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UACE S850 Subsidiary Information and communication technology (ICT) Revision Questions

1. The table below shows specification of two computers X and Y.

Computer Specifications	Computer X	Computer Y
Processor	Intel® 3.2GHz	Intel® 3208 MHz
RAM	1GB	2000MB
Hard disk	4600MB	50GB
Monitor size	19"	15"

(a) Which of the two computers would you recommend for your company to buy?
 (03marks)

Computer Y

(b) State two reasons to defend your answer in (a)

- (i) has higher processor speed
- (ii) Has bigger ram
- (iii) has a bigger storage space

(c) Which is the least important computer specification given in the table? (01mark)

Monitor size

(d) State one reason defending your answer in (c) (01mark)

Just an output devices

2. (a) Explain how computers can professionally be used by:

(i) Teachers (02mark)

- to prepare notes
- to prepare presentations
- to show presentation
- teach ICT
- to search for information

(ii) Doctors (02 mark)

- To communicate to fellow doctor
- To search for drug and disease information
- To store patients health information

(b) State one health risk associated with continued usage of computers (01 mark)

- Muscle and joint pain
- Overuse injuries of the shoulder, arm, wrist, or hand
- Eye strain
- Backache

3. (a) Explain the following terms in spreadsheet

(i) Value (02 marks)

- Numbers entered into cells
- Result of formulas or functions
- Text in constant number, date or time formats

(ii) Label (02 marks)

Labels refer to text that is typed into the cells of a spreadsheet.

(b) Name a symbol used when writing functions in a spreadsheet (01marks)

Equal sign (=)

4. (a) A student had a file on her laptop and wanted to transfer it to a computer in a laboratory.

Give three devices that she can use to transfer the file (03marks)

- USB flash drive/external hard drive
- Direct USB cable transfer
- cloud storage service
- Network transfer (LAN or WiFi)
- SATA cable connection

(b) Explain the following methods of transferring a file from one location to another. (02 marks)

(i) Drag (01mark)

"Drag" means placing the cursor over the icon of an item, pressing the left (or sometimes right) mouse button to highlight it, and while keeping the button depressed, moving the selected item across the screen and drop it to another location.

(ii) copy (01 mark)

Is duplicating a file and then paste a copy in another location

5. (a) Give three factors a company should consider before buying any storage devices.

- **Performance:** Look at transfer speed, access times, and cache space.
- **Capacity:** Choose a device with sufficient storage space.
- **Data Safety:** Consider security features.
- **Portability:** Some hard drives are more portable than others.
- **Price:** Compare costs.

(b) Teo's network access speed is six megabytes per second. How many kilobytes does Teo's network receive or send per second? (02 marks)

$6 \times 1000 = 6000$ kilobytes per second

6. (a) Give one use for each of the following computer devices (02 marks)

(i) Power supply unit (01 mark)

- Provides power to computer components
- Convert AC to DC.

(ii) System Case (01 mark)

Offer mechanical protection and basis for arrangement computer internal components

(iii) CMOS battery (01 mark)

It provides power to the CMOS which **stores critical system information such as the date, time, and hardware configuration.**

(b) Explain the following:

(i) Analog device (01 mark)

It is an electronic device that continuously varies its output to represent a physical quantity such as sound and temperature.

(ii) Digital device (01 mark)

It is an electronic device that process information using discrete bits (1s and 0s) e.g. smartphone, smart TV etc.

7 (a) State three types of computer software (03marks)

- **Operating system** manages hardware, software resources, and provides common services for computer programs.
- **Drivers** allow operating system to communicate with hardware devices like printer, graphic cards, network adapters etc.
- **Utility software** performs maintenance tasks such as disk cleanup, antivirus scanning and file management to ensure the system runs smoothly.
- **Firmware** is low-level software embedded in hardware devices, providing control and communication between the devices and other system components.
- **Boot loaders** are responsible for loading operating system into computer's memory when the system is powered on
- **Language processors/translators** translate high-level programming languages into machine codes that the computer can execute.
- **Resource allocation** is system software that allocate resources like CPU time, memory space and input/output devices to various programs and users

- **Security and Access** control ensures that unauthorized user do not access the system and that data is protected from corruption and loss.
- **Communication Software:** Communication software allows us to transfer data and programs from one computer system to another.

(b) Differentiate between a software version and a release (02marks)

A **software version** is software distributed but differs from other/earlier forms of similar software in some rfeatures and identified by a unique set of numbers and letters.

A **software release** is the distribution of the final version or the newest version of a software application.

8. (a) State two internet tools that support web based research. (02marks)

- Todoist:
- EndNote:
- EduGeeksClub
- Zotero
- RefWorks

(b) Identity three things one would require in order to get connected to the internet (03 marks)

- **Device:** A computer, smartphone, tablet, or any internet-capable device.
- **Internet Service Provider (ISP):** A company that provides internet access.
- **Modem:** This device connects to your ISP and brings the internet into your home.
- **Router:** If you want to connect multiple devices or use Wi-Fi, you'll need a router. Some modems come with built-in routers, known as gateways.
- **Connection Type:** Depending on your ISP, you might use DSL, cable, fiber, satellite or cellular data
- **Cables and Power Supply:** Ethernet cables to connect your modem and router, and power cables for both devices.

9. Outline five factors which determine data transmission speeds over the internet (05marks)

- Network congestion
- Network latency
- Bandwidth
- Type of connection i.e. using cables or wireless
- Effectiveness of hardware and software resources
- Load balancing

10. (a) Give five factors an organization should consider before choosing a Local Area Network. (05marks)

- geographic and physical location
- bandwidth /the amount of information can handle at a given time
- network security

- scalability: a network that accommodate more users, business applications, new location, etc. is preferred
- IT maintenance costs
- Initial costs.

11. (a) Write the initial procedure of booting a computer system (03marks)

- Switch on computer power button.
- Wait for the operating system to load.
- Login to your operating system.

(b) Give any two measures taken to ensure that computers in the laboratory are safe (02marks)

- Minimize rodents from computer room by not eating or drinking from within
- Keep an authorized persons out of the laboratory
- Lock the laboratory in the absence of a laboratory supervisor
- Employ a security guard
- Use antivirus software
- Passwords to computer files
- Computer laboratories should be clean and organized to avoid accident

12. (a) A computer file is made up of a file name and a file extension.

(i) What is the purpose of a file extension? (02 marks)

- It identifies the type of file e.g. .docx is a document type of Microsoft word
- Helps the operating system to open/edit the file with the correct software thus preventing errors
- Helps the user to identity a potentially dangerous files such as executable files(.exe) which may contain malware

(ii) Write down the file extension for a word processing document. (01 mark)

.docx

(b) Okello deleted his file accidentally. In which two ways can he recover his file (02 marks)

- Check and restore the file from Recycle Bin
- Use a data recovery software
- Hire a data recovery service
- Restart word to open auto recover files

13. (a) An Internet café plans to replace Cathode Ray Tube (CRT) monitors with Liquid Crystal Display (LCD) monitors. Why should the café replace CRTs with LCDs? (05 marks)

- **Space:** LCD monitors take up much less space than CRT monitors.
- **Power Consumption:** LCD monitors consume less power.
- **Brightness:** LCD monitors output a much brighter image than CRT monitors.
- **Design:** LCDs are thin, compact, and lightweight.
- **Color Quality:** The quality of color displayed on an LCD screen is better than on CRT screens.

14. Indicate True or False against each statement in the table below (05 marks)

		TRUE/FALSE
(a)	Window XP is a graphical user interface operating system	TRUE
(b)	Presentation software support multimedia	TRUE
(c)	Word processor have formula bars	FALSE
(d)	Backup is to combine the content of two or more files to produce one output file	FALSE
(e)	The Disk Operating System is menu driven	FALSE

15. Company A uses custom-made applications while company B uses off-shelf applications. Write down any five advantages company B has over company A.

- Lower initial cost and cost-effectiveness
- Quicker and easier to implement and use
- Proven reliability and quality
- Regular updates and support
- Available training resources and community support
- Owned by someone else, so they foot the development/upgrade costs

16. (a) Explain the term **software Piracy**. (02marks)

Software piracy is the **unauthorized use, copying or distribution of copyrighted software**

(b) Write down any three precautions taken to prevent **software piracy**. (03marks)

- Comply with Piracy Regulations.
- Utilize End-user License Agreement.
- Utilize General Public License.
- Use a License Key Management System.
- Introduce a Subscription Model.
- Release an Improved Version of the Pirated Software.

17. The table below shows part of a database. Use it to answer the questions that follow.

EMPLOYEE NO.	NAME	TEL. NO.	SALARY	NO. OF MONTHS	TOTAL PAY
E227008	Betty	0774267820	\$700,000	3	
E227011	Kintu	0701998142	\$400,000	4	

(a) Write down the data type entered in the following fields.

(i) TEL. No -label (01 mark)

(ii) SALARY- value (01 mark)

(b) Suggest a suitable primary key

E227xxx

(c) The formula entered in the design view to determine TOTAL PAY, which is SALARY and MONTH is (02marks)

=(SALARY*NO. OF MONTH)

18. State any five characteristics of a modern computer (05marks)

- **Diligence:** that is Computers perform repetitive task without getting tired and work long hours without making mistakes
- **Versatility:** computers perform many tasks with the same accuracy and efficiency
- **Accuracy:** computers perform tasks with high degrees of exactness
- **Flexibility:** computers are flexible that they can perform a variety of programmed tasks
- **Time saving :** high computer speed enables computers to handle tasks quickly even those with complicated procedures
- **Effectiveness:** computers process huge volumes of data effectively
- **Space saving:** computers store a large amount of data saving shelf space
- **Low supervision cost:** computers perform automatic task that require minimal supervision
- **Simplifies work;** Computers simplify problem solving using programs designed for the purpose
- **Good for information flow;** Computers improve information flow in an organization
- **Entertainment;** Use of computers has ushered in the era of games and music playing
- **Multitasking:** computers can do many tasks at ago.

19. From the given terminologies used for internet and Networks below, choose the correct one to complete each of the statements that follow:

- A discussion group

- Instant messaging
- Video conferencing
- A chat room
- Online shopping
- Telephony

- (a) The type of Internet communication that allows multiple user to exchange messages in real time is called **video Conferencing**(01mark)
- (b) The type of internet communication that enable individuals to post messages on a particular topic for others to read and respond is called **Instant messaging** (02marks)
- (c) The use of multimedia communication is called **Chart room** (02marks)

20. (a) Explain the following terms as used in electronic mail. (02 marks)

(i) Blind carbon copy (BCC)

BCC is a way of sending copies of an email to other people where the recipient not informed of the addresses of other recipients

(ii) Carbon copy (CC)

CC is a way of sending copies of an email to other people where the recipient is informed to addresses of other recipients

(b) State one requirement needed for one to send an email (01marks)

- Computer/smart pone
- Internet connection
- Email address of the receiver

21. (a) Define the term computer (02marks)

A computer is an electronic device that stores, retrieves, processes data and present it in the form the user desires. A computer operates under the control of a set of instructions that is stored in its memory unit.

(b) Give any three peripheral devices of a desktop computer (03marks)

- Input devices: Keyboards, mice, scanners, and webcams.
- Output devices: Monitors, printers, and speakers.
- Storage media: CD/DVD drives, external hard drives, and USB thumb drives.
- Communication devices: Network adapters and modems.
- Specialty devices: Game controllers and musical instrument

(pick any three)

NB. A peripheral device is a device that either enters information into a computer system or receives information from the computer system

They include

- Input devices allow you to enter data on a computer, such as a keyboard or a mouse.
- Output devices allow you to see what is happening on the computer screen, such as a monitor or printer.
- Storage peripheral devices store data, such as a hard drive, pen drive, or SSDs.
- Internal peripheral devices are connected to the PC motherboard, including memory and video cards.

22. (a) State one reason why a computer laboratory should have (03 marks)

(i) A good lighting system

- ensures clear visibility,
- reduces the risk of accidents,
- enhances accuracy in tasks, and
- promotes the well-being of lab personnel.

(ii) A well ventilated environment

- provide fresh air to the computer operator
- control temperature in the laboratory and computer reducing fire hazards
- controls humidity in the laboratory

(iii) Appropriate furniture

- ensure proper utilization of space
- contributes to posture, comfort and wellbeing of laboratory personnel
- Ensures safety and compliance with regulatory standards.

-

23. Outline the negative impact of ICT on the following

(a) Economic sector (02marks)

- **Unemployment:** Automation and advanced technologies can lead to job losses, especially in roles that are easily automated.
- **Cyber security Risks:** Increased reliance on ICT makes businesses vulnerable to cyber-attacks, data breaches, and other security threats
- **High Costs:** Implementing and maintaining ICT systems can be expensive.
- **Workplace Distraction:** The constant connectivity provided by ICT can lead to distractions and decreased productivity
- **Technological Dependence:** Over-reliance on technology can make businesses vulnerable if systems fail.
- **Work-Life Balance:** ICT blurs the boundaries between work and personal life.

(b) Social sector (02marks)

- **Digital Divide:** Not everyone has equal access to ICT, which can exacerbate social inequalities.

- **Privacy Concerns:** The use of ICT in social services often involves handling sensitive personal data that may be pirated.
- **Social Isolation:** Over-reliance on digital communication can lead to social isolation.
- **Mental Health Issues:** Excessive use of ICT, particularly social media, has been linked to mental health issues such as anxiety, depression, and stress.
- **Dependence on Technology:** Over-reliance on ICT can lead to a lack of basic skills and knowledge.
- **Resource Intensive:** Implementing and maintaining ICT systems can be costly and resource-intensive.

24. (a) Describe the booting process of a computer (03marks)

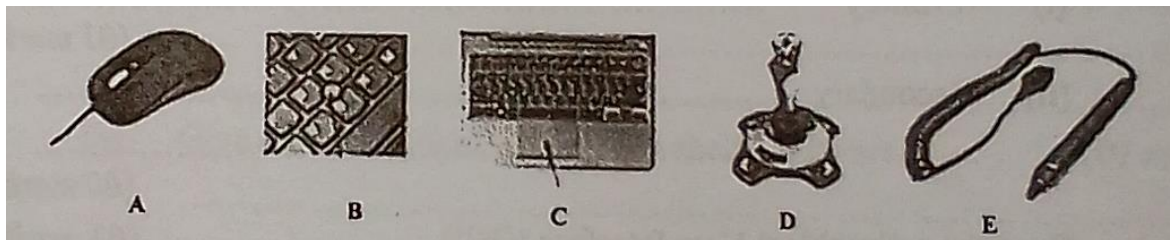
The booting process of a computer involves the following steps:

- **Running BIOS:** When the computer is turned on, the CPU looks for the BIOS (Basic Input/output System) program and runs it.
- **Running POST (Power-On Self-Test):** The system checks hardware components for errors during this step.
- **Loading MBR (Master Boot Record) to RAM:** The MBR contains information about the partitions and the boot-loader.
- **Running the Boot-loader:** The boot-loader loads the operating system.
- **Running the OS (operating system):** the OS kernel gains access to the hardware components

(b) State two possible consequences a computer may encounter whenever improper shut down is done. (02 marks)

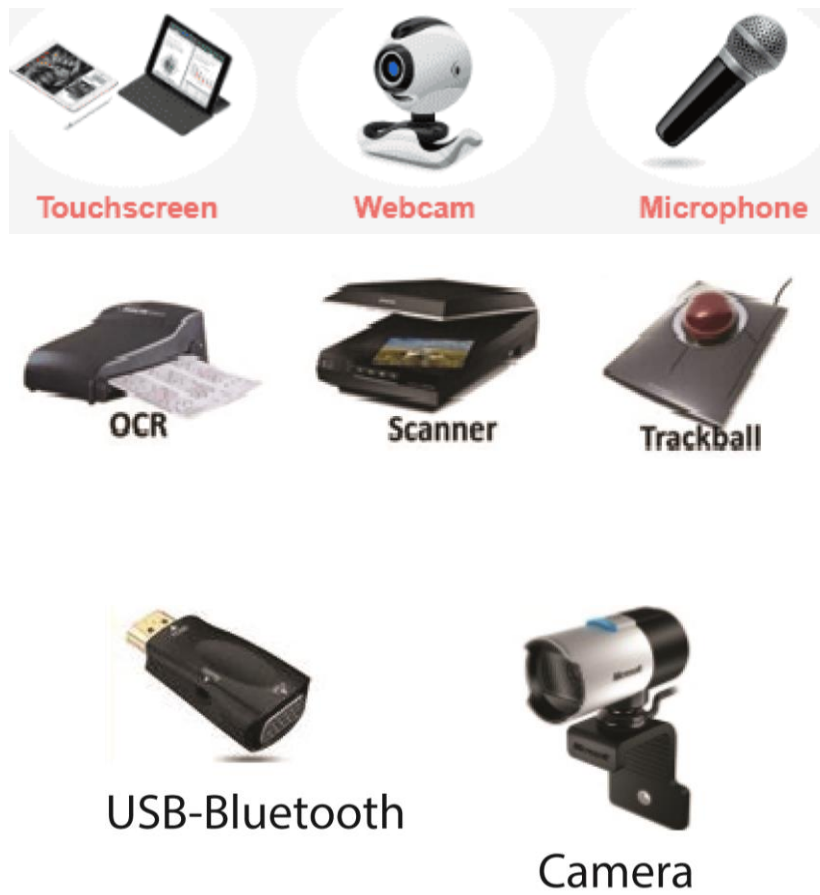
- Loss of unsaved documents
- Corruption Unsaved Work:
- Can cause damage to hard drive
- Damages software and operating System
- Decreased Lifespan of Components

25. Identify the follow input



- A – mouse
- B – Keyboard
- C – touchpad
- D – joystick
- E - light pen

Others input devices include



26. (a) Differentiate between system files and Document files (02 marks)

System files are files that are necessary for your computer to run while document files that can be viewed or edited by a human user.

(b) Give any three circumstances under which a computer user may choose the option **save as** in a file menu

- (i) Press Alt + F to open the file menu; Let go of all keys when the file menu appears and Press " A " to choose the Save As option.

- (ii) Click the **File** tab (File menu) and choose **SAVE AS**.
- (iii) alt + F + A
- (iv) F12

27. (a) Distinguish between **primary storage** and **secondary storage** (02marks)

Primary storage is the temporary, volatile storage of information when the computer is running that it is directly accessible by the CPU (central processing unit) while secondary storage is the type of storage that provides long term storage for software programs and data even when the computer is turned off.

(b) Name one example of primary storage and two examples of secondary storage

- (i) Primary – RAM, ROM, cache memory (01 mark)
- (ii) Secondary - hard disk drives, solid state drives, USB drives, CDs, and DVDs, floppy disc, external hard disk, ZIP, (02marks)

28. (a) Describe a Graphical User Interface (GUI) (02marks)

A graphical user interface, or GUI , is a **form of user interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation.**

(b) State one function of each of the following desktop icons (03 marks)

(i) My computer

It a graphical feature that makes it easier to access software programs, files, or functions on a computer screen.

(ii) Recycle bin

It is a graphical feature that makes it easier to access the folder that contains deleted files.

(iii) My document

It is a graphical feature that makes it easier to access the folder that store documents and other associated with programs on the computer

29. Define the following terms in relation to computer data processing:

(a) Processor speed (02 marks)

It is the number of cycles per second in which a CPU can process instructions.

(b) Fetching (01 mark)

Fetching is the **retrieval** of information from a source, such as a database, network, or storage medium. After being retrieved, the data is moved to an alternate location or displayed on a screen.

(c) Decoding (02 marks)

Decoding is a process of interpretation and translation of coded information into a understandable form.

30. (a) Explain any two elements of the “off-the-shelf” software. (04marks)

- (i) standardized programs that massively produced and ready for use
- (iii) they are not explicitly tailored but rather universal and made for widespread business use
- (iii) are easily integrated with existing systems without complex configurations.

(b) Give one example of the “off-the-shelf” software (01 mark)

- Editor programs- examples include Photoshop, Lightroom, Facetune
- Mail services- examples include Gmail, Outlook, Zohomail
- Media players- examples are VLC, Windows Media player
- Operating systems- examples are Windows, Mac
- Antiviruses programs- examples are Kaspersky, Norton

31. (a) List any **two** requirements for internet connection (02marks)

- A computer or device.
- An Internet Service Provider (ISP).
- A telephone or cable line.
- A modem or a network card.
- A company providing Internet connection(ISP)
- Communication Software (Web browser)

(b) Outline three advantages of internet connectivity (03marks)

- Faster communication
- Access to information
- Transfer of research papers
- Advertising
- Marketing
- Easy banking
- Access to a global audience

- More efficient government services.
- Cultural sharing and diversity.
- Virtually unlimited entertainment options, videos and music

32. (a) State one function of each of the following utility programs (03marks)

(i) Diagnostic utility

A diagnostic utility is software used **to troubleshoot a problem on the computer system**. It provides clues about the causes of problematic computer symptoms.

(ii) File compression Utility

File compression Utility a program that compresses and decompresses various file types

(iii) Antivirus Utility

An antivirus is a program that helps to keep the computer virus-free.

NB. Utility software is a program or tool that performs specific tasks to enhance productivity, efficiency, functionality, or maintenance of a computer system.

(b) Outline two ways of reducing the spread of computer viruses.

- Install antivirus and anti-malware software.
- Avoid sharing flash disks
- Avoid installing programs and files unsecure sources
- Regularly update antivirus software.
- Do not open unsecure email attachments.
- Back up your data.

33. (a) Write WWW in full as used in internet technology (01 marks)

WWW means World Wide Web

(b) Distinguish between a **Web browser** and **search engine** (02marks)

A web browser is a program used to access and view websites or website information.

A search engine is a software program that helps people find the information they are looking for online using keywords or phrases.

(c) Give an example of a (02marks)

(i) Web browser: Google chrome, opera, Internet Explorer, Mozilla Firefox

(ii) Search engine: Google, Yahoo!, and MSN Search.

34. (a) Differentiate between IP address and domain name (02 marks)

An Internet Protocol (IP) address is the unique identifying number assigned to every device connected to the internet.

A domain name is **web address that helps users find your website.**

(b) Describe each of the following protocols in relation to data communication

(i) Simple Mail Transfer Protocol (SMTP) (01 mark)

It is a set of rules and guidelines for transmitting electronic mail (email) over a network.

(ii) Post Office Protocol (POP) (01marks)

It is a network server by which client-based e-mail programs are connected to access a user's e-mail on a central server.

(iii) Hypertext Transfer Protocol (HTTP) (01mark)

It is a set of rules and guidelines for transmitting hypermedia documents, such as HTML

NB. A protocol is a set of rules and guidelines for communicating data. These rules define how computer or devices should interact during communication, ensuring successful data transmissions.

35. (a) Outline any three violation of computer ethic usage by computer user

- Illegally downloading movies, music, software, etc., from the internet.
- Internet fraud/theft
- Duplicating copyrighted content without the author's approval
- Accessing personal information of others
- Hacking is an unethical practice that involves unauthorized access to computer systems, networks, or data, often with malicious intent.
- Cutting and pasting a paper together using online materials without appropriate citations.
-

(b) Suggest two measures that should be put in place to guard against information piracy in an organization (02marks)

- protect data with password
- restrict access to company computers
- Use of watermarking to make pirate content traceable.
- Report pirated content to marketplaces
- Educating work that information piracy is illegal
- Use of Legal & Enforcement to punish those involved in information piracy

36. List five elements of data communication (05 marks)

- sender,
- receiver,
- communication medium,
- the message to be communicated, and
- certain rules called protocols to be followed during communication.

37. The table below shows a budget for introduction ceremony.

	A	B	C	D	E
1	ITEM	UNIT COST	QUANTITY	TOTAL COST IN SHS	TOTAL COST IN £
2	Cultural dress	180,000	2		
3	Food	3,500	150		
4	Decoration	1,200,000	1		
5	Soda	19,000	13		
6	Mineral water	15,000	5		
7	Exchange rate of £1 = 4,630				

(a) Which computer application was used to design the given budget? (01 mark)

Excel

(b) Identify the cell formatting feature which was applied to contents in D1 and E1 (01mark)

Capitalize

(c) Write down the formula that would be used to compute

(i) TOTAL COST in shillings (Shs) (01mark)

D2 =(b2*c2)

D3 =(b3*c3)

D4 =(b4*c4)

D5 =(b5*c5)

$$D6 = (b6 * c6)$$

(ii) TOTAL COST in pounds (£) (use the exchange rate in cell B7) (02marks)

$$E2 = (D2/4,630)$$

$$E3 = (D3/4,630)$$

$$E4 = (D4/4,630)$$

$$E5 = (D5/4,630)$$

$$E6 = (D6/4,630)$$

38. Describe any five tasks that are performed by digital forensic specialists (05marks)

- Gathering evidence from cybercrimes.
- Retrieving data from virtual networks and physical devices.
- Reconstructing events that led to a cyber-attack.
- Recovering data compromised in a hack.
- Reconstructing and restoring data damaged or erased from devices.
- Reporting cybercrimes
- Protecting data
- Continuous Learning and Training
- Collaboration with Other Professionals

39. (a) State the use of each of the following features in a presentation:

(i) slide looping

A looping slideshow displays each slide automatically for a certain amount of time. Once that time has elapsed, the slide automatically continues to the next slide.

(ii) Slide transition

Slide transitions are the animation-like effects that happen when you move from one slide to the next during a presentation.

(iii) Hyperlinks

They are words, shapes, or images, when clicked allow movement between slides or redirects computer user to a specified url

(b) Give **one** advantage of using the following in presentations

(i) Handouts

- Ensure the contents of an oral presentation can be reviewed by the audience after the presentation.
- avoid information congestion on slides because some of information is presented in handouts
- keep the presentation on track,
- remind the audience of the message,
- allow audience follow-up and retain viewers' attention.

(ii) Note pages

- to create beautiful presentation artifacts for audiences.
- Help the presenter to remember the main points

40. (a) Outline any two uses of a server in a computer networking. (02 marks)

- Store and manage and computes data on a network
- Enable sharing of printers by computers on the network
- Enables sharing of software by computers on the network
- Processes requests from clients
- Enable sharing of internet by the computers on the network
- Enable interactive activities like games be played by users on the network

(b) Name three types of computer networks (03 marks)

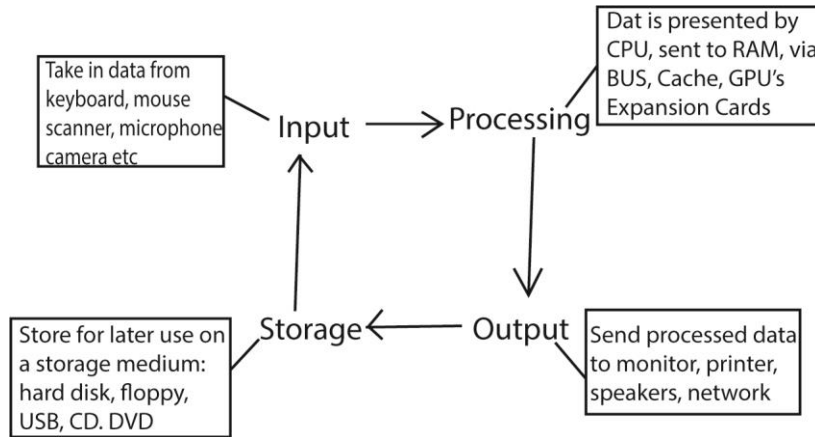
- **Personal area network** (single person network)
- **Local area network** (multiple computer network)
- **Campus network** (several building network)
- **Metropolitan area network** (city-wide network)
- **Wide area network** (Global network)
- **Wireless LAN**
- **Storage area network** (High-speed storage network)
- **Home network** (home-base network)
- **System area network** (High-performance network)

41. (a) List three major specification one would consider when buying a laptop computer (03marks)

- (i) Processor speed
- (ii) Screen size and resolution.

- (iii) Storage Space
- (iv) Size of ram
- (v) Presence of graphic card

(b) Illustrate the information processing cycle (03marks)



42. (a) Distinguish between cold booting and warm booting (02 marks)

Cold booting is the process of starting up a computer that is switched off.

Warm booting is the process of restarting a computer that is already on without completely turning it off.

(b) Give **three** circumstances under which a computer can be warm booted.

- (i) when computer is slow,
- (ii) when computer is unresponsive,
- (iii) when computer is unstable.
- (iv) for software updates

43. (a) What is information and Communication Technology (ICT)?

Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information.

(b) Outline any three measures that can be taken to prevent environmental degradation through the use of ICT. (03marks)

- (i) Reduces deforestation by saving on use of paper
- (ii) Reduces use of fossil fuel in transporting information
- (iii) reuse and recycle computer component
- (iv) Disseminate environmental education information

44. (a) Give two reasons why file management is important in computer system (02marks)

- (i) Eases finding and accessing a file
- (ii) Maintains **data integrity by preventing accidental deletion or alteration of files**
- (iii) Ensures data security.
- (iv) Ensure saving of related files in the same folder
- (v) Standardized processes of files

(b) List three operations which can be performed on a file (03 marks)

- Saving
- opening
- editing
- copying
- moving
- renaming
- deleting files.

45. (a) Explain the term troubleshooting as used in computers. (02marks)

Troubleshooting is a systematic process used to locate the cause of a fault in a computer system and correct the relevant hardware and software issues.

(b) State three ways in which one can troubleshoot a computer that has failed to start.

- Try a different power source.
- Check your monitor connection.
- Listen for beeps.
- Let the battery charge
- Start your PC in safe mode.
- Restore your computer to previous settings.
- Unplug USB devices.

46. (a) Define an input device (01 marks)

An input device is a piece of equipment that enters data to computer processing.

(b) Name two basic input device associated with common desktop computer

- (i) keyboard
- (ii) mouse

(c) Identify an input device for each of the following data: (02marks)

- (i) sound: microphone
- (ii) Images: camera, scanner

47 (a) Name three functions of operating system (02marks)

- (i) manages files,
- (ii) manages memory,
- (iii) manages processes,
- (iv) handles input and output,
- (v) controls peripheral devices like disk drives and printers

(b) Name any two operating system software (02marks)

- (i) Apple mac OS,
- (ii) Microsoft Windows,
- (iii) Google's Android OS,
- (iv) Linux Operating System
- (v) Apple iOS

48. Ali has a DVD full of data and would like to transfer the data to CDs. The capacity of the DVD is 4.7GB and each CD is 700MB. Calculate the number of CD's he needs to transfer all his dat. (05marks)

$$\text{Number of CD} = \frac{4.7 \times 1000}{700} \quad 6.7 \approx 7$$

49. (a) Define the term tailor-made software (01marks)

It is software that is developed specifically for some specific organization or other user.

(b) Outline any four qualities of good application software

- **Functionality:** It refers to the degree of performance of the software.
- **Reliability:** A set of attribute that Bear on the capability of software to.
- **Efficiency:** It refers to the ability of the software to use System.
- **Usability:** It refers to the extent to which the software can be used with.
- **Maintainability:** Refers to the ease with which the modifications can be made in a software system to extend its functionality, improvement, performance or correct errors. Maintainability covers Testability, Stability, Changeability, Analyzability.
- **Robustness:** It refers to the degree to which the software can keep on functioning in spite of being provided with invalid data.
- **Integrity:** It refers to the degree to which Unauthorized Access to the software data can be prevented.

50. (a) Write the following computer abbreviations in full. (02marks)

- (i) CPU is central processing unit
- (ii) ALU is Arithmetic-logic unit

(b) State the role of each of the following CPU components (03 marks)

- (i) BUS transfer data between components or devices connected to computer.
- (ii) Control unit manages a computer's operations
- (iii) Registers are small amounts of high-speed memory contained within the CPU. They are used by the processor to store small amounts of data that are needed during processing, such as: the address of the next instruction to be executed.

51. (a) Distinguish between utilities and application software (02marks)

Utility software is a program or tool that performs specific tasks to enhance productivity, efficiency, functionality, or maintenance of a computer system.

Application software is software designed to handle specific tasks for users.

(b) Give three examples of utility programs. (03marks)

- (i) Antivirus software for virus protection.
- (ii) File management tools for managing files.
- (iii) Compression tools for reducing file size.
- (iv) Disk management tools for managing storage.
- (v) Debuggers for examination and modifying data

52. Explain the following as applied to internet

(i) Hotspot (02 marks)

Wireless hotspots are wireless access points, typically in public location, that provide internet access to mobile devices such as your laptop or smartphone when you are away from the office or your home.

(ii) Internet Service provider (01mark)

An ISP is a company that provides web access to consumers and businesses through various channels, such as cable, DSL, fiber, or wireless.

(iii) Search Engine (02marks)

A search engine is software that searches a database of information according to the user's query.

53. Give five symptoms of a computer infected by a virus (05 marks)

- Slowing down
- Unexpected pop-up windows
- Unwanted programs starting automatically

- Missing files and programs
- System crashing
- Being locked out of your computer
- Mass emails sent from your email account.
- Your security software has been disabled.
- Your battery drains quickly.

54. (a) Give two reasons to justify ownership of institutional website (02 marks)

- Enhances your brand image. When it comes to corporate digital presence, the company's image grows stronger as it dominates new channels.
- Serves as information bank about the institution
- Increases visibility and accessibility because information is available to globe 24/7 online
- Markets institution's good and services.
- Facilitates communication between the institution and its clients
- A well-designed website enhances the institution's credibility and professionalism, helping to build trust among stakeholders.
- It may act as resource centre by hosting a variety of resource such as research publication, online courses and digital libraries.
- Facilitates interaction between the institution and its clients through features like forum, contact us, comments.

(b) (i) What is a web browser? (01 mark)

A web browser is a program used to access and view websites or website information.

(ii) Under what circumstances can someone use a Uniform Resource Locator (URL) in a web browser? (02marks)

A URL (Uniform Resource Locator) is an address of a website used to locate a resource on the internet.

55. Give any five advantages of using automation in industry. (05marks)

- (i) Higher production rates and increased productivity automated machines work 24/7
- (ii) Improved worker safety since dangerous work is assigned to robots
- (iii) better and consistently high quality production
- (iv) Reduced space required for production
- (v) Reduced human errors
- (vi) Reduced lead times: automation streamlines production processes thereby reducing the time it takes to bring product to market.

(vii) Flexibility and adaptability: modern automation technologies can quickly adapt to new production schedules or products making it easy for businesses to respond to market changes

(ix) reduced wastage of materials since automated systems are efficient

56. (a) Define data communication (01 marks)

Data communication, **the process of transferring data over a transmission medium between two or more devices, systems, or places.**

(b) State any four requirements for setting up a computer network

- **Computers** to be networked
- **Software** to enable connected computers to operate
- **Router:** Connects your network to the internet and manages traffic between devices.
- **Modem:** Connects to your ISP (Internet Service Provider) and provides internet access.
- **Switch:** Expands the number of devices you can connect in a wired network.
- **Access Point:** Extends the range of your wireless network.
- **Cables:** Ethernet cables (Cat5, Cat5e, or Cat6) for wired connections.
- **Network Interface Cards (NICs):** Required for each device to connect to the network.

57. For questions (a) – (e), fill in the missing words from the list below

Formula bar Worksheet

Active cell Workbook

Cell Column

(a) The **cell** is the intersection of a column and row

(b) The content of a current cell is also displayed in the **formula bar**

(c) The **active cell** is one with a thicker boundary and is the insertion point in spreadsheet.

(d) The cell address of the current cell is displayed in the **formula bar**

(e) A spreadsheet file is referred to as **workbook**.

58. (a) Give three disadvantages of electronic communication. (03marks)

- Lacks non-verbal cues such as body language and facial expression that enhance understanding

- Information overload caused by constant influx of messages, emails and notifications.
- Risks to security and privacy concerns to cyber-attack vulnerability.
- Impersonal nature
- Technical issues such as lack of internet connection disrupts communication
- Prolonged use of electronic devices can lead to physical health problems such as headaches and poor postures.
- Distractions and interruptions: popup sounds associated to electronic communication can lead to frequent distractions and interruptions, affecting productivity and focus.

(b) Name any two manual communication methods

- (i) sign language
- (ii) touch
- (iii) Manual English Signed Systems

59. (a) Give two situations under which electronic presentation would be used (02marks)

- Business meeting
- Teaching
- Conferences and seminars
- Training sessions
- Sales pitches

(b) State **three** advantages of using electronic presentation over the traditional chalk and talk.

- **Flexibility in design:** Tools offer templates for different types of slides.
- **Use of multimedia resources:** Incorporate images, videos, and audio.
- **Easy editing and revision:** Quickly update content.
- **Interactive features:** Engage the audience through polls, games, and icebreakers.

60. (a) Differentiate between intranet and extranet. (02 marks)

An intranet is a **private network contained within** an enterprise that is used to securely share company information and computing resources among employees.

An Extranet is a **private network contained within** an enterprise shared by internal and selected, external parties, such as business partners, suppliers, key customers, etc.

(b) Define a Local Area Network (LAN) (02 marks)

A local area network (LAN) is a **collection of devices connected together in one physical location**, such as a building, office, or home.

(c) Suggest an area network which is restricted to connecting users in a city. (01mark)

Metropolitan area network (MAN) (city-wide network)

61. (a) Name one tool used to remove dust from a computer. (01 marks)

- Electric Duster / Air Blower blow dust from key board and hidden parts of the computer.
- Anti-Static Brush is used to remove or scrape off the very fine dust that sticks to the fan blades and inside the fan frame.
- Microfiber Cleaning Cloths wipe of dust from the computer
- Screen Cleaners (Also known as Screen Cleaning Solutions) are used together with microfiber cleaning clothes to remove dirt, fingerprints, and dust from a computer.
- Vacuum Cleaners extract dust from key board and hidden parts of the computer.

(b) Give reasons why one would require the following in the computer laboratory (03marks)

(i) Uninterruptible Power Supply (02 marks)

- Keep computer running for at least a short time when incoming power is interrupted to prevent loss of unsaved data and to allow proper shutdown of computer.
- Prevent damage to computer in event of power failure
- Stabilize power
- Prolonged usage of computer in during abrupt power shutdown and thus increased efficiency.

(ii) LCD projector (02 marks)

- Lectures
- Video
- Quizzes and attendance
- Demonstrations
- summeries

62. (a) Write the procedure for changing the name of existing file or folder (03 marks)

- (i) Open File Explorer and navigate to the location where the file or folder is stored.
- (ii) Right-click the name of the file or folder you wish to rename.
- (iii) Click Rename (on the menu that opens up).

(iv) Type a new name for the file and press Enter.

(b) Explain the function of a device driver in a computer system (02 marks)

- Operate and control a device attached to a computer.
- Provide an interface between the operating system (and application) and the device.
- To tell the operating system how to communicate with the hardware component.
- Translate requests between the device and the computer.

63. Write the following in full as used in Information and Communication Technology

(a) CCTV stands for Closed-Circuit Television

(b) ROM stands for **Read-Only** Memory

(c) CAD stands for Computer Aided Design

(d) CPU stands for **Central Processing Unit**

(e) VDU stands for Visible Display Unit

64. (a) Identify one storage device that is resistant to virus attacks (01marks)

CD, DVD, DVDR

(b) Describe the following terms as used in computer;

(i) File (02marks)

A computer file is a collection of digital data(text, images, media etc.) stored as a single object on a disk.

(ii) Folder(02marks)

A folder is an **area on the computer containing other folders and files** and helps keep the computer organized

65. (a) State four categories of computer systems. (04marks)

- On the basis of size and capacity: Supercomputer, Mainframe, Mini, and Micro Computer.
- On the basis of purposes: General and Special Purpose.
- On the basis of hardware design and type: Analog, Digital, and Hybrid Computer.
- Personal Computers (PCs)
- Workstations

(b) Give the function of any one category you have stated in 5(a). (01mark)

Personal computer is used to do and store personal data

66. Indicate TRUE or FALSE against each statement in the table below. (05marks)

	Statement	TRUE /FALSE
--	-----------	-------------

(a)	Open source software is copyrighted and distributed without cost for trial period	T
(b)	Product activation is used to ensure that software is not installed illegally	T
(c)	Programming software interfaces user application and computer hardware	F
(d)	A file extension is a combination of characters used to identify a file NB. it identifies a type of file	F
(e)	A clipboard holds copied data	T

67 (a) Define the term hardware as used in Information and Communication Technology (02marks)

Hardware refers to the external and internal devices and equipment of computers that enable input, output, processing and storage of data.

(b) Name two ports used to connect devices on a computer (02marks)

- USB port
- HDMI
- Ethernet
- VGA
- DVI (Digital Visual Interface)
- Thunderbolt
- Audio Jack used to connect headphones, microphones and speaker

(c) Give one device that can be used to transfer a hardcopy document to a computer.

(01marks)

Scanner

Digital camera

68. (a) What is a system software (01mark)

System software is a type of computer program that is designed to run a computer's hardware and application programs.

(b) Outline four functions of operating system (04marks)

- manages files,
- manages memory,
- manages processes,
- handles input and output,
- controls peripheral devices like disk drives and printers

69. (a) Distinguish between Reading and writing in relation to storage medium. (02marks)

Reading from storage media means that user is copying or moving data from storage media to the computer.

Writing to storage media means that user is copying or moving data to storage media from the computer.

(b) Mention one example for each of the types of storage devices given below

- (i) Optical storage: **CD-ROM, DVD-ROM, and Blu-ray disc drives,**
- (ii) Magnetic storage: **Hard Disk Drives (HDDs), floppy disks, and magnetic tapes.**
- (iii) Solid storage : **memory cards, flash disks**

70. (a) Name two examples of documents created using desktop publishing applications.
(02marks)

- (i) Brochures
- (ii) News papers
- (iii) Magazines
- (iv) Greeting card
- (v) flayers

(b) State any three desktop publishing features that can be enhance enhance the document you named in 10(a) (03 marks)

- **Text tools** that allow creation of documents with various fonts, text wrapping, drop caps and paragraph styles
- **Graphic tools** for easy insertions and edit of images
- **Page layout** tools such as grinds and guides to align elements precisely on page and use of layers to organize different elements on separate layer to easier editing and complex designing.
- **Provision for master templates** with consistent headers, footers and other repeating elements
- **Interactive elements** such as hyperlinks and multimedia integration tools for audio and videos into a document.
- **Provision of stylish templates** for brand development and maintenance.

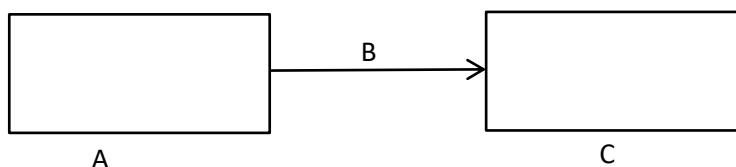
71. (a) Outline any three threats that a system Administrator may face as a result of networking
(02marks)

- **Malwares** such viruses, worms and Trojans that infect systems, steal data or cause disruption
- **Phishing:** e-mail phishing are deceptive e-mails that trick user into revealing sensitive information and spear phishing or targeted attacks on specific individuals within an organization.
- **Network Hacking** or unauthorized access to network resources to steal data or disrupt services
- **Insider threats** where employ or contractor misuse their access to harm the organization.
- **Distributed Denial of Services (DDoS)** that cause service disruption.
- **Social Engineering** or manipulating individuals into divulging confidential information
- **Advanced Persistent Threats (APTs)** or long-term targeted attacks aimed at stealing data or spying on the organization.
- **SQL Injection (SQLi) attacks** or exploiting vulnerabilities in web application to access or manipulate database
- **Man-in-the- middle (MitM) attack** or intercepting and altering communication between two parties without their knowledge.
- **Weak Security Control** or poorly configured systems and outdated software that can be easily exploited by attacks.

(b) Suggest two measures that the system administrator can employ to reduce the network threats. (03marks)

- Install antivirus software
- Create strong password
- Use firewalls to block unauthorized access to the network
- Encrypt Data to protect it from unauthorized access
- Regular Backups to store data in multiple location
- Train users about cyber security and to recognize phishing attempts and other social engineering attacks.
- Monitor Network activity using intrusion detection systems (IDS)
- Update and patch system to fix vulnerabilities that could be exploited by attackers
- Implement strict access control to sensitive information
- Develop a comprehensive security policy that covers aspects of network security and data handling.

72. Study the data communication below and answer the questionsthatfollow



(a) Name the elements of data communication (02marks)

A - sender /transmitter

B – transmission medium

C – receiver

(b) Suggest the device used to connect A to B (01 mark)

Cable/wire/ transmission media

wireless

(c) State the protocol used to uniquely Identify A and C (01mark)

A – Encodes/encrypts data

C – Decodes data

73. The table below consist of some of the peripheral devices of a computer. Indicate Input or output (05 marks)

	PERIPHERAL DEVICES	INPUT/OUTPUT
(a)	Biometric reader	Input
(b)	Projector	output
(c)	Plotter	output
(d)	Scanner	input
(e)	Headphones	output

74. (a) Give two reasons why an electronic spreadsheet is suitable for preparing budgets. (02 marks)

- Offer limitless customization
- Handles vast amount of data
- Makes adjustment of figures easy
- Organizes and makes tracking of income and expenditure easy
- Makes calculation easy
- Provide flexibility in how to manage and analyze the budget
- Enhances visualization through use graphs
- Provides storage and easy accessibility options
- Cheap because most spread software like Google Sheets is free

(b) State one use of the following applications

(i) Presentation software (01 mark)

- Teaching
- Lectures
- Demonstration
- Project report

- Workshops
- Marketing reports
- training

(ii) Word processor (01marks)

- document creation: letters, report, resume, stories and essays
- edits and formats documents
- provides templates for documents like business letters, invoices etc.
- mail merge: automating the process of sending personalized letter or email to multiple recipients
- Creates academic papers and articles
- Creates tables charts and lists of organized information effectively
- Automatically checks and corrects spelling and grammatical errors

(iii) Communication software (01 marks)

- Instant messaging
- Video conferencing
- File sharing
- Entertainment
- Relaxation

75. (a) Name one example of presentation software (01marks)

- **Microsoft** PowerPoint
- Google Slides
- Prezi
- Pitch
- **Visme**
- **Keynote**
- Haiku Deck
- Canva

(b) Give the importance of each of the following features as used in electronic presentation

(i) Master slide

- Enhances presentation efficiency i.e. changes made on the master slide apply to all slides in the presentation saving time for individual slide manual editing
- Consistency i.e. all slides will carry the same log, color, fonts etc.
- Enhances visual effects.

(ii) Transition (02marks)

- Enhance appearance
- Control speed

76. (a) State three advantages of using e-mail service over sending mail by post. (03 marks)

- Reduce postage costs
- Fast
- It is environmentally friendly
- Convenient : letters are created and sent from anywhere.
- Improve document security.
- Mails can be sent and receive simultaneously to multitude of recipients at ago.

(b) State two advantages of post-mail over e-mail communication. (02marks)

- It tangible creating stronger impression
- Carry physical parcels that e-mail can't
- Proof of existence of receiver and residence
- Post office are not prone to hacking
- Personal touch: Handwritten letter or cards carry a sentimental value that email can't replicate

77. Give five examples of networking software (05marks)

- Novel Netware
- Apple talk
- Digi card
- NanjaOne
- Intermapper. Useful Free Network Tools.
- Ecomet for acorn computers
- UNIX Windows for work groups

78. Outline five ways in which a student can use the Internet. (05marks)

- Access To Knowledge: the internet provides students with a wealth of knowledge from all over the world.
- Students access online tutorials and classes
- Research Work Becomes Easier
- Internet facilitate communication of students with teachers and peers through emails and chartrooms.
- Internet provide platform for students to express their creativity.

- It is convenient to access libraries and database resources.

79. (a) (i) What is data transmission media (01marks)

Transmission media is the physical path between the transmitter and the receiver through which data is sent from one place to another.

(ii) Give two examples of data transmission media. (02marks)

- Cable/wired
- wireless

(b) Name two services offered by data communication tools. (02marks)

- mails
- video conferencing
- SMS
- Phone calls
- Tutorials
- entertainment

80. (a) Give any two services that use electronic payment (E-payment) method. (02 marks)

- Online bank transfer
- payment of utilities
- payment for airtime
- payment of school fees and tuitions
- online shopping

(b) State three advantages of using E-payment over traditional methods. (03 marks)

- reliable
- fast
- secure: reduces risk of theft
- low cost
- convenient because it can be done anywhere at any time

81. In the modern world every person is endeavoring to access to information. Give five reasons why students in secondary schools should not be allowed to have mobile phones

- Poor time management when excess time is spent on the internet
- High cost of data
- Inaccurate information
- Exposure to pornography leading to early sex and unplanned pregnancy
- May contract gambling habits

- Information overload

82. (a) Explain the importance of servicing and maintenance of computers (02 marks)

- To ensure the computer is clean
- Enhanced performance: Regular maintenance ensures your computer runs optimally.
- Increased reliability: Prevents issues and reduces downtime.
- Improved security: Helps protect against viruses and malware.
- Data protection: Regular backups and updates safeguard your data.
- Longer lifespan: Proper maintenance extends the life of your computer.

(b) Suggest any **three** activities involved in servicing and maintenance of computers. (03marks)

- Cleaning
- Updating software
- Uninstall programs and applications you no longer use.
- Shutdown your computer over the weekends or when they are unattended for extended periods.
- Perform a regular backup of any files you do not want to lose
- Regular antivirus scanning

83. Use the image below to answer the questions that follow:



(a) Write down the path for subfolder called **My videos**. (03marks)

C:\documents and settings\All Users\documents\My videos

(b) Describe a method you can use to recover accidentally deleted folder from the desktop. (02 marks)

- **Method 1:** Check the Recycle Bin and click the folder to restore
- **Method 2:** Try Restoring from a previous version of the Folder
- **Method 3:** Use a Backup to Retrieve a Deleted Folder

- **Method 4:** Undo Deletion with Ctrl + Z
- **Method 5:** Recover a Deleted Folder Using Data Recovery Software

84. Describe the following terms as used in Information and Communication Technology (ICT) (05marks)

- (i) System unit is **a case containing all the main parts of a computer, also known as a box, main unit, or system box.**
- (ii) RAM chip is **a small electronic device that stores data temporarily on a circuit board.**
- (iii) Power supply is **an electrical device that supplies electric power to a computer.**
- (iv) BUS is **a communication system within a computer or between computers that transfers data between different components.**
- (v) Peripheral devices is **a device that either enters information into a computer system or receives information from the computer system**

85. (a) Define the term **file extension**. (02marks)

A file extension is the character or group of characters after the period that makes up an entire file name

(b) Fill in the right file extensions for the following files. (03 marks)

(i) **Audio file are**

PCM (Pulse-Code Modulation)

WAV (Waveform Audio File Format)

MP3 (MPEG-1 Audio Layer 3)

AAC (Advanced Audio Coding)

WMA (Windows Media Audio)

FLAC (Free Lossless Audio Codec)

(ii) Word document is **docx**

(iii) Presentation document is **PPTX**

86. (a) What is output device? (01 marks)

An output device is a hardware component of a computer system that displays information to users.

(b) Give two categories of printers and an example in each case:

- Impact printer e.g. dot matrix, plotters
- Non-impact printers e.g. laser printers, Ink-jet printers, thermal printers

87 (a) Distinguish between system and application software (02marks)

System software is a program that control and manage the operations of computer such as interaction between hardware and application software

Application Software is a program that is created to perform a specific task for a user.

(b) Give three types of language translators used in programming (03marks)

- Assemblers
- compilers
- interpreters

88. (a) Differentiate between computer hardware and computer software

Computer hardware are a physical parts of a computer such as internal pieces and connected devices.

Computer software is group of programs or sets of instructions or commands that tell a computer what to do.

(b) Storage devices is one of the categories of computer hardware.

List the other three categories (03marks)

- Processing units
- Input devices
- Output devices

89. Indicate TRUE or FALSE against each statement in the table below

	STATEMENTS	TRUE/FALSE
(a)	Public domain software is copyrighted	FALSE
(b)	Off-the-self software is developed and sold for profit	TRUE
(c)	Source codes of open source software programs are only available to paid up subscribers.	TRUE
(d)	Shared programs are widely available from variety of download sites on internet.	TRUE
(e)	Freeware programs are frequently developed by only amateur programmers	FALSE actually freeware are complex software

90. (a) Define the term motherboard. (02marks)

A motherboard is a printed circuit board (PCB) that connects all components of a general-purpose computer

(b) Identify any three components housed on them motherboard (03 marks)

- CPU (Central Processing Unit) chip
- RAM (Random Access memory) slots
- BIOS (Basic Input/Output System)
- cooling fans
- I/O port
- Power supply connector
- USB (Universal Serial Bus)
- CPU slot
- Mouse and keyboard ports
- FDC (Floppy-Disk Controller)
- CMOS (Complementary Metal-oxide-semiconductor) battery
- DIP (Dual In-line Package) switch
- Jumper
- Clock generator

91. (a) Define the following terms as used in publication

(i) Frame (01 mark)

A frame is rectangular spaces where you can place text, images, or other elements.

(ii) Template (01 mark)

A template is a **file that serves as a starting point for a new document.**

(b) List any two desktop publication software. (02 marks)

Microsoft Publisher, Adobe FrameMaker, Adobe PageMaker, Adobe InDesign, CorelDraw, PageStream, and QuarkXPress.

(c) Name a document that can be produced using publication software (01 mark)

Newspapers, e-books, magazines, blogs, online publications, brochures

92. Complete the table below (05marks)

	Application	Purpose
(a)	Word processing	
(b)		Used to organize data in rows and column and also performs calculations
(c)	Database Management systems	
(d)	Desktop publishing software	
(e)		Used to combine text, graphics, animations, audio and video

93. Computer data and software are exposed to number of risks hence need for great care and protection. Suggest **five** ways of protecting data and software (05 marks)

- Install antivirus software
- Create strong passwords to every document
- Use firewalls to block unauthorized access to the network
- Implement strict access control to sensitive information
- Regular Backups to store data in multiple location
- Encrypt Data to protect it from unauthorized access
- Use VPN
- Train users about cyber security and to recognize phishing attempts and other social engineering attacks.
- Monitor Network activity using intrusion detection systems (IDS)
- Update and patch system to fix vulnerabilities that could be exploited by attackers
- Develop a comprehensive security policy that covers aspects of network security and data handling.

94. (a) Give three benefits of sending documents using email service. (03 marks)

- Instant/faster communication
- Easy file sharing and collaboration
- Reduce postage costs
- It is environmentally friendly
- Convenient: letters are created and sent from anywhere.
- Improve document security.
- Mails can be sent and receive simultaneously to multitude of recipients at ago.
- Allows for a high degree of customization, enabling businesses to tailor their communications to specific needs.

(b) State two benefits for sending documents using ordinary post? (02 mark)

- It tangible creating stronger impression
- Carry physical parcels that e-mail can't
- Proof of existence of receiver and residence
- Post office are not prone to hacking
- Personal touch: Handwritten letter or cards carry a sentimental value that email can't replicate

95. Use the terms to complete the statements that follow: (05marks)

Virtual Reality, WIFI, Simulation, Bluetooth, Artificial intelligence

- (a) The science of representing behavior of real life situation using a computerized mode is **simulation**.
- (b) The technology that allows an electronic device to exchange data using radio waves of a computer network is **WIFI**
- (c) The technology that allows users to transfer data for short distances between mobile devices is **Bluetooth**
- (d) The technique that rates images by a computer that appears to surround the person looking at them is **Virtual reality**
- (e) The science of computers that enable qualities of human being to be imitated is **Artificial intelligence**

96. (a) Distinguish between a hyperlink and home page (02 marks)

Hyperlink is a group of words, shape, or image, when clicked allows movement between documents, presentation slides or redirects computer user to a specified URL.

A **home page** is a webpage that serves as the starting point of website.

(b) Identify three netiquette guidelines while using the internet. (03marks)

- empathy
- use friendly tone
- use respectful language
- Send messages if appropriate
- Check for grammar mistakes
- Respect people's privacy
- Respond to e-mails on time
- Create clear and accurate posts

97. (a) Give two wireless transmission media

- Radio waves e.g. Bluetooth,
- Microwaves e.g. satellites, radars
- Infrared

(b) Identify three limitations of wireless transmission media. (03marks)

- Transmission speed is comparably less.
- it has a limited amount of bandwidth for communication
- As communication is done through open space, it is less secure.
- More open to interference.
- Has high chance of jamming.
- Unreliability
- Wireless networks can be easily hacked.

98. Choose the correct terms to complete the statements (a) – (e). (05marks)

Rename, Watermark, Bookmark, marge, Pointer, cursor, indent

- (a) A background feature in a document is referred to as **Watermark**
- (b) The feature that allows duplication of a document with unique address is **Rename**
- (c) The feature that starts a line of text further from the margin is **indent**
- (d) The feature that assigns a name to a specific point in a document is called **Bookmark**
- (e) A symbol on the screen that indicated an insertion point in a document is **cursor**

99. Explain each of the following terms as used in information and communication Technology: (05marks)

(i) Communication

Communication in ICT refer to the tools used to send, receive and process information

(ii) Network

A network is a connection of at least two computers either by cable or wireless connection.

(iii) Protocol

A **protocol in ICT** is a standard set of rules that allow electronic devices to communicate with each other.

(iv) Modem

A **modem** is a hardware component that allows a computer or another device to connect to the computer.

(v) Bandwidth

Bandwidth is the amount of information that something, like a connection to the internet, can handle at a given time.

100. Outline five uses of internet in an organization (05 marks)

- Online Businesses (E-commerce)
- E-marketing

- Cashless Transactions
- Education
- Social Networking
- Entertainment

101. (a) Distinguish between Random Access Memory (RAM) and Secondary storage (04marks)

RAM (computer memory) is used to temporally store data that is required for processing within the CPU.

Secondary storage/ auxiliary storage, is any non-volatile storage medium that holds data until it is deleted or overwritten.

(b) Give an example of secondary storage cycle (01marks)

hard drives, SSDs, CDs, DVDs, memory cards, flash discs

102. Explain each of the following Database features

(a) Field Name (02 marks)

It is a name given to a column in the table

(b) Field properties (01 mark)

The field property in database is the characteristics and behavior of data added to that field.

(c) Date type (02marks)

The DATE data type is used to store dates, without any time information. This data type is useful when you need to store information about in dates, such as birthdays, appointments, or deadlines, but don't need to keep track of specific times of day.

103. (a) Distinguish between computer servicing and computer repair (02 marks)

Computer servicing is the regular maintenance and upkeep required to keep your computer running smoothly and efficiently.

Computer repair is the process of fixing a computer that has broken down or malfunctioned.

(b) Write one reason for having the following items in the computer laboratory

(i) Wooden carpet (01mark)

It is noiseless and durable floor

(ii) Blower (01marks)

Air Blower **removes dust and dirt from computers.**

(iii) CCTV cameras (01 mark)

They are for surveillance and security purposes.

104. (a) Don is a new computer user. As an ICT student advise Don on which tool to use

(i) to trace files he cannot locate (01 mark)

Click 'Computer' or 'This PC' then click in the Search field and enter part or all the file name you want to find.

(ii) to trace a word from an open document (01 mark)

Control+ F or click Home and then Find

(b) A student is typing using Microsoft word. Write down three steps the student will use to shut down the computer (03 marks)

(i) Save the document and close word file

(ii) In the Start menu, click on the power icon. A submenu will appear. - Shut Down:

(iii) Click on the "Shut Down" or "Power Off" option in the submenu.

105. (a) State five activities that can be performed on a computer using a mouse piece. (05marks)

(i) Move the cursor pointer on screen

(ii) select/ highlights image, text, file or icon

(iii) right click displays menu

(iv) double clicking opens or executes a program

(v) can be used for scrolling

(vi) move images, text on screen

(vii) Positioning cursor

(viii) displays hover information

106. Identify five ICT related employments opportunities in Uganda to day (01 marks)

- Teaching
- Computer repair and maintenance
- Computer and parts sales
- Computer Programmers.
- Web Designers.
- Database Analysts.
- Project Managers.
- Social Media Managers.
- Social Community Managers.
- Security/Networking Analysts.
- Technology Support.

107 (a) What is multiprocessing? (01marks)

Multiprocessing is the use of more than one central processing units (CPUs) within a single computer system

Or

Multiprocessing is the ability support more than one processor or allocate tasks between them.

(b) Give two advantages of each of the following operating systems (02marks)

(i) windows (02 marks)

- User-friendly graphical user interface (GUI).
- Wide range of compatible software and applications.
- Extensive hardware support for various devices.
- Regular updates and security patches for improved performance.
- Familiarity, as it's a widely used operating system.
- Standard operating system for high-end gaming
- Available at different configurations and price points

(ii) Linux (02 marks)

- **Open-source nature:** Linux is freely available and customizable.
- **Security:** Linux is more secure than other operating systems.
- **Easy and frequent software updates.**
- **Variety of distributions:** Choose from various Linux distributions based on your requirements.
- **Cost-effectiveness:** Linux is freely available on the internet.
- **Stable**

108. (a) Name two examples of application software

General Applications	Business Applications	Application Based on Shareability
<ul style="list-style-type: none"><input type="radio"/> Word Processing Software<input type="radio"/> Graphics Software<input type="radio"/> Spreadsheet Software<input type="radio"/> Presentation Software<input type="radio"/> Web Browsers<input type="radio"/> Multimedia Software<input type="radio"/> Education and Reference Software<input type="radio"/> Simulation Software<input type="radio"/> Content Access Software<input type="radio"/> Information Worker Software	<ul style="list-style-type: none"><input type="radio"/> Customer Relationship Management Application Software<input type="radio"/> Enterprise Resource Planning Application Software<input type="radio"/> Project Management Application Software<input type="radio"/> Business Process Management Application Software<input type="radio"/> Database<input type="radio"/> Resource Management Application Software<input type="radio"/> Productivity Software<input type="radio"/> Time Management Application Software<input type="radio"/> Educational Software	<ul style="list-style-type: none"><input type="radio"/> Freeware<input type="radio"/> Shareware<input type="radio"/> Open source<input type="radio"/> Closed source

(b) State three problems associated with usage of packaged application. (03 marks)

- Packaged software is a standard program solution and may not be appropriate for all organizations.
- It is costly to maintain when future upgrades are required, or new versions are needed.
- It is time-consuming to install and maintain.
- Limited customization

109. (a) What is the World Wide Web? (02marks)

It is an information system that enables content sharing over the

(b) Show three ways in which the internet can facilitate trade and business (03 marks)

- Online Businesses (E-commerce)
- E-marketing
- Cashless Transactions
- Education and training

110. (a) Show one way in which the internet can be a danger to: (02marks)

(a) Molarity (01 mark)

- Use of vulgar language on social media
- Cyber bullying
- Cyber Predators such as sexual and other predators often stalk children on the internet, taking advantage of their innocence, lack of adult supervision and abusing their trust.
- Watching pornography, bestiality

(b) Labour (01 mark)

- Fraud through fake Job advertisement
- Internet addictions reducing effective labor
- Increased unemployment
- threats to decent work and fair competition from digital labour platforms
- reduced job satisfaction due to unfair comparisons among jobs and countries

(c) System security (01 mark)

- Hacking, where unauthorized users gain access to computer systems, email accounts, or websites.
- Viruses or malicious software (known as malware) which can damage data or make systems vulnerable to other threats.
- Identity theft, where criminals can steal personal and financial information.

(d) Human security (01mark)

- Abuses on social media causing psychological harm

- Addition to malicious information and behavior.
- Cyber crimes

(e) Information

- Hacking, where unauthorized users gain access to computer systems, email accounts, or websites.
- Spread of false information
- Identity theft.
- Data breaches.
- Malware and viruses.
- Phishing and scam emails.
- Fake websites.

111. Explain the following attributes of computers which make them dependable and reliable tools (02marks)

(i) Diligence (02 marks)

Computers perform repetitive task without getting tired and work long hours without making mistakes

(ii) Versatility (02 marks)

Computers perform many tasks with the same accuracy and efficiency

(iii) Accuracy

Computers perform tasks with high degrees of exactness

112. (a) Describe the term Computer literacy (02 marks)

Computer literacy is the ability to use computers and information technology efficiently

(b) Outline any three ways in which ICT can improve the quality of education (03 marks)

- provides interactive and engaging content.
- facilitates personalized learning.
- enables access to a wealth of resources.
- fosters collaboration and communication among students and teachers.
- Improves reading and listening skills
- Stores information for future reference

113. (a) Differentiate between copy a file and move a file. (02 marks)

Copying – make a duplicate of the selected file or folder and place it in another location.

Moving – move the original files or folder from one place to another (change the destination).

(b) Study the file path below and answer questions that follow:

F:\accounts\bursar\fees.xls

- (i) Identify the file name (01 mark)
Fees.xls.
- (ii) On what drive is the file located (01 mark)
F
- (iii) In which sub-folder is file located(01mark)
Bursar

114. (a) List three input devices (03 marks)

- scanner
- mouse
- Camera
- keyboard

(b) Give a function of any two input devices listed in (a) above (02 marks)

- Keyboard enter data /text message into the computer
- Scanner feeds hardcopy information into computer softcopy
- camera captures picture and feed them into the computer
- Mouse allows you **to control the movement of the cursor on a computer screen**

115. Identify the following from email address robert@yahoo.com

(a) (i) Domain name yahoo.com (01 mark)

(ii) User name robert@yahoo.com (01 mark)

(iii) Top level domain name **.com** (01 mark)

(b) (i) Which type of organization does the domain name of the email user above, subscribe to? (01 mark)

yahoo.

(ii) Give any other examples other than you have stated in (b)(i)above (01mark)

Google

hotmail

116. (a) Define the term **Computer Network** (02 marks)

A **computer network** is a connection of at least two computers either by cable or wireless connection

(b) Give three disadvantages of networking computer. (03marks)

- Has high initial cost to setup
- Encourages spread Virus and Malware to network computers
- Disruptions can occur frequently.
- Computer Networking can direct us to various types of distractions.
- It requires a specific type of setup.
- May lead to loss of information easily

117. (a) Differentiate between a server and a client computer. (02 marks)

A server is a computer that provides and authorizes resources or services for the client computer.

A client is a computer that connects to a server in order to access resources or services

(b) What is the function of each of the following network devices?

(i) Bridge (01 mark)

A **bridge** is a network device that connects multiple sub-networks to create a single network

(ii) Switch (01 mark)

A switch enables connected devices to share information and talk to each other.

(iii) Router (01 marks)

A **router** is a device that connects two or more packet-switched networks or subnetworks. It serves two primary functions: managing traffic between these networks by forwarding data packets to their intended IP addresses, and allowing multiple devices to use the same Internet connection.

118. The table below shows a worksheet which Nabirye was working on

Use it to answer the questions that follow.

1	A	B	C	D	E
	ID number	Name	Item 1	Item 2	Item 3
2	100000	Akello	990	34	29.1
3	100002	Nambi	660	-	#DIV/0!
4	#####		880		
5			#NAME?		
6					

(a) (i) Suggest a reason why the entry in cell A4 appear as shown (01 mark)
Microsoft Excel might show ##### in cells when a column isn't wide enough to show all of the cell contents.

(ii) How do you rectify the error in cell a4? (01marks)

It rectified by

- Increase width of the cell
- Reduce the font of the text
- Decrease the number of decimal point

(b) What does the error in cell E4 mean? (02marks)

The **#DIV/0!** error occurs when you attempt to divide a number by zero.

(c) How do you correct the error in cell C5? (01 marks)

#NAME? is a common Excel error notation that appears when a formula or function cannot find the referenced data it needs to complete the calculation.

Enter correct data in the necessary cell

119. (a) Tick the **three** utility programs from the list below (03marks)

	Tick
Web browser	
Data compressor	x
Disk defragmenter	x
Operating system	
Antivirus software	x

(b) State the functions of any two utility programs you marked in (a) above. (02marks0)

- Data compressor compresses a file
- Disk Defragmenter in Windows rearranges fragmented data so your disks and drives can work more efficiently.
- Antivirus software protects computers against viruses and malware

120. (a) Explain the following terms giving examples in each case. (02 marks)

(i) Simplex (02 marks)

Simplex mode is a transmission mode in which information is sent in one direction only, also known as unidirectional.

Example: keyboard, Television, Mouse, Radio Broadcasts, and Monitor

(ii) Half duplex (02 marks)

In half-duplex mode, each station can both transmit and receive, but not at the same time.

Example: walkie-talkie - a two-way radio that has a push-to-talk button

(b) Identify one non-physical data transmission media (01 marks)

	Tick here
Optic fiber	
Bluetooth	x
Twisted pair	

121. (a) Explain the term **Information and Communication Technology**. (02marks)

Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information.

(b) State **three** ways in which Information technology has improved communication (03marks)

(i) fast

(ii) reliable

(iii) cheap

(iv) improved shopping and payment methods

122. Give one reason why a school director would purchase the following equipment for a computer laboratory (03 marks)

(i) Blower (01 marks)

Blows dust off and out of the computers

(ii) Anti-glare filter screens (02marks)

Improves vision of the screen

(iii) Air conditioner (02marks)

Maintains favorable temperatures in the computer laboratory

123. During a practical examination, student was required to open a blank file and save is as.

D:\STUDENT WORK\EOT PRACTICAL\safety.doc

(a) State the name of the immediate subfolder in which students must save the file (01 marks)

EOT PRACTICAL

(b) Write the root directory onto which the file must be saved. (02 marks)

D:

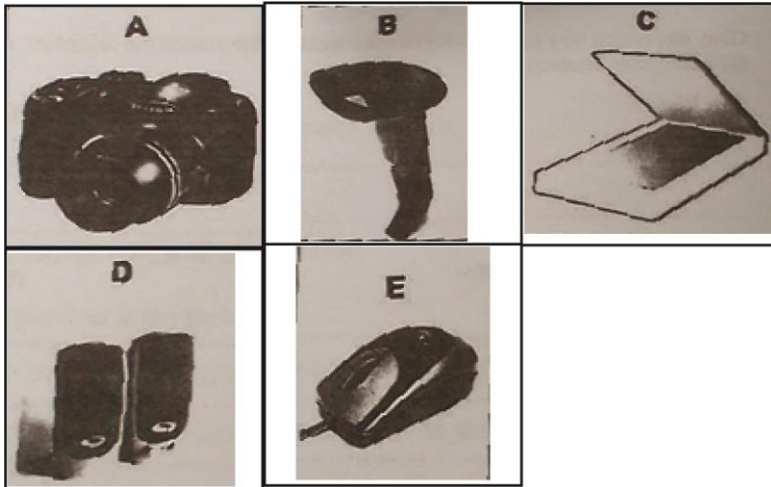
(c) Suggest one example of a computer application the student can use to create the file. (01 mark)

Word processing .

(d) State the name of the file represented by the above file path. (01 mark)

Safety.doc

124. Study the devices below and answer questions that follow



(a) Name the devices labeled (03marks)

A- digital camera

B- Bar code reader

C- Scanner

(b) Give one major similarity between devices A and E. (01 marks)

They are input devices

(c) Identify one device which can be categorized as an output device. (01 marks)

D

125. Read the statement below and write the word TRUE or FALSE in the space provided (05marks)

	STATEMENT	TRUE/FALSE
(a)	Machine code is one of the low level computer language	TRUE
(b)	Microsoft is the only operating system in use in Uganda	FALSE
(c)	WINZIP is an example of a system software which reduces the actual size of a file	TRUE
(d)	A student delivering a presentation would need an LCD projector and a laptop	TRUE
(e)	Screen saver can be categorized as desktop publishing software since they can be used for advertising purpose	FALSE

126. (a) State two adverse effects of using Internet for business and communication (02 marks)

- (i) **Unemployment:** Automation and advanced technologies can lead to job losses, especially in roles that are easily automated.
- **Cyber security Risks:** Increased reliance on ICT makes businesses vulnerable to cyber-attacks, data breaches, and other security threats
- **High Costs:** Implementing and maintaining ICT systems can be expensive.
- **Workplace Distraction:** The constant connectivity provided by ICT can lead to distractions and decreased productivity
- **Technological Dependence:** Over-reliance on technology can make businesses vulnerable if systems fail.
- **Work-Life Balance:** ICT blurs the boundaries between work and personal life.

(b) Suggest the most appropriate Internet Communication Service in the following situations:

(i) Online meeting between two company employees in geographically separated regions. (01 mark)

Video conferencing software

(ii) Instant and real time communication between friends. (01 marks)

Video conferencing software, live chat software, Instant messaging

(iii) Typed views on an on-going online discussion among a specific group of people. (01 mark)

Email

127 (a) Identify any three devices other than computers required to set up a network within a school environment. (03marks)

- **Router:** Connects your network to the internet and manages traffic between devices.
- **Modem:** Connects to your ISP (Internet Service Provider) and provides internet access.
- **Switch:** Expands the number of devices you can connect in a wired network.
- **Access Point:** Extends the range of your wireless network.
- **Cables:** Ethernet cables (Cat5, Cat5e, or Cat6) for wired connections.
- **Network Interface Cards (NICs):** Required for each device to connect to the network.

(b) Distinguish between **data communication** and **networking**. (02 marks)

Data communication, **the process of transferring data over a transmission medium between two or more devices, systems, or places.**

A networking is a connection of at least two computers either by cable or wireless connection.

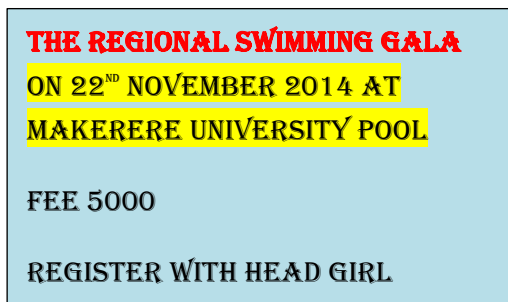
128. (a) List three possible threats to data networked environment (02marks)

- **Malwares** such viruses, worms and Trojans that infect systems, steal data or cause disruption
- **Phishing:** e-mail phishing are deceptive e-mails that trick user into revealing sensitive information and spear phishing or targeted attacks on specific individuals within an organization.
- **Network Hacking** or unauthorized access to network resources to steal data or disrupt services
- **Weak security control**
- **Insider threats** where employ or contractor misuse their access to harm the organization.

(b) Name any two types of security measures which can be used to control the threats listed in (a) above (0 marks)

- (Install antivirus software
- Create strong password
- Use firewalls to block unauthorized access to the network
- Encrypt Data to protect it from unauthorized access
- Regular Backups to store data in multiple location
- Train users about cyber security and to recognize phishing attempts and other social engineering attacks.
- Monitor Network activity using intrusion detection systems (IDS)

129. Given below is a notice which a head girl has typed and intends to pin up on all the notice boards in the school.



Explain any five word processing features which the head girl would use to enhance the appearance of the above notice

- (a) Making the title bold
- (b) Changing the color of the title
- (c) highlighting some text
- (d) using fancy fonts
- (e) Use attractive background

130. (a) Suggest one way in which computers have been made user-friendly for persons that are physically challenged in the following areas (04marks)

(i) without hands (01 marks)

- Speech recognition
- Mouth, Chin, Lip-Direct Access
- Head Movement-Direct Access

(ii) Impaired vision (01mark)

- Font magnification
- Speech recognition

(b) Give three health issues that may be caused by prolonged use of computers. (03 mark)

- Muscle and joint pain
- Overuse injuries of the shoulder, arm, wrist, or hand
- Eye strain
- Backache
- Upper limb disorders (repetitive strain injury or RSI)

131. (a) Choose the appropriate file extensions from the list given for sentences (a) to (e)
.doc, .txt, .tif, .bat, sys (05 marks)

(a) Programs files that perform fundamental operations in computer **.sys**

(b) A Microsoft word file **.doc**

(c) A file containing series of commands during boot up. **.bat**

(d) A plain file created using note pad **.txt**

(e) A graphic file created using application such as Adobe Photoshop **.tif**

132. (a) State any three operations of the machines of a central processing Unit (03marks)

- **Registers** are small amounts of high-speed memory contained within the CPU. They are used by the processor to store small amounts of data that are needed during processing, such as: the address of the next instruction to be executed.
- **Control unit** is a unit that controls all activities that go on within the computer
- **Arithmetic Logic Unit ALU** is where all calculation and logic operations happen
- **RAM (computer memory)** is used to temporarily store data that is required for processing within the CPU.

(b) Describe any one of the operations stated in (a) above. (02marks)

.....
.....
.....

133. (a) A set of instructions that are arranged in a logical way to run a computer is called (01 marks)

Software

(b) List any three categories of system software (03marks)

- (ii) Operating system **manages hardware, software resources, and provides common services for computer** programs. **Drivers** allow operating system to communicate with hardware devices like printer, graphic cards, network adapters etc.
- (iii) **Utility software** performs maintenance tasks such as disk cleanup, antivirus scanning and file management to ensure the system runs smoothly.
- (iv) **Firmware** is **low**-level software embedded in hardware devices, providing control and communication between the devices and other system components.
- (v) **Boot loaders** are responsible for loading operating system into computer's memory when the system is powered on
- (vi) **Language processors/translators** translate high-level programming languages into machine codes that the computer can execute.

(c) Give an example of a presentation software (01marks)

- Microsoft PowerPoint
- Google slide
- Keynote

134. (a) Give three benefits of connecting computers to the internet (03 marks)

- Faster communication
- Access to information
- Transfer of research papers
- Advertising
- Marketing
- Easy banking
- Access to a global audience
- More efficient government services.
- Cultural sharing and diversity.
- Virtually unlimited entertainment options, videos and music

(b) Outline two disadvantages of connecting computers to the internet. (02marks)

- Malware and viruses.
- Hacking, where unauthorized users gain access to computer systems, email accounts, or websites.
- Fake websites.
- Spread of false information
- Identity theft.
- Data breaches.
- Phishing and scam emails.

135. Explain why an organization would prefer to use Electronic mail (E-mail) over ordinary mail (05 marks)

- Reduce postage costs
- Fast
- It is environmentally friendly
- Convenient : letters are created and sent from anywhere.
- Improve document security.
- Mails can be sent and receive simultaneously to multitude of recipients at ago.

136. Outline five areas of self-employment that a sub ICT student can engage in (05 marks)

- Computer repair and maintenance
- Computer and parts sales
- Computer Programmers.
- Web Designers.
- Database Analysts.
- Project Managers.
- Security/Networking Analysts.
- Technology Support.

137. Use the terms below to complete the sentences that follow I (a) – (e) (05 marks)

Slide transition	slide design
Slides	slide show
Animation effect	Slide master
Slide layout	handouts

- (a) The Visual movement from one slide to another **Slide transition**
- (b) The **slide design** set up the way text/objects appear on a slide during a presentation.
- (c) The presentation of slides in sequence on a projection screen is referred to as **slide show**

- (d) The **Slide layout** defines the arrangement of all items that make up a slide
- (e) A user can print the entire presentation on one page by printing the **handouts**

138. (a) State one difference between a Compact Disc (CD) and Digital Versatile Disc (DVD)
(01marks)

DVDs store more data compared to CDs

(b) Explain the circumstance under which the following storage devices are used.

(i) Memory card (02 marks)

- They are used in storing data like pictures, documents, and videos.
- They are also used in creating data backups.
- The data and information in the memory card can be password protected.
- The memory card can easily be transported from one place to another.
- They are non-volatile and possess an incredible data transfer rate hence used globally.

(ii) Flash disk (02mark)

- Flash disks are solid-state drives that are durable
- Store large huge amount of data
- High transfer rate

139. (a) Describe the following terms in programming. (03marks):

(i) Interpreters

An interpreter is a **software that converts high-level language code to machine code line by line and executes it immediately.**

(ii) Syntax

Syntax is a **set of rules that determine how to arrange characters in a valid statement in a language.**

(iii) Debugging

Debugging is **the process of identifying and resolving errors or bugs in a software system.**

(b) Identify two characteristics of a good programming language

- **Simplicity:** A good programming language should be easy to understand and use, with clear syntax and semantics.

- Readability: The language should promote code readability, making it easy for programmers to understand and maintain the code.
- Expressiveness: A good programming language provides expressive power, enabling developers to write concise and meaningful code.
- Scalability: Scalability is the ability of code to handle an increasing amount of data and traffic.
- Testability: Testability is the ability to write automated tests to verify the correctness of the code.

140. Using the email address annet@gmail.com, identity these parts stand for.

- (a) annet- **username** (01marks)
- (b) @ - **at** (01marks)
- (a) gmail- **domain** name (01marks)
- (a) .com - top-level domain (01marks)

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Thanks

Dr. Bbosa Science