disc*
- *Digital video/versatile disc*

Any 4x1 = 4marks

25. a) Name any **four** output devices you (4 marks)

- *Visual display unit / Monitor*
- *Loudspeaker*
- *Projector*
- *Monitor*
- *Printer*
- *Plotter*

Any 4x1 = 4marks

b) Suggest **one** suitable input device for each of the following tasks: (6 marks)

1. To enter instructions in a CLI – *Keyboard*

2. To move the pointer in a GUI – *Mouse*
3. To input text/graphics from hard copies into electronic format – *Scanner*
4. To read the barcodes of products in a supermarket – *Barcode reader*
5. To record human voice into the computer – *Microphone*
6. To control a video game – *Joystick*

26. a) What is a **computer network**? (2 marks)

A computer network is the infrastructure that allows two or more computers (called hosts) to communicate with each other.

b) Mention **three** network types you know (3 marks)

- *Local Area Network*
- *Metropolitan Area Network*
- *Wide Area Network*

c) List any **two** network transmission media (2 marks)

- *Un-shielded Twisted Pair (UTP)*
- *Shielded Twisted Pair*
- *Coaxial Cable*
- *Optical Fiber*
- *Radio Transmission*
- *Microwave*

Any 2x1 = 2 marks

d) Write the following in full: (3 marks)

- 1 **IRC** – *Internet Relay Chat*
- 2 **FTP** – *File Transfer Protocol*
- 3 **NIC** – *Network Interface Card*

SECTION C (20 MARKS)

Attempt only **ONE** question in this section. Answers to the question **must** be done in the answer sheet provided.

27. a) Define **computer virus**. (02 marks)

- A computer virus is a software program that is designed to copy itself over and over again and to attach itself to other programs.
- A piece of code that is capable of copying itself and typically has a detrimental effect, such as corrupting the system or destroying data.

Any 1x2 = 2marks

b) State **five** ways in which computer viruses spread. (05 marks)

- Email attachments
- Visiting fake websites
- Using illegitimate/pirated software
- Using fake antiviruses
- Sharing infected storage media
- Joining a network of infected computers

Any 5x1 = 5marks

c) Give **five** reasons for restarting a computer (05 marks)

- When a computer a computer freezes or hangs
- After installing a certain new software
- After installing a certain new hardware
- After uninstalling a hardware device
- After uninstalling a program
- After changing the Basic Input-Output System (BIOS) setup

Any 5x1 = 5marks

d) Identify **four** technical problems which can hinder computer use and suggest a solution to each. (08 marks)

Problem	Solution
Computer cannot start	check that the computer is plugged to

	into power
The screen is blank	-Ensure monitor is plugged into power point -Secure the connection between monitor and computer hard drive
Windows won't boot	Reinstall Windows
Computer frozen	Restart the computer
Computer slow	Install antivirus, firewall or antispyware tool
Fan makes a lot of noise	Clean/replace the fan
Computer is overheating	Replace fan
Computer keeps restarting	Update all critical system drivers (graphics card, motherboard and network card)
Printer won't work	-Ensure printer is connected to the computer -Install printer drivers if not installed -Turn the printer off and on -Unplug the printer and plug it back
Non system disk	Remove non-system disk from boot device
No operating system found	Install operating system e.g. Windows
Hard disk makes a lot of noise	Back up data and replace the hard disk

Identifying problems 4x1 = 4marks

Providing solutions 4x1 = 4marks

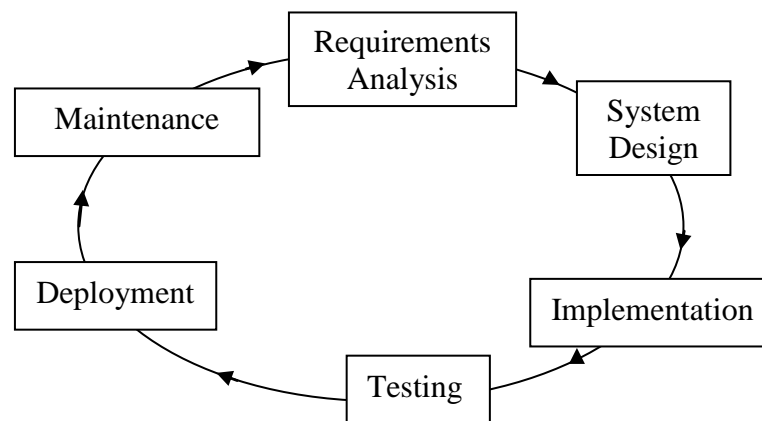
28. a) Explain **four** computer professions in Uganda. (08 marks)

- ***Information System Management*** – professionals in this area serve as technology managers and decision makers within an institution

- **Computer programming** – professionals in this area implement the designs of software engineers writing programs
- **Database administration** – in this field, professionals are responsible for handling information stored on the computer database
- **Network administration** – professionals in this field are responsible for building, maintaining and repairing computer networks.
- **Software engineering** – in this area, professionals design and engineer programs that can work within hardware limitations
- **Website development** – website developers design websites for individuals and or organisations

Any 4x2 = 8 marks

b) Describe the steps taken when developing a new computer software program
(12 marks)



Correct Illustration = 6 marks

The sequential phases in Waterfall model are:

Stage 1: Requirement Gathering and analysis: All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.

Stage 2: System Design: The requirement specifications from first phase are studied in this phase and system design is prepared.

Stage 3: Implementation: With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.

Stage 4: Integration and Testing: All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

Stage 5: Deployment of system: Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market.

Stage 6: Maintenance: There are some issues which come up in the client environment. To fix those issues patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

Mentioning what is involved in each stage 6x1 = 6 marks

29. a) Explain **four** uses of the Internet.

(08 marks)

- Research
- Communication
- Online Shopping
- Leisure and entertainment – playing computer online games, music, reading online books and ebooks
- Exploring the world – satellite & mapping apps, travel sites provide details for places etc
- Ecommerce
- Social networking using platforms like Facebook, Twitter, LinkedIn, etc
- Job search

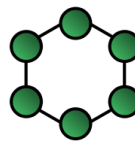
Any 5x2 = 10 marks

b) With illustrations, describe briefly **four** examples of network topologies

(12 marks)

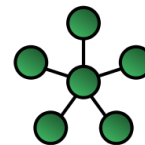
Ring topology

A network topology is set up in a circular fashion in such a way that they make a closed loop.



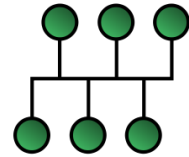
Star topology

In local area networks with a star topology, each network host is connected to a central hub with a point-to-point connection.

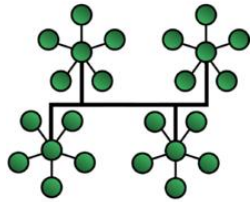


Bus topology

In local area networks where bus topology is used, each node is connected to a single cable, by the help of interface connectors. This central cable is the backbone of the network and is known as the bus.



Tree /Hybrid topology



A tree network, or star-bus network, is a hybrid network topology in which star networks are interconnected via bus networks.

Tree networks are hierarchical, and each node can have an arbitrary number of child nodes

Mesh topology

In a fully connected network, all nodes are interconnected. The simplest fully connected network is a two-node network.



Mentioning topology 2x1 = 2marks

Illustrating topology 5x1 = 5 marks

Correct description 5 x 1 = 5 marks

END