

**JOINT MOCK EXAMINATIONS
MARKING GUIDE
Uganda Advanced Certificate of Education
UACE August 2016
ICT S850/1**

- 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.**

<ul style="list-style-type: none">• Lower cost of purchase• Non volatile• Portable or facilitate data transfer• Has high data stability	<ul style="list-style-type: none">• Not easily attacked by viruses• Have a bigger capacity than floppy diskettes
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- (Any 2 x 1 = 2 marks)
(2mks)
- (c) **State the meaning of the following data storage concepts**
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 un solicited mails/ messages
 - Using other people's ICT resources without their permission / knowledge.
 - Sending nude pictures o controversial content to others. erodes human dignity
 - Copying and using proprietary software without pay / prior permission of the manufacture 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 forge, steal and cone 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 marge 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.**

- | | |
|--|---|
| <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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.**

- | | |
|---|--|
| <ul style="list-style-type: none"> • Terror attacks • Virus attacks / logic bomb • Destructive earthquakes • Floods | <ul style="list-style-type: none"> • 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**

- | | |
|--|--|
| <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • Absorbs moisture and keeps the lab warm all the time • Reduces accidents like falling • They are frame 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
- OR the difference between the highest and lowest frequencies that can be transmitted by a communication channel or media.

(1 mark)

(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 user's point of entry for accessing client-server computing. (1 mark)

(b) **State two factors one should consider when selecting a network model.** (2 marks)

- 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

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** (Any 2 x 1 = 2 marks)

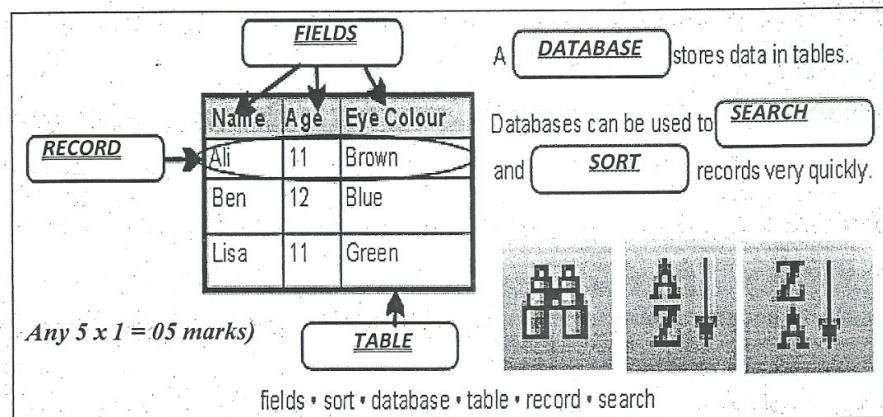
- Radio waves
- Micro wave
- Fiber optic cables
- Coaxial cables
- WIFI
- Twisted pair cables
- Infrared
- Bluetooth

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) **St:**

- 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.**(Any 2 x 1 =2marks)

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

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. (1mark)
- Is the largest Network of Networks.

(ii) **Intranet**

- Is a LAN that uses WWW or internet standards/ protocols to relay data and information within an organization. (1 mark)

(iv) **Extranet**

- Is an extended intranet of an organization to its customers and suppliers (1mark)

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
 - 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"> General radio waves transmission Television transmission Keyboard operations (1 mark)

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 importance 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 o 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**

- **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 | ✓ Box all vie |
| ✓ Skydive | ✓ Sugar Sync. |
| ✓ Drop box | ✓ Amazon cloud drive |
| ✓ Open drive | ✓ Windows live mesh |
| ✓ Drive HQ file manager | ✓ Box.net |
| ✓ One drive | ✓ Spider Oak |
| ✓ iCloud | |
- (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.