



**SECTION A (20 MARKS)**

- 1 (a) Distinguish computer primary storage from secondary storage.  
• Primary storage is temporary and usually internal, while secondary storage is permanent. (1mk)
- (b) State any two advantages of using compact disks for data storage.  
• Lower cost of purchase  
• Non volatile  
• Portable or facilitate data transfer  
• Has high data stability  
• Not easily attacked by viruses  
• Have a bigger capacity than floppy diskettes  
(Any 2 x 1 = 2 marks)
- (c) State the meaning of the following data storage concepts (2mks)  
Storage media:  
• The device that stores the data  
• The device or component that holds / stores application and user information e.g. CD, HDD, Flash, etc  
Storage drive:  
• The device that retrieves or writes data onto the storage media.
2. (a) Briefly describe the concept of computer ethics  
• Moral guidelines of computer users while buying, utilizing and disposing off computers or their parts. (2 marks)
- (b) State three unethical practices usually engaged in by ICT users.  
• Phishing  
• Not alerting colleagues in cases of virus attacks  
• Sending unsolicited mails/ messages  
• Using other people's ICT resources without their permission / knowledge.  
• Sending nude pictures or controversial content to others. erodes human dignity  
• Copying and using proprietary software without pay / prior permission of the manufacturer or authorized vendor.  
• Plagiarism  
• Snooping / interfering into other people's files or mail boxes, and ICT works or resources.  
• Using ICTs to bear false witness.  
• Using ICTs to invade other people's privacy- hacking, phishing and pharming.  
• Using ICTs to forge, steal and harm some innocent others.  
• Cracking  
• Hardware theft  
• Hacking  
• Spoofing  
• Denial of service attack

- Spamming
- Cyber bullying

(Any 3 x 1 = 3 marks)

3. (a) Distinguish between mail merge and word wrap word processing concepts.
- Mail merge is a word processing feature that allows one to create multiple letters from one main letter addressed to different people. While word wrap is a feature used to refer to automatic movement of the cursor to the next line. (2 marks)

- (b) State any three advantages of using electronic word processors.

- Have easy to use edit and formatting feature
- Outputs/ work can be sent and receive electronically
- Easy to use text search tools and wild cards
- Ease of duplication / sending to many recipients
- Works look more business-like
- Ease of file storage and retrieval

(any 3 x 1 = 3 marks)

4. Natural disasters can cause loss of data and important programs. As an ICT literate person;

- (a) State three measures that can be taken to ensure that data and programs are not completely lost in cases of disaster.

- Backup in isolated places like on- line storage.
- Data recovery software.
- Utilities like Anti-virus and encryption utilities
- Use of very strong firewall
- Password
- Setup working rules and regulations. Like a school ICT use policy
- Educate about sensitivity of data at hand
- Works be done by professionals
- Fire extinguishers
- Alarm systems to warn on impending danger
- Use of water proof safes.
- Use of online storage
- Use of water and fire proofs
- Installation of conductors
- Use of fire extinguishers

- (b) State two forms of disasters that can befall computer systems and installations.

- Terror attacks
- Virus attacks / logic bomb
- Destructive earthquakes
- Floods
- Lightning strikes
- Acts of vandalism and burglars
- Land slides

(Any 2 x 1 = 2 marks)

5. A problem with some computers in the computer lab was reported to a lab technician. Two of the technician's recommendations were for the school to install gadgets to regulate temperatures, and also buying a woolen carpet for the computer laboratory.

- a. Air-conditioner (1 mark)

- b. Give two reasons to explain why the gadget suggested in 5(a) above is required in a

computer room

- Keep the computer lab cool all the time
- Allow free and easy air circulation
- Reduce the effects of excessive temperature variations on data busses and electric circuits.  
(Any 2 x 2 = 2 marks)

c. State two benefits of a woolen carpet in a computer lab

- Maintains room temperature
- Absorb dust
- Reduce on the effects of damage when small objects fall
- Reduce on the effects of electric shocks just in case of leaking electricity
- Absorbs moisture and keeps the lab warm all the time
- Reduces accidents like falling
- They are flame resistors

(Any 2 x 1 = 2 marks)

6 a) State the following ICT networking terms

(i) Band width

- Rate at which data signals travel through a communication media at a time
- Transmission capacity of a communication channel (1 mark)
- OR the difference between the highest and lowest frequencies that can be transmitted by a communication channel or media. (1 mark)

(ii) Web server

- Software that manages user for requests for web pages and other hyper media documents or data (1 mark)

(iii) Client computer

- A work station portable or desktop computer as the users point of entry for accessing client-server computing. (1 mark)

(b) State two factors one should consider when selecting a network model.

- Cost / networking budget
- Size of the organization
- Security levels needed
- Nature of the organization or business
- Administrative support
- Number of computers
- Purpose of the network
- Type of topology (2 marks)

7. a) Distinguish between synchronous data communication modes (1 mark)

**A synchronous** technology that parcels data into uniform simple and small cells (8-bytes cells) for high capacity transmission more especially for voice and video signals.

Whereas,

**Synchronous** is the term used for technologies where users must be online at the same time in order to interact. This may include real-time chat, live conferencing or a scheduled online discussion.

b) Give two examples of data transmission media

- Radio waves
- Micro wave
- Fiber optic cables
- Coaxial cables

- WIFI
- Twisted pair cables
- Infrared
- Bluetooth

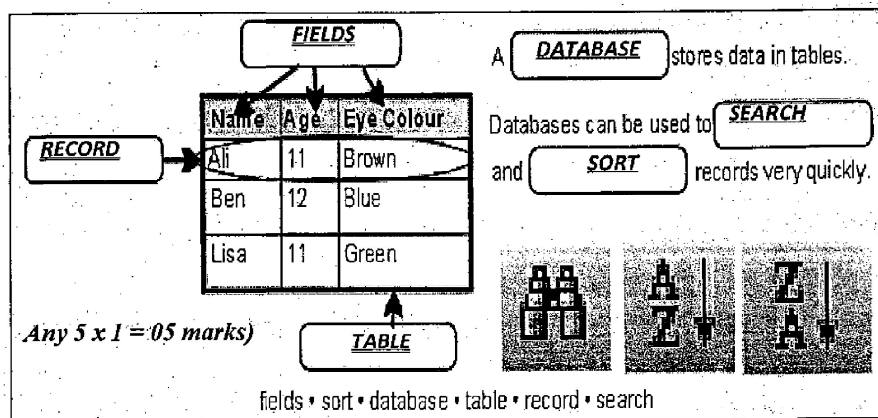
(Any 2 x 1 = 2 marks)

c) State two factors you would consider when choosing a data transmission media

- Security levels
- Cost / budget
- Distance
- Geographical / physical setup
- Band width
- Attenuation rate

(Any 2 x 1 = 2 marks)

8. Use the words at the BOTTOM to fill in the blanks and complete the gaps!



9. a) State one situation where you can use a softcopy

- Electronic presentations
- Electronic data transfer
- Electronic data storage
- E – learning
- E-entertainment
- Data sharing
- Applying for a job online

(Any 1 x 1 = 1 marks)

b) Give two advantages of using softcopies over hardcopies

- Ease of access
- Easy to edit and format
- Easily to distribute electronically
- Reduce storage space considerably
- Ability for online storage

(Any 2 x 1 = 2 marks)

c) List down two examples of impact printers

- Dot matrix
- Daisy wheel
- Drum printers
- Line printer band printers
- Braille printers
- Band printers

(Any 2 x 1 = 2marks)

10. a) Briefly define the following terms as used in networks and internet based communications
- (i) Internet
- Is a global or an international interconnection of computers and LAN.
  - Is the largest Network of Networks. (1mk)
- (ii) Intranet
- Is a LAN that uses WWW or internet standards/ protocols to relay data and information within an organization (1 mk)
- (iv) Extranet
- Is an extended intranet of an organization to its customers and suppliers (1mk)
- b) State two examples of web browsers
- Opera
  - Ms internet explorer
  - Mozilla Firefox
  - Emissary
  - Web surfer
  - Netscape navigator
  - Google chrome
  - Mosaic
  - Safari
  - Comodo ice dragon
  - Water swift fox
  - Swift weasel and ice weasel
  - Minimo
  - Sky fire
  - Conqueror
  - Lunar scape
  - Arora
  - IBM Web explorer
  - Lynx, etc (Any 2 x 1 = 2 marks)
- 11 a) Define the concept of computer system security  
Measures / steps taken to protect computer systems to ensure that they are accurate and reliable. Also focuses on system quality assurance, vulnerability and abuse. (1 mark)
- b) Define the concept of firewalls in ICT systems?  
A combination of hardware and software placed that stands between an organizations internal network and an external network to prevent outsiders from invading their private network.
- c) State three threats faced by organizations as a result of computer networking
- Networking maintenance costs ( for initial capital outlay , servicing and network repairs)
  - Effects of virus attacks
  - Network related crimes and abuse like hacking, cyber bullying and unsolicited messages.
  - Effects of network changes and failures – work can be adversely affected (Any 3 x 1 = 2 marks)

12. Give one characteristics of the following spreadsheets cell data type;
- Labels:
- Not subjected to arithmetic operations
  - Left aligned in the cell by default
  - Put in quote when they appear in logical functions (Any 1 x 1 =1 mark)
- Values:
- They are right aligned in the cell by default
  - Purely generated from counting numbers
  - They are subjected to arithmetic operations (Any 1 x 1 = 1 mark)
- b) Study the logical function below to answer its related questions:  
 =RANK ( B2,\$B\$2:\$B10,0)
- (i) State the output of the above function
- The function will rank or position all the cell range B2 to B10 in descending order(1 mark)
- (ii) State one reason as to why the dollar sign is used on cell B10
- To make its address absolute OR,
  - To ensure that the cell range does not change as the formula gets pasted to other cells.
- (Any 1 x 1 = 1 mark)
- (iii) State the implication of having a zero at the end of the function
- To define the order of ranking as descending order i.e., the highest score takes the first position.
13. “ICTs have been grossly abused.” This was a lamentation by one of the parents who attended the S.6 class day of The Girls School.
- a. State one category of ICT abusers:
- Individuals
  - Institutions / organizations
  - Hackers
  - Crackers
- b. Give two ways in which ICTs are being abused
- Forging documents
  - Abuse and insult others
  - Platforms for communicating , watching and storage of pornographic materials plus other controversial content
  - Vandalism
  - Replacing people
  - Baring of false witness
  - Used to cheat and waste time (Any 2 x 1 = 2 marks)
- c. Suggest some two etiquette guidelines to facilitate appropriate ICT usage
- Sending warnings to colleagues in cases of virus attacks
  - Asking permission from people before sending them messages
  - Using authorized software
  - Proper identification whenever using networks including social networks
  - Respect of proper rights and ownership
  - Respect of humanity and dignity
  - Espec for the environment with god disposal policies

- Respect for privacy
- Use of descent ICT games
- Avoiding sharing of passwords
- Avoid spamming
- ICT equipment should be switched off when not in use
- Avoiding snooping into others files and folders (Any 2 x 1 = 2 marks)
- Password it
- Encrypt
- Lock and key
- Biometric devices
- Secures the network –fire walls , server base model
- Software audits
- Customize the software backup policy
- Educate
- Working rules and regulations
- Anti –virus utilities
- Avoid unnecessary sharing
- Data destruction and recovery policy and plan (Any 2 x 1 = 2 marks)

- (b) State one area in each case, where the following data transmission modes can be used. (03 marks)

Mode of transmission	Area of application
Full duplex	Mobile telephone operations
Half duplex	Fax machines, credit cards, verification systems, radio calls transmission for security
simplex	<ul style="list-style-type: none"> <li>• General radio waves transmission</li> <li>• Television transmission</li> <li>• Keyboard operations (1 mark)</li> </ul>

15. Define the concept of wildcards as used in Data Base Management (DBMS)?

- A wildcard is a special character that can stand for either a single character or a string of text.

(1 mark)

- b) State two importances of wildcards in query criterion ?

- Used to search for data within the table
- Wildcards are useful when you want to query to look for a range of different possible values, and also
- Also useful when you are not certain exactly what you are looking for but can give the query some clues to work with. (Any 1 x 2 = 2 marks)

- c) State two frequently used wildcards used in DBMS

- Asterisk (\*) represents any string of text from nothing up to an entire paragraph or more.
- Question mark (?) represents a single character only. (although you could use , for example ,two question marks to represent two unknown characters.

(2 x 2 = 4marks)

16. (a) Briefly explain how each of the following devices contributes to the general operations of a computer system
- (i) Hard disk
    - Holds /keeps the operating system plus important utilities
    - Keeps update for reference
    - Supplements RAM
  - (ii) Power Supply unit
    - Distributes electric power in the system unit
    - Regulates electric power
    - Converts from AC to DC
  - (iii) RAM chips
    - Holds data being displayed on the computer screen
    - Contributes to the procession speed
- b) State two methods you can use to enhance the speed of a computer
- Increase RAM capacity where applicable
  - Virus cleaning and protection
  - Remove unnecessary files and programs
  - Re-install the O.S
- (Any 2 x 1 = 01 marks)
17. (i) Define the concept of “crop marks” used in desktop publishing . (2 marks)  
Crop marks are marks which facilitate trimming of business cards.
- (ii) State three features of Desktop Publishing Software.
- Similar features as a word processor but rich / enhanced like text boxes ,text formatting features , drawing and graphics tools
  - Most DTP packages provide a large, readymade range of professional looking templates to enable one to quickly and easily create a publication.
  - Easy to use wizards which guide you through creating a publication.
  - Frames/ place holders that allow text and images to freely move around the page .
- (Any 3 x 1 = 2 marks)
18. Differentiate between the following
- (i) Cracking from hacking  
Hacking involves unauthorized access in to the computer systems. It can be legal or illegal  
Whereas cracking involves tampering with security codes of the software product or file for personal gains. (1 mark)
  - (ii) eavesdropping from denial of service attack  
Eavesdropping involves secretly spying onto ones computer activities physically or by use of spy ware. Whereas denial of service attack involves engaging a network user to deny him /her the right of using the network line.(1 mark)
  - (iii) virus from a worm
    - A Virus is a potentially damaging computer program malware, while a worm is a malware that copies itself repeatedly, using up resources and possibly shutting down computer or network.

(1 mark)
  - (iv) Digital forensics from artificial intelligence
    - Artificial intelligence is the process of building computer systems that simulate human thought process and actions. Whereas digital forensics is an ICT career



involving the recovery and investigation of material found in digital devices, often in relation to computer crime. (1 mark)

(b) Give one example of biometric devices

- Mouse finger print scanner
- Door scanner
- Facial scanner
- Computer scanner
- Signature verification scanner
- Iris scanner
- Finger print scanner

19. a) Briefly explain the following terms as used in internet based technology ;  
Handle

- Is an online name for an internet user (1 mark)

Blog

- Is a personal online journal for personal opinions/ ideas

Social network

- Are highly interactive virtual/ computer based platforms through which people create, share, discuss/ exchange, and modify user-generated content. (1 mark)

(b) Give one example of a web browser

- Internet explorer
- Mozilla Firefox
- Google chrome
- Opera
- Etc.

c) Briefly describe one danger of controversial content that circulates through the internet.

(1 mark)

Dangers of slanderous and pornographic content;

- Can cause/ promote hatred
- Vulgarized sex
- Dangers of rape, defilement and indecent assault out of excitement.
- Loss of dignity
- Sexual addiction
- Insecurity
- Violence and strikes
- Virus infection

20. Hilda prefers to store her documents online rather than removable devices.

(a) What is online storage? (1 mark)

Refers to the practice of storing electronic data and third party service accessed via the internet.

(b) State two examples of cyber (ONLINE) STORAGE FACILITIES YOU KNOW.

- ✓ Google drive
- ✓ Skydrive
- ✓ Drop box
- ✓ Open drive
- ✓ Drive HQ file manager
- ✓ One drive

- ✓ iCloud
  - ✓ Box all vie
  - ✓ Sugar Sync.
  - ✓ Amazon cloud drive
  - ✓ Windows live mesh
  - ✓ Box.net
  - ✓ Spider Oak
- (c) Give one advantage of using cyber storage over removable devices.
- ✓ Enables free sharing of files and folders with other users.
  - ✓ Provides large and limitless storage space.
  - ✓ Can be accessed from anywhere provided the user has internet connection.
  - ✓ Provides security features to protect the data and third party files.
  - ✓ It provides quick recovery of your files and folders.
  - ✓ It provides for automatic and quick data
- (d) How can Hilda ensure security of her data held by online data banks? (1 mark)
- ✓ Pick password.
  - ✓ Don't reuse your passwords.
  - ✓ Don't share your passwords.
  - ✓ Back up your data.